

PROCEEDINGS OF THE INSPIRATIONAL SCHOLAR SYMPOSIUM (ISS)

**16 - 17 NOVEMBER 2021
VIRTUAL CONFERENCE**



UUM
Universiti Utara Malaysia



**INSPIRATIONAL
SCHOLAR SYMPOSIUM**

6th Inspirational Scholar Symposium 2021
University Teaching and Learning Centre (UTLC)
Universiti Utara Malaysia, 06010 UUM Sintok,
Kedah Darulaman.

6TH INSPIRATIONAL SCHOLAR SYMPOSIUM (ISS 2021)
“STRENGTHENING TEACHING AND LEARNING BEYOND THE NEW NORM”
16 – 17 NOVEMBER 2021 | VIRTUAL CONFERENCE

<https://iss.tlgateway.edu.my/>

Editors:

Fauziah Abdul Rahim
Sarimah Shaik Abdullah
Izwan Nizal Mohd Shahraneer
Wan Hussain Wan Ishak
Fadhlina Md Pudzi
Norhidayah Mohd Kaharuddin
Raihanah Hasaniah Abdullah

Cover Design:

Mohd. Asyraff Shafareez Mohammad Asseri

Pusat Pengajaran Pembelajaran Universiti (UTLC)
Universiti Utara Malaysia
06010 UUM Sintok
Kedah Malaysia

Tel: 04-928 4701
Faks: 04-928 4702
E-mel: utlcnet@uum.edu.my
Laman Web: utlc.uum.edu.my

©2022 Pusat Pengajaran Pembelajaran Universiti (UTLC)

Cetakan Pertama 2022

Hak cipta terpelihara. Tiada bahagian daripada terbitan ini boleh diterbitkan semula, disimpan untuk pengeluaran atau ditukarkan ke dalam bentuk atau dengan sebarang alat juga pun, sama ada dengan cara elektronik, gambar serta rakaman dan sebagainya tanpa kebenaran bertulis daripada Pusat Pengajaran Pembelajaran Universiti (UTLC) terlebih dahulu.

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical including photocopy, recording, or any information storage and retrieval system, without permission in writing from the University Teaching and Learning Center (UTLC)

e-ISSN: 2811-46396



Copyright ©2022 by Inspirational Scholar Symposium (ISS)

ACKNOWLEDGEMENT

Heartfelt gratitude and appreciation from University Teaching and Learning Centre
(UTLC)

to:

Content Capital Sdn. Bhd., Smartlab Sdn. Bhd. and all those involved direct or
indirectly in the success of 6th Inspirational Scholar Symposium (ISS) 2021

ABOUT THE 6TH ISS 2021

Background

University Teaching and Learning Centre (UTLC), Universiti Utara Malaysia (UUM) invite all professors, faculty members, educators, educational personnel and postgraduate students, to submit abstracts and full research papers for oral paper presentations at the **6th Inspirational Scholar Symposium (ISS 2021)**. The theme of the symposium for this year is, “*Strengthening Teaching and Learning Beyond the New Norm*”, which encapsulates the experiences that we currently face within the educational contexts due to Covid-19 outbreak.

The **ISS 2021** aims to promote and disseminate knowledge concerning topics and technologies related to teaching and learning.

Due to the current Coronavirus outbreak, the **ISS 2021** was held **virtually/online only**. Nevertheless, abstract submission and publication processes will remain the same. **The online ISS 2021 was held on November 16 - 17, 2021.**

Objective

A virtual congregation of esteemed academics, researchers and practitioners from various institutions to share knowledge, ideas and best practices in teaching and learning. The ISS also aims to encourage and enhance innovative practices and the use of technology in developing knowledge in all areas, hence strengthening teaching and learning beyond the norm.

Theme

“Strengthening Teaching and Learning Beyond the New Norm”

ORGANIZING COMMITTEE

Patron	: YBrs. Prof. Dr. Haim Hilman Abdullah
Advisor	: YBrs. Prof. Dr. Shahimi Mokhtar
Chairperson	: Prof. Dr. Fauziah AbdulRahim
Deputy Chairperson	: Assoc. Prof. Dr. Sarimah Shaik Abdullah : Ts. Dr. Izwan Nizal Mohd. Shahraneer
Secretary	: Mrs. Fadhlina Md. Pudzi
Treasurer	: Mr. Othman Mustafa
Secretariat	
Promotion	: Mr. Nik Mohd. Baidzani Haddad Ibrahim : Mrs. Nur Assila Abd Latiff : Mrs. Shahrini Abdul Jabar : Mrs. Noor Nabilah Najwa Omar
Registration	: Mrs. Fadhlina Md. Pudzi : Mrs. Norhidayah Mohd Kaharuddin : Mrs. Raihanah Hasaniah Abdullah : Mrs. Suhaida Abdullah
Article Publication	: Ts. Dr. Izwan Nizal Mohd. Shahraneer : Assoc. Prof. Dr. Sarimah Shaik Abdullah : Assoc. Prof. Sr. Dr. Mohd Nasrun B Mohd Nawi : Ts. Wan Hussain Wan Ishak : Mrs. Norhidayah Mohd Kaharuddin : Mrs. Raihanah Hasaniah Abdullah
Technical/ Online Platform, Graphic, Multimedia & Website	: Assoc. Prof. Dr. Muhamad Shahbani Abu Bakar : Mr. Mahamad Nabawi Mohamad Saad : Mrs. Noridayu Mangsor : Mr. Nur Aliyin Yahaya : Mr. Mohd. Asyraf Syafareez Mohd Aseri : Mr. Efendy Nayan
Invitation	: Mrs. Fadhlina Md. Pudzi : Mrs. Nur Assila Abd Latiff : Mrs. Shahrini Abdul Jabar
Sponsorship	: Assoc. Prof. Dr. Sarimah Shaik Abdullah : Ts. Dr. Izwan Nizal Mohd. Shahraneer : Mr. Nik Mohd. Baidzani Haddad Ibrahim : Mrs. Fadhlina Md. Pudzi : Mr. Othman Mustafa

REVIEWERS

The organizing and technical committees of the 6th Inspirational Scholar Symposium (ISS 2021) would like to express gratitude to all reviewers for the volunteering support and contribution in the reviewing process:

Prof. Dr. Nurahimah Mohd. Yusoff
Prof. Dr. Nor Aziah Abd Manaf
Assoc. Prof. Kahiroh Mohd Salleh
Assoc. Prof. Dr. Surendran Sankaran
Assoc. Prof. Dr. Sarimah Shaik Abdullah
Assoc. Prof. Dr. Norazlinda Saad
Assoc. Prof. Dr. Mardzelah Makhsin
Assoc. Prof. Dr. Aizan binti Yaacob
Assoc. Prof. Ts. Dr. Norbayah Mohd Suki
Assoc. Prof. Ts. Dr. Muhamad Shahbani Abu Bakar
Assoc. Prof. Ts. Dr. Mohd Hasbullah Omar
Assoc. Prof. Ts. Dr. Fadhilah Mat Yamin
Assoc. Prof. Ts. Dr. Ariffin Abdul Mutalib
Assoc. Prof. Dr. Zuaini Ishak
Assoc. Prof. Dr. Saliza Abdul Aziz
Assoc. Prof. Dr. Hasniza Nordin
Ts. Dr. Izwan Nizal Bin Mohd Shahrane
Dr. Siti Nazuar Sailin
Dr. Shahreza bin Md. Sheriff
Dr. S. Kanageswari Suppiah Shanmugam
Dr. Raja Nor Safinas Raja Harun
Dr. Nursiha Alias
Dr. Nurliyana Bukhari
Dr. Narentheren Kaliappen
Dr. Mohan Rathakrishnan
Dr. Mohamed Ali bin Haniffa
Dr. Marini Kasim
Dr. Marhaiza Ibrahim
Dr. Hafizah Mohamad Hsbollah
Dr. Fathiyyah Abu Bakar
Dr. Farah Mohamad Zain
Dr. Faizahani Ab Rahman
Dr. Fahainis Mohd. Yusof
Dr. Aspalila binti Shapui
Dr. Amrita Kaur

EDITORIAL NOTES

As all good things must come to the end, we have indeed reached the end of the 6th ISS 2021 gathering of provoking thoughts, stimulating sharing and debating, whilst challenging ideas amongst inspirational scholars. We have been entrusted to provide to you with some closing remark – a sad task as it signals that we are about to close the doors of this engaging gathering of intellectuals, or BUDIMAN, taking on the term used by Profesor Emeritus Tan Sri Dato’ Dzulkifli Abdul Razak, or ILMUAN, as we would like to refer – and bidding farewell to newly acquainted friends and associates.

However it is also a privilege and honour to do this in the presence of eminent people from different disciplines of knowledge whose heart and minds, we hope, are geared passionately towards improving their practices with fervour, and in so doing, improve the quality of Learning and Teaching in the higher education in their respective institutions.

This has been a wonderful conference. Together, we have enjoyed listening to the keynote speeches and some of the workshops and paper presentations that were successfully presented through the conference themes despite having to succumb to the inevitable technical glitches.

In the last two days, our minds have been assailed by a torrent of ideas, information, statistics, qualitative data, insights, perspectives, interpretations and visions – and it would probably need a day or two for us to recover from the cognitive stimulation to sift through the information and takeaways, to consolidate for our own personal perspectives.

We are delighted that with most papers under the Alternative Assessment conference track that shared various methods of assessing – from Pecha Kucha, scenario-based role play, online technology, role play, capstone projects, project based learning, digital storytelling, case studies, Interactive design and Human computer interaction, evidence based practice, and community projects to the use of web 2.0 tools in remote teaching and learning – portrays not only the capacity of educators to continue assessing students in various ways despite the pandemic but more so to be able to have strong convictions, based on evidence, to signify the potentials of using these methods of alternative assessment in ensuring that learning takes place. Papers that delineate the roles of lecturers as facilitators in mediating learning through questioning to enhance critical thinking and learning in second language contexts as well as measuring attributes and sub attributes of soft skills in various discipline areas provide certainties in the applicability of the alternative assessment.

Papers from the sub themes of transformative teaching, technology enhanced learning, and curriculum development present an array of evidence of instructors’ effort to improve the method of **delivering** instruction from the use of Historical Thinking Skills to the use of Youtube, Hybrid SIRE Model of simulation technique, to intervention of PEiEP4FLIPPED, collaborative learning, and various techniques of stimulating collaboration, case study gamed data, PBL, capstone, blended learning to researching and reflecting on their practices through SoTL.

Even the adverse effect of the pandemic on TnL did not deter scholars as researchers to explore the use of augmented reality, Wizer.me and Socrative, suggesting new model OPA, micro learning approach, Edpuzzle, gamification, collaborative learning through digital platform and projects, facebook, game based teaching, using Universal Design for Learning to assist colour vision deficiency, the use of auto text summarization tool in writing, and researching the users’ perspectives of blended learning, learning management system, the use of avatar and the protocol for online learning – all in the quest to measure or enhance students’ soft skills. These papers have indicated the efforts made by scholars to understand the diverse ways when

teaching diverse learners, despite the dynamic context in which remote learning and teaching has compelled us to transform the ways of doing things.

In the motivation strand, presenters have shared research on readiness of lecturers and readiness of the students in reflecting on how they have taught or learned to witness the benefits of learning in various contexts within the class or outside like when joining the students' clubs and associations and increasing the confidence level of the students. These were done while taking into consideration the teaching and learning style as well as instructors' reflections on their practices for improvement. In both keynote sessions we were reminded on the importance of striking a well-balanced work-life to ensure positive and healthy mental health and well-being not only for ourselves but also for our students. We were also reminded to continue to improve ourselves and to do what we do with pride and integrity.

As we close the door of the 6th ISS2021, we do hope that researching one's practices and students' development, and sharing with colleagues in this annual Inspirational Scholar Symposium are not merely for the sake of ticking off the key performance indicator set for our personal goals. We hope that we will move beyond the norm of influencing the trajectory of our personal learning that could expand the transformation of learning and teaching for the good of the development of higher education students – the development of future leaders, with a focus on human development, through the various subject disciplines that we are entrusted in.

Our final closing note to you, esteemed inspirational scholars of this conference, is to find the love to do what you and us do as true inspirational scholars in upholding academic integrity in learning, teaching, researching, and disseminating what we do with colleagues and not to be swayed by the peripherals that derail us from our AMANAH.

On behalf of the 6th ISS 2021 organising committee, we would like to extend our gratitude to everyone who have made this conference a memorable one.

We pray for your great health and safety no matter where you are and may the 6th ISS2021 be one of your wonderful memories that will ignite your energy to continue the good that you do, until we meet again in the 7th ISS next year. In Shaa Allah.

Peace and Take charge.

Wabillahitaufikwalhidayah Wassalamu'alaikum warahmatullahi wabarakatuh.

Editors, 6th Inspirational Scholar Symposium (2021)
University Teaching and Learning Centre
Universiti Utara Malaysia

Fauziah Abdul Rahim
Sarimah Shaik Abdullah
Izwan Nizal Mohd Shahraneer
Wan Hussain Wan Ishak
Fadhlina Md. Pudzi
Norhidayah Mohd Kaharuddin
Raihanah Hasaniah Abdullah

TABLE OF CONTENTS

Acknowledgement	iii
About the 6 th ISS 2021	iv
Organizing Committee	v
Reviewers	vi
Editorial Notes	vii – ix

TABLE OF CONTENT

NO	AUTHORS	PAGES
TRACK: ALTERNATIVE ASSESSMENT		
1	Students' and Lecturers' Perception of Pecha Kucha as a Mode of Presentation for Marketing Subject <i>Mohd. Noor Abdul Hamid, Azrina Abdul Razak, Norhaiza Khairudin</i>	1 – 12
2	Online Technology as a Tool for Alternative Assessment in Nationhood Studies: A Review <i>Sharifah Ismail, Maizatul Azura Yahya</i>	13 – 24
3	New Alternative Assessment Approach via Role Play: A Lawyer to Be <i>Nor Anita Abdullah</i>	25 – 31
4	Competition Law and Policy: Nurturing Economics Students and Challenges in Digital Markets <i>Muhammad Ridhuan Bos Abdullah</i>	32 – 37
5	Nurturing Engaged Learners in Financial Management Courses Through Working in a Small Group: Case Studies <i>Boo Hooi Laing</i>	38 – 52
6	Designing a Shariah Compliant Fund Based on Real-Market Data of Financial Assets <i>Mohd Fikri Sofi, Nor Aina Mhd Khotib</i>	53 – 61
7	Teaching Banking Theory Using Digital Story Telling Project and Cognitive Engagements during Remote Learning <i>Muhammad Muhaizam Musa, Sarah Shaharruddin, Idyawati Hussein@Hussen</i>	62 – 70

8	The Utilisation of Alternative Assessment in Promoting Student Involvement in Virtual T&L Sessions of Elective Malay Language Courses at UUM <i>Maizatul Azura Yahya, Mohamad Zakuan Tuan Ibharim, Nasihah Hashim, Sharifah Ismail</i>	71 – 78
9	Do Attitude, Infrastructure Capability and Study Environment Affect Accounting Information System Enjoyment in Remote Learning? <i>Saliza Abdul Aziz, Raja Haslinda Raja Mohd Ali; Fathiyyah Abu Bakar</i>	79 – 88
10	Designing a PBL Scenario under the Topic of Reconstruction and Dissolution of Companies <i>Mohamad Naimi Mohamad Nor, Dzarfan Abdul Kadir, Zuaini Ishak</i>	89 – 96
11	e-PROBLEM Based Learning (e-PBL) Sebagai Pentaksiran Alternatif Bagi Kursus MPU Falsafah Dan Isu Semasa Dalam Kalangan Pelajar Universiti Utara Malaysia <i>Nor Hanani Ismail</i>	97 – 103
12	Research Products in the Limelight: Showcasing the Applications of Theories, Laws, and Principles in Teaching and Learning <i>Husniza Husni</i>	104 – 111
13	Media Ethics and Law Classroom Alternative Assessments <i>Zuraidah Abu Talib, Noor Aziah Abdullah</i>	112 – 119
TRACK: CURRICULUM DEVELOPMENT		
14	Developing Historical Thinking Skills (HTS) in Malaysian Nationhood Studies: An Educator's Perspective <i>Mohamed Ali bin Haniffa, Nor Azlah Sham Rambely</i>	120 – 132
TRACK: MOTIVATION		
15	Voices of Today, Leaders of Tomorrow: Implications of Female Undergraduate Students' Involvement in Clubs and Associations <i>Low Kah Choon, Vally Senasi, Siti Syuhadah Mohamad, Noranida Mokthsim</i>	133 – 143
16	Personal Journey: My Transformation through Inspirational Academician Programme Module 6 – Scholarship of Teaching and Learning <i>Narentheren Kaliappen</i>	144 – 151

17	Self-Reflection towards the Journey of SoTL Inspirational Academician Programme (IAP) <i>Hooi Sin Soo</i>	152 – 157
18	Evaluation of impact of online training: Reflection-on-action of the NEEL Program <i>Norhafezah binti Yusof, Saliza Abdul Aziz, Fathiyyah Abu Bakar, Tengku Faekah Tengku Ariffin, Hasniza Nordin</i>	158 – 168
19	Does Reflection Matter? Evidence from Training <i>Indraah A/P Kolandaisamy, Raenu A/P Kolandaisamy</i>	169 – 179
20	Implementing Problem-Based Learning (PBL): What the Lecturers Said? <i>Nasihah binti Hashim, Maizatul Azura binti Yahya</i>	180 – 187
21	Student Reflection of Leadership Communication Course related to Self-Confidence <i>Azlina Kamaruddin</i>	188 – 197

TRACK: TECHNOLOGY ENHANCED LEARNING

22	The Impact of REV-OPOLY Augmented Reality Board Game on Students' Motivation in Learning <i>Noradila Nordin, Nur Rasyidah Mohd Nordin, Wafa Omar</i>	198 – 209
23	Impact of Digital Tools in Teaching Cross-Cultural Management Subject <i>Narentheren Kaliappen, Wan Nurisma Ayu Wan Ismail</i>	210 – 216
24	Adopting Computer-Supported Collaborative Learning: Reducing the Impact of Diverse Behaviors during the Covid-19 Pandemic <i>Nurul Nazihah Hawari</i>	217 – 222
25	Empowering Students' Online Collaborative Learning during Covid-19 Pandemic Using Canva <i>Siti Nazuar Sailin Noor Aida Mahmor, Mohammad Shah Kamarulzaman</i>	223 – 230
26	Factors Affecting the Adoption of Cloud Storage for Learning Purposes: Evidence from Malaysian Public University Undergraduate Students <i>Mathivannan Jaganathan, Nazlina Zakaria, Vimala Ramaniganthan, Logeswari Uthama Puthran</i>	231 – 241

27	Teaching Criminal Procedure: Opportunities and Challenges using Technology during the COVID-19 Pandemic <i>Aida Abdul Razak</i>	242 - 251
28	Empowering Learners in Elementary Statistics Courses using concept of 'No One Left Behind': A Case Study <i>Nor Intan Saniah Sulaiman, NorHisham Haron</i>	252 – 263
29	Do Accounting Information Systems Students' e-Learning Preferences Differ Based on Topics Discussed in Online Learning <i>Raja Haslinda Raja Mohd Ali, Saliza Abdul Aziz, Fatthiyah Abu Bakar</i>	264 – 273
30	Towards Applying Natural Language Approach in Improving Students Writing Skills: Lecturer Feedback Tools (LeFT) <i>Juhaida Abu Bakar, Hasniza Nordin, Tengku Faekah Tengku Ariffin</i>	274 – 285
31	Students' Experiences in Attending Lectures in Shared Virtual Worlds <i>Juliana Aida Abu Bakar, Adzira Hussein, Ulka Chandini Pedit</i>	286 – 294
32	Ethics in Online Learning Context: A Reflection <i>Ratnaria Wahid</i>	295 – 299
TRACK: TRANSFORMATIVE TEACHING		
33	Teacher's Instructional Design Competency: Exploring Students' Perspectives <i>Norliza Kushairi</i>	300 – 313
34	Analysis of Students' Satisfaction with Online Collaborative Learning in the New Normal <i>Zuaini binti Ishak, Shamharir Abidin</i>	314 – 324
35	From Zero To Hero: Embedding Paragogy In Assisting Non-Major Students In Achieving the CLOs <i>Muhammad Noor Abdul Aziz, Fathiyyah Abu Bakar</i>	325 – 333
36	Personal Reflections: The Myth vs. Truth of Scholarship of Teaching and Learning <i>Arifatul Husna Mohd Ariff</i>	334 – 339

37	COVID-19 and SOTL: Turning Disruption into Opportunity in Teaching Cases <i>Siti Seri Delima Abdul Malak, Arifatul Husna Mohd Ariff, Dr. Noor Afza Amran</i>	340 – 350
38	Online Learning Readiness of Company Secretarial Practice (CSP) Course <i>Dzarfan Abdul Kadir, Mohamad Naimi Mohamad Nor, Zuani Ishak, Sazali Saad</i>	351 – 359
39	The Use of the Think-Aloud Strategy in Enhancing Critical Reading Skills among Undergraduate Students <i>Aizan Yaacob, Paramjit Kaur, NoorAishah Zolqarnain</i>	360 – 371
40	Enhancing Student Performance through Targeted Support <i>Fadhilah Mat Yamin, Wan Hussain Wan Ishak</i>	372 – 379
41	Problem-Based Learning vs Problem Solving: Case of Law Students <i>Harlida Abdul Wahab, Ani Munirah Mohamad</i>	380 – 388
42	Cultural Differences in Visual Sketching for Entrepreneur Education <i>Idyawati Hussein</i>	389 – 394
43	Problem-based Learning Strategy in Contract Law: Students Empowering Students <i>Ani Munirah Mohamad, Harlida Abdul Wahab</i>	395 – 404
44	Discovery of Scholarship of Teaching and Learning among Accounting Academics: A Personal Reflection <i>Khairina Rosli, Siti Seri Delima Abdul Malak, Arifatul Husna Mohd Ariff</i>	405 – 413
45	Strengthening Teaching and Learning beyond the New Normal <i>Dzulkifli Abdul Razak</i>	414 – 424

Students' and Lecturers' Perception of Pecha Kucha as a Mode of Presentation for Marketing Subject

Mohd. Noor Abdul Hamid^{*a}, Azrina Abdul Razak^b, Norhaiza Khairudin^c

^{a,b}School of Creative Industry Management & Performing Arts,

^cTunku Puteri Intan Safinaz School of Accountancy,
Universiti Utara Malaysia, Sintok, Kedah, Malaysia.

*Corresponding Author: mohdnoor@uum.edu.my

Abstract

This study investigates perceptions of students and lecturers of the Pecha Kucha method as an alternative mode of presentation for marketing subject. Data for the study is collected from students' self-evaluation and lecturers' evaluation of the presentations as well as their reflection of the exercise. Findings from students' self-evaluation showed that modes of presentation did not contribute significantly on students' overall performance. However, Pecha Kucha did improve students' ability to use physical behaviour or gestures more effectively. On the contrary, results from the lecturers' evaluation showed that Pecha Kucha did improve students' presentation skills hence considered as a better mode of presentation. Pecha Kucha seems to improve students' ability to contribute to students self-confidence, preparation and delivery of presentation.

Keywords: Pecha Kucha, Visual Storytelling, Presentation Skills, Marketing Education

Introduction

Presentation skills is an essential skill that needs to be mastered by students in institutions of higher learning and has been identified as one of the key areas in the Malaysian Education Blueprint (Higher Education) 2015-2025. The skills are crucial especially for students pursuing their studies and later in their careers in marketing which require them to present or pitch their ideas, plan, and strategies in achieving career and organisation goals. Furthermore, developing presentation skills is also important for improving communication and creating positive learning experiences (Alwi & Sidhu, 2013). Thus, scholars have called for institutions to integrate communication skills, particularly presentation skills, into their marketing courses curriculum (Young & Murphy, 2003).

However, based on personal experience, it has been observed that most students are not able to deliver effective presentations. This is mainly due to lack of preparation and the inability to master the content which in turn leads to anxiety. Most of their presentations are dull, monotonous, unconvincing and lack eye contact with the audience. Consequently, the teaching and learning process becomes mundane and less engaging.

Apart from possessing self-confidence, mastering presentation skills also require organisation and commitment. Students need to be prepared and well-versed about the topic they are presenting, which directly will boost their confidence in giving excellent presentations. This is very much applicable to the teaching and learning (T&L) of marketing courses where students are required to understand various philosophies, concepts, and theories before putting them into practice. In other words, presentation is an effective way to assess students' understanding of a course content as well as allowing them to take charge of their own learning and become an active learner.

One way of helping students to improve their presentation skills is by encouraging them to adopt systematic methods in facilitating their presentations in the classroom. In this era of technological advancement, various tools and technologies are available to assist students to prepare for their presentations. Nevertheless, the use of these tools and technologies needs to be paired with appropriate skills, creativity and imagination.

Literature Review

Presentation as an Assessment Method

Assessment methods in business courses such as marketing, should focus on the development of important soft skills including critical thinking, problem solving, decision making and leadership, and communication skills which include written and oral communication skills (Bhati, 2012). In particular, oral communication skills are crucial especially for marketing students as they will be required to present or pitch their ideas, plan and strategies in achieving career and organisation goals once they enter the workforce (Alwi & Sidhu, 2013). Therefore, evaluation of oral communication skills through presentation is very much applicable in marketing courses and considered one of the best methods to assess the learning process. In addition to the generic discipline related knowledge and skills, oral communication competencies are also important criterion that employers use to evaluate a graduate (Davis & Karunathilake, 2005). One of those competencies is the ability to listen and speak well in order to carry out any given tasks. Thus, universities face challenges in providing proof that they have been assessing these essential skills (Erwin & Sebrell, 2003). Consequently, researchers have studied the oral presentation as an effective method of assessment in business subjects (e.g. Bhati, 2012; Dunbar, Brooks, & Kubicka-Miller, 2006).

Rubric for Oral Presentation: The Competent Speaker

Rubric are defined as assessment tools that guide the evaluation of the quality of work and performance level achieved by students on certain tasks using specified criteria and levels (García Ros, 2011). Scholars have raised for the need of a comprehensive and reliable assessment of students' communication skills (Interlante, De Riemer, Tirpak, & Palomino, 2016). Following this, the Competent Speaker Speech Evaluation Form, was developed in 1990 by the U.S. National Communication Association Committee as a standardized and tested instrument to assess public speaking competency in higher education (Backlund, 1990). It is specifically designed for the purpose of classroom evaluation, placement, instruction, advisement of students and the generation of assessment data (Morreale, 1990). The evaluation consists of eight public speaking competencies, where four components relate to the preparation and four components relate to the delivery of the presentation as described in Table 1 (Morreale, 2007).

Table 1
The Competent Speaker Assessment Components.

<i>Components</i>	Preparation & Content	Presentation & Delivery
<i>Items</i>	<ul style="list-style-type: none"> • Topic selection • Thesis / specific purpose • Supporting material (includes presentational aids) • Organization of presentation. 	<ul style="list-style-type: none"> • Language • Vocal variety • Pronunciation, grammar, and articulation. • Physical (nonverbal) behaviours & gestures.

Traditional Approach of Students' Presentation: The Death of Powerpoint

Microsoft PowerPoint (PowerPoint) is considered the leading presentation software used in higher education for the past two decades, mainly because it is user-friendly and systematic (Eves & Davis, 2008; Klemm, 2007). It was estimated that over 30 million Powerpoint presentations are recorded daily especially in the classroom setting (Apperson, Laws, & Scepanisky, 2006 ; Clark, 2008).

Despite its popularity, there are some drawbacks of PowerPoint, especially in improving students' oral presentation skills. The tendency to cram the slides with text and read verbatim often make presentations less engaging and frustrating. This often leads to exceeding the time allotted (Levin & Peterson, 2013; Oliver & Kowalczyk, 2013; Tomsett & Shaw, 2014) and do not assist students to improve their presentation skills. Harman (2010) concludes such presentations to be an unbeneficial and unendurably boring experience. Garber (2011) described this phenomenon as the 'Death by PowerPoint'.

Previous studies have focused on the impact of PowerPoint on students' recollection of lecture materials with mixed findings. However, a few have stood out with stronger internal validity. Savoy et al. (2009) found that traditional lecture students retained more of the auditory information compared to the PowerPoint lecture and those who did not attend class. Similar findings were found in Wecker (2012) which used between-subjects design of having three conditions of i) not using any slides, ii) use of 10 slides, or iii) 4 slides in a 30-minute presentation. It was found that the concise and no slides conditions exhibited better retention of oral information. In another study Murugaiah (2016) looked at the effectiveness of presentation styles by juxtaposing visually rich presentations with text-heavy slide presentations. It was found that the latter lacked engagement because it forced the audience to construe between what is said and written on screen. All the above-mentioned studies revealed that traditional, text-based PowerPoint slides may not be able to enhance the learning experience and that using bullet points in a presentation do not always produce the desired results.

Visual Story Telling & Pecha Kucha as an Alternative Presentation Method

Numerous studies have found that the way in which a presentation is designed and organized are as important as its delivery. Storytelling is seen as an important teaching technique which allows the use of a foray of human experiences as teachable moments for students (Woodhouse, 2011). By combining visual images, storytelling provides a stimulus for emotional connections to bind with a storyline and thus, assists to contextualize the knowledge presented. Previous studies (e.g. Brock & Joglekar, 2011; Murugaiah, 2016) have found that students responded more positively to visual presentations rather than with text or bullet point presentations. Their study concluded that the slides used in such presentations act as support and memory devices for presenters. Condensing information and highlighting them assisted in the retainment of information.

In line with this, Beyer (2011) suggested an alternative approach to develop student presentation skills, that is by using the Pecha Kucha method. The Pecha Kucha is a novel and widely used presentation style of new concepts and ideas due to its easy format which is concise and fast-paced. It is a creative solution to "Death by PowerPoint". The concept was first developed by Astrid Klein and Mark Dytham in 2003 at a meeting on architecture. Interestingly, presenters at such meetings have used Pecha Kucha in presenting new products ranging from newly constructed buildings to new designs or even for other related subjects (Byrne, 2016; Levin & Peterson, 2013; Murugaiah, 2016; Oliver & Kowalczyk, 2013). It is seen as an effective presentation method for both the

presenter and the audience, therefore, making it suitable to be used in classes (Byrne, 2016). Although Pecha Kucha has been used extensively as a student presentation format in higher education institutions abroad, Murugaiah (2016) argues that its usage is still in its infancy in Malaysia, thus require more studies to evaluate its effectiveness within the local context.

The term Pecha Kucha is Japanese for “chit chat”. It can also mean “lightening talk,” and uses a highly disciplined presentation structure consisting of 20 slides that are presented at a rate of 20 seconds per slide, limiting the overall presentation time to 6 minutes and 40 seconds. By doing so, the presentations are concise, interesting and allow more presenters to share their ideas. The most prevalent difference between Pecha Kucha presentations and standard PowerPoint presentations is the use of pictures and graphics on the slides to supplement communication of ideas rather than bullet-point text, charts, and graphs. Even though the structure is rigid, Pecha Kucha is suitable to be used by a single presenter or in dyads or groups because the format is flexible.

There are several reasons why Pecha Kucha is believed to improve student presentations. Firstly, using automated slides requires precision of the presenter to organize the messages to be presented within the allotted time. Pecha Kucha presentations also use imagery to support key main points. This enables the audience to make visual connections between abstract concepts (Eves & Davis, 2008). The use of images clarify the meaning of the message as described in Paivio’s (1971) Dual Coding Theory. The exclusion of text in Pecha Kucha presentation, forces presenters to cleverly combine the visual images on the slides with verbal presentation (Kletzin, Paladino, Johnson, & Devine, 2010). Using Pecha Kucha requires the presenter to know the material well enough to present and genuinely engages with the audience. They enhance the audience’s understanding, rather than steering their attention away from the intended message (Eves & Davis, 2008).

Previous studies have found that students benefited from Pecha Kucha method in terms of reduced anxiety (Coskun, 2017), better understanding (McDonald & Derby, 2015) and retention (Savoy et al., 2009) of course content, better concentration and improve rapport of the presenter (Beyer, 2011). This method is also found to be more entertaining, attractive, interesting, liberating, and creative (Abraham et al., 2018; Artyushina, Sheypak, & Khovrin, 2011; Beyer, 2011; Kletzin et al., 2010). It also encourages active learning and lessens student preparation time for exams (Coskun, 2017).

Nevertheless, Anderson and Williams (2012) raised two different issues about the timing of Pecha Kucha. The first issue highlighted on the effectiveness of presentations where the limitation of time forces presenters to focus just on the primary information whilst leaving out the details. To overcome this issue, Byrne (2016) suggested increasing the amount of slides and time allotted, especially when used for complex subjects. Furthermore, Beyer (2011) suggested that the presenter’s effective delivery is just as important as the presentation style in determining the presentation quality. According to Murugaiah (2016), this can be challenging for students at low proficiency levels. Therefore, in order to maximise the potential benefits of Pecha Kucha as a learning strategy, he suggested adding more training and pedagogical support for students.

Methodology

This study adopted a randomized control trial design with aim to evaluate the effects and perceptions of two modes of presentation. Therefore, the modes of presentation (i.e. Pecha Kucha & traditional modes of presentation) act as the independent variables and

the students' performance, i.e. level of competency in giving a presentation, act as the dependant variable.

Participants and Sample Size

The participants in this research were the students enrolled in the SCIM2023 Marketing in Creative Industries course in First Semester 2020/21 session. A total of 76 students registered for the course and were randomly assigned into two groups (i.e. 37 students in Group A and 39 students in Group B) by the university's course registration system. For this study, Group A was treated as the control group, whereas Group B was treated as the experimental group. Each student was required to fill up two self-evaluation questionnaires. To examine the effects of the treatment, only data from students who completed both questionnaires were included for analysis.

Research Procedures: The Experiment, Measurement, and Intervention

On the third week of class, both groups were briefed about the exercise and the rubric that would be used for evaluation. For this exercise, each student was required to prepare a seven-minute presentation on the Value Creation topic. This topic was chosen because it is one of the core topics of the course and it allows students to have freedom in choosing their own case for presentation. It also tests students' analytical skills. Specifically, they were asked to choose an organization, a product or a brand within the creative industries and present their analysis about the product portfolio, branding, promotion and pricing strategy.

The rubric used to evaluate the students' presentation skills in this exercise was adapted from "The Competent Speaker Speech Evaluation Form" developed by the U.S. National Communication Association (S. Morreale, 2007). A Five-point Likert scale (1=Poor, 2=Fair, 3=Average, 4=Good, 5=Excellent) was used to evaluate eight presentational competencies outlined by the Competent Speaker Assessment tool (Backlund, 1990). Students' overall performance was measured using the mean score of the eight competencies.

The briefing also included an introduction and demonstration of Pecha Kucha as treatment for the experimental group. They were also provided with the modified Pecha Kucha template consisting of 14 slides which automated at the rate of 30 seconds per slide. This is based on Byrne (2016) recommendation due to the difficulty of the topic. After the briefing, each student was required to fill up a self-assessment questionnaire of their own performance.

On the fourth and fifth week, students were requested to identify the case and prepare for their presentations. Students from the Control Group were requested to use whichever tools they were comfortable with to prepare their presentations. Majority of the students in this group opted to use PowerPoint. Meanwhile students from the Experimental Group were required to adopt the Pecha Kucha format.

All presentations were recorded and made available for each student to review their own performance. This was then followed by the second self-assessment questionnaire, the lecturers' assessment, and reflections. To minimize bias in lecturers' evaluation, two lecturers who did not teach the course were asked to score students' performance from the video recordings. Video recording has been proven to be a method which empowers students to assess their performance (Bourhis & Allen, 1998; Quigley & Nyquist, 1992). They are also more likely to apply what they learned from the self-assessment when developing future presentations (Smith & Sodano, 2011). The use of video technology also allows for a better assessment where assessment for the content can be separated from delivery skills (Ritchie, 2016). In total, 57 completed responses from the students

were used for analysis and reporting. Figure 1 summarizes the research procedures.

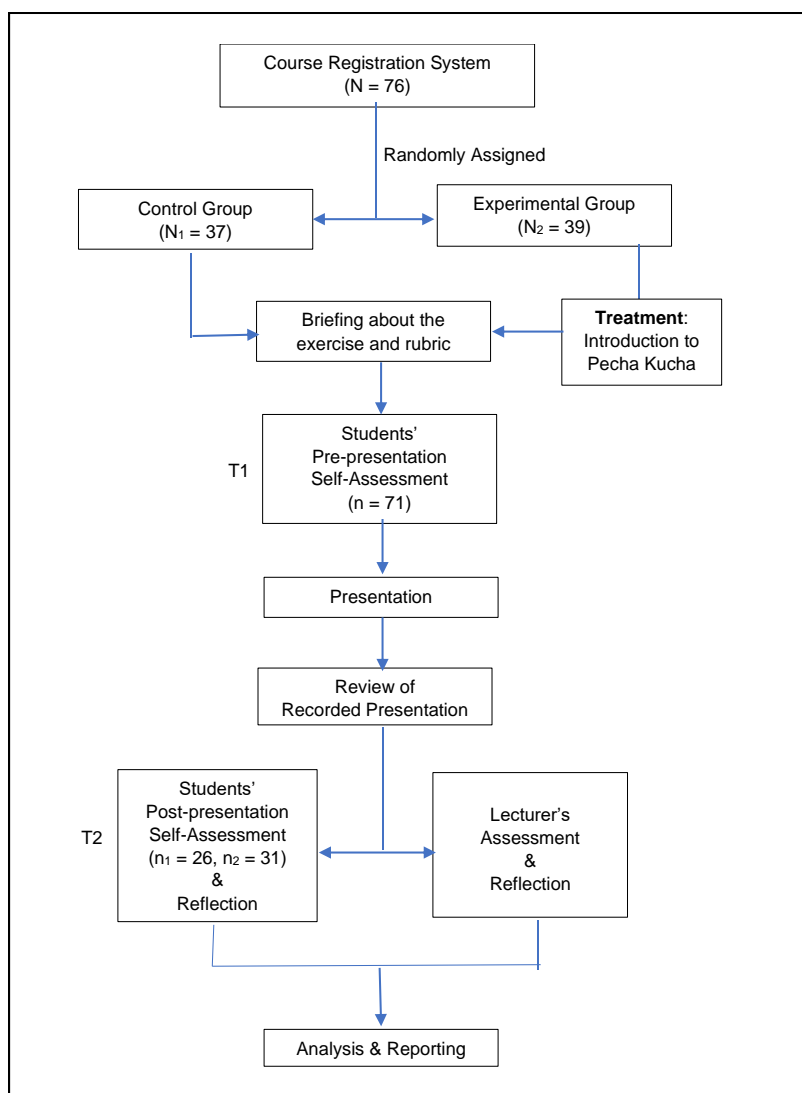


Figure 1. The Research Procedures

Findings

Findings from the Experiment

Students' Self-Evaluation

Table 2 shows students pre- and post-presentation evaluation for both control and experimental groups. The means score for all eight competencies are above average for both groups. Students from the experimental group rated themselves higher as compared to those in the control group. The component with the highest rating is ability to communicate the purpose of presentation and present the arguments. Meanwhile, the competency with the lowest rating, is the physical behaviour.

Table 2
Students' Self-Evaluation

Competencies	Control Group (n1 = 26)		Experimental Group (n2 = 31)	
	Pre- presentation Mean (SD)	Post- presentation Mean (SD)	Pre- presentation Mean (SD)	Post- presentation Mean (SD)
Choice of topic (i.e. case)	3.81 (1.06)	3.96 (1.04)	4.06 (0.73)	4.29 (0.78)
Purpose/Thesis	4.44 (1.14)	3.64 (0.81)	4.72 (0.88)	3.95 (0.86)
Supporting materials	3.70 (0.89)	3.80 (0.97)	3.90 (0.62)	3.94 (0.81)
Organization	3.69 (0.89)	3.56 (0.85)	3.87 (0.75)	3.84 (0.78)
Language	3.88 (0.91)	3.58 (1.10)	4.00 (0.82)	3.81 (0.91)
Vocal variety	3.58 (0.99)	3.58 (0.99)	3.61 (0.84)	4.03 (0.95)
Pronunciation, Grammar &	3.62 (0.64)	3.42 (0.95)	3.61 (0.56)	3.61 (0.72)
Articulation	3.52 (0.81)	3.38 (0.78)	3.52 (0.64)	3.85 (0.77)
Physical Behaviours (Gestures)	3.81 (0.84)	3.64 (0.89)	3.96 (0.60)	3.94 (0.76)
Overall Performance				

Effects of the Exercise on Students' Presentation Skills (Pre- VS Post-Presentation).

The students in both control and experimental group did not demonstrate any significant improvement in terms of their overall performance as a result of completing the exercise. However, on the component level, their ability to communicate the purpose or thesis of presentation seemed to decrease significantly before and after the exercise, i.e. $t(25)=3.727$, $p=.001$ for the control group and $t(30)=3.804$, $p=.001$ for the experimental group. Nevertheless, the experimental group reported improvements in terms of their ability to use their vocal, $t(30)=2.087$, $p=.045$ and physical behaviour, $t(30)=2.310$, $p=.028$.

Effects of the Presentation Mode (Traditional Powerpoint VS Pecha Kucha) on Students' Performance (Control VS Experimental Group). In order to examine the effect of presentation mode on students' presentation skills, the post-presentation self-evaluation score between the two groups were compared. The analysis shows no significant difference in terms of the overall performance for both groups. However, on the component level, the experimental group performed better in terms of their ability to use physical behaviour or gestures, $t(55)=2.244$, $p=.029$.

Lecturers' Evaluation (Post-presentation)

Table 3 shows the lecturers' evaluation for both the control and experimental groups. The participant in the experimental group clearly outperformed their counterparts in the control group in all components as well as overall performance. The main differences between the two groups are in terms of their ability to use supporting materials and organizing their presentations. This result shows that Pecha Kucha is favored by the lecturers.

Table 3
Lecturers' Evaluation

Components	Control Group (n1 = 26) Mean (SD)	Experimental Group (n2 = 31) Mean (SD)	t (55)	Sig. (2-tailed)
Choice of topic (i.e. case)	2.65 (0.485)	3.65 (0.839)	5.322	.000
Purpose/Thesis	2.71 (0.218)	2.96 (0.588)	2.065	.044
Supporting materials	2.47 (0.486)	3.92 (0.584)	10.092	.000
Organization	2.72 (0.637)	3.76 (0.405)	7.507	.000
Language	2.69 (0.549)	3.52 (0.724)	4.762	.000
Vocal variety	2.88 (0.326)	3.32 (0.541)	3.613	.001
Pronunciation, Grammar & Articulation	2.65 (0.485)	3.35 (0.709)	4.268	.000
Physical Behaviours (Gestures)	2.81 (0.227)	3.31 (0.539)	4.398	.000
Overall Performance	2.70 (0.297)	3.49 (0.525)	6.810	.000

Comparison between Lecturers' and Students' Evaluation.

The study also analyses the differences between the lecturers' and students' expectations for the exercise. Students in the control group gave significantly higher scores for their overall performance as well as in all components assessed as compared to the lecturers. However, the self-evaluation scores from the experimental group only differ from the lecturers' score in terms of overall performance, $t(30) = 3.671$, $p=.001$ and in four components, namely, i) choice of topic, $t(30) = 5.064$, $p= .000$, ii) communicating the purpose or thesis of presentation, $t(30) = 6.449$, $p=.000$, iii) vocal variety, $t(30) = 4.383$, $p=.000$, and iv) physical behaviour, $t(30) = 3.869$, $p=.001$.

Findings from Students' and Lecturers' Reflections

Based on the students' reflection, there are several benefits reported by those who adopted Pecha Kucha. One of the main benefits that were mentioned by the participants is that the approach has forced them to be more prepared, rehearse and understand the content of their presentation well.

"I used to depend or read the text on my slides when presenting. However, with Pecha Kucha there is no way I can do that. [...] It makes me feel more anxious to present and at the same time it also requires more effort to make sure I didn't stumble during the presentation!" Student A.

"Pecha Kucha is really challenging for me because I need to make sure everything is smooth and synchronized with the timing (but) it helps me a lot in preparing for my presentation" Student B.

In addition to that, Pecha Kucha allow students to use their body and gesture more effectively as mentioned by one student.

"I like it because I can move freely since there is no need to hold on to the mouse in order to control the slides transition" Student C.

However, there are also some difficulties faced by the students in trying this new approach. For some students, finding a good image to represent the concept or idea that they wanted to explain can be very challenging.

"I find it difficult to find suitable picture to describe an abstract or subjective concept such as customer satisfaction. At the end I just use a thumb up picture." Student D.

Overall, students who adopted Pecha Kucha found it challenging but they admitted that it is a better approach and would prefer listening to this mode of presentation than the traditional bullet and text slides presentation.

"Yes! It is very challenging ... but it is more interesting, and you really focus on what the presenters are saying rather than reading their slides." Student E.

"Before this I never really paid much attention to my friends' presentation because I can simply read their slides on my own. It was boring. Everyone just read their slides! But with Pecha Kucha everything makes more sense, more interesting and I really pay more attention." Student F.

"It is very difficult! If I was given a choice, I would choose the normal way to present because it is easier! Less preparation is needed. I can simply read my slides (haha)."

But it is of course more interesting to listen to Pecha Kucha presentation.” Student G.

The lecturers are all in favour of Pecha Kucha. Based on their observation, students adopted this approach seems more to exhibit more self-confidence, well-rehearsed and fully understand what they presented.

“I am impressed on the quality of Pecha Kucha presentations! You can tell that these students really put a lot of effort to make sure their presentation went well. They also seem to give better explanation and possess better self-confidence”. Lecturer A.

“Overall, I can see the difference between the two groups of students. Those who use Pecha Kucha really understand the content of their presentation thoroughly. Whereas those who use traditional approach seem to only read their slides most of the time ... they also show no effort or interest in their own presentation and seems unprepared! They also took more than the allotted time. Most of their presentation are too long and very dull”. Lecturer B.

Discussion

The main aim of this study is to examine the students’ and lecturers’ perception of Pecha Kucha as an alternative mode of presentation. From the students’ perspective, the findings indicate no significant improvement in their overall performance. The Pecha Kucha approach only improved their ability to effectively use their gestures. This is probably due to the fact that this approach uses an automated slides transition which allows students to use their body to present and express their arguments more convincingly. The findings are in line with Kletzin et al. (2010) who found that both modes of presentations were equally effective in teaching and learning. The results might be due to the fact that most students have acquired satisfactory level of competency as observed in their pre-presentation self-evaluation. Therefore, it can be argued that the differences found in this study might simply be based on their perception of the particular exercise used in this study and not a reflection of their overall improvements following the treatment. This also explains the decrease in ability to communicate the purpose or thesis of their presentation for both groups. It somehow shows their inability to foresee the difficulty of the exercise during the initial briefing. In other words, most students often expect the task to be easier during the briefing than the actual experience of doing it.

Findings from students’ reflections reveal that those who adopted Pecha Kucha found it easier than expected. From the audience perspective, majority of the students who listened to Pecha Kucha presentation favor it over the traditional presentation and view it as fun, engaging and enjoyable. This is consistent with findings by Abraham et al. (2018), Artyushina, Sheypak, & Khovrin (2011), Beyer (2011), and Kletzin et al. (2010). However, as a presenter, most of them would choose the traditional approach due to the familiarity, ease of preparation and no pressure in terms of timing. This finding is consistent with Beyer (2011).

Pecha Kucha is also the preferred approach by the lecturers’ and have been found to improve students’ competency, in particular, their ability to use supporting materials, organizing and delivering their presentation. This is again because students were compelled to avoid textual materials and be more creative in presenting their points. It was also observed that those adopting Pecha Kucha approach seems to exhibit better self-confidence. Many reported that this approach has forced them to rehearse their delivery and better understand the content of their presentation. As expected, the

automated transition format also solves the issue of students consuming more than the allotted time, thus disrupt and drag the presentation schedule.

This study also found that there is significant disparity between students' and lecturers' expectations for presentation. This is consistent with previous research (e.g. Langan et al., 2008; Patri, 2002). In most cases, students tend to overrate their own performance (e.g. Beyer, 2011; Karpen, 2018; Miller, 2003). The findings also highlight the discrepancy between the students' and lecturers' expectations of an excellent presentation. This calls for a better approach in closing the gaps between these two expectations. Showing students examples of excellent and poor presentations during the initial briefing could be helpful to achieve this. Students should also be encouraged to seek on-going feedbacks, especially based on their rehearsal. Furthermore, students enrolled in Marketing courses need to be exposed to various approaches of presentation and choose the one that best match their strengths as well as most appropriate for the subject and audiences.

Conclusion

Mastery of presentation skills is important in preparing students for the workforce as well as improving their learning experience. Although the study reveals that there are no significant improvements were observed by the students in their presentations, they still enjoyed Pecha Kucha presentations. On the other hands, the lecturers observed improvement in students' competency when this approach is employed especially when incorporating supporting materials and in organizing their presentations. Therefore, they preferred this approach over traditional ones. The discrepancy between the students' and lecturers' expectations of what constitutes an excellent presentation is an issue that need to be addressed. This is to ensure that the evaluation can be done in the most objective manner and students can be trained to give a better presentation.

References

- Abraham, R. R., Torke, S., Gonsalves, J., Narayanan, S. N., Kamath, M. G., Prakash, J., & Rai, K. S. (2018). Modified directed self-learning sessions in physiology with prereading assignments and Pecha Kucha talks: Perceptions of students. *Advances in Physiology Education*, 42(1), 26-31.
- Alwi, N. F. B., & Sidhu, G. K. (2013). Oral presentation: Self-perceived competence and actual performance among UiTM business faculty students. *Procedia-Social and Behavioral Sciences*, 90, 98-106.
- Anderson, J. S., & Williams, S. K. (2012). Pecha Kucha for lean and sticky presentations in business classes. *Working paper prepared for the W.A. Franke College of Business, Northern Arizona University*.
- Apperson, J. M., Laws, E. L., & Scepansky, J. A. (2006). The impact of presentation graphics on students' experience in the classroom. *Computers & Education*, 47(1), 116-126.
- Artyushina, G., Sheypak, O., & Khovrin, A. (2011). *Developing student presentation skills at the English language classes through pechakucha*. Paper presented at the 2011 IEEE Global Engineering Education Conference, EDUCON 2011.
- Backlund, P. (1990). Communication Competence and Its Impact on Public Education.
- Beyer, A. M. (2011). Improving Student Presentations: Pecha Kucha and Just Plain PowerPoint. *Teaching of Psychology*, 38(2), 122-126.
- Bhati, S. S. (2012). The Effectiveness of Oral Presentation Assessment in a Finance

- Subject: An Empirical Examination. *Journal of University Teaching and Learning Practice*, 9(2), 6.
- Bourhis, J., & Allen, M. (1998). The role of videotaped feedback in the instruction of public speaking: A quantitative synthesis of published empirical research. *Communication Research Reports*, 15(3), 256-261.
- Brock, S., & Joglekar, Y. (2011). Empowering PowerPoint: Slides and teaching effectiveness. *Interdisciplinary Journal of Information, Knowledge, and Management*, 6, 85–94.
- Byrne, M. M. (2016). Presentation innovations: Using Pecha Kucha in nursing education. *Teaching and Learning in Nursing*, 11(1), 20-22.
- Clark, J. (2008). PowerPoint and pedagogy: Maintaining student interest in university lectures. *College Teaching*, 56 (1), 39-44.
- Coskun, A. (2017). The Effect of Pecha Kucha Presentations on Students' English Public Speaking Anxiety. *Profile: Issues in Teachers' Professional Development*, 19(1), 11–22.
- Davis, M. H., & Karunathilake, I. (2005). The place of the oral examination in today's assessment systems. *Medical teacher*, 27(4), 294-297.
- Dunbar, N. E., Brooks, C. F., & Kubicka-Miller, T. (2006). Oral Communication Skills in Higher Education: Using a Performance-Based Evaluation Rubric to Assess Communication Skills. *Innovative Higher Education*, 31(2), 115.
- Erwin, T. D., & Sebrell, K. W. (2003). Assessment of critical thinking: ETS's tasks in critical thinking. *The Journal of General Education*, 50-70.
- Eves, R. L., & Davis, L. E. (2008). Death by PowerPoint? *Journal of College Science Teaching*, 37(5), 8-9.
- Garber, A. R. (2011). Death by PowerPoint. *Small Business Computing.com*. Retrieved from <http://www.smallbusinesscomputing.com/biztools/article.php/684871>.
- García Ros, R. (2011). Analysis and validation of a rubric to assess oral presentation skills in university context. *Electronic Journal of Research in Educational Psychology*, 9, 1043-1062.
- Harman, K. E. (2010). Innovations in co-ordinating undergraduate students' oral tutorial presentations. *Journal of University Teaching & Learning Practice*, 7(1), 1-13.
- Interlante, M., De Riemer, C., Tirpak, P., & Palomino, A. (2016). Oral Communication Competency Across the Virginia Community College System: A Faculty-Designed Assessment. *Inquiry: The Journal of the Virginia Community Colleges*, 20(1), 3.
- Karpen, S. C. (2018). The Social Psychology of Biased Self-Assessment. *American Journal of Pharmaceutical Education*, 82(5), 6299. doi:10.5688/ajpe6299
- Klemm, W. R. (2007). Computer slide shows: A trap for bad teaching. *College Teaching*, 55(3), 121-124.
- Kletzin, J. C., Paladino, E. B., Johnson, B., & Devine, C. (2010). Pecha Kucha: Using "lightning talk" in university instruction. *Computer & Education*, 35(3), 175-187.
- Langan, A. M., Shuker, D. M., Cullen, W. R., Penney, D., Preziosi, R. F., & Wheeler, C. P. (2008). Relationships between student characteristics and self-, peer and tutor evaluations of oral presentations. *Assessment & Evaluation in Higher Education*, 33, 179-190.
- Levin, M. A., & Peterson, L. T. (2013). Use of pecha kucha in marketing students' presentations *Marketing Education Review*, 23(1), 59–63.
- McDonald, R. E., & Derby, J. M. (2015). Active Learning to Improve Presentation Skills: The Use of Pecha Kucha in Undergraduate Sales Management Classes.

- Marketing Education Review*, 25(1), 21-25.
- Miller, P. J. (2003). The effect of scoring criteria specificity on peer and self-assessment. *Assessment & Evaluation in Higher Education*, 28(4), 383-394.
- Morreale, S. (1990). "The Competent Speaker": Development of a Communication-Competency Based Speech Evaluation Form and Manual.
- Morreale, S. (2007). "The Competent Speaker" *Speech Evaluation Form*: National Communication Association.
- Murugaiah, P. (2016). Pecha Kucha style powerpoint presentation: An innovative call approach to developing oral presentation skills of tertiary students. *Teaching English with Technology*, 16(1), 88-104.
- Oliver, J., & Kowalczyk, C. (2013). Improving student group marketing presentations: a modified pecha kucha approach. *Marketing Education Review*, 23(1), 55–58.
- Paivio, A. (1971). *Imagery and verbal processes*. New York: Holt, Rinehart & Winston.
- Patri, M. (2002). The influence of peer feedback on self and peer assessment of oral skills. *Language Testing*, 19(2), 109-131.
- Quigley, B., & Nyquist, J. (1992.) Using video technology to provide feedback to students in performance courses. *Communication Education*, 41(3), 324-334.
- Ritchie, S. M. (2016). Self-assessment of video-recorded presentations: Does it improve skills? *Active Learning in Higher Education*, 17(3), 207-221.
- Savoy, A., Proctor, R. W., & Salvendy, G. (2009). Information retention from PowerPoint and traditional lectures. *Computers & Education*, 52, 858-867.
- Smith, C. M., & Sodano, T. M. (2011). Integrating lecture capture as a teaching strategy to improve student presentation skills through self-assessment. *Active Learning in Higher Education*, 12(3), 151-162.
- Tomsett, P. M., & Shaw, M. R. (2014). Creative classroom experience using pecha kucha to encourage ESL use in undergraduate business courses: A pilot study. *International Multilingual Journal of Contemporary Research*, 2(2), 89-108.
- Wecker, C. (2012). Slide presentations as speech suppressors: When and why learners miss oral information. *Computers & Education*, 59, 260-273.
- Woodhouse, H. (2011). Storytelling in university education: Emotion, teachable moments, and the value of life. *Journal of Educational Thought*, 45(3), 211–238.

Online Technology as a Tool for Alternative Assessment in Nationhood Studies: A Review

Sharifah Binti Ismail^{*a}, Maizatul Azura Binti Yahya^b, Rukhaiyah Haji Abd. Wahab^c,
Rafidah Mohamad Cusairi^d

^aSchool of Languages, Civilisation and Philosophy, Universiti Utara Malaysia

^{*}Corresponding author: sharifah@uum.edu.my

Abstract

Nationhood studies is a course that is specifically designed for students to understand about nation building process in Malaysia. It discusses the progress of nation building in the country from different aspects. The course aims to equip the students with the transferable skills, knowledge, and sound ethical foundations to maximize their creative potentials to be global citizens with a strong Malaysian identity, ready and willing to contribute to the harmony and betterment of the family, society, and nation. Therefore, online technology has been incorporated into the teaching and learning process as a form of alternative assessment to allow students to not only fully understand the curriculum, but also to develop critical skills and values needed to function successfully as a citizen in our country. This paper investigates the application of online tools for alternative assessment in education. It also examines the effectiveness of the technology as an alternative assessment platform for nationhood studies subject. The researchers adopt a qualitative method that enables them to analyze and assess the materials collected from multiple sources. These sources help furnish the study with solid accounts to examine the roles of online tools to serve as a platform for alternative assessment in nationhood studies. The study arrived to the conclusions that online technology plays a significant role in education of current world. The usage of online applications as a form of alternative assessment for nation building studies enriches students learning experiences and supports the formative assessment objectives.

Keywords: Online Technology, Alternative Assessment, Formative Assessment, Online Evaluation Tools, Nationhood Studies.

Introduction

Nationhood studies equips students with the knowledge in nation building in Malaysia. The objective of the course is to highlight and analyze challenges in the process of nation building in Malaysia. Since independence, Malaysia has faced a challenging task to form a single Malaysian identity due to its pluralist society which each ethnicity retains a strong ethnic identity. The success of nation-building in Malaysia needs more than people who claim that they are Malaysian and who see Malaysia as their home. Beyond that, they must have a strong sense of attachment and deep shared values to reach a shared destiny of a Malaysian nation. Therefore, the course acquires us to enhance students understanding on the topic as to build good practice in skills and knowledge acquisition in specific issues and skills.

Online technology could be one of feasible options and tool for alternative assessment in nationhood studies. Online tools can enhance the students understanding on the topic and provide meaningful learning experience to them. Online alternative assessment can be used as a tool to monitor students' progress in learning process, to give feedback and evaluate students' achievements in a fully online mode which is more

valuable for academic development. The use of online technology as a form of alternative assessment in teaching and learning is more effective than conventional methods in enhancing digital skills of students. It also enhances students' comprehension and equip students with critical skills and values needed for a nation.

The purpose of this research is to highlight online tools for alternative assessment in tertiary education. It also analyses the usefulness of online alternative assessment for nationhood subject. Therefore, this paper fosters the understanding of alternative assessment process via the usage of online technology. It also provides engage documentation of online alternative assessment to enhance teaching and learning aspect and share best practices in the subject matter with other practitioners and public.

Methodology

The researchers implement a qualitative method that enables them to analyze and assess the materials collected from multiple sources. Available secondary sources such as from library research are referred with the given topics. The researchers also carried out several class observations. Observations were conducted during nationhood studies class meetings both with Universiti Utara Malaysia undergraduate students and the Universiti Utara Malaysia Centre for Foundation Studies students. This observation method is distinctive because the researchers approached the focus groups in their own environment. They also had informal conversations and interactions with the focus groups in order to build rapport and to get firsthand information as well as more honest and truthful answers from them.

This method is useful for gaining a thorough understanding of the students experience with online alternative assessment through personal experiences and engagement in its natural setting. This method is integral to further furnish the data collected through other methods such as library research that gave the researchers better understanding of the subject matter.

This method has enabled the researchers to build several observations on the conduct online alternative assessment for nationhood studies. This method is also very useful for the researchers to evaluate the performance of the students as well as to assess online alternative assessment roles on the students' progress. Besides, other source such as reflections from both students and lecturer on online assessment activities help furnish the study with solid accounts to examine the roles of online tools to serve as a platform for alternative assessment in nationhood studies. These personal observations, reflections and other sources are of great interest for the present study in terms of research methodology, content analyses, assessment of the practice and the findings of the research. These firsthand information and personal experiences would enhance the researchers' understanding in discussing the topics concerned from different perspectives.

Literature review

One of the most crucial components of the educational process is assessing student learning. Assessment is a critical component of successful learning. It aids individuals involved in learning and teaching in determining the level of achievement of learning outcomes as well as its relevance to student abilities and skills. (J.W. Gikandi et. al, 2011).

In tertiary education frameworks, assessment is a major force. Students' learning styles, as well as the substance and scope of their learning, are influenced by assessment systems. The degree and quality of educational achievements, the learning techniques develop, teaching and learning cultures, teachers' professional image, and learners' self-image and motivations are all influenced by assessment systems. Many traditional education principles and notions have recently been challenged, necessitating a re-evaluation of learning, teaching, and assessment methods. While assessment methods have become increasingly important in the history of higher education, assessment theory and practice have undergone qualitative changes, resulting in new approaches to its goals and objectives.

As a result, alternative assessment methodologies go beyond traditional psychometric testing. Alternative assessments are designed to evaluate learning tasks that develop critical thinking abilities and force students to produce or exhibit knowledge rather than just recollect information from others. Alternative assessment methodologies give an alternate option with the existing assessment system. Alternative assessment strategies have been identified by many scholars as an effective and important way of assessing learner educational development. It encourages students to take an active role in the assessment process, improving and developing the quality of learning by expanding their awareness of the assessment criteria (Libman, 2010).

Online based alternative assessment is technology advancements that have infiltrated the educational sector. Many features and options are available in web-based assessment to meet the demands and requirements of learners. These technologies provide assessment tools that cater to a wide range of demands and learning styles by utilizing numerous sources and a variety of content and tools. Most importantly, online based alternative assessment is learner-centered environments that allow learners to actively participate in assessment using various tools and methodologies while reinforcing teaching and learning processes.

Computer-delivered assessment is already outperforming traditional types of assessment in terms of pedagogy, implementation, and administration. Online testing offers increased flexibility, cost-effectiveness, and time-saving benefits. In an era of competitive higher education financing and resource restrictions, these qualities have made it appealing. Current online designs can accommodate group and individual feedback, student self-testing, flexibility, and the detection of misconceptions in order to consolidate early intervention. The motivated and self-regulatory aspect of computer-based evaluation is an extra benefit. Students can determine when, where, and how often they take tests by allowing them to assess their own knowledge and understanding. This ensures their readiness for learning process (McLoughlin, & Luca, 2006).

Ahlam (2020) in his study investigated the impact of web-based alternative assessment methodologies, such as self- and peer-assessment, and its effects on the students. The finding from the research showcases that implementation of alternative web-based assessment methodologies can help improve the quality of education and assessment. The researcher concluded that alternative web-based assessment methodologies are recommended in education because they have a substantial impact on improving student learning skills and performance. Traditional teacher-based evaluations do not adequately reinforce student active integration into the evaluation process as these approaches do.

Discussion and Conclusion

Malaysian Nationhood Studies is a pre-requisite course for all Universiti Utara Malaysian (UUM) students. In this subject, students are inquired to analyse the advancements and changes that occurred during the country's nation-building process. They must also be able to use their understanding of nationhood to help them build their self-identity and cultivate their patriotism, nationalism, volunteerism, and leadership abilities.

Most instructors find it difficult to implement teaching and learning activities for the nationhood studies subject. The Malaysian Nationhood Studies course was seen by many students as a difficult and repetitious course. They frequently had a poor impression of the course and stated that the lecturers were not innovative in their delivery of the material (Salmah, et.al, 2020).

Besides, academicians today confront the difficult task of dealing with students who prefer interactive learning over traditional learning approach. To stimulate students' interest, lecturers must be more innovative, altering their teaching approaches and incorporating cutting-edge technological tools in education (Salmah, et.al, 2020). This statement is in line with previous study conducted by Azlah et.al, (2019). The study focused on students' opinions on the teaching approach for the Malaysian Nationhood course. The respondents of the study reported that effective and interesting teaching methods are significant components in learning the subject, based on the overall data. As a result, lecturers' inventiveness as well as their pedagogical content expertise are critical. Teaching and learning in this subject should be more relevant if educators incorporate a variety of factors into the subject's content or methodology. As a result, lecturers must structure this academic subject in an appealing manner.

Assessment is another crucial part of the teaching and learning process. Assessment is critical for ensuring educational quality and should be used to facilitate student learning as well as measure and evaluate students' progress. Assessment also ensures that students' learning results are in agreement with the demands of 21st-century skills. To adapt to contemporary development, it is critical to incorporate technology as a tool for assessment. This move is also in accordance with the Malaysian Education Blueprint (MEB 2013-2025), which calls for educators to assist students develop 21st-century abilities including critical thinking, communication, problem-solving, and cooperation. In light of this, educators play a critical role in growing students' cognitive talents, such as creativity, as well as stimulating and motivating students to think and see situations differently in classroom activities, which should be promoted among students (Tajularipin, et.al. 2021).

The purpose of this research is to introduce some online technology that have been used as a tool for alternative assessment activities in nationhood studies. Alternative assessment activity is functioned as a tool to measure students understanding on the learning process. This activity also is to align with other learning activities in order to achieve the targeted course learning outcomes.

Online mind mapping or e-mindmapping is an online tool that organize, categorize, and represent subject matter or knowledge in online form. The visual representation of the knowledge made with any online tool like Mind.mup, Canva, Mindmapfree. Com, Coggle.it and many more. The researchers' strategy in delivering the assessment is based on course learning outcomes that requires for discussion and

explanation. The evaluation session started when the lecturer gave brief lecture on the topic of study. The students later were tasked to define and work individually to understand the subject of the study. Students find the information by using online notes in UUM online learning, online search engine such as Google.com or any available online platform. The online applications are easy to be assessed by the students and can show quick results to them therefore enhancing the learning experience. After that, students will share main ideas of topic in question through online mind mapping. Students could create their own mind mapping by using their preferred online tools.

The using of online applications as tools on education stimulates students interest and understanding on the lesson content. Online mind mapping provided more attractive features for teaching and learning tool. It allows real time assessment and feedback. It also equipped with many interactive and collaborative features. Therefore, it is a more interesting tool for alternative assessment. The visual depiction of information provided by mind maps further enhance memory and improve learning experience. Hence, it is also a more appealing tool for teaching and learning.

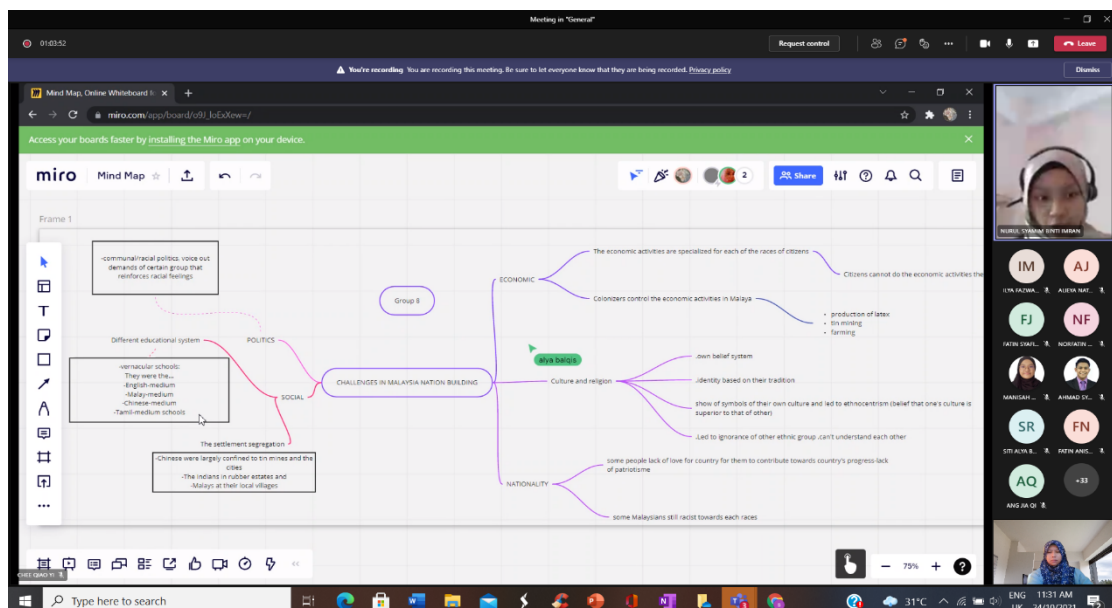


Figure 1. The figure showing the sample of e-mind mapping produced by students.

Online video is an interactive tool to increase students understanding of the topic and provide more interesting learning experience. Through the visual and audio presentation, online video helped students understanding and retention on the topic. Since the video is available online, therefore students can watch it anytime at any place that's convenient to them. Furthermore, video assignment also functioned as an effective tool for alternative assessment. For this task, students will be provided with video presentation on the selected topic of the course. During the presentation, students are instructed to jot down main points from the video and share their thoughts and feedback during class discussion. After the discussion, students were instructed to produce their own videos that related to the topics in nationhood studies. There are many online video maker applications available for video making and editing such as Visme, Canva, Animoto, Biteable.com, Filmora, Screencastify, Screen-cast-omatic and many more.

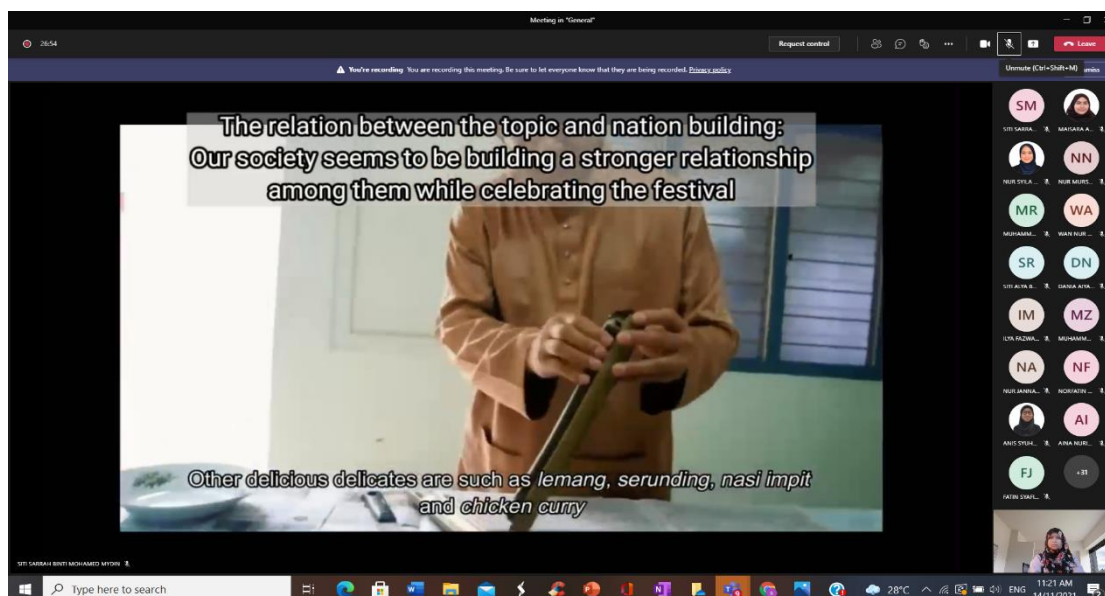


Figure 2. The figure showing the sample of video created by students.

One of the most interesting approach for alternative assessment in nationhood studies is using Web 2.0 applications as a tool for evaluation. Web 2.0 tools are simple to use digital platform that that empower students to cooperate or create and share their works online. Students can connect with and, learn from course material using Web 2.0 tools. They're especially useful when used in conjunction with teaching and assessment activities that demand students to synthesise knowledge or demonstrate understanding on the subject matter. Students can also connect with one another and share what they've learned using Web 2.0 tools with their classmates, or learners all around the world.

Web 2.0 technology has the ability to develop more interactive and powerful learning environments in which students become knowledge creators, producers, editors, and evaluators (Richardson, 2009). In this context, the researchers had also bring new approach in using the technology in the class. Instead of asking students to use tools that we have recommended them, now they could choose their own online tools that suit their learning styles and preference. This step made they feel more ownership and responsible towards the learning, and made learning activities become more fun, interactive and collaborative. It also alleviates educators' burden in exploring and finding new educational tools that suitable for students. In this assessment activity, students are requested to create a new product material based on their understanding of nationhood studies syllabus by using any preferred Web 2.0 tool. There are many online applications available such as presentation app, podcast player, virtual whiteboard or mind mapping, audience engagement tools like Nearpod, Glisser, Mentimeter, digital notebook, social media platforms, video sharing platforms such as Tiktok, Youtube and many more to be utilized.

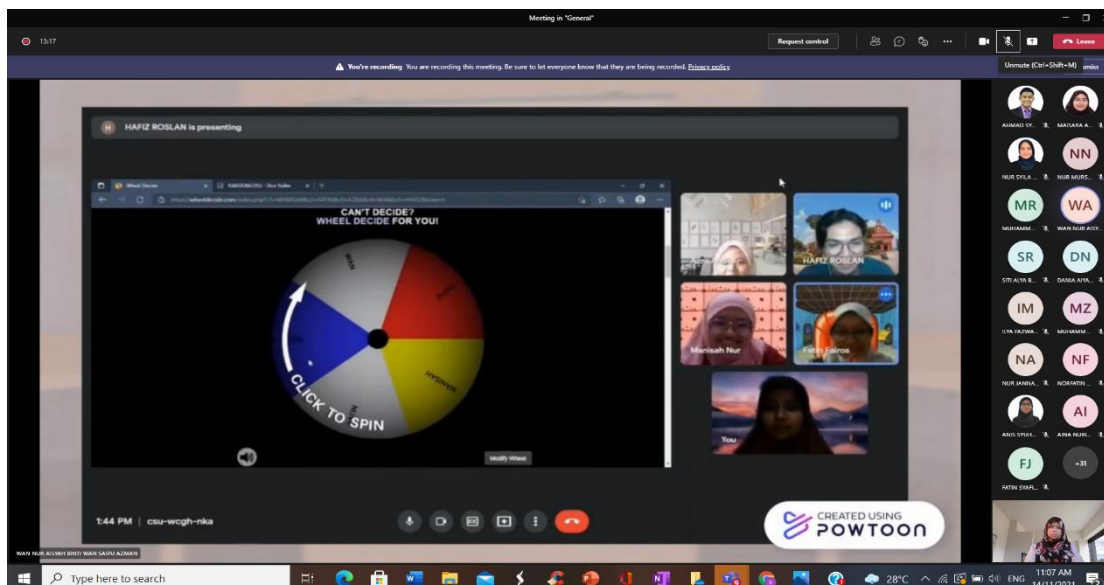


Figure 3. The figure showing the sample of Web 2.0 based assignment made by students.

Digital technology like gamification can be applied as a tool to measure students' learning progress. A game-based assessment has been designed to evaluate students' performance on the nationhood subject. In this assessment, students should display a clear connection between the content of the game and the desired learning goals the game is designed to foster. The purpose of the assessment also is to prepare the students to be independent learners towards self-directed learning that focus more on process outcome along with knowledge and skills gaining. In this assessment, students are given options either to develop their own game or to utilize any available gamification tools. Among game-based software used by the students are Random.Org, Gamestar Mechanic, Gamilab, Educaplay, Among Us and Gartic Phone.

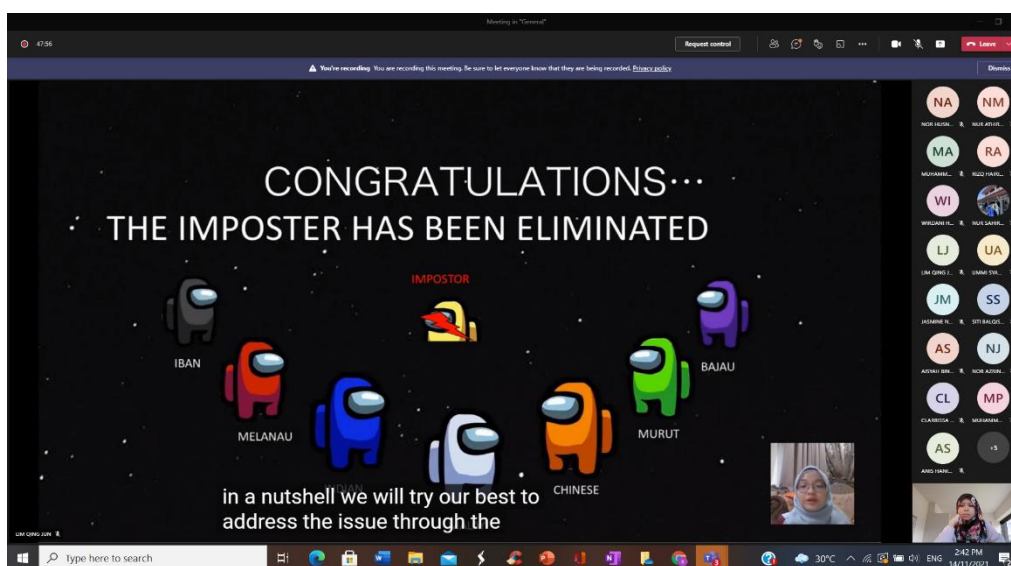


Figure 4. The figure showing the sample of game-based assignment designed by students.

Universiti Utara Malaysia Nationhood Studies Massive Open Online Course (MOOC) is an online course designed for mass participation and open (free) web access. The platform provides quality education through affordable and flexible ways of learning. MOOC have the potential to be beneficial and provide valuable knowledge that will expand our personal learning environment (Vera, M, 2015). MOOC also is a part of alternative assessment tools for nationhood subject students of UUM. Students are requested to accomplish some delivery tasks including assessment in the MOOC platform. In conclusion, MOOC offer immense opportunity to utilize new technologies for alternative assessment to attain specific learning goals.



Figure 5. The figure showing the homepage of Universiti Utara Malaysia Nationhood Studies Massive Open Online Course (MOOC) platform.

In summary, web based alternative assessment provides students with opportunity to study and work at their convenience. The material that is always accessible online provide more learning engagement and greater ability for students to concentrate on lesson content. The using of technology as a tool in education stimulates students' interest and understanding on the lesson content. Further, online based assessment presents more attractive features for teaching and learning approach in comparison to conventional method. When students create assignment using a web-based application, they are stored online. That means students can access, create, view, edit and share them from any computing device they use anywhere anytime. By using online tools, students and teacher can work collaboratively in real time. Online based alternative assessments provide a platform of interaction with live, creative and interactive audience presentation and participation, real time assessment and feedback that engaged the users.

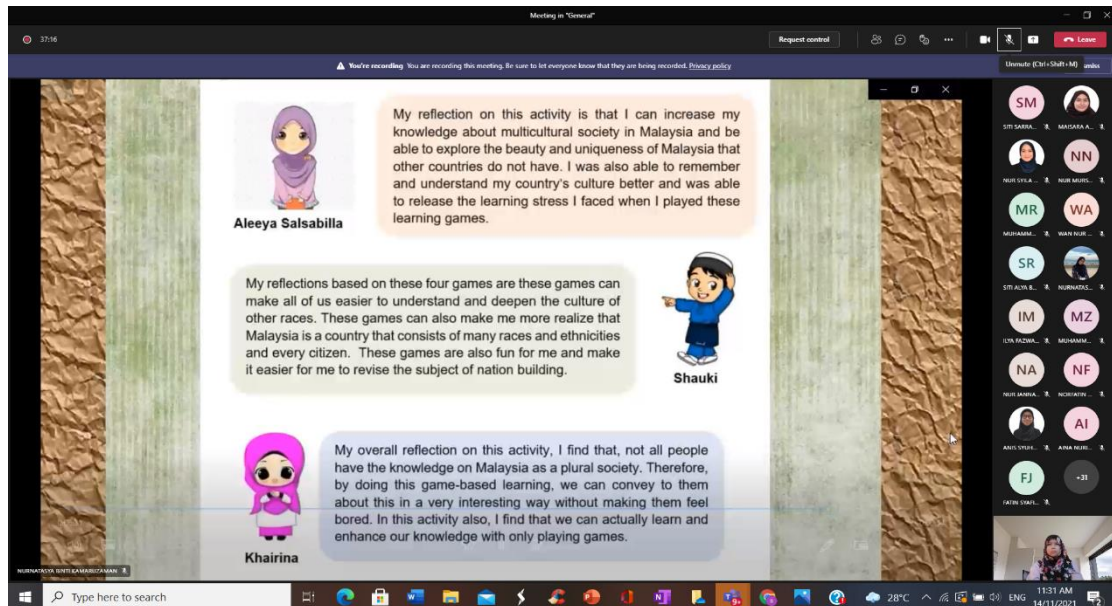


Figure 6. The figure showing the sample of feedback and reflections by students on the learning activity.

The alternative assessment activity is functioned as a tool to measure students' academic performance. It also a platform of interactions between educators and students. This activity also is to align with other learning activities in order to achieve the targeted course learning outcomes. From our own observations, our instructional delivery strategy by combining conventional approach and technology based learning triggered students' interest and motivation on the subject and contributed to the meaningful learning experience. The use of this approach in teaching and learning process also received positive responses from the students. The using of online tools such as Linoit.com, Polleverywhere.com, Kahoot.it.com and Padlet.com for instance further reinforced students understanding on the topic of the study. The real time application allows instant feedback from students. The activity also means to address teamwork and collaborative skills of the students. Therefore, the tools that had been used in learning activities provided flexible, interactive and collaborative learning experience for students. They are visual collaboration tools that created a shared perspective on any project or topic that the students working on. This activity also gave students the feel of ownership on the subject because they had opportunity to work collaboratively on the project. This student centred learning approach also makes the learning becomes more fun, interactive, engage and effective. As the students are generation with technology or digital netizen, the incorporation of technology in education stimulates students' interest and participation on the activities. They learned and used technology as educational tool at the same time. It retains their attention in learning process while keeping up with technology in education. In addition, from this learning activity and tools that have been utilized, teacher can have ideas on the level of students understanding on the topic, therefore can take necessary actions to assist student in the learning process.

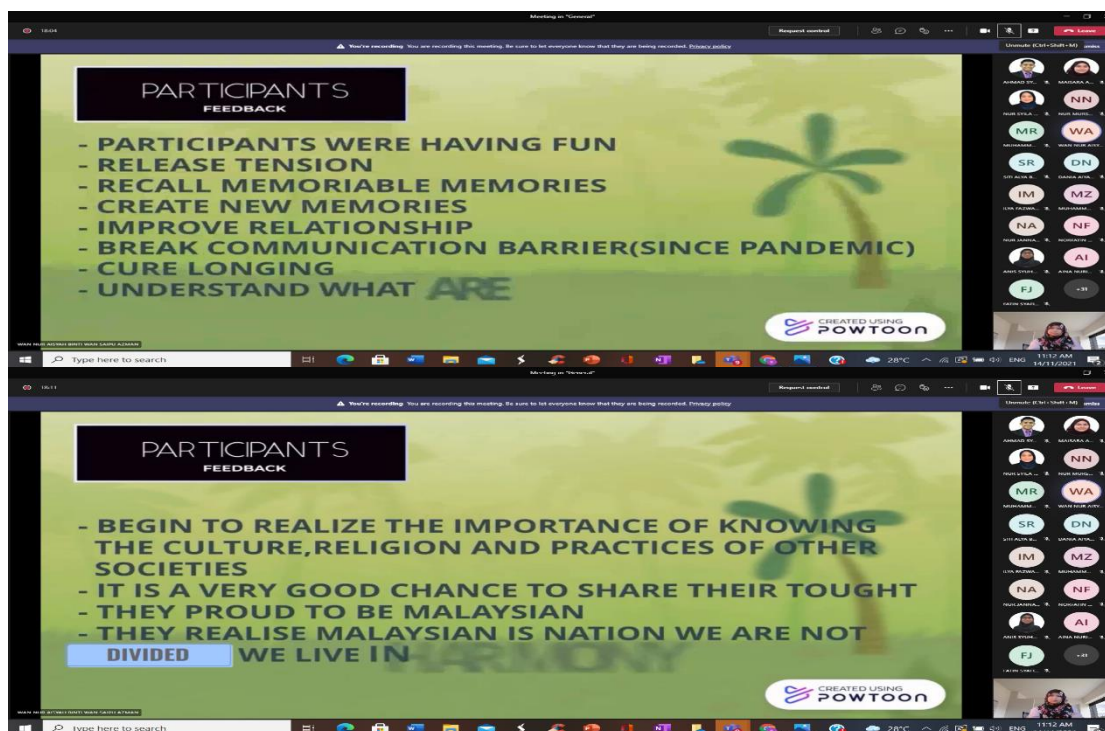


Figure 7. The figure showing the sample of feedback by the participants of the learning activity.

It can be concluded that the enhancement of class activities and assessment with technology-based education increase students' comprehension on the learning content. Therefore, it is important for teachers to build an effective situation towards the use of technology in teaching and learning. Teachers should also provide more creative and well-planned technology based instructional planning for teaching and learning process for better engagement of students.

The use of technology on the teaching practice can become a mechanism in facilitating teachers' self-professional development. This tool is a powerful technique for improving achievement. It provided teachers with on-going embedded professional development through diagnostic strategies designed to promote students' learning progress. It assists educators in increasing their ability to provide meaningful learning and recognize students' mastery in learning. Providing relevant tools in teaching is a constructive strategy for improving the learning effectiveness and providing input on teaching strategies hence resulting to professional growth. There is a link between the effectiveness of intervention activities and teacher professional development. Therefore, through teaching interventions and continues evaluations, we feel that the instructors of this course could further develop themselves professionally in their field of expertise.

The focus of alternative assessments is to do learning, improvement, and progression of the students in specific issues or skills. This is to build good practice in skills & knowledge acquisition to enhance current practice and to deliver services that follows best practice standards for knowledge and betterment of students. The findings from our observations showed that the use of online technology as the intervention in assessment is more effective than conventional method. It also enhances students' comprehension and increase their learning outcomes. Based on this evidence, the course instructors may further enhance the current teaching approach by designing new strategies in alternative assessment to equip students with necessary learning outcomes as well as to facilitate students' self-directed learning mechanism.

The researchers contemplate that incorporating technology in learning experience was a good idea as it stimulates students interest on the subject and foster their understanding on the topic discussed. Yet, educators should be careful in selecting appropriate tools for their learning activities. It is advisable for them to find tools that promote collaborative and interactive works in the class. Further, technology consumes much time in learning activities therefore lecturers should be cautious with time management in the class.

Nevertheless, learning new online tools for assessment purposes is a challenging task for educators. We have to familiarize ourselves with the tools, and to experiment with them beforehand before instructing the students to use the online applications. Therefore, in-depth research on the tools is required for better planning and execution of the task.

Educators need to be conscious of the benefits that web-based technology offers for teaching and learning, as well as the potential challenges they may face while implementing the new technologies in their classrooms. The problem of developing meaningful alternative assessment to promote desired learning outcomes is one of the hurdles to effective use of online resources for instruction. Furthermore, educators must be aware that the social element of online technologies, which makes them appealing as possible learning tools, is also one of its disadvantages. As a result, the instruments may present both opportunities and limitations that should be studied and investigated further.

In conclusion, the exercise equips the researchers with the concept of teacher scholar by systematically observing their own teaching practices using scholarly approach within specific learning environments and share our best practices with other practitioners and public. As we can conclude here, this academic exercise has embedded us with necessary knowledge and skills for quality teacher scholar in tertiary education, to enable effective engagement with our learners and impactful learning experience. Therefore, it is recommended that academic discourse on online alternative assessment should be extended to larger academic community of UUM and beyond in order to give them more exposure and insights on the topic for the benefit of all stakeholders and all.

Acknowledgement

This research is a part of research project “Spesifikasi Aplikasi Web 2.0 Untuk Keperluan Pengajaran Dan Pembelajaran (PDP) Bagi Kursus-Kursus Teras Universiti Di Jabatan Tamadun Dan Falsafah, Universiti Utara Malaysia Pasca Perintah Kawalan Pergerakan (PKP)”. This research was supported by Universiti Utara Malaysia through university grant scheme (SO Code 14790). We also want to thank you Universiti Teaching and Learning Centre (UTLC), Universiti Utara Malaysia for sponsoring the research to be presented in the 6th Inspirational Scholar Symposium (ISS) 2021 and for post-conference publication. We wish to express our appreciation to our nationhood studies students both in undergraduate and foundation studies levels for their contributions to this research. It is with immense gratitude that we acknowledge the utmost supports of the students particularly for granting us permission to access and share the personal information and assignment materials in this research paper.

References

Ahlam, M. A.A. (2020). Alternative assessment approaches and quality product design within web-based learning environments, *International Journal of Web-Based*

- Learning and Teaching Technologies*, 15 (3).
- Gikandi, A.B., D. Morrow, N. E. Davis. (2011). Online formative assessment in higher education: A review of the literature, *Computers & Education*, 57 (4), 2333-2351.
- Libman, Z. (2010). Alternative assessment in higher education: An experience in descriptive statistics. *Studies in Educational Evaluation*, 36, 62–68.
- McLoughlin, C., and Luca, J. (2006). Alternative approaches to assessment with online technologies: Integrating process and product outcomes. In B, Mann (Ed.), *Selected Styles in Web-Based Educational Research*. Hershey, PA: Information Science Publishing.
- Nor Azlah, S., Mohamed, A. H., Rohani, A. G., Zuhilmi, P., Ahmad, S. A.H., and Fahains, M. Y. (2019). Challenges in teaching and learning of nationhood education in Malaysia, *International Journal of Innovative Technology and Exploring Engineering*, 8 (7S2), 338-343.
- Richardson, W. (2009). Blogs, Wikis, Podcasts, And Other Powerful Web Tools For Classrooms (2nd ed). Thousand Oaks, CA: Corwin Press, In Yun, J.A, Bosede A., Glenda, B. and Kevin W. (2009). teaching with web 2.0 technologies: benefits, barriers and best practices, *32nd Annual Proceedings, The Annual Convention of the Association for Educational Communications and Technology*, (1), 1-6.
- Salmah O., Nor, H. I., Mohamad A. H., and Mohan, R. (2020). The use of kahoot interactive quiz in the teaching of Malaysian nationhood studies course at Universiti Utara Malaysia, *International Journal of Solid State Technology*, 63 (3), 177-182.
- Tajularipin, S., Suzieleez, S. A. R., Kai, Y. W., and Wan M.W. J. (2021). The use of “scratch and challenge board” as an alternative assessment tool to enhance university students’ skills, *Asian Journal of University Education*, 17(3), 85-98.
- Vera, M. M. S, and Espinosa, M. P. P. (2015). Beyond objective testing and peer assessment: Alternative ways of assessment in MOOCs, *International Journal of Educational Technology in Higher Education*, 12, 119-130.

New Alternative Assessment Approach *via* Role Play: A Lawyer to Be

Nor Anita Abdullah
School of Law, COLGIS, Universiti Utara Malaysia,
Sintok, Kedah, Malaysia
Corresponding Author: noranita@uum.edu.my

Abstract

Effective teaching and learning must adopt effective techniques as an active learning instead of passive learning. It is a paradigm shift in our educational system at the higher level. Thus, it is important for the development of teaching and learning to come with the ideas of incorporating the active learning. For a law student, as the profession suggests having a better implementation of becoming a good future lawyer begins from the day registered as law student in the university. Introducing the simulation of role-play in teaching and learning as a new alternative assessment may be a part of teaching techniques in achieving the specific goals to prepare students to a real-world problem. Thus, this paper attempts to develop the speaking and listening skills by enhancing creativity and imagination towards their journey as a future lawyer. The method to be applied is by using the approach of role-play in conducting a client counselling activity. The technique of alternative will be practically applied during lecture period among the law students as one of the alternative assessments of role-play to be conducted. It will increase student involvement in the learning process of how to conduct the client counselling which promotes a deeper understanding and engagement in course content. As a result, from the implementation and the approach used, student would be able to visualize and appreciate the profession from the beginning on how to become a good future lawyer in the future via the implementation of the simulation of role-play as part of their learning process. They are well trained and ready to begin the journey as law students to deal with the reality of the legal profession.

Keywords: Alternative assessment, role-play, client counselling, law student, teaching and learning

Introduction

In higher education, academics are challenged to adopt a new innovative teaching and learning techniques to experience the students by applying the non-conventional methods. The traditional form of assessment is a type of conventional method applied before the alternative assessment is introduced (Shrestha, M., & Roffey, C. (2018)). The structure and design in adopting the traditional assessment are not similar with the method adopted by an alternative assessment. The use of pen and paper with the combination of computer-based approaches were adopted in the teaching and learning.

However, an alternative assessment is a new approach. It as an alternative to the standard methods in assessing the students as practiced in the test and examination. It is a classification form full assessing approach based on the student performances. Students are encouraged to provide their own responses originally, innovative, and creative in participating in conducting the assessment activities (Petre, A.L (2017)). The traditional assessment needs right answer; questions must be unknown to students, isolations of skills, focus on facts, and a one-shot approach. However, an alternative assessment, it demands high-quality performance or product, along with the validations of choices,

instructions, issues, and objective must be acknowledged to students in advance. In fact, a series of skills and knowledge need to be integrated to answer a problem and iterative aspect in nature. It is a new strategy to the conventional method. Students are guided to the knowledge from a modern education perspective.

Objective

This paper focuses on the teaching and learning approach to be conducted for the undergraduate programme of Bachelor of Laws (LL.B) during period of study. The course involves the first semester structure of study under the LL.B programme which is Law of Contract 1 (GLUP1053). This paper studies on how to develop the speaking and listening skills by enhancing creativity and imagination towards their journey as a future lawyer from the beginning of their period of study as law student in Universiti Utara Malaysia.

Methodology

In achieving the objective in developing speaking and listening skills, as well as giving them the opportunity to reflect on the knowledge of a topic, whilst sparking and enhancing creativity and imagination towards the journey as students becoming a future lawyer, the methodology applies is role-play in conducting a client counselling/consultation. Role-play exercises have been designed for the course that increase student involvement in the learning process of how to conduct the client counselling which promotes a deeper understanding and engagement in course content. The specific exercises used, which are described in detail, require students to think beyond the words they read—to learn by doing in a safe environment (Alkin, M. C., & Christie, C. A. (2002). Arranging the use of role-play in small groups will produce more impacts to the students in engaging all skills needed especially in communication (Jackson & Back, 2011).

The course Law of Contract (GLUP1053) will be using to adopt the alternative assessment. The syllabus highlights the importance of Contracts Act 1950 which is the main reference that governs the law of contract. The course then focuses on the importance of agreements in the commercial world. The students will be able to learn the basic elements that needs to be fulfilled before any transaction of contracts comes into picture and how the agreements would be legally binding. Thus, it is important for the students to understand the validity of a contract and how to make the legal and binding contract.

This course provides the basic understanding of the elements of contract. For a person to understand why it is a need to study contract law, they must be familiar with a term "contract" and "contract law". There are many definitions regarding the term of contract, but the common meanings, which globally accepted by many educational institutions is contract itself. To study a law of contracts is important as it enable a lawyer, in which currently they are now a student, to understand contracts when it deals with legal matter. Thus, the implementation of role-play will help the student to have earlier understanding on the contract legal issues in the society.

Role-play approach

Planning the role-play activity involves creativity of the lecturer. The students will be divided into a few groups depending on the numbers of student consists of three to four students to form a group to act the role-play as lawyers and clients. In this role-play, the

student needs to act as a real lawyer in practice on how to deal with a client seeking for a legal consultation from lawyers.

The first step is to sketch scenarios and ways to incorporate them into the lesson plan. At this stage, lecturer must determine and build the scenario for the skit. Cooperative-based learning, lecture, or a combination of both could be used to introduce the content. Probably, the students will be enquired to place together a skit or role-play in such a way that others will be able to see the information in action when the simulation process comes into picture. Additional rules can be agreed upon with the students, which may be addressed with a well-designed rubric prepared by the lecturer. It may include the need to contribute in a positive manner, displaying respectful conduct, and providing positive feedback that is centered not on the performance ability of the student when they simulate the role-play but on the context in which it was delivered.

In conduction this method of role-play, time is a major factor during the process of simulation. A well-designed role-play scenario will be depending on the skit of problem-based question prepared by the lecturers. Then, by allowing students to create the scenario themselves needs around 20–30 minutes per counselling session.

Implementation of the role-play

In implementing the role-play, students will be asked to search on how the client counselling is handled and lecturer will help the students by helping in conducting the session. The most important part in the implementation of the role-play is to ensure the preparation in prior. Lecturer sketches the scenario based on the contents in the course syllabus related to the course-learning outcome (CLO), students who have been assigned need to identify the characters towards the fulfillment of conducting the role-play needed. In conducting the role-play in client consultation, the law students should be able to identify in specific the characters based on the sketched scenario, or the problem given which probably includes two legal counsels and one or two clients depending on the parties in the scenario. Prior to that, understanding on the scenario is paramount to the implementation of the role-play.

Role-play assessment criteria

In conducting the role-play as an alternative assessment needs a rubric. The role-play simulated by the students will be assessed according to the rubric designed specifically for the approach. Thus, there are a few criterions for the assessment. According to the CLO for the course, with reference to the new Malaysian Qualification Frameworks (MQF) mapping based on MQF 2.0 (2nd Edition), the specific Learning Outcome Cluster (LOC) is to assess the students individually based on the LOC3c (communication skills (verbal communication) and LOC2 (cognitive skills). Thus, in designing the actual rubric which suits the implementation and the approach used in role-play in conducting the client counselling, the specific Program Learning Outcome (PLO 2 and PLO 4 which are in line with the LOC2 and LOC3c will be implemented. At the end of the approach used, student will be able to achieve the relevant PLOs for the course in which the PLO has to be linking with the Program Educational Outcome (PEO) for the programme as well as to the CLO and LOC.

For the assessment, there will be an attribute and sub attribute to the specific LOC. For this specific role-play assessment, the chosen and relevant attributes are based on LOC2 (Cognitive Skills) which based on problem solving. The students will be assessed according to their level of understanding on the scenario provided. Students are also will be enlightened with the other sub attributes in compliance with the attribute such as problem identification and the use of knowledge about the laws. While LOC3c

(Communication Skills – Verbal Communication) focuses on the sub attributes of teamwork, organization of the role-play in action, speaking and listening skills and presentation through well and proper manner. Each attribute and sub attributes to the specific LOCs will be assessed accordingly for the purpose of evaluation.

Literature Review

Assessment is important in teaching and learning process. According to Huerta-Macias, A. (1995), there is no single definition of alternative assessment. The idea of introducing the alternative assessment was due to inadequacies and deficiency of traditional approaches. (Al-Mahrooqi & Denman 2018). Simultaneously, the alternative assessment requires students to deliver answer and response to the issues themselves without having any options to be selected. It is a form of activities conducted during the assessment and students will be evaluated based on it (Petre, 2017). It is in contrary with the traditional approach. Typically, students will be questioned to show what they can do, and they will recall and reproduce when asked during the test or examination. This is how they were evaluated. Everything will be assessed based on their memorization once it is produced as an answer. Ghosh, S. et al. (2020) mentioned that memorizing information is only a lower order cognitive ability in which unable to appreciate the level of academic achievement among the students. Nevertheless, Nasab (2015) said that this method is a form of a standardized test drive educators to position the attention only to the specific subjects for examinations.

In fact, the curriculum is designed to provide an opportunity for students to play an active role in teaching and learning activities. According to the learning domain, in assessing the students, there are a few aspects namely Cognitive, Affective and Psychomotor. These three important domains can be considered as a goal in the learning process in which at the end of the process, it resulted to a new skill, knowledge, and attitude (Hoque, et al. (2021).

An alternative assessment is more towards how they understand, approach, process and completing ‘real-life’ tasks in a particular domain. In fact, there are views insist that the application of an alternative assessment during the process of teaching and learning are arranged of process-oriented methods. Meanwhile, it also includes tracking student development and making evaluation as part of learning in which it has led to time-consuming to the nature of the process. In fact, how the lectures evaluate students seems to be too subjective and not consistent (Petre, 2017).

Role playing is a learning structure that allows students to immediately apply content as they are put in the role of a decision maker. According to Heyward (2010), role play in education especially in teaching and learning process will improve the student’s knowledge and commitment towards the contents of the course. Students would be able to feel the positive emotion of learning environment through the role play in action. Role play can be considered as a teaching technique in the 21st century. Students will act as someone else and imitate the characters of a person as in a real world depending on the type of role (Pinatih, 2021). Conducting role play will improve the communication skills among students. They learn how to deal with other people by communicating in a proper way and improve their speaking skill (Rika & Arriyani 2019).

Communication skill is a basic proficiency in simulating the role play. Unfortunately, some students may feel resistance to engage in the role-play due to the need of the communication skill (Baile, et al. 2015). According to Hingle, et al. (2021, July), participation of students in the role play is possible to nurture students to contextualize the case or scenario they are working on. They are simulating the real

situation of how it occurs. In fact, according to Tortorella & Cauchick-Miguel (2018), doing role-play highlighting on learning by doing. Student will take over a character for the real act and simulate it. By doing this, they will have the idea to solve it and the possible strategies to apply.

Findings

Role-play is a technique that allows students to explore realistic situations by interacting with other people in an organized managed way to develop experience and trial different strategies in a supported environment. It can be considered as a very powerful component of learning while practicing role play. Student needs to act as a real lawyer in practice on how to deal with a client who seeks for a legal consultation from a lawyer. The implementation of the alternative assessment in adopting the role-play simulation, the course will be designed to suit with the need of producing a good future lawyer. Students would be able to experience the real-world practice through the process of learning. Students act a role as lawyer in offering a consultation to the clients. The role-play in action helps student practiced their career development skills such as communication skill of listening and speaking and developing their level of confidence.

The approach used will also help students to reflect, internalize, make meaning, and store the experience on how to conduct the role-play in managing the client consultation. Furthermore, based on the way of how the role-play is to be implemented, the approach used, and the criteria of assessment structured will achieve the best evaluation as to the performance of the students in developing their skills.

Student will be assessed according to the specific attributes and sub attributes. The application of appropriate rubrics to assess the performance of the students simulating the role-play would be helpful as an indicator towards the successfulness of the approach used. Thus, the main objective of this paper in developing the speaking and listening skills among the students by enhancing creativity and imagination towards their journey as a future lawyer via role-play will be achieved.

Discussion

As a conclusion, the question of why role-play is important for learning purpose is to be highlighted. Based on the findings, a role play area is an exciting and an entertaining activity. However, it also becomes a key component in learning process. It is a social space that develops speaking and listening skills, as well as giving students the opportunity to reflect on and develop their knowledge of a topic, whilst sparking and enhancing creativity and imagination especially in becoming a future lawyer. Prior preparation needs to be part of action taken by the lecture to ensure that students who are assigned to do the role-play have full information to complete the given task. Students need to be guided before they are ready to do the simulation as they are unfamiliar to the role and how to conduct it.

The decision of adopting the alternative assessment is very important as lecturer need to really decide in choosing the best kind of assessment. Applied assessment in the process of teaching and learning inspired lecturer to identify the test acquisition of content knowledge or the ability to apply that knowledge and relevant criteria and elements to be assessed. The criteria included the writing ability, speaking skills, creativity, the use of method to do the role-play, the arrangement, the time management. These were taken into consideration in adopting the assessment. Thus, in conducting the role-play as one of the alternative assessments, there are

questions need to be clarified in detail. Meanwhile, during the implementation of the role-play, it would better for the students to engage with role in action by creating it as the real-world environment, as lawyer, with the real clients in an actual legal firm.

Conclusion

In fact, alternative assessment versus traditional assessment, both are significant in addressing the performance of students. However, by looking toward the development of the society especially in achieving the active learning goals, can turn into a platform of producing a good and remarkable student to handle and manage the real world soon. Furthermore, reflecting on the role-play after end of the activity is also important. It will provide opportunities for the students to have a reflection to be manifested as part of the assessment process especially their commitment throughout the role-play activity. Meanwhile, the impact of adopting the new strategies in teaching and learning would help motivation students for better results.

References

- Al-Mahrooqi, R. A. H. M. A., & Denman, C. (2018). Alternative assessment. *The TESOL Encyclopedia of English Language Teaching*, 10, 9781118784235.
- Baile, W., Neuendorf, K., & Walters, R. (2015). Using “Action Methods” to Enhance Role-Play Simulations in Teaching Communication Skills (P17). *Journal of Pain and Symptom Management*, 49(2), 325.
- Ghosh, S., Brooks, B., Ranmuthugala, D., & Bowles, M. (2020). Authentic Versus Traditional Assessment: An Empirical Study Investigating the Difference in Seafarer Students' Academic Achievement. *The Journal of Navigation*, 73(4), 797-812.
- Heyward, P. (2010). Emotional Engagement Through Drama: Strategies to Assist Learning through Role-Play. *International Journal of Teaching and Learning in Higher Education*, 22(2), 197-204.
- Hingle, A., Johri, A., Rangwala, H., & Monea, A. (2021), July. Using the Boeing Max Air Disaster as A Role-play Scenario for Teaching Ethical Thinking. In *2021 ASEE Virtual Annual Conference Content Access*.
- Hoque, S. S. I., Chowdhury, A. A., Hossen, M. R., & Arjumand, D. (2021). Can Tailoring Skills Be Delivered Through E-Learning Platform; Perspective of The Three-Learning Domains (Cognitive, Affective And Psychomotor Domain). *American International Journal of Education and Linguistics Research*, 4(1), 31-38.
- Huerta-Macias, A. (1995). Alternative assessment: Responses to commonly asked questions. *This page intentionally left blank*, 338.
- Jackson, V. A., & Back, A. L. (2011). Teaching communication skills using role-play: an experience-based guide for educators. *Journal of palliative medicine*, 14(6), 775-780.
- Nasab, F. G. (2015). Alternative versus traditional assessment. *Journal of Applied Linguistics and Language Research*, 2(6), 165-178.
- Pekbay, C., & Koray, Ā. Z. (2020). Alternative Assessment Tools Based on A Feedback Process: Perceptions Of Pre-Service Science Teachers. *MOJES: Malaysian Online Journal of Educational Sciences*, 8(1), 50-63.
- Petre, A. L. (2017). The impact of alternative assessment strategies on students. *Scientific Research and Education in The Air Force—AFASES2017*, 157-160.

- Pinatih, I. G. A. D. P. (2021). Improving Students' Speaking Skill through Role-Play Technique in 21st Century. *Journal of Educational Study*, 1(1), 103-108.
- Rika, R., & Arriyani, N. (2019). Teaching Speaking by Using Role Play For High School Level. *English Empower: Journal of Linguistics and Literature*, 4(1), 31-37.
- Shrestha, M., & Roffey, C. (2018). An Alternative to Traditional Assessment: The Debate Showcase. *Journal of Education and Research*, 8(2), 5-31.
- Tortorella, G., & Cauchick-Miguel, P. (2018). Combining traditional teaching methods and PBL for teaching and learning of lean manufacturing. *IFAC-PapersOnLine*, 51(11), 915-920.

Competition Law and Policy: Nurturing Economics Students and Challenges in Digital Markets

Muhammad Ridhuan Bos Abdullah

School of Economic, Finance and Banking, Universiti Utara Malaysia

Corresponding Author: ridhuan@uum.edu.my

Abstract

The Malaysian Competition Acts 2010 was introduced to enhance economic development by promoting and protecting the competition process to protect the interests of consumers. Competition is often seen as a spur to economic efficiency as firms pursue and adopt innovations in order to gain competitive advantage. The main thrust of the Competition Act is to promote a competitive market environment and curtailing anti-competitive practices. Seeing its importance, this value needs to nurture among higher education learners at the undergraduate level. In addition to highlighting the need to nurture undergraduates with competition matters, this study describes the challenges that competition policy faces in relation to the digital economy. It explores the specific characteristics of digital economy markets and how these characteristics impact competition policy. To do this, we utilized one of the course objectives for teaching and learning as well as the course learning outcomes. This research intended to understand features specific to digital platforms and their implications for competition law and policy in Malaysia. It identifies the areas of competition law in which there is need for adaptation, to deal with anti-competitive outcomes that may arise from dominant digital platforms.

Keywords: competition policy, regulation, digital economy, learning and teaching economics

Introduction

Competition is often seen as a spur to economic efficiency as firms pursue and adopt innovation in order to gain competitive advantage. Economists argued that competitive market structures will increase consumer choice and welfare. At the same time competition is also said to encourage efficiency by allowing most efficient firms to survive and grow at the expense of their inefficient counterparts. Under the Structure-Conduct-Performance (SCP) approach, a good structure is defined in terms of perfect competition. This approach focuses on the performance of industries and suggests aspects of structure and conduct that could be adjusted to bring about desirable performance outcome. In other words, competition defines good performance, and appropriate industry structure to ensure such performance.

Within the neoclassical theory, different models describe price and output determination for different market structures. The number of firms in a market and the ease of entry and exit by new firms determine the type of structure. Table 1 shows the basic taxonomy used in this paper to describe several structures. The models of perfect competition, monopoly and monopolistic competition describe how firms should set their prices and output levels to maximize profit.

Table 1
The Neoclassical theory of the firm: the structures of the market

	No. of firms	Entry conditions	Product differentiation
Perfect Competition	Many	Free entry	Identical products
Imperfect competition			
Monopolistic competition	Many	Free entry	Some differentiation
Oligopoly	Few	Barriers to entry	Some differentiation
Monopoly	One	No entry	Complete differentiation

The two most extreme cases are perfect competition (the most competitive model) and monopoly (the least competitive). Between perfect competition and monopoly is imperfect competition, which subdivides into two cases: monopolistic competition and oligopoly.

Malaysian Competition Law and Dominant Position

Competition policy deals with three principal areas; monopoly, restrictive practices, and merger (Lipczynski et.al, 2017). The implementation of monopoly, restrictive practices and merger policy requires a practical method for measuring market power.

Dominant position means a situation in which one or more enterprises possess such significant power in a market to adjust prices or outputs or trading terms, without effective constraint from competitors or potential competitors.

From an economic perspective, abuse of significant market power has two different categories of conducts for competition law purposes: Firstly, “exploitative conduct” which is the ability of an enterprise to maintain price above the competitive level for some time without worrying about whether consumers will switch to other products or worrying that new competitors will enter the market. Secondly, “exclusionary conduct” which is the ability of an enterprise to dictate the level of competition in a market by preventing efficient new competitors from entering or significantly harming existing equally efficient competitors – either by driving them out of the market or preventing them from effectively competing.

The ability of an enterprise to price well above the competitive level for a sustained period or the ability to actually drive an equally efficient competitor out of business provides evidence that the enterprise has considerable market power i.e. is dominant. Dominance is usually determined indirectly by using a range of criteria which is discussed below.

Section 4(1) of the Act

"Section 4 (1) A horizontal **or** vertical agreement between enterprises is prohibited insofar as the agreement has the **object or effect** of **significantly** preventing, restricting or distorting competition in any market for goods or services."

Then, both **horizontal agreements** (between enterprises at the same level of production, which normally means competitors in the same market) and **vertical agreements** (between buyers and sellers at different stages of the production and distribution chain) are prohibited if they have an anti-competitive object or effect which is significant on the market.

In general, “significant” means the agreements must have more than a trivial

impact. It should be noted that impact would be assessed in relation to the identified relevant market. A good guide to the trivial impact of an anti-competitive agreement might be the combined market share of those participating in such an agreement.

Trends in Competition and Market Concentration

Competition is rivalry among firms. A competitive market is a market with large number of buyers and sellers, such that no single buyer or seller is able to influence the price or any other aspect of the market. Competitive market will lead to efficient allocation of resources and relatively lower prices to consumers. The competitive process, however, does not regulate every market well. The problems of market power, information asymmetry and barriers to entry lead to market failure. When this problem occurs the efficiency property of competitive market equilibrium cease to hold and the potential for socially beneficial government intervention arises. In this regard, competition policy is seen as critical in curtailing excessive market power as manifested in cartels, collusion, restrictive business practice and abuse of market power.

Prior to CA2010, the Acts describes the process of competition as encouraging efficiency, innovation and entrepreneurship which promotes competitive prices, improvement in the quality of products and services and wider choices for consumers. This will be achieved through the prohibition of anti-competitive practices:

- Anti-competitive agreement: agreement or concerted practices between enterprises or association of enterprises which have the object or effect of significantly preventing, restricting or distorting competition such as price fixing, market allocation, bid rigging agreement and limiting production, refusing to supply; and to adjust prices or outputs or trading terms without effective constraints from competitors such as predatory pricing and excessive pricing.

In the context of Malaysia, the existing evidence on the state of competition in Malaysia has mostly been in the form of market concentration studies in the manufacturing sectors and some anecdotal evidence of abuses of market dominance, e.g. hoarding and refusing to supply, for example sugar and cooking oil in recent years. By and large, the concentration ratio especially the four firm concentration ratio (CR4) is the most widely used indicator for market structure studies (Abdullah & Suhaila, 2006). Ceteris paribus, the more concentrated an industry or a market, the higher the possibility for monopolistic behavior and their effects.

Therefore, the percentage of output (data of sales not available) accounted for by these two groups in 2010 and 2015 is presented in Table 2.

Table 2
Trends in competition (2010-2015)

Year	Non-competitive industries		Competitive industries		Semi-competitive industries	
	No. of firms	Percent of output	No. of firms	Percent of output	No. of firms	Percent of output
2010	130	48.83	63	30.56	53	20.61
2015	118	29.41	74	32.96	58	37.63

Source: Ridhuan (2020).

Large technology companies have changed the global business landscape. From Table 3, show the top 15 Malaysian companies by market capitalization in 2021 included only one technology company and three oil and gas companies; in 2021, the list included three telecommunication companies and three banking companies that are both large on size (market capitalization).

Table 3
Top 15 Malaysian companies, 31 March 2009
(RM million)

Rank	Company	Industry	Market Capitalization
1	Maybank	Banking	96820.8
2	PBBank	Banking	81524.9
3	PChem	Industrial Products	70000.0
4	IHH	Consumer Products	59047.4
5	Tenaga	Energy	55657.6
6	CIMB	Banking	51573.1
7	PMetal	Industrial Products	49991.8
8	HLBank	Banking	40536.3
9	Axiata	Telecommunication	37608.1
10	Maxis	Telecommunication	37409.6
11	DiGi	Telecommunication	34287.8
12	PetGas	Industrial Products	33836.3
13	MISC	Shipping	32407.1
14	Nestle	Consumer Products	31423.0
15	SimePlt	Plantation	30083.4

Source: BSKL

Competition in Digital Market

The growth of the Malaysian digital industry has accelerated due to Covid-19 pandemic. Malaysia is among the first developing countries to extend indirect taxation to imported digital services provided by non-resident suppliers (collecting an estimated US\$100 million in new revenues during 2020), pushing the development frontier not just in Malaysia but in other countries helping to balance growth of the digital economy while safeguarding public sector revenues (World Bank, 2021).

Organisation for Economic Co-operation and Development (OECD) said that digitalization as new technologies and scientific breakthroughs are unfolding on many fronts. Advances in communication and data processing are not just profoundly affecting existing industries, but also rearranging global value chains, thereby allowing for entirely new products and services and disrupting traditional ones.

Table 4
Specific features of digital platforms

Structure	Description	Remarks
Definition	an undertaking operating in two (or multi)sided markets, which uses the Internet to enable interactions between two or more distinct but interdependent groups of users so as to generate value for at least one of the groups	platforms involve services and activities such as marketplaces, social networking, search engines, payment systems and video sharing

High barrier	Digital platforms have new business models and function with algorithms, which are designed to collect and process data, with decisions made based on that data. Such platforms require high up-front sunk costs and have low marginal costs	The technologies required to store and process data can be costly but, once a system is operational, the marginal costs related to additional data are low, and the data can help improve the algorithms to provide better and more personalized services to consumers. This cost structure “is characterized by high economies of scale and scope and can therefore facilitate market concentration of big data in the hands of a few players
Data-driven network effects	A network effect “refers to the effect that one user of a good or service has on the value of that product to other existing or potential users”	For example, people may wish to use Facebook for social networking simply because their friends do so. The value of using digital platforms directly depends on the number of users
Economies of scale and scope	Economies of scale and scope, data-driven network effects and control of data create high barriers to entry.	. For example, Google can use the search data of users to improve its search engine algorithms; new entrants to the market do not have this advantage.
Theoretical perspectives	Digital platforms have challenged the neoclassical approach to doing business, which defined the goal of a private company as maximizing profits	Dominant platforms can afford such a business strategy given leeway to incur losses by investors
Dominant position	Dominant platforms have also expanded into other related businesses, with the objective of accessing more data	For example, Google gives its Android operating system free of charge to mobile telephone manufacturers, thereby enabling it to collect user data
Anti-competitive	Research on behavioral tendencies shows that there is a cognitive cost in switching platforms, in terms of time, effort, energy and the concentration and sustained thought required; competition is therefore not “one click away”.	Given a handful of dominant platforms that do not face any competition, consumers have few choices and almost no control over the collection and use of their data. This has raised competition and consumer protection concerns worldwide.

Conclusion

Competition is rivalry among firms. A competitive market is a market with large number of buyers and sellers, such that no single buyer or seller is able to influence the price or any other aspect of the market. Competitive market will lead to efficient allocation of resources and relatively lower prices to consumers. The competitive process, however, does not regulate every market well. The problems of market power, information asymmetry and barriers to entry lead to market failure. When this problems occurs the efficiency property of competitive market equilibrium cease to hold and the potential for socially beneficial government intervention arises. In this regard, competition policy is seen as critical in curtailing excessive market power as manifested in cartels, collusion, restrictive business practice and abuse of market power.

The main thrust of the Competition Act is to promote a competitive market environment and curtailing anti-competitive practices. The general perception of the legislation is that it is practical, workable and a step in the right direction. The following are some of the challenges in the implementation of the Competition Law: producing clear guidelines and given a transition period for firms to comply; promoting a healthy competitive culture and competition advocacy; having a strong and independent competition authority and promoting dynamic efficiency.

References

- Abdullah, Muhammad Ridhuan Bos, & Abdul Jalil, Suhaila. (2006). Industrial Structure and Concentration in Malaysian Manufacturing Industry. *International Journal of Management Studies*, 13, 83-101.
- Burgess, Giles H. (1995). *The Economics of Regulation and Antitrust*. Harper Collins. New York.
- Suruhanjaya Persaingan Malaysia (2013). *Akta Persaingan 2010 (Akta 712)*. International Law Book Services. Kuala Lumpur.
- Viscusi, W.K.K, Harrington, J.E. and Vernon, J.M. (2000). *Economics of Regulation and Antitrust*. MIT Press
- Waldman, Don E. & Jensen, Elizabeth J. (2001), *Industrial Organization: Theory & Practice*. Addison-Wesley.

Nurturing Engaged Learners through Team-Based Learning: A Case Study of Financial Management Course Offered at UUM

Boo Hooi-Laing

School of Economic, Finance and Banking, Universiti Utara Malaysia

Corresponding Author: hlboo@uum.edu.my

Abstract

Financial Management (FM) is a course undertaken by many students at both the undergraduate and postgraduate levels in higher educations, as well as in professional tests. Interestingly, a sizable number of students find the subject challenging. It is these considerations that have spurred us to research on the challenges which students face in understanding FM and factors that affect their mastering. This study uses quantitative research to examine what is the diversity of undergraduate students related to their academic achievement in FM course. Mean and standard deviation were used for descriptive analysis. We tested for normality using the skewness and kurtosis tests at the 5% significance level. Then one-way ANOVA statistics were used to test for mean differences among variables. Pairwise correlations of variables were used to test the relationship between variables. The Ordered Logistic Regression model was used to analyse the relationship between learners' diversity to the academic achievement of FM. The empirical evidence in the research shows that the achievement of learners in FM is significantly different due to three factors. First, learners in different classes have significant differences in the results of their group presentations. Second, there is a significant difference between the achievement of male and female learners in their group assignments. Third, learners who perform well in group assignments are more likely to produce good results in group presentations. I suggest increasing the mix of learners from different classes to provide more interaction and thus get better performance in group presentations. In addition, in order to carry out extensive team-based learning or group learning, I recommend that lecturers need to effectively play the role of learning facilitator.

Keywords: financial management, Ordered Logistic Regression, group learning

Introduction

Financial management is a core course offered for Bachelor of Finance students. This course aims to produce competent and knowledgeable grandaunts in the area of finance in accordance with the human capital needs of the domestic and financial industry. Financial management also is an introductory course to financial management that provides the students with the theoretical, conceptual, and practical aspects of financial management. Specifically, it focuses on short-term financial management and financial instruments such as financial statement analysis, risk and return, and the time value of money. These financial concepts and tools are used to perform firm valuation as well as to forecast and plan firm's financing.

The principles in FM have permeated many business entities because whatever the size, type or motive of its establishment, all organizations want to run their entities in a financially efficient manner to continue to allow financing by capital providers. This gives credence to the widespread acceptance of the subject and why it stands out in the curriculum of many programs. There is empirical evidence from Olokoya and Oyewo

(2014), that teaching methods, perceived difficulty, perceived relevance, and liking for numerical subjects are factors that can influence learners towards Financial Management. Furthermore, these researchers also recommend the use of teaching methods that demonstrate FM practicality such as the use of real-life examples, case studies, and discussion groups to ensure continuous improvement and proper subject mastery.

Yet, as noted by Susiani (2021), understanding financial management problems requires analytical agility and strategic vision. In this case, the effectiveness and practical results of using financial data to evaluate real-world companies are still disputed. Therefore, this study aims to explore the learning performance of learners in FM course. However, activities that encourage participation in the classroom or implement active learning do not always bring positive outcomes to students (Cooper et al., 2018a). Understanding learners' diversity can help contextualize the outcomes of participation and shape teacher's subject expertise (Azam, 2020). In order to obtain better learning outcomes, this study investigated the relationship between student gender (Marshman, Kalender, Schunn, Nokes-Malach & Singh, 2018; Aguilon, Siegmund, Petipas, Drake, Cotner & Ballen, 2020) and their seniority as measured by their present semester of study (Rapa, Diemer & Roseth, 2020) on learners' academic performance. These differences may help explain the observations of learners' diversity in academic achievement.

Moreover, with the increasing popularity of teams and work in organizations (Blowers, 2000), students tend to face many situations that require them to work with others and then present their information to the audience from time to time. Therefore, this study focuses on the effectiveness of students interacting and interdependent with each other or usually known as student engagement to solve problems, make decisions, and achieve common goals or objectives in a small group or team-based learning. Student engagement is considered a solution to increase motivation and academic achievement. As mentioned by Halif et al. (2020) that there is a significant relationship between student participation and interaction between teachers and peers in the classroom experience. From an active learning perspective, Najat (2021) found that compared to traditional individual learning, a large number of students prefer team-based learning (TBL), and TBL has a greater impact on students' motivation to participate in class activities and assignments. This is consistent with Smith et al. (2009) who also revealed that student performance can be improved by increasing opportunities for peer discussion in active learning in the classroom.

TBL has been found to be beneficial to both students and teachers, because students who participate in collaborative learning perform better and are therefore more satisfied with their education (Burke, 2011). As Chad (2012) pointed out, TBL is an effective teaching process that allows educators to provide students with a better and more exciting learning experience. In addition, the learners participating in this study come from a variety of backgrounds, and the tutorials and discussions are conducted in different online classes. As a consequence, working in a small group or TBL will help them in developing teamwork skills and improving communication skills, as well as understanding group members from different backgrounds, cultures, beliefs, and attitudes to achieve the goals of the project (Payne et al., 2004).

Furthermore, FM course primarily focus on solving the issue of creating a robust management decision-making process in corporate finance. Ideally, it should be based on analytical and critical evaluation of any decision-relevant information. Therefore, activity 1 that is group assignment appears to be an appropriate assessment method for this topic. Then activity 2 which is also called group presentation is given to assess the performance of diversity learners working in small groups and conduct group

presentations in a virtual classroom setting. Therefore, in order to achieve the aims of this study, I divided the learners of class A and class C into a small group with a maximum of 6 members in each group. This above statement leads to the following questions:

- i. Does student diversity (gender, seniority and TBL) influence their academic achievement in FM courses?
- ii. What is the diversity that affects learners' understanding of FM courses?

The research Hypotheses are as follows:

H1a: The learner's diversity is positively correlated to undergraduate students' academic achievement in FM.

H2a: There is significant difference in academic achievement mean scores between learners in class A and class C in FM course.

H3a: There is significant difference in academic achievement mean scores between male and female learners in FM course.

H4a: There is significant impact of current semester studied on FM's scores.

H5a: There is significant impact of team-based learning strategy on FM's scores

In order to explore these relationships, this study focused on the direct effects of the learners' diversity on their learning outcomes.

Methodology

This study adopted a quantitative research design to obtain the academic achievement of undergraduate students at University Utara Malaysia, taking FM as a course. The main reason for conducting the statistical analysis is to know the learner's performance neither in group presentations or critical thinking in completing their group assignments with a diverse sample of students. To collect data for this study, two parallel classes from this subject BWFF 2033 Financial Management Semester A202 in University Utara Malaysia with 62 students in class A and 63 students in class C were chosen as samples in this case study. All of the learners undertaking this subject do not have fundamental in basic concept and principles of finance, except one learner was a retake student in class C. The subject was taught by one educator, and the syllabus, teaching materials, and assignments given for both groups are the same.

Learners then have to form groups with a maximum number of 6 members in each group at the commencement of the semester. The formation of each group and the resulting composition are based on the learner's self-selection, and the lecturer did not participate in the entire selection process. The groups remained the same for the duration of the semester. In this case, I will have a total of 25 reports in assessing the financial performance of listed companies in Malaysia that referred to the first activity, namely group assignments, and 25 group presentations on the chapters covered by the syllabus distributed by lecturers, referred to as the second activity, namely group presentations.

The desired course learning outcome (CLO) for activity 1 is CLO 2, while CLO 1 will be achieved in Activity 2. The rationale for choosing these two CLOs is that upon completion of these two activities, students should be able to explain the basic concepts of financial management. Then, students also will be able to understand ratio categories, calculation and interpretation of ratio results, and techniques of applying ratios in evaluating company performance.

Activity 1: Group Assignment

The topic chosen for the group assignment is Chapter 3: Assessing Firm's Financial Performance, which is covered in the subject of BWFF 2033 Financial Management. With this, after successfully completing the above course work, students will be able to demonstrate the following:

“COURSE LEARNING OUTCOMES (CLO)”

CLO 1 To explain the fundamental concepts of financial management.

CLO 2 To apply financial management techniques in performing analysis.

CLO 3 To apply financial management techniques in decision making process.

- a. Assess the performance of a firm (in term of profitability and financial stability) by applying financial ratio analysis.
- b. Understand the use of financial ratios and the techniques of applying the ratios in valuing the company's performance.
- c. Make appropriate business decisions with reference to various accounting information and tools.

Activity 2: Group Presentation

The objectives of this activity 2 are:

- a. Working in groups and conduct group presentations in a virtual classroom setting to prepare students to participate in team-based organizations and other professional contexts.
- b. To present basic concepts and ideas on a particular FM topic, and also to trigger (and preserve / strengthen) the audience's understanding of the topic.

STATA was used for statistical analysis. The data needed in this study was the learners' learning- performance evidence. The data was collected using the results generated from activity 1 and activity 2. Mean, standard deviation, minimum value, and maximum value were used for descriptive analysis. The skewness and kurtosis tests was used to test for normality. The test showed that study variables had p-value >0.05, so this study used the ANOVA parametric statistics to test for differences in mean between groups. Lastly, correlation and regression analyses were used to test for relationships. An Ordered Logistic Regression model, formulated to analyse the relationship between learners' diversity to the academic achievement of FM, is expressed in equations (1), (2), and (3) as bellows:

$$\text{Academic achievement of FM} = f\{\text{Class, Gender, Semester, Group}\} \quad (1)$$

$$\text{POINT 1} = \beta_0 + \beta_1\text{CLA} + \beta_2\text{GEN} + \beta_3\text{SEM} + \beta_4\text{GRP} + \mu \quad (2)$$

$$\text{POINT 2} = \beta_0 + \beta_1\text{CLA} + \beta_2\text{GEN} + \beta_3\text{SEM} + \beta_4\text{GRP} + \mu \quad (3)$$

Where:

POINT 1 represents Financial Management academic achievement in activity 1;

POINT 2 represents Financial Management academic achievement in activity 2;

CLA represents class;

GEN represents learners' gender;

SEM represents learners' present semester study;

GRP represents small group that learners working in;

$\beta_0, \beta_1, \beta_2, \beta_3, \beta_4$ are repressor coefficients

μ represents the error term.

Findings and Discussions

Descriptive Analysis

Table 1 is devoted to present the summary statistics of variables in the regression model. The table shows a total of 125 learners were involved in this study over the semester A202; 63 observations for Class C and 62 observations for class A. Compared with Class A, Class C has one more student, so the average GRP score of Class C is 7.27, which is slightly higher than Class A's 6.67.

Similarly, the table also indicates the mean value of POINT1 and POINT2 are both slightly higher in class C in comparison to class A, implying that learners in class C perform better than learners in class A. Lastly, the mean score of SEM is 0.14 higher in Class A due to there is a semester 5-6 student.

Table 1
Descriptive statistics of variables

	CLASS A					CLASS C				
	Obs	Mean	Std.Dev.	Min	Max	Obs	Mean	Std.Dev.	Min	Max
POINT1	62	15.65	1.56	13	18	63	16.04	1.20	14	17.5
POINT2	62	12.39	2.00	9	14.7	63	13.48	1.01	11.7	14.73
GRP	62	6.67	3.50	1	12	63	7.27	3.71	1	13
GEN	62	0.37	0.49	0	1	63	0.34	0.48	0	1
SEM	62	1.22	0.46	1	3	63	1.08	0.27	1	2

Results

After that, pairwise correlation coefficients are run to test the correlation and the possible multi-collinearity between the explanatory variables used in the regression model (Brooks, 2014). The findings in Table 2 indicate that the highest correlations are found between POINT1 and POINT2 with 0.56, followed by CLA and POINT2 with 0.34, then the correlation between CLA and SEM with 0.19. Since all correlations are less than 0.7, therefore, proving that there is no highly correlated variables were found in the regression (Bryman and Cramer, 1997).

Table 2
Pairwise Correlation Coefficients

Variables	POINT1	POINT2	CLA	GEN	SEM	GRP
POINT1	1.0000					
POINT2	0.5558	1.0000				
CLA	0.1414	0.3411	1.0000			
GEN	-0.1698	-0.0753	-0.0059	1.0000		
SEM	-0.0005	-0.0026	-0.1923	0.1897	1.0000	
GRP	-0.0673	0.0515	0.0759	-0.0261	0.1136	1.0000

Thereafter, the skewness and kurtosis tests were calculated to determine for normality present in the data results. Skewness is a measure of the asymmetry of the probability distribution of a random variable with respect to its mean. The figure below (Table 3) shows the results obtained after performing the skewness and kurtosis test for normality in STATA. The probability of skewness and the probability of kurtosis are 0.1256 and 0.0747 (both p-value >0.05), indicating that skewness and kurtosis are asymptotically distributed. Besides, the chi (2) is 0.0632 which is greater than 0.05

showing it is not significant at a 5% level, thus, failed to reject the null hypothesis. In this case, residuals show normal distribution.

Table 3
Skewness and Kurtosis Tests for Normality

Variable	Obs	Pr(skewness)	Pr(kurtosis)	Chi2(2)	Prob>chi2
Resid	125	0.1256	0.0747	5.52	0.0632

The descriptive results for the one-way ANOVA shown in Table 4 indicate whether the variables had statistically significant differences between the group means. The results shown that the significance level of CLA and POINT2 is 0.001 (p-value < 0.005) and therefore, there is a statistically significant difference in the mean achievement of group presentation between class A and class C. From the result, we also know that the significance level of POINT1 and GEN is 0.0584, which is below 0.10, which proves that the two genders did differ, however, in terms of group assignment achievement.

In addition, the results failed to prove there was a significant difference in the present semester of study with academic achievement, indicating that learners' FM achievement in either Activity 1 or Activity 2 did not differ significantly regardless of whether students had enrolled in FM courses during semester 1-2, semester 3-4 or semester 5-6.

Table 4
One-way ANOVA results between achievement of group assignment (POINT1) and group presentation (POINT2) to class, gender, present semester study, and small groups

Source	POINT1 Analysis of Variance				POINT2 Analysis of Variance			
	SS	df	MS	F-value	SS	df	MS	F-value
CLA Between groups	4.86	1	4.86	2.51	40.25	1	40.25	16.2***
Within groups	238.34	123	1.94		305.70	123	2.49	
Total	243.21	124	1.96		345.95	124	2.79	
GEN Between groups	7.01	1	7.01	3.65*	1.96	1	1.96	0.70
Within groups	236.20	123	1.92		343.99	123	2.80	
Total	243.21	124	1.96		345.95	124	2.79	
SEM Between groups	0.88	2	0.44	0.22	9.90	2	4.95	1.80
Within groups	242.33	122	1.99		336.05	122	2.75	
Total	243.21	124	1.96		345.95	124	2.79	
GRP Between groups	13.75	12	1.15	0.56	22.50	12	1.88	0.65
Within groups	229.46	112	2.05		323.44	112	2.89	
Total	243.21	124	1.96		345.95	124	2.79	

Note: ***coefficient is significant at 1%; **significant at 5%; *significant at 10%.

The estimation results from Ordered Logistic Regression are presented in Table 5. The dependent variable used in this regression for Activity 1 is scores in group assignment, while dependent variable for Activity 2 is the scores of group presentation. The likelihood ratio chi2 values of this model are 50.37 for achievement of group assignment, and 42.87 for achievement of group presentation, which are both statistically significant at 1%. This indicates the overall fit of the model for these two activities. The results showed that students

from different classes, working in small groups, and with different genders were found to be insignificant and negatively related to achievement in group assignments. This indicates a lack of evidence supporting the above diversity factors will influence students' academic achievement in terms of group assignments. This is contrary to the findings of

However, the Table 5 also display that coefficient of different classes and working in small group were positively related to the group presentation. The results showed that the higher the diversity of learners (from different classes or different groups), the higher their achievement in group presentations. This is consistent with the finding of Burke (2011), who concluded that group work is beneficial for students because when students spend time meeting in groups, they are able to achieve deeper learning themes covered in class as well as develop their teamwork skills.

In addition, the result illustrated that gender was found insignificant and negatively related to both group assignments and group presentations, which was contrary to Leondari, Syngollitou, and Kiosseoglou (1998), who found significant gender differences in academic performance because girls outperform boys in academic performance and task persistence.

Moreover, the coefficient of learners' present study semester was not significant, but it has a positive effect on their performance in group assignments and group presentations. The findings may due to the senior learners have more experience and knowledge in how to perform presentations better. This matches the findings of Honicke, Broadbent & Fuller-Tyszkiewicz (2020). The author found that the more seniority in semester study has a significant relationship with learners' achievement in academic with concluded that the 7th-semester students achieved better academic performance than the 6th- semester students.

In addition, the estimation results also show that the learner's achievements were found to be positive and significant under all activities given. This implies that learners who perform well in activity 1 (group assignment) are more likely to also perform well in activity 2 (group presentation). Consistent with the findings of Lim, Ab Jalil & Saad (2020) that students' ability to learn with peers was found to have a positive and significant effect on academic achievement.

Table 5
Ordered logistic regression for the achievements of group assignment and group presentation

	Group Assignment		Group Presentation	
	Coef.	P>z	Coef.	P>z
CLA	-0.24	0.51	0.76	0.02
GRP	-0.03	0.44	0.03	0.56
GEN	-0.51	0.13	-0.01	0.98
SEM	0.08	0.85	0.19	0.66
POINT	0.78	0.00	0.76	0.00
Log likelihood chi2	50.37	0.00	42.87	0.00
Number of observations		125		125

Conclusion and Recommendation

In this study, though some results were statically insignificant, the study offered confirmation of three findings. First, learners in different classes have significant different in the results of their group presentations. Second, there is a significant mean difference between the achievement of male and female learners in their group assignment. Third, learners who perform well in group assignment are more likely to produce good results in group presentations. As noted at the outset, the learners' diversity is believed to influence their academic achievement. But the results show that working in a small group, learners' gender, and present study semester did not have direct effects on their academic achievement through the case study method.

The significant findings suggested that increasing the mix of learners from different classes provides more interaction to obtain better performance in group presentations. At a more general level, the findings confirm that learners who perform well in group assignments will be more likely to obtain higher grades in their group presentations, proving that skills in student engagement and learning as well as developing team skills are one of the important factors in determining learner's achievement (Ucar and Kumtepe, 2020).

Although group learning or team-based learning is insignificant in this study, but it has been widely used in higher education. Therefore, how to use this approach optimally is an issue that must be studied and improved. In order to conduct extensive team-based learning or group learning, lecturers need to effectively play the role of learning facilitator. They may design an appropriate assignment or project, and then guide the learner to analyse the given assignment as well as to discuss an action plan. In addition, lecturers may work on the learners' listening, writing, and communication skills in group discussions to boost participation engagement (Pundak, 2009). When learners understand how to perform well when working in groups, teachers need to evaluate learners' performance in the classroom to improve their learning engagement and learning process (Choy et al., 2012).

As with most studies, this study has some limitations that offer areas for future research. This study involves a case study of a medium-sized undergraduate FM class. Further research opportunities include studying classes covering a wider range of settings, such as small vs medium vs large classes, semester A202 vs A211. This study focuses on the impact of learner diversity on their academic achievement in FM course rather than discussing how diversity affects the learning process. Considering the results of these evaluations and the potential for improvement, this provides an opportunity to explore the learning process and learning experience in future research.

References

- Aguillon, S. M., Siegmund, G. F., Petipas, R. H., Drake, A. G., Cotner, S., & Ballen, C. J. (2020). Gender differences in student participation in an active-learning classroom. *CBE—Life Sciences Education*, 19(2), ar12.
- Azam, S. (2020). Addressing student diversity in science classroom: Exploring topic-specific personal pedagogical content knowledge of high school teachers. *Journal of Research in Science Mathematics and Technology Education*, 3(3), 141-163.

- Blower, D. (2000). Canada: The story of prior learning assessment and recognition. *HIGHER EDUCATION POLICY SERIES-LONDON-JESSICA KINGSLEY PUBLISHERS LIMITED-*, 52, 83-102.
- Burke, A. (2011). Group work: How to use groups effectively. *Journal of Effective Teaching*, 11(2), 87-95.
- Chad, P. (2012). The use of team-based learning as an approach to increased engagement and learning for marketing students: A case study. *Journal of Marketing Education*, 34(2), 128-139.
- Choy, J. L. F., O'Grady, G., & Rotgans, J. I. (2012). Is the Study Process Questionnaire (SPQ) a good predictor of academic achievement? Examining the mediating role of achievement-related classroom behaviours. *Instructional Science*, 40(1), 159-172.
- Nkhoma, M., Sriratanaviriyakul, N., Cong, H. P., & Lam, T. K. (2014). Examining the mediating role of learning engagement, learning process and learning experience on the learning outcomes through localized real case studies. *Education+ Training*.
- Cooper, K. M., Ashley, M., & Brownell, S. E. (2018a). Breaking down barriers: A bridge program helps first-year biology students connect with faculty. *Journal of College Science Teaching*, 47(4), 60–70.
- Halif, M. M., Hassan, N., Sumardi, N. A., Omar, A. S., Ali, S., Aziz, R. A., ... & Salleh, N. F. (2020). Moderating Effects of Student Motivation on the Relationship between Learning Styles and Student Engagement. *Asian Journal of University Education*, 16(2), 94-103.
- Honicke, T., Broadbent, J., & Fuller-Tyszkiewicz, M. (2020). Learner self-efficacy, goal orientation, and academic achievement: exploring mediating and moderating relationships. *Higher Education Research & Development*, 39(4), 689-703.
- Kareem, N. O. (2021). Using Team-Based Learning in Teaching English to EFL Undergraduate Students: A Pilot Study Evaluation. *Koya University Journal of Humanities and Social Sciences*, 4(1), 91-103.
- Kareem, N. O. (2021). Using Team-Based Learning in Teaching English to EFL Undergraduate Students: A Pilot Study Evaluation. *Koya University Journal of Humanities and Social Sciences*, 4(1), 91-103.
- Leondari, A., Syngollitou, E., & Kiosseoglou, G. (1998). Academic achievement, motivation and future selves. *Educational studies*, 24(2), 153-163.
- Lim, C., Ab Jalil, H., Ma'rof, A., & Saad, W. (2020). Peer learning, self-regulated learning and academic achievement in blended learning courses: A structural equation modeling approach. *International Journal of Emerging Technologies in Learning (IJET)*, 15(3), 110-125.
- Marshman, E., Kalender, Z. Y., Schunn, C., Nokes-Malach, T., & Singh, C. (2018). A longitudinal analysis of students' motivational characteristics in introductory physics courses: Gender differences. *Canadian Journal of Physics*, 96(4), 391-405.
- Nkhoma, M., Sriratanaviriyakul, N., Cong, H. P., & Lam, T. K. (2014). Examining the mediating role of learning engagement, learning process and learning

- experience on the learning outcomes through localized real case studies. *Education+ Training*.
- Olokoyo, F. O., & Oyewo, B. (2014). Making a Case for New Teaching Methods in Financial Management with Empirical Evidences from Nigeria. *Pensee Paris, France.*, 76(9).
- Payne, B. K., Monl-Turner, E., Smith, D., & Sumter, D. (2004). Improving group work: voices of students. *Education*, 126 (3), 441-448.
- Pundak, D., Herscovitz, O., Shaham, M., & Wisner-Biton, R. (2009). Instructors' attitudes toward active learning. *Interdisciplinary Journal of E-Learning and Learning Objects*, 5(1), 215-232.
- Rapa, L. J., Diemer, M. A., & Roseth, C. J. (2020). Can a values-affirmation intervention bolster academic achievement and raise critical consciousness? Results from a small-scale field experiment. *Social Psychology of Education*, 23(2), 537-557.
- Smith, M. K., Wood, W. B., Adams, W. K., Wieman, C., Knight, J. K., Guild, N., & Su, T. T. (2009). Why peer discussion improves student performance on in-class concept questions. *Science*, 323(5910), 122–124. doi: 10.1126/science.1165919.
- Susiani, R. (2021). Implementation Of Financial Report Preparation For Small And Medium Micro Enterprises (Msmes)(Survey in Sukajadi Village, Soreang District, Bandung Regency). *Turkish Journal of Computer and Mathematics Education (TURCOMAT)*, 12(8), 1563-1566.
- Ucar, H., & Kumtepe, A. T. (2020). Effects of the ARCS-V-based motivational strategies on online learners' academic performance, motivation, volition, and course interest. *Journal of Computer Assisted Learning*, 36(3), 335-349

Appendix

i. Guidelines of Activity 1 and Activity 2

Guidelines of Activity 1 (Group Assignment)	Guidelines of Activity 2 (Group Presentation)
<ol style="list-style-type: none"> 1. This activity contributes 20% towards the overall assessments for this subject. 2. Form a group with a maximum of 6 members and register with the lecturer latest by week 2. Once the group is finalized, changing of groups is not allowed. 3. Please elect a leader for each group. Group leaders are responsible for motivating the group members to ensure the final report achieve the highest level of quality. Do alert the lecturer at the early stages of the activity if any group member is not contributing towards the group project. 4. Please include the relevant pages of the annual report, such as company's Income (P&L) statements and Balance Sheets for the relevant years in your activity's appendix section. 5. The activity (a 3000-word written report excluding cover page, table of contents, references, and appendices) has to be passed up latest by 12:00p.m. on 29th May 2021 (Thursday of Week 10) in the 	<ol style="list-style-type: none"> 1. This activity contributes 15% towards the overall assessments for this subject. 2. By using the group form in activity 1 to complete activity 2. 3. Please select a presentation moderator. The presentation moderator or also called team leader is responsible for organizing your group to work as a team, and need to develop an effective structure that encourages group members to participate meaningfully. The presentation moderator can also give a final speech when decision - making is needed 4. As a group, ensure each group member understanding the audience, the presentation's purpose, divides the presentation, and then creates a time series so that the team understands the sequence of tasks that must be completed. 5. The following are some key approaches of group work that will help your group develop an interactive way that focuses on completing tasks or achieving the group's goals. <ol style="list-style-type: none"> a. Define roles and outcomes.

<p>form of soft copies uploaded in UUM Online Learning. Hand-written activity will not be accepted.</p> <p>6. Standard format: Times New Roman, font size of 12, 1.5 spacing, one-inch margins, reference in APA citation as per attached, and use standard cover as per attached.</p> <p>7. You must attach the Activity Cover Sheet to the front of your activity. Ensure that you have entered complete details clearly in the cover sheet. Please maintain the formatting of the cover sheet when submitting.</p>	<p>b. Implement effective communication.</p> <p>c. Recognize contributions.</p> <p>d. Use reflective thinking.</p> <p>e. Commit to combating social loafing.</p> <p>6. Perfecting an effective presentation can take practice. Here are some tips that will help you make sure everything is running smoothly, use the "Presentation Do List" as a checklist:</p> <p>a. Have your presentation ready / Do know your material.</p> <p>b. Test your equipment beforehand.</p> <p>c. Do know the order of the presenters.</p> <p>d. Do address the listeners occasionally to make sure they are still listening.</p> <p>e. Do know which person is going to answer questions so there is no fumbling around.</p>
---	---

ii. Discover

Activity 1 (Group Assignment)	Activity 2 (Group Presentation)
<p>1. Select 2 companies listed on the Main Market of Bursa Malaysia. Ensure that the chosen company is engaged in trading physical goods, not financial, bank or services.</p>	<p>1. After knowing the chapters assigned to each group, the group should begin to understand the topic and activity.</p> <p>2. Then, the group members should discuss some questions about the parameters of the activity, the details they know,</p>

<ol style="list-style-type: none">2. You are to download the latest annual reports of the chosen company. The company's annual as well as quarterly reports can be downloaded from the Bursa Malaysia website and also the company's website.3. Provide a brief background history of the company and its recent development.4. Analyze these 2 chosen Malaysian listed companies' financial condition for the FY 2020, evaluating trends in the <u>last 2 years</u> (FY 2020, FY 2019) in the company's<ol style="list-style-type: none">a. Liquidityb. Efficiencyc. Capital Structure ratiosd. Profitability, ande. Market performance - Together with the PE ratio, provide justifications on whether the company's shares are worthy of investment.5. A clear conclusion and recommendations for improvements. Then provide justifications on the financial strength of these 2 chosen listed companies.	<p>personal issues, and preferences. All members should be on the same page and have a clear idea of where they are headed after completing this discussion.</p> <ol style="list-style-type: none">3. Every group should create a clear picture of the presentation, making clear references to the group, and staying focused on achieving the group's overall goal.4. During the presentation, you need to divide into main areas so that there is a clear beginning, middle, and end. Here you can decide the order in which group members are responsible for the subtopics.5. There will be a questions and answers session after the group presentation. But presenting in a group means that when an audience member asks a question, the presentation moderator/team leader can refer a member who has the relevant knowledge to provide an answer. This can avoid any hesitant pauses.
---	---

1. This activity contributes 15% towards the overall assessments for this subject.
2. By using the group form in activity 1 to complete activity 2.
3. Please select a presentation moderator. The presentation moderator or also called team leader is responsible for organizing your group to work as a team, and need to develop an effective structure that encourages group members to participate meaningfully. The presentation moderator can also give a final speech when decision -making is needed
4. As a group, ensure each group member understanding the audience, the presentation's purpose, divides the presentation, and then creates a time series so that the team understands the sequence of tasks that must be completed.
5. The following are some key approaches of group work that will help your group develop an interactive way that focuses on completing tasks or achieving the group's goals.
 - Define roles and outcomes.
 - Implement effective communication.
 - Recognize contributions.
 - Use reflective thinking.
 - Commit to combating social loafing.
6. Perfecting an effective presentation can take practice. Here are some tips that will help you make sure everything is running smoothly, use the "Presentation Do List" as a checklist:
 - a. Have your presentation ready / Do

You must attach the Activity Cover Sheet to the front of your activity. Ensure that you have entered complete details clearly in the cover sheet. Please maintain the formatting of the cover sheet when submitting.

- b. Test your equipment beforehand.
- c. Do know the order of the presenters.
- d. Do address the listeners occasionally to make sure they are still listening.
- e. Do know which person is going to answer questions so there is no fumbling around.

ii. Discover

Activity 1 (Group Assignment)	Activity 2 (Group Presentation)
<ol style="list-style-type: none"> 1. Select 2 companies listed on the Main Market of Bursa Malaysia. Ensure that the chosen company is engaged in trading physical goods, not financial, bank or services. 2. You are to download the latest annual reports of the chosen company. The company’s annual as well as quarterly reports can be downloaded from the Bursa Malaysia website and also the company’s website. 3. Provide a brief background history of the company and its recent development. 4. Analyze these 2 chosen Malaysian listed companies’ financial condition for the FY 2020, evaluating trends in the <u>last 2 years</u> (FY 2020, FY 2019) in the company’s <ol style="list-style-type: none"> a. Liquidity 	<ol style="list-style-type: none"> 1. After knowing the chapters assigned to each group, the group should begin to understand the topic and activity. 2. Then, the group members should discuss some questions about the parameters of the activity, the details they know, personal issues, and preferences. All members should be on the same page and have a clear idea of where they are headed after completing this discussion. 3. Every group should create a clear picture of the presentation, making clear references to the group, and staying focused on achieving the group's overall goal. 4. During the presentation, you need to divide into main areas so that there is a clear beginning, middle, and end. Here you can

Designing a Shariah Compliant Fund Based on Real-Market Data of Financial Assets

Mohd Fikri Sofi^{*a}, Nor Aina Mhd Khotib^b

^{ab}Islamic Business School
Universiti Utara Malaysia
06010 UUM Sintok, Kedah

*Corresponding Author: mohdfikri@uum.edu.my

Abstract

This study proposes a conceptual planning, structure, and organization of a new type of alternative assessment in instructional delivery surrounding the investment course for Islamic business students. It aims to apply project-based learning in Shariah compliant fund portfolio design process for a better learning experience, motivated by full coursework rather than traditional paper and pencil assessment during the novel Coronavirus pandemic outbreak. The project-based learning instruction will be used in the forthcoming semester where a maximum number of 100 students is expected to enroll the course. In a small group establishment, students are required to design a Shariah compliant fund portfolio and carry out a variety of buy and sell financial asset transactions to deliver the best performance and attain the stipulated objective within the Shariah principle and guidance. Investing practice generally requires maximum return, good performance, and better insulation of corporate governance. More importantly in Islamic investing, this project-based learning examines student comprehension on the asset selection, the prevalence of Shariah governance, and financial reporting with attention to wealth distribution before declaring the attributable profit. Although the implementation looks and sounds complex, Shariah portfolio fund as one example of project-based learning could be made beneficial both during face-to-face and online classes for a better equipped and future human talent.

Keywords: Project-based Learning; Shariah Compliant Fund; Real Market Data; Financial Assets; Shariah Portfolio Design

Introduction

The world of education in Malaysia has been accustomed with many tests during the learning process since the rudimentary school level. While test or examination is distinguishable from assessment, it defines a formal procedure executed strictly within a specific time to measure the student performance focusing on a specific area of interest. The latter, however, alludes to a wider and broader concept encompassing any means, events, and observations along the teaching session, whether formally or informally, including the tests to collect and gather relevant information relating to student progress as well as their performance. A continuous assessment provides teachers mechanism to check the student level of understanding using various types of formative assessment.

Assessment treats students individually and sometimes collectively in a group to evaluate their performance across different measures, dimensions, and populations. The level of student understanding provides a good reflection about teaching and learning process. As a result, the current student achievement can be improved in aligned with a better enhanced teaching plan. In conjunction with the ongoing process to achieve the learning objective, assessment motivates students to present input and feedback to teachers, thereby establishing a good relationship and encouraging inclusive learning which ensuring the needs of all students

are taken into account for effective teaching practice and learning process.

As teaching approach shifts from teacher-centered to students-centered in tertiary level of education, the sage behind the stage is no longer relevant where knowledge can be self-discovered instead (Mohamad Uri & Abdul Aziz, 2017). The shifted paradigm has paved the way for a new student assessment method and allows for a rethinking on different strategy to suit with the new approach. In this light, Janisch, Liu, and Akrofi (2007) define alternative assessment as classroom based, qualitative, informal, or performance assessment to quantify the extent of student learning by excluding the formal test. Moreover, alternative assessment can be explained by executing task in the classroom based on constructivism epistemology that humans have the ability to generate new knowledge and meaning from an interaction in the context of ideas and experience integration. Thus, students, materials, and the context are imperative influence to drive the achievement of learning outcomes. The student learning process is equally important to the outcome or results. Among others, alternative assessment includes self-assessment, peer-assessment, co-assessment, project-based learning, portfolio assessment, and performance assessment.

With a combination of project-based learning and portfolio assessment, students who enrolled in Islamic investment course in the forthcoming semester will be introduced to designing a Shariah compliant fund portfolio within the environment of Islamic capital market. The student exposure to various financial assets made available in the general capital market is our primary motivation. Appraises the student proficiency on managing a portfolio fund, their numerical, and analytical skills simultaneously are imperative at delivering a superior performance to investors on top of their abilities to conform to Shariah principle of investing persistently. Moreover, the conflict between teamwork and the power of authority will be a challenge for them to demonstrate groundwork in a professional manner (Simons & Baeten, 2016). Rather than passively learning and perform tutorials in the class where students are prone to lackluster, real case data application upon the portfolio management is deeper, long-lasting, and inspiring to build connection with learning experience. Further, financial report preparation fosters their meticulous observation and analytical skills especially when logical reasoning and data interpretation are critical.

Aiming at proposing a conceptual planning, structure, and organization of a new type of alternative assessment in instructional delivery around project-based learning for Islamic investment course, this study makes some contribution to the Islamic finance teaching literature in several ways. First, project-based learning would be made public and shared with stakeholders, particularly the industry experts and instructors beyond classroom through digital portfolio and website. The real challenge is to manage the portfolio management project while preparing and delivering fund details in timely and accurate manner simultaneously. Second, the project is based on non-traditional investing practice that uphold Shariah principle and Islamic values framework throughout the process. All the processes, decisions, and policies must always be consistent with the fashion and settings endorsed by Shariah law. Third, it demands a new rubric for this alternative assessment to be successfully measured. More importantly, such rubric must be competent and in tandem with the learning outcomes.

The remainder of this paper is structured as follows. Section 2 discusses the related previous literature concerning project-based learning and portfolio assessment, Section 3 presents the conceptual method of project-based learning, Section 4 provides some preliminary findings, and finally, Section 5 concludes the study and highlights the limitations and suggestions for future research.

Literature Review

Project-based learning is a model of teaching that pulls away from traditional classroom practises and teacher-centred lessons toward long-term multidisciplinary, student-centred, and real-world challenges and practises. The Ministry of Education (MOE) has introduced this alternative assessment in 2006 to coincide with the development of computer-based knowledge and technology in the 21st century (Educational Technology Division, 2006). Zimmerman (2010) states that traditional education is no longer relevant to be applied in today's society, considering the problems that today's young generation faces in a more complicated and technology-driven environment.

Thus, project-based learning method is one of the effective teaching techniques that can be used in the classroom. A variety of strategies and approaches in teaching can help and encourage students to be more active. Project-based learning can help students develop their creativity. Experiments, creating a poster, a multimedia presentation, a portfolio, and project work are examples of project-based learning. To qualify as a genuine project-based learning, the following are the features that must be associated with an assessment explained by MOE (Educational Technology Division, 2006):

- Embedding core curriculum across multidisciplinary
- Activate student participation in a long-term endeavour
- Grant student power to make decision in the project
- Based on the collaboration spirit
- Employing real-world practice based on real data.

According to Tal, Krejčík, and Blumenfeld (2006), teaching and learning methods that use project-based learning allow students to extend their learning experience outside the classroom.

The approach of using project-based learning that requires students to complete a project based on a specific problem or question will have an impact on their knowledge. Project-based learning must integrate with the function of technology, information, and communication. Shariah portfolio fund adopts project-based learning with portfolio assessment method that provides electronic platform for students to report the fund information, observation, and performance and Shariah clarification. Electronic portfolio or e-portfolio refers to a digital version of the traditional series of paper-based portfolio. E-portfolio has been utilised successfully in a variety of fields, including social sciences, humanities, and arts for both learning and evaluation (Bhattacharya & Hartnett, 2007).

A portfolio allows the process of careful documentation involving a collection of several types of proof of learning outcomes attainment. Practically, a requirement for student portfolio shall include various documents such as academic papers, external sources data, financial reports, and other materials. E-portfolio would be more interesting and original with overall student reflection part on project-based learning on top of new knowledge, experience, strengths, and weaknesses. The attractive part of the portfolio is that it may contain proof of attainment of all learning outcomes within its framework. The portfolio assessment is frequently utilised to support the project-based learning since it includes student reflection, improvements in their progress, and desired outcomes (Davis & Ponnamparuma, 2015). A finding by Gülbahar & Tinmaz (2006) shows that e-portfolio method was favoured by all students. This statement is supported by a study conducted by Bhattacharya & Hartnett (2007) arguing that students who have previously worked on e-portfolio continue did not simply halt their portfolio works and develop the communities through learning using the idea exchanging and sharing as well as online conversations. This is because the weekly feedback on the assignments and the possibility to redesign the assignments before the final submission were evaluated by the students as a great opportunity for self-improvement (Gülbahar & Tinmaz,

2006).

Data and Methodology

Course Intended

Project-based learning which associated with alternative assessment in this study has selected one of the courses currently offered by Islamic Business School, Universiti Utara Malaysia (UUM). The course name is Islamic investment with the course code BWFS 3013. Generally, Islamic investment is opened for enrollment to most of the students in semesters 5 and 6 subject to pre-requisite prior courses. The number of registered students would be able to reach a maximum of 100 students as allocated by the academic department.

This course aims to provide basic concepts and principles in investment, focusing on alternative practice of Islamic investment. Students will be exposed to conventional and Islamic investment theories and techniques as well as practical applications. Furthermore, the Malaysian Islamic capital market investment context and mechanisms are also incorporated where appropriate. Introductory lectures will provide an overview of the Malaysian capital market, risk and return in investment, trading of securities, types of investment securities, and mutual funds. The focus consists of discussions on common stocks, bonds or *sukuk*, derivative securities, and portfolio funds.

As Islamic investment strives to transfer the knowledge, the course emphasizes on various skills, namely cognitive, practical, and numerical to facilitate students better. However, project-based learning and portfolio assessment focus on practical and numerical skills only in the pursuit of the course learning outcome that students will be able to involve in Islamic investing activities decision making by applying appropriate methods. It requires students to apply the knowledge learned in the class into novel situations and probably engender new knowledge from the integration with experience.

Project-based Learning

This focused alternative assessment study employs project-based learning that emphasizes on practical, application, and hands-on. Big project is multi-disciplinary in nature and integrates a broader knowledge encompasses management, financial, Shariah governance, and investment analysis. Focused on student-centered learning, this approach highly engages and encourages students to learn and work collaboratively (Almulla, 2020) in a team striving for the objectives and deliver the best interest of investors. Besides, the project managed is flexible given the time horizon and the necessary required quarterly report. More importantly, it will be made meaningful as the data of financial assets used is real-time and real-world benefitting from deliberate, prudent, and vigilant observations.

Fundamental knowledge of investment has enabled students to understand the nature and settings of a portfolio fund. The gap between conventional and Shariah investing practice is what project-based learning and portfolio assessment attempt to address. Moreover, investing practice within Shariah context does not only attend to the permissible activities particularly on financial assets held, but more importantly the governance aspect, Shariah objective, and the whole fashion that must consistently be adhered with Islamic teaching. The investing platform, market analysis, information, and real-market data of financial assets are available in the Bursa marketplace. Shariah portfolio fund can be designed by performing trading transactions and this task requires a great deal of observation, analytical, and data interpretation abilities.

Shariah portfolio project-based learning underlines many objectives. Among others, it fosters students learning to understand both information quantitatively and qualitatively before making decision around Islamic investing and to analyze and ensure the best performance

delivery investing within Shariah principles boundaries. Portfolio assessment gives the students opportunity to explore the designing process during the establishment of a new portfolio management until the regularly financial report presentation. But, on the whole idea, students would be capable to demonstrate independently the underpinning concepts and applications concerning with the theories and methodologies in Shariah compliant investment.

Shariah Portfolio Fund Approach

Shariah portfolio fund project is initiated with the design and establishment of a new portfolio management with a complete structure of corporate and Shariah governance. Once trading transaction or investing practice begins, fund manager will start to gather some essential observation and monitoring of financial assets as well as fund performance with conflicting decisions in the management team. The shifting of portfolio composition is prevalent and the real challenge lies behind the fund capability to retain its specific attributes towards achieving the underlined objective. In this light, iterative inquiry, monitoring, and reevaluation are of utmost importance to ensure persistency in all aspects, particularly Shariah matters. To expand further, managers together with Shariah experts need to gather feedback from experts, often reflect their practice and current performance, and promote the community acknowledgement so that sustainable investing can be ascertained in the long run.

In the instruction, a group of 4 or 5 students is required to design and establish a new portfolio management with a complete structure including the governance, fund manager, fund approved size, fund objective, fund category, fund type, expenses, and the potentially Shariah governance matters. A portfolio fund shall comprise of a variety of financial assets which are deemed appropriate and aligned with fund objective, category, and type. The portfolio management project will be carried out over 12 weeks led by a fund manager, supervised by a board of director, and monitored by Shariah committee.

The performance of portfolio management is expected for evaluation through the preparation of a quarterly financial report and the fund composition of a number of different assets in e-portfolio or special design website. Persistent performance of a portfolio fund is crucial in order to retain the current holdings as well as attract new inflows. Not only the fund generates superior performance, but also outperforms the selected market benchmark. Students are encouraged to perform inquiry and designing processes iteratively. Student engagement is productive when asking questions, finding resources, and applying information within their control. Feedback from expert motivates students and provides them with room of improvement while reflection solidifies the knowledge and alerts teachers.

Findings and Discussion

The structure of Shariah portfolio as alternative assessment under the classification of project-based learning does not only reinforce the student knowledge, but also strengthen their understanding and authenticate the skills required for managers and Shariah experts. While designing a Shariah portfolio fund would probably be a challenging question, it can be implied to personal investing practice as well where personalized learning takes place by giving the students space to identify their strengths, needs, skills, and interests. In this case, teachers hand over the learning process and plan to students for the new things they eager to learn and the way they learn best at their pace.

Two challenges would likely be raised, namely the positive persistence in performance and Shariah issues around the investing activities. A continuous related inquiry drives students active in the class when seeking answers especially from teachers. Simultaneously, feedback from teachers support their works and substantiate evidence that portfolio performance meets the standard. The portfolio project shall be made public to the stakeholders and community

acknowledgement. Figure 1 presents Shariah portfolio fund project-based learning approach benefits.

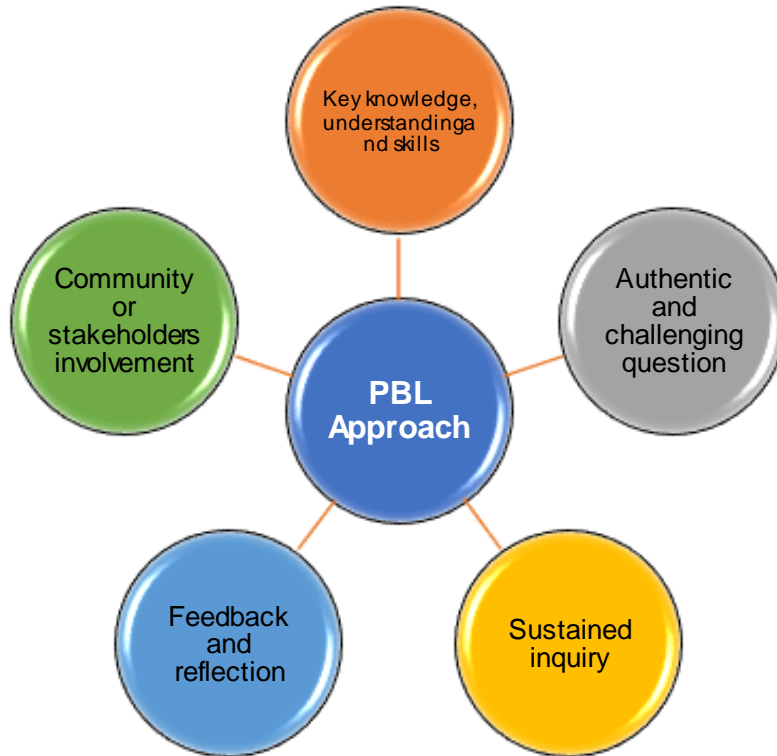


Figure 1. Shariah portfolio fund project-based learning approach benefits.

A pilot study has been performed in the same course the preceding semester, where the class comprises 20 students. Many of them have zero experience when it comes to stock trading transaction in Bursa market exchange platform. In addition, they are full of uncertain, hesitation, and doubtful situation because afraid of losing the original amount of capital. From the student motivation, the overall performance as illustrated by the asset selection and portfolio assessment would slightly be disappointed.

The student weakness is extremely apparent following their suboptimal analytical skills and poor understanding of return computation. Although they are informed about Islamic investing practice and its obligation, but their ability to perform a full set of practice from many perspectives is not at satisfactory acceptance. Thus, this study proposes an improved rubric for Shariah portfolio project-based learning and portfolio assessment as illustrated in Table 1.

Table 1
Shariah portfolio rubric of assessment

Group Name:					Matric No.:
Lecturer Name:					
Course Code:					
Portfolio Fund:					
	1 = Poor	2 = Fair	3 = Good	4 = Excellent	
Conceptualisation	Able to generate a simple idea or an idea independently.	Able to generate a new idea or ideas with some help from lecturer or colleagues	Able to generate a new idea or ideas that is or are relevant and appropriate.	Able to generate new idea or ideas that have potential to be applied, has depth, quality, and novel in nature.	
Evaluation/ Analysis	Able to evaluate several potential assets but not able to select appropriate assets with maximum assistance.	Able to evaluate several potential assets and able to select appropriate assets with minimum assistance.	Able to evaluate several potential assets and clearly and accurately select alternative assets without assistance.	Able to evaluate several potential assets and able to select alternative assets clearly and accurately in detail.	
Generation of Solutions	Able to solve problems or offer alternative solutions with maximum assistance.	Able to partially solves problems or provide alternative solutions with some assistance.	Able to solve problems or provide alternative solutions well without assistance.	Able to solve problems and provide alternative solutions with accuracy, clarity and detailed.	
Report Presentation	Unable to present graphical and statistical evidence to support the analysis and decision.	Able to partially present graphical and statistical evidence to support the analysis and decision.	Able to present graphical and statistical evidence better to support the analysis and decision.	Able to present graphical and statistical evidence to support the analysis and decision.	
Positive Performance	Able to present poor performance with overall negative individually and inferior against the market.	Able to present average performance but overall negative individually and inferior against the market.	Able to present good performance and overall positive individually and superior against the market.	Able to present incredible performance and overall, the best individually and outperform the market.	
Persistent Performance	Able to generate a little consistency in performance with greater volatility	Able to generate some consistency in performance with acceptable volatility	Able to generate better consistency in performance with reasonable volatility	Able to generate the best consistency in performance with controlled volatility	
Shariah Investing Practice	Able to demonstrate Shariah investing practice with many setbacks	Able to demonstrate Shariah investing practice with significant setbacks	Able to demonstrate Shariah investing practice with some setbacks	Able to demonstrate Shariah investing practice with acceptable setbacks	
Corporate and Shariah governance	Limited effort to acknowledge the functions of corporate and Shariah governance	Some effort to acknowledge the functions of corporate and Shariah governance	Considerable effort to acknowledge the functions of corporate and Shariah governance	Outstanding effort to acknowledge the functions of corporate and Shariah governance	
Overall Portfolio Summary	Able to illustrate the portfolio completely with lack of information and investing practice	Able to illustrate the portfolio completely with some good information and investing practice	Able to illustrate the portfolio completely with many good information and investing practice	Able to illustrate the portfolio completely with the highest standard of information and investing practice	
Reflection and New Knowledge	Able to provide common reflection with scant new knowledge	Able to provide average reflection with some new knowledge	Able to provide above average reflection with decent new knowledge	Able to provide brilliant reflection with lavish new knowledge	
Total Marks:					

Guided by proposed rubric, students can be made informed about the most quality Shariah compliant portfolio design. The instruction departs from personal investing portfolio

to institutional designed portfolio implying the notion of separation of ownership and control. Personal interest could be important feature when applying the investment decision making between both portfolios. The latter practice requires a systematic and organized investment activities and management to ascertain optimum use of investor funds consistent with objective and Shariah ruling. In this regard, Table 2 provides the description of task expected that meets the standard of portfolio investing.

Table 2
Shariah portfolio design description

No.	Task	Course Learning Outcome (CLO)	Learning Outcome Clusters (LOC)
1	Establish a public Shariah fund under a sponsored company registered with various regulators.	Apply appropriate methods for decision making in Islamic investment	LOC 2 (Practical skills)
2	Determine the features of Shariah fund such as category, class, objective etc. (reference is available from mutual fund practice).		
3	Design the board of directors, management, and Shariah advisory board structure with its policy.		
4	Explain the types of investable assets associated with this Shariah fund and the risk category for investors' reference.		
5	Perform investment transaction within the portfolio planning based on the decision made by the management (with rationale and justification).		
6	Prepare quarterly and overall investment performance report for analysis and future direction. Return computation is thus crucial to estimate the fund investing profitability.		LOC 6 (Numeracy skills)
7	Create overall fund report based on the quarterly basis performance over the period as well as Shariah declaration on all activities undertaken.		
8	Upon the distribution to investors, clarify the purification of income and zakat practice if necessary.		
9	Outstanding design of Shariah portfolio summarizes the industry by providing performance comparison with the counterparts.		

Conclusion

The current study proposes a conceptual planning, structure, and organization of a new type of alternative assessment under the project-based learning instructional for Islamic investment course, which is expected to be implemented in the forthcoming semester. Project-based learning executed concerns at designing a new Shariah portfolio fund which pools capital from public investors and distribute investment in accordance with strategy, techniques, and

financial assets in aligned with Shariah principle. As such, Shariah portfolio must look appealing by having a good structure of corporate and Shariah governance, features, and lucrative performance

Although the findings from a pilot study in the previous class about this project-based learning with attention to Shariah portfolio were surprising around the student development and effect on their numeracy skills, the same instructional delivery will be applied in the forthcoming semester with some improved features, control, and rubric of assessment. Thus, this study addresses a more genuine project-based learning in relation to Shariah portfolio fund where the financial report and student observation can be monitored through digital portfolio.

A number of caveats need to be noted in the present study. First, apparently the course assessment is planned for Islamic business students only. However, financial teachers in general course of investment could take this as a reference for their assessment. One source of weakness in this study which could have affected to unexpected impact on students is attributed to the complex and comprehensive design of a Shariah portfolio. Perhaps, that would be the rationale for such coursework to be carried out along 12 weeks. Further experimental investigation is, thus, necessary to provide a continuous improvement on the rubric of assessment presented. It would be interesting to have a formal quantitative study to assess the student effect after experiencing this project-based learning. Unless the university adopts Islamic financial system with an equally important of analytical skills among Islamic business students, the collaboration between investment and Shariah expert will not be seen friendly towards finding resolution for public investors in the future.

References

- Almulla, M. A. (2020). The Effectiveness of the Project-Based Learning (PBL) Approach as a Way to Engage Students in Learning. *SAGE Open*.
- Bhattacharya, M., & Hartnett, M. (2007). E-portfolio Assessment in Higher Education. *Proceedings - Frontiers in Education Conference, FIE*.
- Davis, M. H., & Ponnampuruma, G. G. (2015). Portfolio Assessment. *Journal of Veterinary Medical Education*, 32(3), 279–284.
- Educational Technology Division. (2006). Project-Based Learning Handbook: Educating the Millennial Learner. Malaysia: Ministry of Education, 3.
- Gülbahar, Y., & Tinmaz, H. (2006). Implementing Project-Based Learning and E-Portfolio Assessment in an Undergraduate Course. *Journal of Research on Technology in Education*, 38(3), 309-327.
- Janisch, C., Liu, X., & Akrofi, A. (2007). Implementing Alternative Assessment: Opportunities and Obstacles. *The Educational Forum*, 71, 221-230.
- Mohamad Uri, N. F. & Abdul Aziz, M. S. (2017). Alternative Assessment: Exploring the Effectiveness of Self-Assessment Practice among Engineering Students. *Akademika*, 87(1), 141-152.
- Simons, M., Baeten, M. (2016). Student teachers' team-teaching during field experiences: An evaluation by their mentors. *Mentoring & Tutoring: Partnership in Learning*, 24(5), 415–440.
- Tal, T., Krajcik, J. S., & Blumenfeld, P. C. (2006). Urban Schools' Teachers Enacting Project-Based Science. *Journal of Research in Science Teaching*, 43(7), 722–745.
- Zimmerman, D. C. (2010). Project Based Learning for Life Skill Building in 12th Grade Social Studies Classroom: A Case Study. (Master's thesis, Dominican University of California, San Rafael, California). Retrieved from <https://files.eric.ed.gov/fulltext/ED510590.pdf>.

Teaching Banking Theory Using Digital Story Telling Project and Cognitive Engagements during Remote Learning

Muhammad Muhaizam Musa^{*a}, Sarah Shaharruddin^b, Idyawati Hussein@Hussen^c

^aSchool of Economics, Finance and Banking, Universiti Utara Malaysia,

^bSchool of Business Management, Universiti Utara Malaysia,

^cSchool of Computing, Universiti Utara Malaysia.

*Corresponding Author: dr.muhaizam@gmail.com

Abstract

The study aims to identify the effects of learning using alternative assessment activities such as digital story telling tasks for banking theory titles and cognitive engagements on the achievement and motivation of undergraduate students at university. A total of 30 students from a course in the university participated in this study. The instruments of this study are motivational questionnaires and achievement tests. All findings in this study were statistically analyzed inference that is paired t sample test and Wilcoxon signed rank test using IBM SPSS Version 25 software. The findings of this study show that there is a significant link between the use of digital story telling through the inquest method towards student achievement and motivation.

Keywords: Learning strategy, alternative assessment, teaching banking for undergraduate, remote learning, reflective inquiry method.

Introduction

The approach of using digital storytelling in education is a tool that is often used as a medium of information delivery to all communities. The use of digital story telling as a way to enhance an individual's skills and understanding is relevant to further strengthen the information that students are being able to understand and understand. To what extent can the effectiveness of using digital storytelling have a positive motivational effect among students? Digital storytelling that tends to be more arts and social topics rather than involving on technical topics such as in economics, banking, finance or any other scientific topics which does not involve creativity and innovation in nature. It should be noted that not all fields of the academic discussion prescribe suitable pedagogy to trigger reflective thinking processes in their fields. Who is inclined to use digital storytelling nowadays? Today, social media channels such as Facebook, Instagram, Tik Tok and Twitter are virtual mediums that are free and accessible to anyone which most of it would involve some elements of digital storytelling. If this digital storytelling would be more acceptable to generate academic discourse amongst educators as well as learners, this would presents the opportunity for students to contribute ideas that can be shared together.

Effective learning processes need to be implemented to improve the quality of education of students. However, will teaching and learning methods using digital storytelling have an impact on students to learn without compromising the concept of digital storytelling itself? According to Royer (2008), the technology adopted in digital storytelling alone will not benefit students as they are not exposed to the feasibility of digital storytelling in education in more detail. As an educator, it is necessary to look at these shortcomings from different perspectives in helping to improve students' reflective thinking through digital storytelling, not just the integration of technology in the field of education and understanding that it will lead to an effective teaching and learning process for students. Thus, reflective thinking is seen as

suitable to be instilled in attracting students and enhancing their motivation in the learning environment through digital storytelling. Hence, the concept of learning banking theory through reflective thinking skills is one of the innovations in learning through digital storytelling as an effective medium.

Objectives

The objectives of this study are:

- i. Building appropriate alternative assessment activities through digital narration for Banking Theory Topics for Basic Banking course studies for undergraduate studies.
- ii. Analyze the effect of the use of reflective digital narration through the inquest method of student achievement.
- iii. Analyze the effect of the use of reflective digital narration through the inquisition method on students' motivation.

Research Questions

The questions of this study are:

- i. What is the appropriate alternative assessment activity through digital narration for Banking Theory for Basic Banking course studies for undergraduate studies?
- ii. What effect does the use of reflective digital narration have on student achievement?
- iii. What effect does the use of reflective digital narration have on the inquisition method on students' motivation?

Research Hypothesis

H_{o1}: There is no significant difference between student achievement before and after the use of reflective digital narration through the inquisition method.

H_{o2}: There is no significant difference between the motivation of students before and after the use of reflective digital narration through the inquisition method.

Theoretical Framework

To view students' achievements before and after the use of reflective digital storytelling, the following theoretical framework is implemented through the inquisition method adopted from the taxonomic model introduced by Krathwohl (2002). In order to see the motivation of students before and after the use of reflective digital narration, the Instructional Material Motivation Survey (IMMS) questionnaire by Keller (2010) was used. Figure 1 below shows the theoretical framework used for the overall purpose of this study.

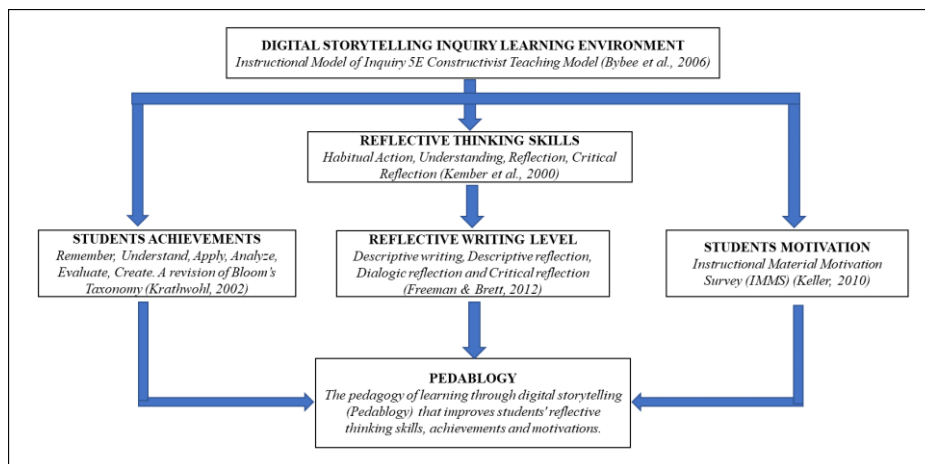


Figure 1. This is a diagram showing the theoretical framework used for this study.

Methodology

The design of this study is an experimental study of the pre-post-group type over a group of students taking a course in foundation of banking in Universiti Utara Malaysia. Through the design of this study, there is a group of studies that will be tested which is control group and another group will undergo the normal study. These groups will undergo pre-test to prove whether the abilities or capabilities between the two groups studied are equal or different. After going through the review process, the group will undergo a post-test. Post-test is used to determine the difference in a student's capability of learning.

The Instructional Materials Motivation Survey (IMMS) questionnaire instrument and Reflective Thought Dimension instrument have tested its reliability with test-retest reliability tests and internal consistency tests. A total of 20 respondents in the class were chosen to answer the survey.

The Cronbach Alpha coefficient has been used to assess the reliability of both instruments. The result of the reliability test for Cronbach alpha value for the IMMS questionnaire was 0.981 while the Reflective Thought Dimension questionnaire was 0.741. Both instruments have exceeded the value of 0.7. This indicates that the instrument is considered valid to evaluate knowledge or skills while a value above 0.6 indicates the instrument is considered reliable (Landis & Koch, 1977).

Paired-samples t-test is conducted using SPSS software version 25 with alpha value = 0.05, to study whether the use of reflective digital storytelling through the inquiry method has a significant impact on student achievement or not. These paired t-sample tests are used to compare two variables which were. Pre-test scores and post-test scores. Wilcoxon signed rank test was conducted with SPSS software with an alpha value = 0.05, to determine whether the use of reflective digital storytelling through the inquiry method had a significant impact on the motivation of the student or not.

There were 30 students who attended the Undergraduate Level Foundation of Banking course at Universiti Utara Malaysia became the sample for this study.

Literature Review

For quite some time, traditional learning has dominated the teaching and learning methods in universities. During the Covid-19 global pandemic, the shift to move into an alternative

assessment in the context of measuring students achievements and motivation to learn have become the main focus of many literatures because most of the classes were conducted via remote learning instead of the traditional face-to-face classes.

In the traditional learning, most of the students would only listen, taking down notes on the subject and lacks of attempts to comprehend the concept being thought to them because they were only memorize concepts in order to pass their examination for the course. In this situation, students are placed as objects of the recipient of educational materials from the educators, whereas the educators act as learning agents and cannot help to increase the motivation of the students to learn knowledge in the classroom. Educators position themselves as people with knowledge and the only source of knowledge for students to infer to. This is because educators were only interested in the delivery while students would focus on listening to ensure the continuity of the learning process. This type of learning only focuses on teacher centered approach and one way directional in teaching in classroom (McPherson, 2009).

There are several literatures that have discussed the ways of teaching the subject of banking to students in many different approaches and innovative ways instead of focusing on teacher centered approaches. According to Breen and Boyd (1976), alternatives to the teaching such as simulation in classroom to teaching banking courses would enhance students understanding on the process and technical practices of banking as the topics were more practical to the banking industry standard for students to understand. Whereas, Balkenborg, Kaplan, and Miller (2011) have opted for creative way for teaching the topic on monetary policy by using classroom experiments to generate students interest in learning about the concept of bank runs in a more intuitive way. Duffy and Jenkins (2019) highlighted that by using technological enhanced learning in the classroom helps students to be more understanding on certain technical topics such as monetary policy in banking as classroom experiments provided the students better hands on discovering and analysing the concepts with their peers using alternative assessment activities such as role play where students take turn to play the role of Central Bank to act on different scenarios in the changes of the monetary policy decision making. Students understanding and comprehension on banking knowledge is important besides being stimulated by authentic activities leading to active learner role by the students in the classroom (Hoffer, 2015). This authentic activity can be translated into other reflective learning such as digital storytelling that would be much better approach in understanding the topic of banking theory.

According to Thomas (2017), studies on blogs or other digital storytelling mechanism should focus on the teaching and learning methods available through social media networks rather than dealing with problems that are constraints on the smooth running of this process. Based on a number of past studies, there are many factors that help students towards positive achievement in the classroom through the use of digital storytelling as a reflective thinking activity of students in the classroom (Scott et al., 2016) while Yang & Wu (2012) explained that it is related to the integration of the student's thinking skills process.

The implementation of digital storytelling in today's teaching and learning can provide a space to implement an effective and orderly learning process (Tabieh et al., 2021). There are several factors to consider to ensure the use of digital storytelling in teaching and learning according to the desired quality (Hargrove, 2013). Among them are strategies, theories, styles of teaching and the appropriate teaching and learning models to enhance their learning skills (Jackling et al., 2015). In addition, students' achievements and motivation should also be seen in ensuring the desired quality in education (Tanrikulu, 2020; Villardon-Gallego, 2016).

The activities contained in digital storytelling should be exploited to ensure that all teaching approaches used by educators will get a positive reaction from students in the process of improving their achievement (Jathaenthung et al., 2021). This can be further explore by looking at the digital storytelling learning environment based on the model introduced by

Bybee et al. (2006). They have identified the learning environment that is to be incorporated in the digital storytelling into 5 phases namely Engage, Explore, Explain, Elaborate and Evaluate.

To view students' achievements before and after the use of reflective digital storytelling implemented through the inquisition method, the taxonomic model introduced by Krathwohl (2002) provides the best measurement tool to investigate in this field of research on reflective digital storytelling. While Keller (2010) provided the tools see the motivation of students before and after the use of reflective digital narration based on the Instructional Material Motivation Survey (IMMS) developed by them which focuses on determining the motivational factors of students that consist of elements namely Attention, Relevance, Confidence and Satisfaction.

Findings

There were several activities which were conducted in this class to stimulate learning using the reflective digital storytelling method of inquiry. Each available activity applies several authentic elements so that students are not bound by formal and one-way sharing. With this, they can be more inspiring to explain their concept and present it in a more creative and meaningful form. In this regard, the objectives of the study can be achieved well because the content of the learning is in line with the good and effective delivery methods for the students. Figure 2 is a summary of the activities available to students in the classroom.

Activity	Objective	Learning Outcome
1. Time Exploration	The students investigate the history of banks in the beginning of early ages until present time.	Students will be able to understand the banking concept.
2. The Gathering	The students explore what they see in banking theory application and find out the most important point in the theory that they have learn to their colleagues.	Students will be able to explain the banking theory.

Figure 2. Student Learning Activities

Student Achievement

The following presents the findings on the effects of using reflective digital storytelling through the inquiry methods in teaching and learning on students' achievement in this study. Table 1 show the results of questionnaire instruments on students' samples in this study.

Table 1

Paired t test results for student achievement

	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std Error Mean			
Pre and Post Test	-37.367	5.881	1.074	-34.802	29	.000

Based on Table 1, the null hypothesis H_{01} has been rejected because students' achievement in post-test ($M=86.17$, $SD=3.630$) has increased significantly compared to pre-tests ($M=48.80$, $SD=5.088$) with $p=0.000$ ($p<0.05$). Thus, the results of the pairing t-sample test showed that there was a significant difference between the students' achievement before and after the use of reflective digital narration compared to the mean value of the pre-test (Mean Difference = 37.367), thus indicating that the use of reflective digital narration through the

inquisition method had improved the students' achievement level. It is shown that the results of the pairing sample test showed that the use of reflective digital narration through the inquest method had improved students' achievement.

Student Motivation

The following presents the findings on the effects of using reflective digital storytelling through the inquiry methods in teaching and learning on students' motivation in this study. Table 2 shows the students' pre and post-motivational reporting according to the four levels of motivation measured.

Table 2
Students' pre-and-post motivational levels

Motivation Levels	Mean_Pre	SD_Pre	Mean_Post	SD_Post
Attention	2.77	0.28	4.42	0.50
Relevance	2.73	0.32	4.40	0.62
Confidence	2.74	0.25	4.28	0.62
Satisfaction	2.88	0.31	3.76	0.37
Average IMMS	2.77	0.24	4.30	0.51

Overall, the reporting of student motivational results showed high motivation after the use of reflective narration through the inquiry method. The reporting results showed that the student's post-motivational average value was 4.30 with a standard deviation value of 0.51 compared to before the use of reflective digital narration using the inquiry method of 2.77 with its standard deviation value of 0.24. The results showed that the level of motivation of students increased after the use of reflective digital narration through the inquiry method.

Wilcoxon subsequently signed rank test was conducted using SPSS software with alpha = 0.05 value, to study whether the use of reflective digital storytelling through the inquiry method had a significant impact on the students' motivation. The test was used as an alternative to the pairing sample test because the data was not normally released based on Shapiro's analysis. Wilcoxon signed rank test also used to find out that there were significant differences in the two interconnected samples. The sample size of this study is n=30.

Furthermore, based on Table 3 and Table 4, null hypothesis H_{02} was rejected because post-motivational students (M=4.27, SD = 0.513) increased significantly compared to pre-motivation (pre-motivational IMMS) students (M=2.77, SD = 0.244) with a p=0.000 (p<0.05). So Wilcoxon's signed rank test results showed there was a significant difference between the overall level of student motivation before and after the use of digital storytelling through the inquest method. Since the mean value of student post motivation is higher than the mean pre-motivational value (Mean Difference = 1.5), it shows that the use of reflective digital storytelling through the inquiry method has increased the overall level of motivation of the students. In conclusion, Wilcoxon's test results showed that the use of reflective digital storytelling through inquiry methods had increased the motivation of students in the classroom.

Table 3
Wilcoxon signed rank test result

Ranks		N	Mean Rank	Sum of Ranks
IMMSPost	Negative Ranks	1 ^M	3.00	3.00
IMMSPre	Positive Ranks	29 ^M	15.93	462.00
	Ties	0 ⁰		
	Total	30		

Table 4
Wilcoxon signed rank test statistics

	Test statistics	
	IMMSPre	IMMSPost
Z		-4.722b
Asymp. Sig. (2-tailed)		0.000

Discussion

The determination of the correct learning strategy that is found in this study will ensure that each component designed for teaching and learning in the field of banking can function properly and in line with the objectives of this study. This study applies the method of reflective inquiry in learning. The 5E inquest learning model also known as 5E Instructional Model spearheaded by a group of researchers from biological sciences curriculum study (Bybee et al., 2006) was selected. This model is chosen because it is more practical, organized and suitable to improve students' learning levels.

The learning activities used by the class for the observation in this study are according to the objective learning syllabus. Those activities has been completed and discussed thoroughly with students by looking at the objectives and learning outcomes specifically for the topics of on banking theory. The conventional way for teaching the topic on money and banking with students were mostly based on simulated learning and classroom experiments. According to Kane (1976), learning the banking topics in the classroom should be practical as well as flexible to meet students learning needs so that quality education can be delivered as many banking topics are both technical and according to the industry practices.

In this study, the students went through the inquiry method to learn the topic of banking theory. As stipulated in other literatures, students have gone through five phases in their learning process based on the inquiry method for this topic, namely, Engage, Explore, Explain, Elaborate and Evaluate to ensure the use of reflective digital storytelling through this inquiry method affects the student before and after using it. Each phase has been reinforce with authentic activities such as collaborative learning using Miro (miro.com).

The findings of this study show that there are significant differences in students' achievement and motivation when using reflective digital storytelling through the inquiry method. With regards to student achievement, student achievement results after the use of reflective digital storytelling were found to have increased from their achievements prior to the use of reflective digital narration. A total of 19 students had obtained grade A and most of them had stated that they could have a better understanding of the concept and basics of banking theory through the training provided. Most of them also stated that the existing knowledge they have learned greatly helped them as well as new knowledge in this reflective digital storytelling that has also catalysed their achievements. This statement is also supported by Beyer (2008) that the style of thinking and knowledge greatly influences students' achievement in learning. The motivational levels of the four components namely attention, relevance, confidence and satisfaction were found to have increased significantly based on the difference in mean value post and pre after going through the learning process through reflective digital storytelling through the inquiry method. Most students have stated that they clearly understand to complete the tasks given and are delivered in reflective digital storytelling using the inquiry method. This showed that the learning activities that the students have pursued were beneficial to them as they were in line with the learning needs. This was supported by students through their very positive response to the information and knowledge section. Therefore, in order to maximize the impact of the components of attention, relevance, confidence and satisfaction in the basic courses of banking, educators should provide the best possible quality pedagogical instruments

that can give students more space to be more creative and innovative.

Conclusion

The study has reported that there is a significant impact on the use of reflective digital narration through inquisitive methods on students' achievement and motivation in basic banking courses at undergraduate level. The importance of creating a learning environment for digital storytelling has been recognized theoretically and practically in the educational pedagogy. Therefore, it is hoped that all parties in the higher education would be interested in adapting to more alternative assessment in their teaching rather than focusing on the conventional method of assessing students' knowledge without considering their interest and motivation while learning the subject thought by educators. In the remote learning environment especially during the closure of physical classes due to Covid-19 pandemic, it has now become necessary to ensure the use of more effective tools such as reflective digital storytelling through the inquiry method to have a positive impact on the effectiveness, implementation, processes and outcomes of learning to improve students' achievement and motivation. In the wake of Industry Revolution 4.0 and Fintech (Financial Technology) innovation, students need to be the creator of knowledge by allowing creativity and innovativeness to be emulated in classroom rather than confining to the traditional method of assessment such as paper based examination that would confine the minds of student in memorizing facts and concepts which certainly would be withholding students potentials in meeting the demands of the industry that seeks new ways of thinking for new products and solutions in dealing with changes in the banking sector as well as other businesses.

Therefore, the use of reflective digital storytelling through inquiry methods plays an important role in enhancing students' achievements and motivations for banking theories topics. Such pedagogical conditions also need to be held continuously in a virtual learning environment in tandem with the application of information technology elements for 21st century learning. This alternative assessment will be complementing the method of student's assessment with other practices in teaching the banking course especially during the remote learning session.

Acknowledgement

The authors would like to give appreciation to Universiti Utara Malaysia as this study is funded by the Student Development research grant.

References

- Balkenborg, D., Kaplan, T., & Miller, T. (2011). Teaching bank runs with classroom experiments. *The Journal of Economic Education*, 42(3), 224-242.
- Beyer, B. K. (2008). What Research Tells Us about Teaching Thinking Skills. *The Social Studies*, 99(5), 223–232.
- Breen, W., & Boyd, J. (1976). Classroom simulation as a pedagogical device in teaching money and banking. *Journal of Financial Quantitative Analysis*, 11(4), 595-606.
- Bybee, R. W., Taylor, J. A., Gardner, A., Van, P., Powell, J. C., Westbrook, A., Landes, N., Spiegel, S., Stuhlsatz, M. M., Ellis, A., Thomas, H., Bloom, M., Moran, R., Getty, S., & Knapp, N. (2006). The BSCS 5E Instructional Model: Origins and Effectiveness A Report Prepared for the Office of Science Education by 5415 Mark Dabling Boulevard. Science Education, June.

- Duffy, J., & Jenkins, B. C. (2019). A classroom experiment in monetary policy. *Journal of Economic Education*, 50(2), 89-107.
- Hargrove, R. A. (2013). Assessing the long-term impact of a metacognitive approach to creative skill development. *International Journal of Technology and Design Education*, 23(3), 489–517.
- Hoffer, A. (2015). A classroom game to teach the principles of money and banking. *Cogent Economics Finance*, 3(1), 1095448.
- Jackling, B., Natoli, R., Siddique, S., & Sciulli, N. (2015). Student attitudes to blogs: a case study of reflective and collaborative learning. *Assessment & Evaluation in Higher Education*, 40(4), 542–556.
- Jathaenthung, Y., Intakanok, P., Homkham, U. & Boonket, N. (2021). Effects of Cognitive Styles and Storytelling Patterns with Digital Storytelling Activities upon Critical Thinking Skills of Undergraduate Teacher Students. *Journal of Humanities & Social Sciences*, 19(1), 139-158.
- Kane, E. J. (1976). Panel Discussion on the Teaching of Money and Banking. *Journal of Financial Quantitative Analysis*, 11(4), 613-616.
- Keller, J. (2010). Motivational Design for Learning and Performance: The ARCS Model Approach. In *Motivational Design for Learning and Performance: The ARCS Model Approach*.
- Krathwohl, D. R. (2002). A Revision of Bloom’s Taxonomy: An Overview. *Theory Into Practice*, 41(4), 212–218.
- Landis, J., & Koch, G. (1977). The Measurement of Observer Agreement for Categorical Data. *Biometrics*, 33(1), 159–174.
- McPherson, S. (2009). A Dance with the Butterflies: A metamorphosis of teaching and learning through technology. *Early Childhood Education Journal*, 37(3), 229–236.
- Scott, K. S., Sorokti, K. H., & Merrell, J. D. (2016). Learning “beyond the classroom” within an enterprise social network system. *The Internet and Higher Education*, 29, 75–90.
- Tabieh, A. A., Al-Hileh, M. M., Abu Afifa, H. M., Abuzagha, H. Y. (2021). The Effect of Using Digital Storytelling on Developing Active Listening and Creative Thinking Skills. *European Journal of Educational Research*, 10(1), 13-21.
- Tanrikulu, F. (2020). Students’ perceptions about the effects of collaborative digital storytelling on writing skills. *Computer Assisted Language Learning*, 1-16.
- Thomas, S. (2017). Journalogue: Voicing student challenges in writing through a classroom blog. *Educational Technology and Society*, 20(1), 112–122.
- Villardón-Gallego, L. (2016). Inquiry-based Learning in Pre-service Training for Secondary Education Counselors. *Proceeding - Social and Behavioral Sciences*, 217, 65–73.
- Yang, Y. T. C., & Wu, W. C. I. (2012). Digital storytelling for enhancing student academic achievement, critical thinking, and learning motivation: A year-long experimental study. *Computers & Education*, 59(2), 339-352.

The Utilisation of Alternative Assessment in Promoting Student Involvement in Virtual T&L Sessions of Elective Malay Language Courses at UUM

Maizatul Azura binti Yahya^{*a}, Mohamad Zakuan Tuan Ibharim^b, Nasihah binti Hashim^c,
Sharifah Ismail^d

^{abcd} School of Languages, Civilisation & Philosophy, Universiti Utara Malaysia

*Corresponding Author: maizatul@uum.edu.my

Abstract

In promoting active student involvement in virtual teaching and learning (T&L) sessions, an instructor has to undertake alternative assessment initiatives in ways to replace the existing practice. The underlying idea is the implementation of interactive and stimulating alternative assessments helps promote the students' focus and engagement in learning a particular course, especially related to the Malay language. The present paper seeks to explore feasible alternative assessments for the Malay language lecturers, especially at UUM in improving the existing T&L assessment method. The deliberation includes the array of practical alternative assessments in the T&L of the Malay courses and their activities to stimulate active student involvement virtually. The paper also sets forth the discussions on the practicality and effects of the alternative assessments vis-à-vis the student involvement in their virtual T&L sessions of the Malay language courses at UUM.

Keywords: alternative assessment, student involvement, Malay language courses

Introduction

Education plays a pivotal role in fashioning human capital among students of eminent identity, skills, personality, knowledge as well as intellectual ability. In correspondence to the National Education Philosophy which underlines the role of noble characters to lead the nation's future generations, the current examination-oriented assessment system must be replaced by an alternative that embodies interactive and thought-provoking learning, whilst keeping the students attracted to partake in the activities at the same time. This type of assessment fundamentally aims to nurture critical thinking and assesses the students by asking them to complete open-ended tasks which normally takes longer than the duration of one class to finish (Companies, 2011).

Alternative assessments are first introduced into the education system to enable students to apply higher-order thinking skills. One feature of such assessment is its process-based method, which puts emphasis on student development, as opposed to results. This, in return, helps to improve the students' potential and does not concentrate on their current performance. Rudner and Boston (1994) argue that alternative assessments require the students to demonstrate knowledge, ability and strategy by giving feedback or results in a meaningful context of reality. To promote the students to be actively engaged in their T&L, particularly virtually, an instructor has to undertake alternative assessment initiatives to replace the existing assessment method. The utilisation of more interactive and stimulating assessment alternatives may help the students to focus and be engaged in learning a particular course, especially pertinent to the Malay language courses in this study.

Research Objectives

The research objectives are as the following:

1. To categorise various alternative assessment methods that can be utilised to promote active student involvement in virtual T&L of the Malay language courses at UUM.
2. To analyse the alternative assessment techniques used by the instructors in virtual T&L of the Malay language courses at UUM.

Literature Review

In general terms, there is an extensive number of studies on alternative assessments by both national and international researchers. Many centres on the concept, utilisation and readiness of the instructors of the alternative assessments. A review of these studies found that the majority renders the alternative assessments able to replace the existing traditional assessment method based on an array of advantages.

Previous Studies on the Concept of Alternative Assessment

Studies by Gipps & Stotbart (2003); Mohd Haidzir & Norasmah (2019) and Mohd Haidzir *et al.* (2020) state the concept of alternative assessments encompasses the process of collecting, analysing, synthesising and interpreting all information related to T&L to help promote students' ability and decision-making process, as well as to improve the T&L processes and achieve the learning objectives.

Fatemah (2015) and Azizi & Kamisah (2018), alternatively brand the concept as an unconventional method of assessment. As cited in Haziyah Hussin, Najah Nadiyah Amran, Nur Farhana Abdul Rahman, 'Adawiyah Ismail & Zamzuri Zakaria (2017), traits of unconventional assessments entail:

1. Monitoring students' learning development and forming knowledge construction; hence it is a part of a learning process.
2. Focusing on reviewing students' strengths and weaknesses to improve them.
3. Creating meaningful learning opportunities to enable students to hone their problem-solving abilities using higher-order thinking and creativity.
4. Demonstrating students' performance and development.
5. Encompassing an establishment of students' learning outcome of products or projects, and performance and skills management processes.
6. Involving instructors' feedback, and the students' response to the feedback.

More specifically, Haziyah Hussin *et al.* (2017) notes that alternative assessment evidence should be valid, authentic, adequate, real-time and consistent. Validity, according to her, is marked by the relevance of the evidence in portraying the benchmark and the learning outcome. Authenticity is determined if the collected and produced evidence is an effort and originally prepared by students. Subsequently, adequacy is defined by the students' work and ability based on given criteria and scoring rubric. Real-time evidence depicts the performance and completion of tasks by students in the real or allotted time; whilst consistency refers to the proof of consistent action and outcome.

The Utilisation of Alternative Assessment

Studies on the utilisation of alternative assessment are also found in the literature, particularly pertaining to the Malaysian context. This includes, but is not limited to, studies by Nurul Farehah Mohamad Uri & Mohd Sallehudin Abd Aziz (2017) and Haziyah Hussin *et al.* (2017).

For example, a study by Nurul Farehah Mohamad Uri & Mohd Sallehudin Abd Aziz (2017) on the implementation of self-assessment as a classroom evaluation tool by the engineering students at Universiti Kuala Lumpur British Malaysian Institute shows the majority of the students – mostly Malay was found to be less confident in their self-assessment process. In spite of this, a great number of the students showed positive feedback on the assessment method itself and regarded the procedure as a valuable and meaningful experience.

A study by Haziyah Hussin *et al.* (2017) found the utilisation of alternative assessments in UKM's Islamic Studies programme had already begun since the 2012-2013 sessions, though the number of courses was limited and inconsistent. Nevertheless, according to the study, the array of initiatives under the Malaysia Education Development Plan (Higher Education) 2015 – 2025 and UKM's Education Framework 4.0 in 2017 have amplified the continuous use of alternative assessments in the 2018-2019 and 2019-2020 sessions. The study, among others, has also found that the selection of numerous assessment methods met the criteria of Education 4.0, which incorporates activity-based learning, fieldwork, essay composition and presentation, seminar organisation and utilisation of digital technology.

Instructors' Readiness

Apart from the concept and application, a number of studies also lay emphasis on the perspective of instructors' readiness in implementing alternative assessments, such as by Marziah & Jamil (2014) dan Azizi & Kamisah (2018). For instance, Marziah & Jamil (2014) assert that the instructors' readiness is key and able to be measured via knowledge on classroom assessment practices, awareness of student diversity, reflection, motivation and record management.

Conversely, a study by Azizi & Kamisah (2018) discover that the instructors, i.e., teachers and lecturers should provide immediate feedback in ways to improve student achievement in the domains of knowledge, psychomotor and affective based on the respective learning outcome.

Based on the above-mentioned studies, it can generally be postulated that alternative assessments are holistic and feasible in determining students' actual ability and performance throughout their T&L processes. However, to ensure the effectiveness of its implementation and optimise student involvement in the classroom and T&L sessions, attention towards the instructors' readiness should also be observed. It should be noted that a well-structured alternative assessment will remain pointless, and the learning outcome is not achieved if the assigned instructor is not committed to implementing it.

Methodology

The data elicitation method of the study encompasses non-participant observation and interview. In general, other than questionnaires and interviews, observation can be used as an alternative method to gather information and data. Through observation, a researcher may monitor the subject according to certain/set variables. In doing so, the researcher acts as an observer to monitor changes of behaviour as well as to listen and observe the subject's behaviour from close range or afar.

According to Simon Achan (2014), the observation technique should be exercised particularly when a researcher intends to study the developmental behaviour of a social unit, such as the examination of children's developmental behaviour, overcrowding effects on rebellious tendencies, the effects of noise on aggressive behaviour and individual anxieties when attending (job) interviews. In the context of the present study, the non-participant observation method is opted to examine the extent of student engagement in the T&L sessions of the elective Malay language courses, as well as the utilisation of the alternative assessments

by the respective instructors.

To achieve the first objective, a thorough experimental plan was designed pre-observation. To this end, each observational plan was marked with a specific purpose, systematically performed, focused, and recorded appropriately to ensure its accuracy, validity and credibility. As mentioned by Kerlinger (1973), observation is of three categories, namely behavioural category, behavioural unit, observer's level of interpretation, generalisation and application, as well as behavioural sampling. These categories detail the items to be examined and recorded in an observational study.

As for the second data collection method, several Malay language lecturers were interviewed to gain insights on their views and readiness in utilising the alternative method of assessment to replace the existing method.

In addition to the data elicitation method, the researcher also ensured that sufficient and relevant data were obtained for analysis. The sample is of the elective Malay language courses offered in the second semester of the 2020/2021 session. The analysis entails the scrutinization of the alternative assessment methods and techniques by the lecturers in promoting active student engagement in their virtual T&L processes.

Findings and Discussion

The study incorporates the elective Malay language courses of the second semester in the 2020/2021 session. A total number of 10 elective courses were selected as the sample of the study. In general terms, the study found that all ten elective courses offered in the second semester of 2020/2021 had utilised alternative methods of assessment. This implementation, among others, postulates the awareness of the lecturers of the current predicament of the pandemic era that the effectiveness of virtual T&L depends solely on their ability and creativity to turn the session meaningful, not dull and able to draw the attention of the students to partake in all classroom activities. This, ultimately ensures the T&L processes remain fluid and the learning outcomes achieved.

The findings go hand in hand with Haziyah Hussin *et al.*'s (2017: 9) study which asserts that one of the change factors comes from the initiatives of the instructors themselves in meeting the aspiration of the Higher Education Development Plan (2015 – 2025), the impact of curriculum review of education programme, the introduction of integrated Cumulative Grade Point Average (iCGPA) as well as the aspiration of the university and instructors' experience in transforming active T&L. The utilised alternative method of assessment categories by the Malay language instructors are shown in Figure 1, as follows:

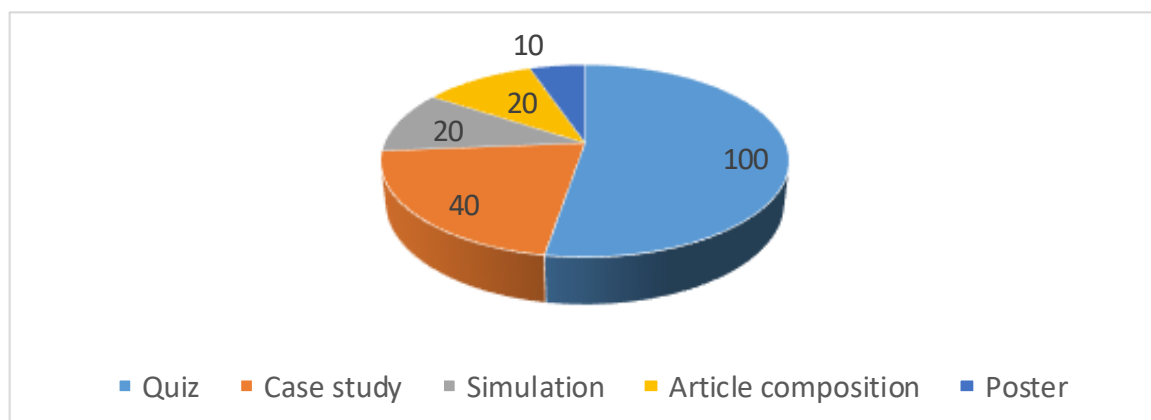


Figure 1. Assessment Categories of Elective Malay Language Courses

Based on Figure 1, it is salient that quizzes are the most utilised alternative assessment category by the Malay language lecturers. All (100%) lecturers utilised it in their respective T&L sessions. 10 out of 21 interviewed lecturers state their choice to opt for online quizzes is down to its convenience, effective use to assess students' comprehension of lectured topics, and interactive setup. The chosen platforms predominantly include *Kahoot!* dan *Quizziz* and they also note positive feedback from the students when using *Kahoot!* dan *Quizziz* as the assessment alternatives. The students also reveal they feel intrigued and understand the lectured topics better when the lecturers opt to organise quizzes in the T&L.

Online Quizzes

Online quizzes are the latest pick by lecturers in assessing their performance in T&L processes. Pertinent to this, Abdul Halim Abdullah (2021) states:

Online quizzes use a similar concept to that of traditional quizzes during face-to-face learning. The difference is the utilisation of the online platform. The structure of the questions may be objective or subjective. The subjective tests require students to show the process of attaining their answer based on a given problem. The objective tests, on the other end, can be structured into four categories. The first is the true/false test, which requires the students to determine the true or false nature of a given statement.

From this statement, it can be said that online quizzes may be regarded as the most suitable form of alternative assessment to optimise student engagement in their T&L sessions for its similarity to conventional quizzes in face-to-face learning. Comparable to its traditional form, online quizzes are also utilised to measure students' knowledge and proficiency on given topics as outlined in Course Learning Outcome. Typically, the platforms of the online quizzes include *Kahoot! Quizziz, Plickers, Google Docs, Quizlet* and *Mentimeter*.

Besides quizzes, the other categories of alternative assessment are also found in the study, namely:

- Simulation
- Case study
- Oral? Poster?
- Article/Script Composition

Simulation

Chilcott, 1996 (as cited in Siti Noridah Ali, Nurliyana Khalid Khan & Ahmad Taufik Wafi Abdul Ghani, and 2018:42) defines simulation as a controlled T&L process that is deliberately fashioned to resemble a real situation, but in a convenient, simplified and scaled-down form to address it easily. In the context of T&L, the students need to undergo learning activities by acting out a given situation or event in a controlled environment in order to address a particular issue. As far as the study is concerned, the utilised method of simulation by the Malay language lecturers include forum, interview and debate. Specifically, forums are mainly opted by the SBLM1053 Bahasa Melayu Pengurusan (Malay Language for Management) lecturers, whilst the remaining three methods are mostly used in the SBLM1063 Retorik Perundangan dan Perbahasan (Legislation Rhetoric and Argumentation) course, as shown in Figure 2.

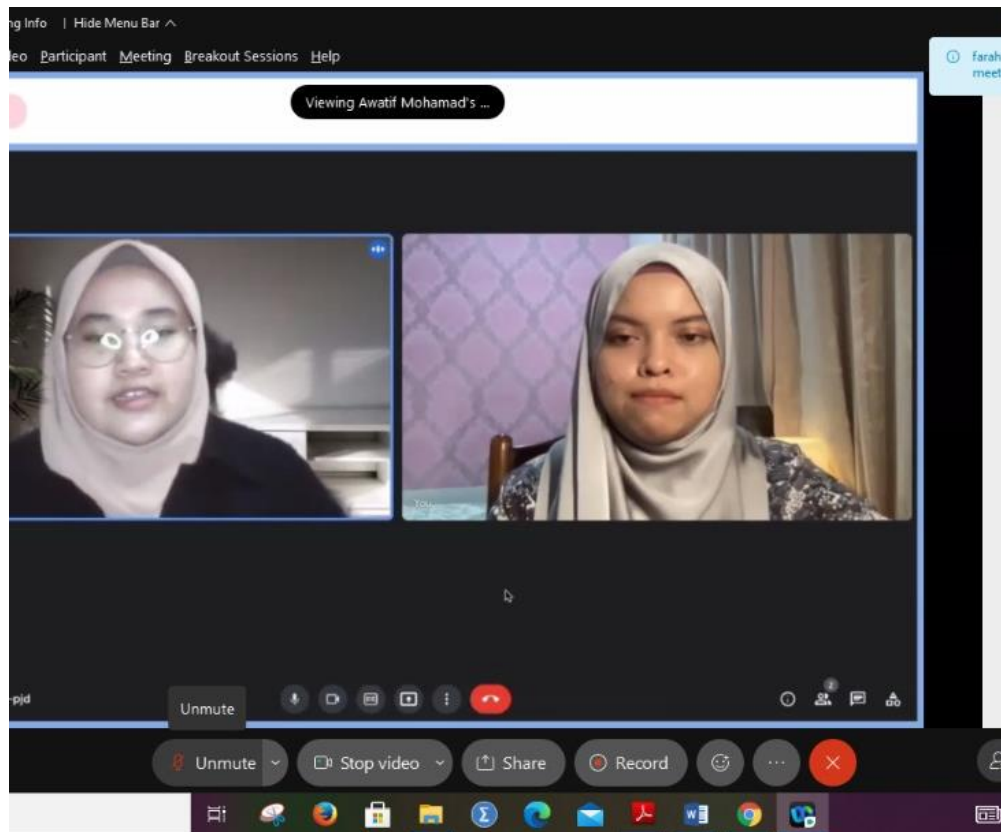


Figure 2. Interview Simulation in SBLM1063 (Legislation Rhetoric and Argumentation)

Case Study

The subsequent method of alternative assessment by the Malay language lecturers is a case study. According to Creswell (2008), a case study mainly refers to an in-depth, specific study on a particular programme or activity individually, rather than a group activity.

The following are the Malay language courses which utilised case study as the alternative assessment method:

- SBLM1013 Pengantar Terjemahan (Introduction to Translation)
- SBLM1043 Bahasa, Budaya dan Masyarakat (Language, Culture and Society)
- SBLM2023 Tatabahasa Bahasa Melayu 1 (Malay Language Grammar 1)
- SBLM2033 Kesusasteraan Melayu (Malay Literature)
- SBLM2043 Perkembangan Pemikiran Dunia Melayu (Development of Malay Thinking)

Overall, the analysis shows that this method of assessment is tailor-made based on the objective/need of a (respective) course. For example, in SBLM1013 (Introduction to Translation), the utilisation of case study mainly functions to test the ability of the students to translate a given (source) text into a target text, as depicted in Figure 3 below:

Tugasan 1 (20%) Teks Peribahasa: Tugasan individu ini melibatkan terjemahan teks yang mengandungi aspek peribahasa. Pelajar akan diberikan petikan yang mengandungi peribahasa berbahasa Inggeris untuk diterjemahkan ke dalam bahasa Melayu secara dinamik. Tugasan perlu ditaip dengan menggunakan font Arial bersaiz 11. Tugasan perlu diserahkan selewat-selewatnya pada 25/26 April 2021.

Tugasan 2 (20%) Teks Karya Sastera Kanak-kanak: Tugasan individu ini melibatkan terjemahan teks sastera kanak-kanak. Pelajar akan diberikan cerita kanak-kanak berbahasa Inggeris yang perlu diterjemahkan ke dalam bahasa Melayu secara dinamik. Tugasan perlu ditaip dengan langkau dua baris dan menggunakan font Arial bersaiz 11. Tugasan perlu diserahkan selewat-selewatnya pada 30/31 Mei 2021.

Tugasan 3 (20%) Teks Umum: Tugasan individu ini melibatkan terjemahan teks umum. Pelajar akan diberikan teks umum berbahasa Inggeris yang perlu diterjemahkan ke dalam bahasa Melayu secara dinamik. Tugasan perlu ditaip dengan langkau dua baris dan menggunakan font Arial bersaiz 11. Tugasan perlu diserahkan selewat-selewatnya pada 13/14 Jun 2021.

Figure 3. Case study as a method of alternative assessment in SBLM1013 (Introduction to Translation)

Based on Figure 3, the SBLM1013 students were tasked to translate the source texts in English into Malay in an array of genres, including proverbs, children literature and general text. In the interview, the lecturer also made note of the positive feedback she received from the students. The response, among others, includes their positive experience when translating and inquiries when they face certain problems in selecting appropriate translation methods or techniques. The feedback is surely welcomed by the lecturer and posits that the implementation of a case study as the method of assessment achieves the course learning outcome.

Conclusion

All in all, it can be concluded that the method of assessment of elective Malay language courses at UUM has changed from conventional to alternative assessment. Such changes are due to the various approaches by the lecturers to further invite and grab the attention of the students so they remain interested and concentrated, albeit in the present environment of virtual T&L sessions.

The study also discovers that the application of the alternative method of assessments in the elective Malay language courses can attract the students to partake in online classroom activities. The form of assessments is also not limited to activity-based learning, fieldwork, essay composition and presentation, but also extended to poster creation and online assessments.

Apart from that, it is also found that the implementation of the alternative assessment had a positive impact on the development of the students' soft skills and active involvement in their T&L sessions, particularly when the assessments are conducted online. Therefore, it is evident that the utilisation of alternative assessment is the best option for instructors, especially the lecturers of the elective Malay language courses at UUM in replacing the traditional method of assessment in the T&L sessions.

References

- Abdul Halim Abdullah. (2021). Guru perlu kreatif taksir murid dalam norma baharu. https://www.researchgate.net/publication/348732455_Guru_perlu_kreatif_taksir_murid_dalam_norma_baharu.
- Azizi Alias, Kamisah Osman. 2018. Pentaksiran Alternatif: Pembinaan dan Pelaksanaan Rubrik dalam Pendidikan Sains. Bangi: Penerbit UKM.
- Chilcott, J. D. (1996). Effective use of simulations in the classroom. Arizona: Creative Learning Exchange.
- Creswell, J. (2008). Educational research. New Jersey: Pearson-Merrill Prentice Hall.
- Fatemeh Ghanavati Nasab. (2015). Alternative versus traditional assessment. *Journal of Applied Linguistics and Language Research*, 2(6): 165-178.
- Gipps, C. & Stobart, G. (2003). Alternative Assessment. *International Handbook of Educational Evaluation*. 9, 549-575. <https://link.springer.com/chapter/10>.
- Haziyah Hussin, Najah Nadiah Amran, Nur Farhana Abdul Rahman, 'Adawiyah Ismail & Zamzuri Zakaria. (2017). Amalan Pentaksiran Alternatif dalam Program Pengajian Islam di Universiti Kebangsaan Malaysia dalam mendepani Cabaran Pandemik COVID-19. *ISLĀMIYYĀT* 43(1), 3 – 14.
- Kerlinger, F. N. (1973). Review of research in education. F. E. Peacock.
- Mohd Haidzir Yusof@Jusoh & Norasmah Othman. (2019). Isu dan permasalahan pentaksiran alternatif dalam sistem penilaian di Malaysia. E-prosiding

Do Attitude, Infrastructure Capability and Study Environment Affected Accounting Information System Enjoyment in Remote Learning?

Saliza Abdul Aziz*^a, Raja Haslinda Raja Mohd Ali^b, Fathiyah Abu Bakar^c
^{a, b, c} Tunku Puteri Intan Safinaz School of Accountancy,
College of Business, Malaysia

*Corresponding Author: saliza@uum.edu.my

Abstract

Remote learning is a new way of learning, and it is also as effective as the normal traditional classroom learning. However, more wide consideration is required because the learners are everywhere and not collectively in one place. The various place of learners following the educators' lectures raises concerns and challenges regarding the consequences of remote-only instructions. In fact, it is also could have impact on the enjoyment of remote learning indirectly depends on the learners' attitude, environment, facilities as well as resources to support a smooth learning process. Hence, this study tries to explore on the factors affected the enjoyment of remote learning among the Database Management System (DBMS) course students in Tunku Puteri Intan Safinaz School of Accountancy, Universiti Utara Malaysia. The objective is to determine whether there is a relationship between attitude, infrastructure capability, study environment and enjoyment in remote learning among the DBMS course students. The respondents of 103 DBMS course students basically support that infrastructure capability and study environment do play some role in ensuring the enjoyment of remote learning. This indirectly could give indicators to the lecturers in evaluating the class engagement and also as basis for the following semester or group of learners.

Keywords: Infrastructure capability, Study environment, Enjoyment, Remote learning, Attitude

Introduction

Malaysia had been ranked on the 46th ranking with average internet speed for fixed broadband of 103.28 Mbit/s. As for mobile connection speed it is recorded at 29.14 Mbit/s and ranked on the 89th ranking (Wikipedia, 2021a). The pandemic Covid-19 and also the restriction in few phases of movement control order imposed had accidentally increased the Malaysia's internet traffic by 30 to 70 per cent. The increase in internet traffic also had affected the internet speed indirectly which had dropped by 30 to 40 per cent in these two years. Considering the new norm in all levels of living i.e., school, higher education, work, communication and family, the Government of Malaysia takes an initiative by introducing JENDELA Program (*Jalinan Digital Negara*). The program is one of the national digital communication enhancements plans under the 12th Malaysia Plan (2021 – 2025). The seriousness of the Government shows the commitment of Malaysia to ensure the society could move forward and sustained in every aspect. In the development phase for year 2020 until 2022, optimising the existing platform with resources and infrastructure is targeted. The improvement in connectivity is targeted to be achieved by expanding to 4G mobile broadband coverage from 91.8 per cent to 96.9 per cent in populated area. This by gradually switch-off the 3G networks until the end of 2021 and further enhanced to 4G and even strengthening the foundation to 5G networks. Besides that, plan of increasing mobile broadband speeds from 25 to 35 Mbit/s would target to enable as many as 7.5 million premises to access gigabit speeds with fixed broadband service. With the achievement then, maintenance of digital services and strengthening to 5G would be the second phases which is for year 2023 until 2025.

The effort taken by the Government of Malaysia indeed support the new norm of working from home as well as remote learning for all students from primary until higher education level. Despite the gradual improvement implemented in ensuring the digital environment would be fully utilized with no disruption or distraction, yet there are few challenges faced by students of higher education stages (World Bank, 2020; Bozkurt & Sharma, 2020). Hence, this study tries to tackle the basic research question – Is there any the relationship between attitude, infrastructure capability, study environment and enjoyment of remote learning among Database Management System (DBMS) course students in Universiti Utara Malaysia? This is expected to response on the research objectives of the study which is to determine the relationship between attitude, infrastructure capability, study environment and enjoyment of remote learning among DBMS course students in particular.

Literature Review

Remote learning is a term that interchangeable applied for distance learning. The difference of distance learning is an option to the students, and remote learning is a geographical separation between learners and educators (Bozkurt, Jung, Xiao, Vladimirschi, Schuwer, Egorov, & Rodes, 2020). Few scholars' defined remote learning to be difference from online learning as it is said that online learning associated with blending learning form of education way (Bozkurt et al., 2020; Hodges et al., 2020; Staker & Horn, 2012).

Enjoyment in Remote Learning

In relation to remote learning, most of the study based on the Technology Acceptance Model (TAM) which focus on the behavioural intention towards remote learning (Venkatesh, Speier, & Morris, 2002; Davis, Bagozzi, & Warshaw, 1992). The consideration of perceived usefulness, perceived ease of uses, self-efficacy, and enjoyment on ease of use and goal orientation are among the constructs that used to determine the intention with regard to technology acceptance. Enjoyment is referring to the extent to which the activity of using a computer system is perceived to be personally enjoyable from the instrumental value of the technology (Davis et al., 1992). In depth, enjoyment is an effect of intrinsic motivation where scholar (Venkatesh, 2000) revealed the stronger effect of enjoyment detected via more direct experience with the system. In fact, as the perception of ease of use increase the perceive enjoyable also increased (Davis et al., 1992; Venkatesh et al., 2002). Hence, the enjoyment would able to transformed anxiety into confident with the ability to successfully execute the task given.

Attitude

In achieving an efficient transformation towards remote learning, the availability and use of technological resources solely perhaps are not enough (Bozkurt & Sharma, 2020; OECD, 2020). Inequity and disruption among the learners need to be take into consideration too (World Bank, 2020). In fact, Bozkurt et al. (2020) agreed that in addition to technology or digital infrastructure, a set of behavioural, attitudinal and socio-psychological attributes also affected the education and its community such as teachers, students and parents. Hence, students' preferences and attitudes towards remote learning should not be ignored. Indeed, by examining and continuously rechecked the students' interest, capability and engagement are required. This indirectly could help in improvement, changes and update the remote education transition towards the rapid digital transformation.

Attitude towards remote or online learning is closely associated in few studies. Most of the studies measured the students' perceptions towards distance learning (Al-Malki, Almasre, Al-Malki, Al-Harbi, Burns, Long, & Seaman, 2013; Hung, Chou, Chen, & Own, 2010);

readiness and ability in adopting distance or online learning (Chung, Subramaniam, & Christ Dass, 2020); readiness towards fully remote learning programmes (Hung, Chou, Chen, & Own, 2010); and roles of students' learning environment preferences (Brooks & Grajek, 2020). This is in particular related to studies which based on Technology Acceptance Model (TAM) (Davis, 1989) such as studied by Chen, Fan, Zhang, & Wang (2017), Joo, So, & Kim, (2018) and Zhu, Zhang, Au, & Yates (2020). Most of the TAM referred studies were conducted in online and blended learning environment which is not fully remote university courses.

Thus, attitude is the sensation or opinion regarding a specific issue (Ayub, 2017; Binder & Niderle, 2007) which could be in a positive, negative or neutral form. A study by Samueli et al. (2020) also support the positive attitude towards remote learning modules via students' engagement, satisfaction and perceived usefulness of the learning.

Infrastructure Capability

In ensuring the education is continued even in the pandemic situation and prevent from dropout or learning losses, it is essential to put in place effective and inclusive remote learning system. Although nothing can replace a face-to-face learning experience, education systems could engage students in meaningful and productive ways to enhance their learning. Many countries are already moving rapidly and relatively to use education technology to deliver remote-learning solutions.

In the time with few limitations and constraints in terms of financial and movement, the learning system could be utilized via the existing infrastructure. This could provide the remote learning opportunities which could work for all students. As for that, few adjustments in both educators and learners are required in ensuring the remote learning could be successfully implemented and workable to all. Indeed, the basic consideration such as the design of the remote learning platform need to be focused so that learners are not neglected especially for those who have limitation in device as well as accessibility.

In any remote learning, support from good bandwidth of internet speed is required besides the appropriate facilities and setting. However, the bandwidth of internet speed closely related to type of consumption as well as number of devices active at the time. Basically, a good download speeds for household is around 10 Megabit per second (Mbit/s) per person. Indeed, the speeds could be reduced accordingly to the usage or consumption of the bandwidth-intensive activities i.e., web surfing, email, video streaming, TVs streaming and also with what kind of devices i.e., desktop, laptop, tablet or smartphones.

Principally, an upload speeds is around 5 Mbit/s where the asymmetric DSL (ADSL) generally with 1.5 Mbit/s speeds. As for fixed or cable internet, the bandwidth for upload speeds is between 5 and 50 Mbit/s. A higher than 1.5 Mbit/s is required for smooth internet experience on heavy information via video chat, high-resolution images or livestream video. Hence, in experiencing a smooth without interruption in uploading any materials or information, a cable provider with a minimum of 25 to 50 Mbit/s would be encourage for home network for work, school or streaming on a regular basis. Unlike the cable provider, a fiber-optic networks which mostly have a very good bandwidth for download and upload with same or symmetrical speeds.

The infrastructure capabilities are most likely influence the enjoyment of remote learning. This is because a good bandwidth could experience a smooth movement of information and encourage remote learning with less disruption or issues even at peak-use times or bottleneck traffic in information dissemination.

Study Environment

The physical, psychological and social circumstances are terms referred to study environment that affect students' wellbeing in study. Indeed, in ensuring the enjoyment of remote learning,

the best study environment need to be created as much as possible according to their capabilities. Most of the reference refer to location or area of study which have minimal interruptions. The interruptions could be reduced with a place where focus could be achieved, and work could be done which is quiet, relaxing space. In fact, the brain could be trained to focus on study with setting of a particular study station with no distractions. Study environment is all about learning the way of living and develop sustainable strategies to protect the environment. Indirectly, it could assist students to understand the living and associate with the physical environment and enjoy the remote learning as well as could resolve challenging environmental if any in studies.

Methodology

This exploratory study employed an online Google Form survey as a method of data collection. The unit of analysis is an individual student who had registered for Database Management System (DBMS) course in semester two of year 2020/2021. The 103 students were chosen because of the experience in concepts as well as technical types of knowledge. The link to the survey is shared in the class social media chat room. The questionnaire survey consists of three (3) sections. The first section collects information related to respondents' diversity. The following second section collects responses with regards to the enjoyment of remote learning, attitude, infrastructure capability and study environment in relation to the student's situation. The last section collects information related to the comment on remote learning in relation to the DBMS course.

In relation to this study, attitude, infrastructure capability and study environment are the independent variables tested on the relationship with enjoyment of remote learning. Accordingly, the following hypothesis are developed:

- H₁: There is a positive significant relationship between attitude and enjoyment of remote learning among DBMS course students.
- H₂: There is a positive significant relationship between infrastructure capability and enjoyment of remote learning among DBMS course students.
- H₃: There is a positive significant study environment and enjoyment of remote learning among DBMS course students.

Findings and Discussion

In general, the result of 103 students enrolled in the DBMS course for the second semester of year 2020/2021 were diverse in terms of ethnicity and semester of the student's study. As in Figure 1, the 103 students consist of two Malay students from semester two; one student in semester three with other race; and one Malay student in other than two, three and four semesters. Majority of the students were in semester four who are 75 Malay students, 13 Chinese students, 7 Indian students and 2 students with other race.

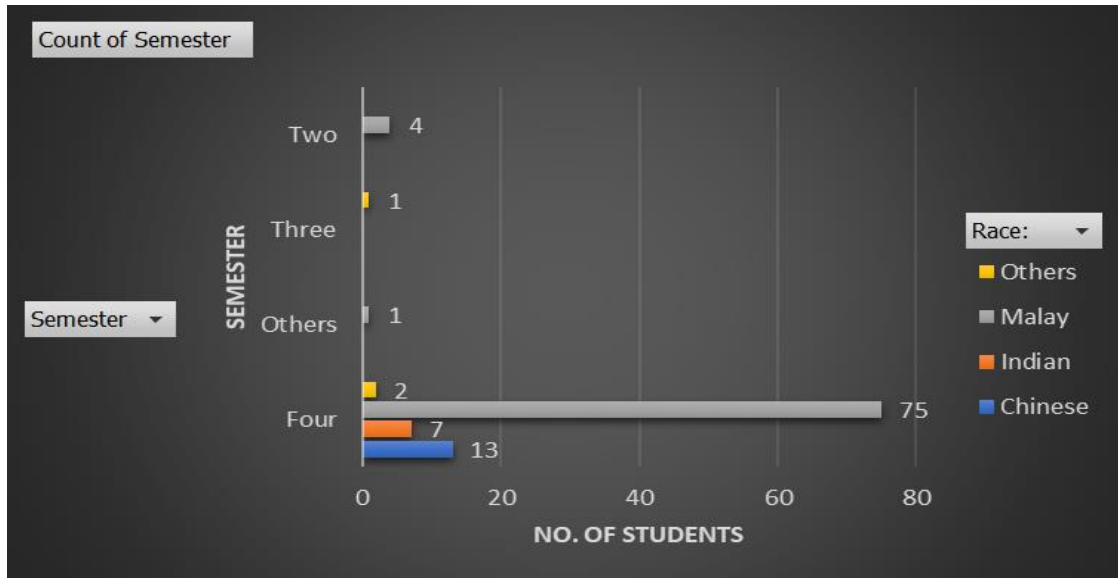


Figure 1. Diversity of Students in Races

In terms of location, the diversity of learners could be detected too. This information represents the student’s demographic of places where the remote learning was followed during the semester. The diversity could reflect the infrastructure capability as well as study environment in following the course as in Figure 2. Besides the 17 students studied in UUM Sintok campus, the balance of 86 students enrolled into the class from different places in Malaysia. For instance, majority from Kedah which were 32 students, 15 from Pulau Pinang, 13 from Selangor, 5 from Johor, 3 from Negeri Sembilan, 2 from Pahang and Terengganu as well as one student from Sarawak, Melaka and Kelantan respectively.

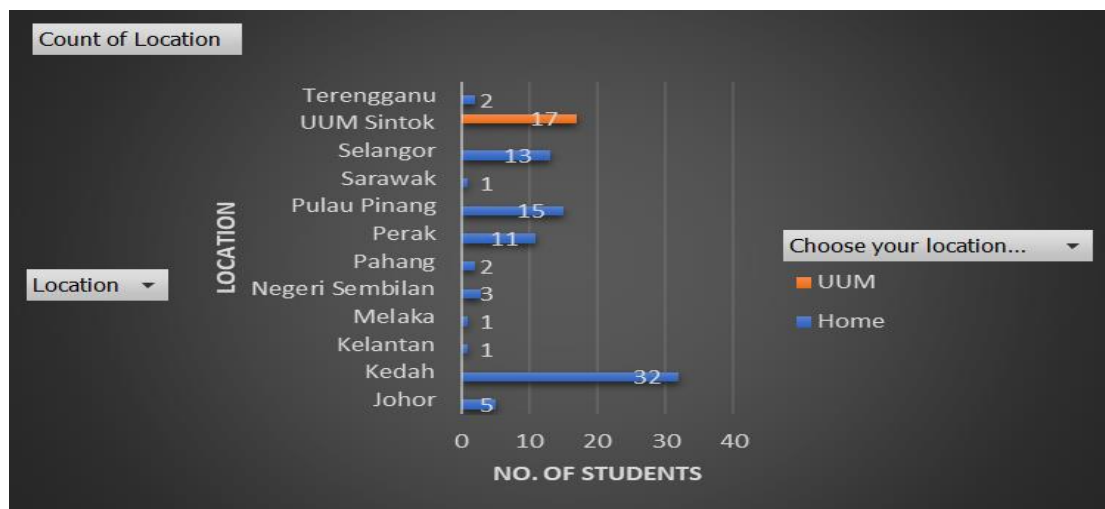


Figure 2. Diversity of Students in Location of Remote Learning

The affordability of internet usage for remote learning among the DBMS students is reflected in Figure 3. As can be seen in the table, majority of the students were afforded to access for remote learning via various devices such as desktop; laptop (13 students); laptop, desktop or smartphone (1 student); laptop or smartphone (51 students); laptop or tablet (2 students); laptop, tablet or smartphone (12 students); smartphone (2 students); and tablet or smartphone (2 students). There are 4 students were highly affordable and 15 students on the other hand were less affordable for internet usage on their remote learning.

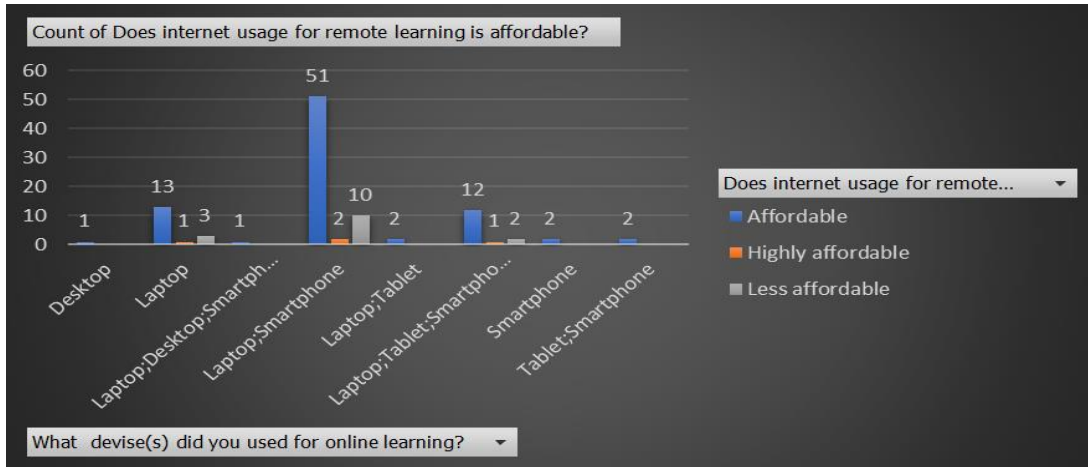


Figure 3. Diversity of Devises in Affordability of Internet Usage for Remote Learning

The students shared their experience in remote learning as in Figure 4. The experience in the enjoyment of remote learning could be seen differ in term of races of the students. Majority i.e., 44 students enjoy learning remotely but would like to have few changes in learning the course. Majority of Malay students (i.e., 37 students) and three Indian and Chinese students as well as one student from other race agreed that remote learning was enjoyed but need for some changes. Without changes needed, 36 students also said that remote learning was enjoyed for the DBMS course. The experienced shared from 27 Malays students, 5 Chinese students, two Indian and other race students respectively. However, 23 students had difference experience where most of them stressed on lack of enjoyment in remote learning due to quite a few challenges in following the course. This is the experience of 16 Malay students, 5 Chinese students and 2 Indian students.

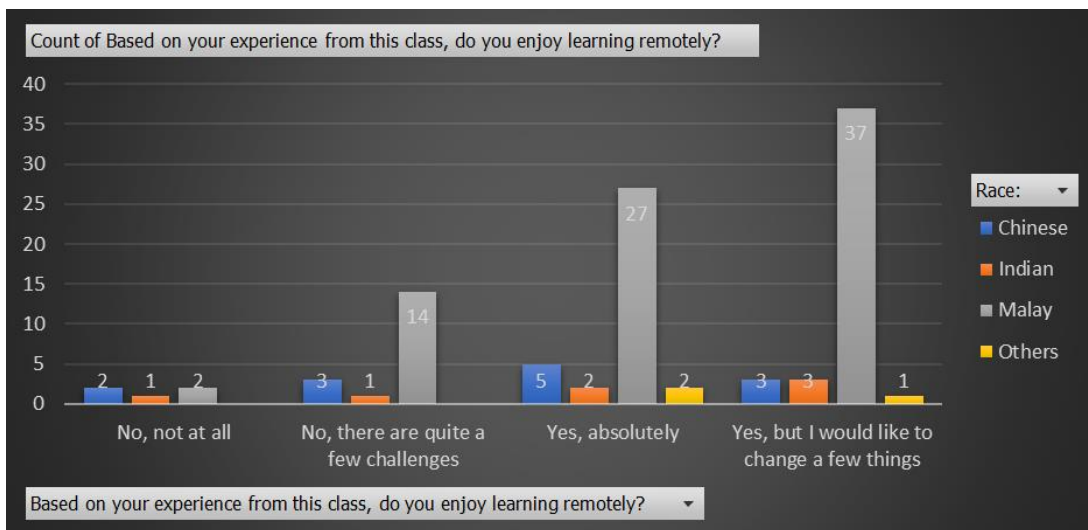


Figure 4. Diversity of Races in Enjoyment of Remote Learning

In relation to the bandwidth download speed using various devised that students experience via online learning, the result revealed as in Figure 5. The speed revealed how much data the students could downloaded from their desktop, laptop, smartphone or tablet. As for 2021 the average of internet speed via internet were between 46.82 Mbit/s according to M-Lab speed test for May 2020; 92.35 Mbit/s if referring to SpeedTest Net,io data for March 2021; and 103.34 Mbit/s as reported in Speedtest.net data for April 2021 (Wikipedia, 2021b). Hence,

by taken into consideration the average bandwidth for download speed as 92.35 Mbit/s, then only 13 students have an average speed of downloading materials or information. Indeed, majority of students facing below the average bandwidth download speed via devices used during remote learning.

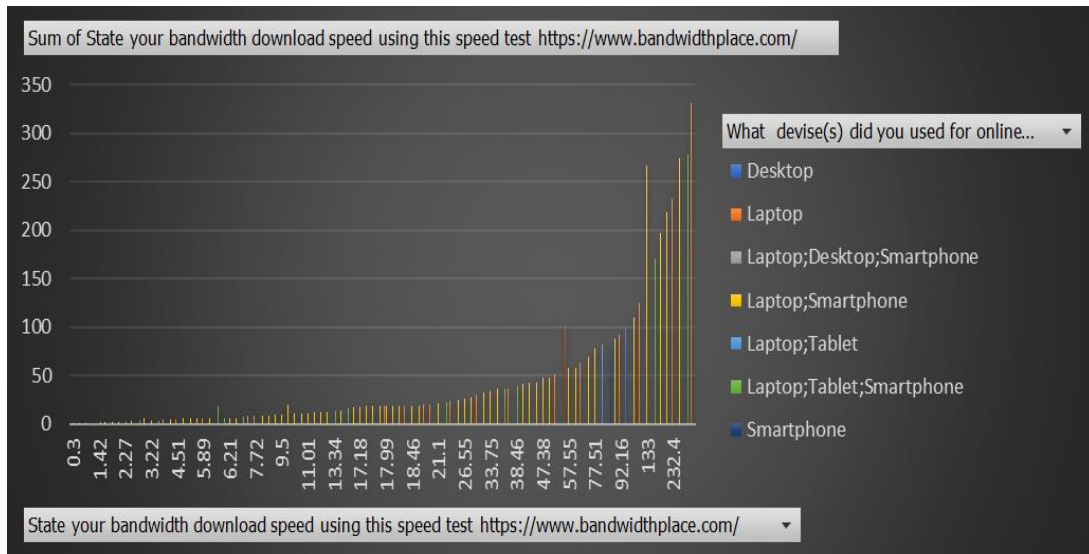


Figure 5. Diversity in Bandwidth Download Speed via Difference Devices

The upload speed refers to the speed that student’s internet connection can allow data to be sent from their devices to the internet. On average, a student need between 5 and 25 Mbps for the amount of data could be transferred in every second (Forbes, 2020). Referring to Figure 6, 76 students were in good bandwidth of uploading material either to lecturers or friends in the group. This is taken into consideration the minimum average upload speed of 5 Mbit/s.

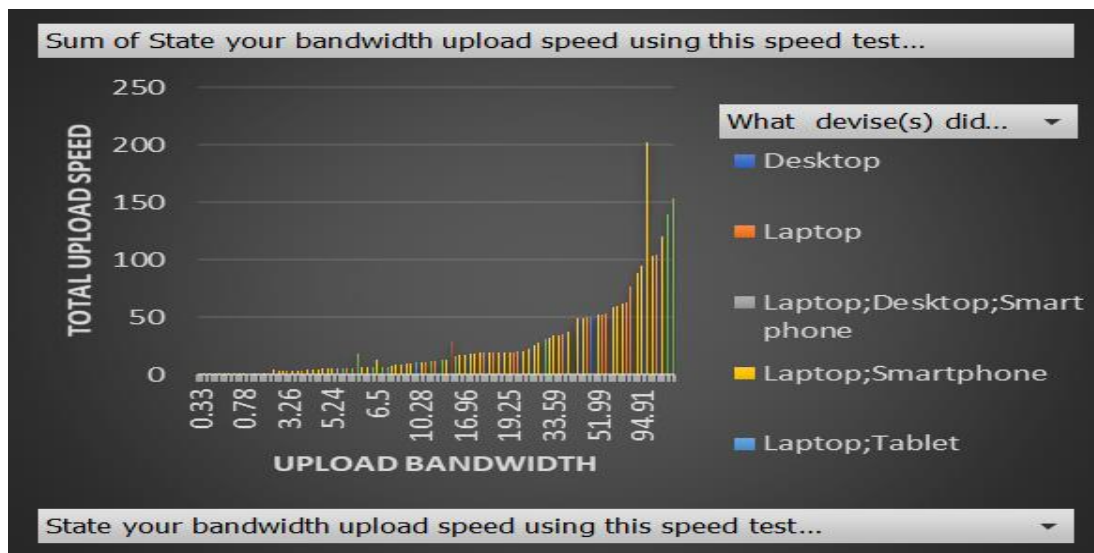


Figure 6. Diversity in Bandwidth Upload speed via Difference Devices

The data of 103 respondents is screened and tested for the assumption of regression. The multicollinearity assumption is examined to check for predictive power associated between the variables. The indication of multicollinearity assumption is not violated in this study as indicated by tolerance value and VIF value as in Table 2. The tolerance value for all construct is below the threshold (i.e., 0.10) and the VIF values below three (Hair, Black, Babin, &

Anderson, 2010). The data also is tested for the reliability and validity in order to ensure the data is fit for further regression. Accordingly, all the variables fall under one factor and the percentage of variance explained is above 60 per cent. The mean value which is above 3 means all the variables were agreed to have affected enjoyment of remote learning among DBMS course students. The study environment is considered peaceful, infrastructure capability is agreed to be supportive, and attitude is also supported for remote learning purposes. The Cronbach's alpha of 0.805 for attitude and study environment as well as 0.827 for infrastructure capability shows that the item tested are adequate to proceed with regression.

Table 1
Descriptive statistic result of each construct (n=103)

Constructs	No. of items	Mean	Standard Deviation	Cronbach's Alpha	% of variance
Attitude	4	3.901	0.708	0.805	63.170
Infrastructure capability	5	4.247	0.598	0.827	62.783
Study environment	3	3.777	0.897	0.805	72.332
Enjoyment	1	3.850	1.216	-	-

The developed hypothesis was then tested via multivariate regression using SPSS. In answering the three objectives of this study in relation to the relationship between attitude, infrastructure capability, study environment and enjoyment of remote learning, the following Table 2 is referred. In total of 103 students enrolled in DBMS course, the variables tested reflected that infrastructure capability ($p < 0.05$) and study environment ($p < 0.05$) are significantly related to enjoyment of remote learning. However, the three variables could only explain by 30.5 per cent (Adjusted R-square) which means there are other factors could affect the enjoyment of remote learning among the DBMS course students. The significant results of both variables indicate that resources of digital technology as well as surrounding are supporting the students in remote learning. Indeed, the surrounding or space of study either at home or in campus also play a big role in enjoying the remote learning.

Table 2
Result analysis of the relationship between attitude, infrastructure capability, study environment and enjoyment of remote learning

Coefficients ^a											
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-.349	.753		-.463	.644					
	SE_TOTAL	.465	.161	.343	2.881	.005	.536	.278	.238	.481	2.078
	IC_TOTAL	.440	.227	.216	1.937	.056	.484	.191	.160	.547	1.827
	ATT_TOTAL	.149	.192	.087	.776	.440	.430	.078	.064	.545	1.835

a. Dependent Variable: Based on your experience from this class, do you enjoy learning remotely?

In specific to the enjoyment of remote learning, based on DBMS students experience, most of them enjoy learning remotely but with some changes need to be done for improvement. In terms of attitude towards enjoyment of remote learning, most of the students agreed with remote learning. The students have own initiative to seek for assistance when facing learning problems and could manage the study or class time well. In addition to that, the students themselves set up own learning goals and motivated to learn for the best academic achievement and performance for the course. The positive attitude and well manage time had made the

students enjoy learning remotely.

Infrastructure capability on the other hand is also proved to be affected the enjoyment of remote learning for the DBMS course students. The students mostly feel confident in using the internet such as Google and Yahoo to find or gather information for online learning and in fact very confident in using computer. The students feel confident to search, download and upload document via internet as well as feel very confident to use any applications or software for online learning. The capabilities of learning remotely and learned the materials presented even when there are technical difficulties shows that students trying their very best to enjoy learning remotely at their own infrastructure capabilities.

Study environment appears to be the most important consideration in ensuring the enjoyment of remote learning among the students. The students shared that they were able to complete their work even when there are online distractions i.e., friends sending email, online chatting and shopping. Even with the distraction in the home from television and children the students feel that they enjoy remote learning. This revealed that the students manage to reduce the distraction and concentrate in remote learning and most of them agreed that their study environment is peaceful while learning online. Thus, the distraction does not take their peacefulness in study at their home or location.

Conclusion

Enjoyment of remote learning basically reflected the teaching emotions and indicated students' consequences in a positive way. Hence, it is important to know the state of students in the class or courses taken. This is necessary for any improvement; enhancement or changes could be encountered before the semester end or could become a basis for the following semester. In this study, the study environment and technology capability turn to be positively affected the students' learning remotely where student enjoyed learning the course. This indirectly could be an indicator for educator to take into consideration the aspect of environment and technology resources do play an important role more than attitude towards enjoyment of remote learning. Indeed, educator would be able to create a central goal in teaching planning of preparing them to enthusiastically teach the course in considering the learners' facilities and capabilities indirectly.

References

- Al-Malki, A. N., Almasre, M., Al-Malki, A., Al-Harbi, R., Burns, M., Long, B. C., Seaman, J. (2013). Online College Students 2015: *Comprehensive data on demands and preferences*. Journal of Library & Information Services in Distance Learning, 24(1), 128–152 https://doi.org/10.7595/management_fon.2013.0026
- Bozkurt, A., & Sharma, R. C. (2020). *Emergency remote teaching in a time of global crisis due to Corona Virus pandemic*. Asian Journal of Distance Education, 15(1), 1–6.
- Bozkurt, A., Jung, I., Xiao, J., Vladimirschi, V., Schuwer, R., Egorov, G., Rodes, V. (2020). *A global outlook to the interruption of education due to COVID-19 Pandemic: Navigating in a time of uncertainty and crisis*. Asian Journal of Distance Education, 15(1), 1–126.
- Brooks, D. C., & Grajek, S. (2020). *Faculty readiness to begin fully remote teaching*. *Educause Review*. Retrieved September 2020 from <https://er.educause.edu/blogs/2020/3/faculty-readiness-to-begin-fully-remote-teaching>
- Chen, B., Fan, Y.-Z., Zhang, G.-G., & Wang, Q. (2017). Examining motivation and self-regulated learning strategies of returning MOOCs learning. The Seventh International Learning Analytics & Knowledge Conference, Vancouver, BC, Canada.

- Chung, E., Subramaniam, G., & Christ Dass, L. (2020). *Online learning readiness among university students in Malaysia amidst Covid-19*. *Asian Journal of University Education*, 16(2), 45. <https://doi.org/10.24191/ajue.v16i2.10294>
- Davis, F. (1989). *Perceived usefulness, perceived ease of use, and user acceptance of information technology*. *MIS Quarterly*, 13(3), 319–34
- Davis, F.D., Bagozzi, R.P., Warshaw, P.R., 1992. Extrinsic and intrinsic motivation to use computers in the workplace. *Journal of Applied Social Psychology* 22, 1111–1132.
- Forbes, A. 2020. *What are good download and upload speeds for home internet?*, 2021 Minim Inc. Retrieved on 24 September 2021. <https://www.minim.com/blog/what-is-a-good-download-and-upload-speed-for-home-internet>.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis* (7/e ed.): Pearson Prentice Hall.
- Hung, M. L., Chou, C., Chen, C. H., & Own, Z. Y. (2010). Learner readiness for online learning: Scale development and student perception. *Computers & Education*, 55, 1080–1090. <https://doi.org/10.1016/j.compedu.2020.05.004>
- Hung, M. L., Chou, C., Chen, C. H., & Own, Z. Y. (2010). Learner readiness for online learning: Scale development and student perception. *Computers & Education*, 55, 1080–1090. <https://doi.org/10.1016/j.compedu.2020.05.004>
- Joo, Y. J., So, H. J., & Kim, N. H. (2018). Examination of relationships among students' self-determination, technology acceptance, satisfaction, and continuance intention to use K-MOOCs. *Computers & Education*, 122, 260–272. <https://doi.org/10.1016/j.compedu.2018.01.003>
- OECD. (2020). Education responses to covid-19: Embracing digital learning and online collaboration. Retrieved September 2020, from [https://read.oecd-ilibrary.org/view/?ref=1201205448ksud7oaj2&title=Education responses to Covid 19 Embracing digital learning and online collaboration](https://read.oecd-ilibrary.org/view/?ref=1201205448ksud7oaj2&title=Education%20responses%20to%20Covid%2019%20Embracing%20digital%20learning%20and%20online%20collaboration).
- Venkatesh, V., 2000. Determinants of perceived ease of use: integrating control, intrinsic motivation, and emotion into the technology acceptance model. *Information Systems Research* 11, 342–365.
- Venkatesh, V., Speier, C., Morris, M.G., 2002. *User acceptance enablers in individual decision making about technology: toward an integrated model*. *Decision Sciences* 33, 297–316.
- Wikipedia, 2021b. *List of countries by Internet connection speeds*. Retrieved on 24 September 2021. https://en.wikipedia.org/wiki/List_of_countries_by_Internet_connection_speeds
- Wikipedia, 2021a. *Internet in Malaysia*. Retrieved on 24 of September 2021. https://en.wikipedia.org/wiki/Internet_in_Malaysia
- World Bank. (2020). *Remote learning and the COVID-19 Outbreak*. (March), 1–12.
- Zhu, Y., Zhang, J. H., Au, W., & Yates, G. (2020). University students' online learning attitudes and continuous intention to undertake online courses: A self-regulated learning perspective. *Educational Technology Research and Development*, 68, 1485–1519. <https://doi.org/10.1007/s11423-020-09753-w>

Designing A PBL Scenario under the Topic of Reconstruction and Dissolution of Companies

Mohamad Naimi Mohamad Nor^{*a}, Dzarfan Abdul Kadir^b, Zuaini Ishak^c
^{abc}Tunku Puteri Intan Safinaz School of Accountancy, Universiti Utara Malaysia

*Corresponding Author: naimi@uum.edu.my

Abstract

The use of PBL as a teaching method, including in the field of management studies, has been widely discussed. This paper aims to share steps taken in developing a PBL scenario for a Company Secretarial Practice course specifically topics related to Reconstruction and Dissolution of Companies. Several related processes in crafting scenarios have been done starting from the stage of identifying learning outcomes to the production of documents that can be used in learning process. In the context of this paper, an email from a company's director to a company secretary is used to introduce the students with the problem. The study also describes how to manage the use of PBL in the classroom. This PBL project presented in this paper is not only can be use as a guide in developing scenarios for secretarial practice courses but also for other management courses especially related to governance studies.

Keywords: problem-based learning, entry document, reconstruction, dissolution of companies, company secretary.

Introduction

Problem Based Learning (PBL) is a teaching method that requires extensive student involvement. Through this teaching method, students will be given one or several problems that resemble real problems that occur outside the classroom to be solved. The problem becomes a catalyst or as a method to provoke students to think and be actively involved in the learning process. This method will encourage students to think creatively and independently. The lecturer acts as a facilitator and the students will play a major in the success of the teaching process.

The PBL method was initially used in law study programs and followed in medicine and then business (Servant-Miklos, n.d.). The method is relevant to use for the field of management studies because it can provide exposure to students about the real problems that occur in the business and corporate world. In fact, Abdul Manaf, Ishak and Wan Hussin (2011) showed that PBL students well performed than non-PBL class.

Students really need such exposure for them to understand a real issue faced by the company and be able to relate to the reality of organizational management. This PBL method can help accounting students in several aspects. The method trains future business leaders (e.g. accountants, company secretaries) to think analytically through complex problem solving. Such problem solving requires students to obtain, evaluate information in decision making and develop soft skills. An example is how the top management of an organization, such as a company secretary, handles the administration of a company. The secretary is not only involved in the company's administrative activities, he/she is also involved in ensuring that business rules and regulations are complied with and provide advice to the management such as in restructuring the company.

Studies using this method for company secretarial -related courses are extremely limited despite Abdul Manaf, Ishak, Hanapi and Md Yassin (2013) assert that PBL is among highly suggested teaching method for business-based programs. As for academics, they face a

lack of resources or guidelines that can be used to develop teaching aids related to company secretarial practices. This issue becomes more complex when the course content discusses business administration activities that are rare or discussed, such as the problems faced by companies in closing business operations. Among the questions that arise is how PBL can be used in teaching for cases related to closure or discontinuity of business. Also, how to develop such problems. Thus, this study will share experiences in developing PBL projects for a specific topic in a secretarial practice course. In particular, the teaching aids developed can be used as a teaching guide for topics related to reconstruction and business discontinuity.

PBL Effectiveness

Several previous studies have been conducted on the effectiveness of PBL. Studies have found that PBL helps in knowledge retention and knowledge application (Yew and Goh, 2016). Albanese and Mitchell (1993) claimed that as compared to traditional teaching methods, PBL is more fun and influences the way students think. In another PBL study, consistent with Yew and Goh (2016), Zakaria, Maat and Khalid (2019) stated that this method has a positive effect on the educational process and even suggested that it can be used as one of the teaching methods at various levels of education.

Besides the advantages mentioned above, the attention should be given to the ability of this method to encourage student involvement in learning process. Almulla (2020) showed that PBL can encourage student involvement through, among others, collaborative learning and iterative learning methods. Almulla (2002) also pointed out that activities conducted in PBL, such as knowledge sharing and group discussion, can encourage student engagement. In fact, a study by Hmelo-Silver (2004) shares about similar view. It is believed that teaching through problem solving contributes to the understanding of lesson content and thinking style. In addition, according to Hmelo-Silver (2004), PBL can help students to build their lifelong learning skills.

However, Yew and Goh (2016) stated that there is still confusion concerning the elements in PBL (i.e. problem/ issue analysis, self-directed learning, and reporting phase) that can effect learning outcomes. Further, Albanese and Mitchell (1993) outlined several aspects that need to be considered by educators in designing and implementing PBL. Among other things, this method necessitates the use of significant number of resources and the ineffectiveness of PBL for large-sized classes. Therefore, to ensure the effectiveness of the implementation of PBL activities, there should be methods or standards so that its implementation will provide optimal benefits.

Designing a PBL project for Company Secretarial Practice course

Designing a PBL project should focus on the process of acquiring knowledge, building understanding and improving students' skills. The PBL designed should challenge the thinking ability, allow students to provide views/ideas and opportunities to improve the quality of work. In addition, an atmosphere of information/knowledge sharing should be created so that the learning process becomes more effective.

Several things need to be planned by the PBL designer in the process of designing a project for PBL. According to Larmer, Mergendoller and Boss (2015), the aspects that need to be included in PBL design are:

- a) prescribing or identifying key knowledge/understanding,
- b) the student's skills to be tested (e.g. problem solving, skill critical thinking skill),
- c) driving question - a question that can drive students to solve problems,
- d) project summary - including the role that students need to play, problems and

- challenges,
- e) event entries or documents (e.g. emails, memo, advertisements),
 - f) identify the output or product to be produced,
 - g) list the required reference sources (equipment, materials, individuals), and
 - h) assessment method
 - i) Reflection method - how students can reflect on the learning process they have gone through (for example journal writing, class discussion).

The items mentioned above, therefore, will be the main source of reference in developing the PBL project for Company Secretarial Practice (CSP) course. This course is one of the compulsory subjects for students pursuing an accounting degree program at Universiti Utara Malaysia. This course is generally taken by students who are at the end of the program which is year 3 or 4 of study. The goals of this course are:

1. *Understand the application, technicalities and procedural aspects of company secretarial practice in accordance with the requirement of Companies Act, 2016 and other related rules.*
2. *Know how to use and prepare the statutory records and documents prepared by companies in complying with all requirements.*

The exposure to real-world business situation in this course through PBL method will prepare students to undergo industrial training attachment prior to graduation. For industry training, students are normally attached to the firms that provide accounting, auditing and secretarial services. Both exposures will then make the students ready to accept employment responsibilities.

The PBL project was designed after ensuring several aspect such as, the course content able to expose students to business activities and prior accounting knowledge to assist them in solving a given problem. Also, the PBL scenario and other materials provided to the students will encourage them to obtain and analyze information in making a decision.

The fifth learning outcome (LO) of this course is chosen to be delivered through PBL. The fifth LO is students are able to *analyse the regulations and procedures of the reconstruction and dissolution of companies in accordance to Malaysian corporate regulations*. This LO covers two topics: corporate recovery plan and cessation of business. This topics are particularly pertinent to the current economic situation as many businesses experiencing financial problems; and must restructure their business structure and operation. Furthermore, students are less exposed to such topics in comparison to other topics (e.g. accounts, audit) that are included indirectly in other accounting courses.

After identifying the LO to be tested, the next step is to develop a driving question. This driving question is expected to help students to find information and provide guidance in solving the problems given. Driving questions are formulated with students having to assume that they are a company secretary and an expert in aspects of reconstruction and discontinuity of business. Among the appropriate driving questions based on the entry document provided is: "How can we, as Company Secretary explains about the procedures for business reconstruction and dissolution, so that the problems faced by the business owner can be solved."

The entry document provided to the students states about some of the business problems that the company faces. Students who act as a company secretary are expected to explain and solve problems faced by directors and companies.

A set of problems to the students was delivered in the form of an email. The email was written by the company's top management, i.e. a director, to the company secretary. In the email, two documents (notice to all creditors and an excerpt) of audit report) are also supplied

to support and explain the issues/problems faced by the company.

The email from the director to the company secretary is presented in the Figure 1 and 2 below:

From:michaelphang@mpcsdnbhd.com
To: amytheseecretary@acs.com
Cc:
Bcc:
Subject: Discussion 27/10
Attached: An excerpt of audit report

Dear Amy,

We haven't been in touch in a long time, please accept my apologies. I've been a bit busy lately.

Our company is facing serious problems right now. The company's revenue has been declining over the past few years. The company is having trouble making payments to suppliers. Personally, I and other major shareholders are disappointed with the financial performance of the company. Early this month, we received another letter from Sintokyo Bank's lawyers. The letter requested that the loan be repaid immediately before further legal action was taken. The audit report has also come out. The tone of the audit report is harsher than last financial year. An excerpt report as attached.

Before I forget, a few days ago, I have found the notice as below from this website:
<https://focusmalaysia.my/clearing-the-air-its-mas-and-not-mab-that-is-facing-liquidation/>

Continued...

NOTICE TO ALL CREDITORS
IN THE MATTER OF COMPANIES ACT 2016
AND
IN THE MATTER OF
MALAYSIAN AIRLINE SYSTEM BERHAD
– IN LIQUIDATION
Registration No: 197101000245 (10601-W)
(In Creditors' Voluntary Liquidation since 14 February 2020)

NOTICE OF SUBMISSION OF PROOF OF DEBT OR CLAIM

NOTICE IS HEREBY GIVEN THAT creditors of the Company, whose debts or claims have not already been admitted, are required not later than 5:00 p.m. on 12 November 2020, to prove their debts or claims and to establish any title they may have to priority by delivering by hand or sending by post to the Liquidator at the address below, a formal PROOF OF DEBT or claim in accordance with the Proof of Debt General Form (which may be obtained from the Liquidator) containing their respective debts or claims and all documents.


The Liquidator
Malaysian Airline System Berhad – In Liquidation
c/o KPMG Deal Advisory Sdn Bhd
Registration No: 199801006138 (462265-P)
Level 10, KPMG Tower
8, First Avenue, Bandar Utama
47800 Petaling Jaya
Selangor Darul Ehsan

Dated this 22nd day of October 2020
ADRIAN HONG BOO KIAT, *Liquidator*

I need your advice since I know you are an experienced company secretary. Based on the problems faced by the company, what options are available? Which option is the best? I will meet the company's lawyer in KL around 24th or 25th October. After that, can we meet at Secret Recipe, Jitra on 27 Oct so that we can discuss on this. Would appreciate if you could show me all relevant documents or forms so that I can better understand the discussion. Thanks.

Regards,
M. Phang
Michael Phang,
Director
MPC Sdn Bhd,
Lot 56, Jalan Industri 3,
Kawasan Perindustrian Jitra Jaya, 06000
Jitra, Kedah, MALAYSIA
Tel: +604 917 6655, Fax: +606 917 5656

Figure 1. An email as entry document.

INDEPENDENT AUDITORS' REPORT

To the Members of MPC Sdn Bhd

.....

We draw attention to Note ... in the financial statements, which indicates that the Company incurred a net loss of RM13million during the year ended 30 June 2021 and, as of that date, the Company's current liabilities exceeded its current assets by RM10 million. As stated in Note ..., these events or conditions, along with other matters as set forth in Note ..., indicate that a material uncertainty exists that may cast significant doubt on the Company's ability to continue as a going concern.

.....

DLTG
Firm Number: AF 1411
Chartered Accountant
ALOR SETAR
30 September 2021
Datuk Lee Thong Guan
Approved Number: 01879/05/2022 J
Chartered Accountants

Figure 2. An excerpt of audit report

The complexity of the assignment depends on the credit hours allocated for the LO. Based on the course content, the number of hours or weeks allocated for this LO is for 2.5 weeks or 5 meetings. Therefore, at the fourth meeting, this assignment should be submitted to the lecturer. The last meeting (the fifth meeting) is a discussion or debriefing session for the discussion on proposed solutions to the problems presented in the email. Explanations will be given to ensure students get clear understanding and what things they should master. The marks allocated for this assignment are 10% of the overall grade of the course. For the purpose of the assessment, the marks are distributed as follows; 5% for content presentations and 5% for relevant supporting documents used to support the presentation.

Student reflection is one of the important components in the PBL implementation process. In this activity, students will record, justify and analyse on what they have learned. Two reflection activities will be carried out; small group discussions and short essays writing.

Through the above-mentioned process, the problems designed have taken into account or anticipated what challenges will be faced by students. Also, it will provide an opportunity for lecturers to be prepared in handling issues that will be raised by students.

Implement PBL in Class

Among the challenges that are closely related to the implementation of PBL is the ability of students to identify the requirements of a given problem and meet the requirements of the course content. For that, guidance and coaching from classmates or lecturers is much needed. The lecturer will facilitate the discussion and support the learning process. Zhang, Yu and Li (2017) proposed a significant degree of facilitation be provided while implementing PBL because students are not adept at gaining factual knowledge to solve real-life situations.

Sessions of brainstorming or discussion among the classroom members should be encouraged. A group consisting of 5 or 6 members was formed. In the formation of the group, each member will be delegated with tasks agreed upon by fellow members. This will create a sense of trust and confidence among members. Students can get reference materials from various sources such as company acts, websites, experts and related articles. This will enable students not only to rely on one source of information but get a new perspective and appreciate various views and opinions.

Referring to the case mentioned above, the assigned task requires students to solve a problem faced by a director of MPC Sdn Bhd. Following the poor operating performance and financial position, the company's director who is also a shareholder; Michael Phang, contacted the Company Secretary, Ms Amy. In the email to Ms Amy, Michael Phang mentioned several situations faced by the company, namely: (i) debt settlement problem to the suppliers; (ii) legal action to be taken by the bank if it fails to pay the loan immediately, and (iii) bad audit report. Based on these situations, Michael Phang would like to get an explanation from Ms. Amy on the appropriate steps he should take to handle this troubled company.

In short, in this PBL there are several processes that students must go through. The steps that can be followed by students are as follows:

- i. form groups (5 or 6 members in a group),
- ii. meeting the problem (receive of emails from company director),
- iii. define the problems or driving question,
- iv. determine their roles and what they need to do
- v. identify what they need to know,
- vi. learn new knowledge by finding solution to the questions that have been raised - refer to step (v),
- vii. discuss the solution among group members,

- viii. the suggested solution is presented to lecturer/member of the class; and
- ix. Make a reflection.

By following these suggested steps, it will make it easier for students to identify problems and find solutions. In addition, it helps students to set goals that they want to achieve together with group members. Students will be actively involved in each process, starting from understanding a given problem to presenting a proposed solution to the facilitator. The involvement of students in determining what they need to do and know, allows them to master knowledge more systematically.

The success of the implementation of PBL also depends on the role of the facilitator. The facilitator will discuss with students to identify issues (i.e. there are at least 3 issues faced by MPC Sdn Bhd) related to a given case. In addition, the facilitator will assist them in understanding the difficult concepts/tasks so that it will motivate the student to understand the subject matter. The facilitator also provides opportunities for students to reflect and improve their understanding – to ensure their understanding is in line with the content of the course/topic discussed. Assignments submitted will be evaluated based on the rubric provided and students will be informed of the quality of their work.

Conclusion

PBL is one of the teaching methods that can be considered for courses related to accounting or in general, management courses. PBL involves participation from students, and they will be fully immersed in gaining knowledge. The biggest hurdle that students will be faced, especially those who are new to PBL, is to understand the needs of the problem and determine what knowledge they want to obtain. In addition, it is important to ensure that the information sought by the student can increase understanding and also in line with the requirements of the course content. The PBL project developed for this course can be improved by incorporating a various types of entry documents/scenarios so that the learning process will be more interesting and effective.

References

- Abdul Manaf, N. A., Ishak, Z. and Wan Hussin, . W. N. (2011). Application of Problem Based Learning (PBL) in a Course on Financial Accounting Principles, *Malaysian Journal of Learning and Instruction*, 8, pp 21-47.
- Abdul Manaf, N.A., Ishak, Z., Hanapi, Z. and Md Yassin, S. (2013). Crafting A Good PBL Scenario In Company Secretarial Practices Course. Proceeding of the 4th International Research Symposium on Problem-Based Learning (IRSPBL) 2013.
- Albanese, M. A. & Mitchell, S. (1993). Problem-Based Learning: A Review of Literature on Its Outcomes and Implementation Issues, *Academic Medicine: Journal of The Association of American Medical Colleges*, 68(1), pp. 52-81.
- Almulla, M. A. (2020). The Effectiveness of the Project-Based Learning (PBL) Approach as a Way to Engage Students in Learning, *SAGE Open*, 10(3), pp. 1–15.
- Hmelo-Silver, C.E. (2004). Problem-Based Learning: What and How Do Students Learn?, *Educational Psychology Review*, 16, pp. 235–266.
- Larmer, J., Mergendoller, J. & Boss, S. (2015). Setting the Standard for Project Based Learning: A Proven Approach to Rigorous Classroom Instruction. Buck Institute for Education.

- Malaysian Institute of Accountants (2018). Auditors' Report on Financial Statements Prepared in Accordance with Malaysian Private Entities Reporting Standard (MPERS) and Companies Act 2016. AAPG 2 February 2018
- Servant-Miklod, G.S. (n.d.) Foundations of Problem-based Learning.
- Vinod, G. (2020). Clearing the air: It's MAS and not MAB that is facing liquidations. Available at <https://focusmalaysia.my/clearing-the-air-its-mas-and-not-mab-that-is-facing-liquidation/> .Accessed on 29 September 2021.
- Yew, E. H. J & Goh, K. (2016). Problem-Based Learning: An Overview of its Process and Impact on Learning, *Health Professions Education*, 2(2), pp. 75-79.
- Zakaria, M. I., Maat, S. M., & Khalid, F. (2019). A Systematic Review of Problem Based Learning in Education, *Creative Education*, 10, pp. 2671-2688.
- Zhang, L., Yu, S. & Li, B. (2017). Can Students Identify the Relevant Information to Solve a Problem?, *Journal of Educational Technology & Society*, 20 (4), pp. 288-299.

e-PROBLEM Based Learning (e-PBL) Sebagai Pentaksiran Alternatif bagi Kursus MPU Falsafah dan Isu Semasa dalam Kalangan Pelajar Universiti Utara Malaysia

Nor Hanani Ismail

Pusat Pengajian Bahasa, Tamadun dan Falsafah, Universiti Utara Malaysia

Corresponding Author: hanani@uum.edu.my

Kursus Falsafah dan Isu Semasa merupakan kursus Matapelajaran Pengajian Umum (MPU). Kursus MPU wajib kepada semua pelajar Institut Pengajian Tinggi Awam (IPTA) dan Institut Pengajian Tinggi Swasta (IPTS). Antara atribut yang ditetapkan oleh pihak kementerian bagi Kursus Falsafah dan Isu Semasa ini ialah Pembelajaran Autonomi. Dari situ, subatribut bagi Pembelajaran Autonomi yang dipilih bagi kursus ini ialah pembelajaran sendiri dan idea baharu. Pentaksiran menerusi pembelajaran berasaskan masalah (e-PBL) dijadikan kaedah bagi mengukur pembelajaran sendiri dan idea baharu oleh pelajar. Persoalannya, bagaimana proses perlaksanaan e-PBL bagi mengukur subatribut pembelajaran sendiri dan idea baharu? Kajian ini menggunakan responden seramai 200 orang dari Universiti Utara Malaysia yang mengambil kursus ini pada semester A201 dan A202. Pelajar-pelajar tersebut melaksanakan e-PBL adalah secara berkumpulan. Pelajar diberi peluang untuk memilih isu yang dilihat dan boleh diteroka serta dibincangkan mengikut domain analisis falsafah. Kajian ini mempamerkan tujuh proses pelaksanaan e-PBL bagi mengukur subatribut pembelajaran sendiri dan idea baharu menerusi video dan infografik yang disediakan oleh pelajar.

Kata kunci: e-PBL, MPU, Falsafah dan Isu Semasa

Pendahuluan

Kursus Falsafah dan Isu Semasa merupakan salah satu kursus MPU (Matapelajaran Pengajian Umum) yang diwajibkan kepada semua pelajar peringkat pengajian tinggi. Kursus Falsafah dan Isu Semasa ini bertujuan memberi pendedahan kepada pelajar terhadap ilmu falsafah dan keupayaan falsafah dalam memahami dan memberi solusi kepada sebarang isu yang berlaku khususnya di Malaysia. Pelajar diajar memahami domain falsafah sebagai alat untuk memurnikan budaya pemikiran dalam kehidupan melalui seni dan kaedah berfikir.

Oleh kerana, kursus ini merupakan kursus MPU, maka hasil pembelajaran atau *Course Learning Outcome* (CLO) ditetapkan oleh pihak kementerian. Hal yang sama pada atribut dan subatribut sebagai pentaksiran kursus ini juga ditetapkan oleh pihak kementerian. Subatribut Pembelajaran Kendiri dan Idea Baharu yang berada di bawah *Learning Outcome Cluster* (LOC3f) iaitu Kepimpinan, Autonomi dan Kebertanggungjawaban ditetapkan oleh kementerian untuk ditaksirkan.

Berdasarkan subatribut ini, satu pentaksiran alternatif telah dilaksanakan bagi mentaksir subatribut tersebut. Pentaksiran alternatif tersebut ialah e-PBL atau *electronic problembased learning* (pembelajaran berasaskan masalah). Kaedah e-PBL merupakan kaedah yang terancang dan tersusun untuk mencapai objektif pembelajaran berdasarkan penyelesaian masalah sebenar (Barrow & Tamblyn, 1980). Penyelesaian masalah merupakan satu proses yang boleh membawa kepada penyelesaian yang efektif dan sempurna terutamanya masalah yang berkaitan dengan realiti semasa. Sesuatu masalah yang wujud dikaitkan dengan penyelesaiannya. Walaupun begitu seseorang yang melakukan proses tersebut bukanlah hanya sekadar kebolehan tetapi lebih dari itu. Seseorang itu mestilah mempunyai keupayaan pada keseluruhan mindanya dalam menjadikan persekitarannya lebih efektif. Bagi menghasilkan

persekitarannya lebih efektif, maka tidak dapat tidak seseorang itu mesti mempunyai *mind set* yang proaktif. Bagi memperoleh *mind set* yang proaktif memerlukan kepada masalah yang berbentuk realiti (Watanabe, 2010). *Mind set* yang proaktif ini merupakan salah satu kemahiran berfikir. Oleh itu, masalah yang bersifat realiti mampu menuntut seseorang itu berfikir secara proaktif. Proses penyelesaian masalah bukanlah satu kebolehan yang diwarisi tetapi ianya merupakan kemahiran yang boleh dipelajari (Watanabe, 2010).

Selain itu, e-PBL merupakan salah satu kaedah dalam pedagogi yang dapat meningkatkan kemahiran dalam pelbagai aspek. Berdasarkan kaedah ini pelajar akan diberi masalah sebenar untuk diselesaikan. Pelajar akan belajar membuat justifikasi, mereka cipta, menyelesaikan masalah, mengambil risiko dan menganalisis dalam proses pembelajaran (Berhannudin, 2011). Terdapat juga kajian-kajian yang membincangkan bentuk-bentuk masalah antaranya masalah yang terkait dengan konteks realiti. Kajian tersebut antaranya kajian yang dilakukan oleh Idris et al. (2009), Saaid (2011), Kasim dan Tamuri (2010) dan Rahman (2002).

Menurut Berhannudin (2011) lagi, pensyarah berperanan sebagai pembimbing kepada para pelajar dalam pendekatan PBL ini. Masalah dapat membantu pelajar meneroka, menguasai dan mempraktikkan kemahiran sebenar yang dipelajari bagi menghasilkan kajian berdasarkan pengalaman sendiri untuk menyelesaikan masalah.

Dapat pada itu, menerusi projek e-PBL ini, pentaksiran secara formatif dapat dijalankan. Pentaksiran secara formatif amat sesuai digunakan bagi mengukur subatribut Pembelajaran Kendiri dan Idea Baharu. Menerusi e-PBL pelajar belajar proses dalam menyelesaikan tugas. Proses-proses dalam melaksanakan tugas diberi refleksi dan ditambahbaik sepanjang semester. Pelajar dapat belajar dari kesilapan pertama dan membuat penambahbaikan dan sekaligus dapat memahami dengan lebih jelas berkaitan tugas. Selain itu, menerusi e-PBL ini yang merupakan pentaksiran secara formatif, pelajar berupaya belajar bersama-sama pensyarah dalam membuat penambahbaikan pada tugas (Heritage, 2010).

Sesi maklum balas dan dialog berlaku antara pensyarah dan pelajar dalam pentaksiran formatif. Sesi dialog antara pensyarah dan pelajar dalam menambahbaik tugas sekaligus memberi motivasi kepada pelajar dalam meningkat kualiti tugas pelajar (Bell & Cowie, 2006). Pensyarah dapat mengetahui apa yang diperlukan oleh pelajar, apakah masalah yang dihadapi oleh pelajar dalam memahami tugas yang diminta. Bagaimana pemahaman pelajar pada arahan yang diberikan untuk tugas dan aktiviti pengajaran dan pembelajaran. Maka pensyarah dapat membuat refleksi pada arahan yang diberikan dan pengajaran yang dibuat (Wiliam, 2011). Jadi penggunaan e-PBL dilihat amat sesuai dijadikan projek bagi pentaksiran formatif yang dapat mengukur pembelajaran sendiri dan idea baharu pelajar.

Menerusi e-PBL ini juga membolehkan pelajar melakukan pembelajaran secara autonomi khususnya dalam membuat keputusan dan menyelesaikan masalah dan berusaha memberi solusi dengan menggunakan domain analisis falsafah terhadap isu yang dipilih sendiri oleh pelajar. Kaedah e-PBL berupaya mendorong pelajar dalam menampakkan pembelajaran sendiri dan idea baharu sekaligus membuang tanggapan bahawa bidang falsafah ini menyebabkan kekeliruan dan ketidakfahaman. Oleh itu, kajian ini meneliti pelaksanaan e-PBL bagi mencapai subatribut pembelajaran sendiri dan idea baharu.

Metodologi

Kajian ini ialah kajian eksperimen yang melibatkan 200 pelajar yang terdiri daripada 20 kumpulan dalam dua kuliah berasingan. Setiap kumpulan (10 ahli) dikehendaki untuk melaksanakan tugas berkumpulan mengikut ketetapan pentaksiran yang disediakan. Pelajar diminta melakukan e-PBL mengikut keputusan tajuk yang diputuskan oleh setiap kumpulan. Pelajar bebas membuat pemilihan tempat, jenis gerak kerja dan responden. Pelajar diberi

peluang untuk memilih isu yang dilihat boleh diteroka dan dibincangkan mengikut domain analisis falsafah. Pelajar meneroka isu yang dipilih sendiri, dan mencari data-data yang bertepatan berkaitan isu.

Kaedah yang digunakan oleh pelajar direkodkan dan dipersembahkan dalam bentuk video. Sebagai contoh, pelajar menggunakan kaedah temubual, dalam video yang dihasilkan. Pelajar perlu menyatakan soalan-soalan yang ditanya dan meletakkan sesi temubual sebagai bukti temubual. Selain itu, menerusi pendekatan e-PBL ini, pelajar diminta menyatakan masalah-masalah yang dihadapi ketika menghasilkan tugas, serta merekodkan solusi-solusi yang diambil bagi mengatasi masalah tersebut. Bermula dengan sesi pemilihan isu yang hendak diteroka, gerak kerja mendapatkan data dan bukti, masalah yang dihadapi dan solusi yang diambil dipersembahkan dalam bentuk video menerusi pendekatan e-PBL.

Selain daripada video, pelajar juga diminta mempersembahkan dapatan hasil tugas *e-PBL* mereka menerusi infografik. Pembentangan daripada pelajar berkaitan proses menyiapkan e-PBL dibuat bagi membantu pelajar dalam menambahbaik tugas e-PBL mereka. Pembentangan diadakan pada minggu ke-5, minggu ke-9 dan ke-11. Pembentangan ini dibuat bagi mengenalpasti masalah yang dihadapi oleh pelajar dalam proses menyiapkan tugas *e-PBL* mereka. Hasil daripada pembentangan ini, pelajar diminta menambahbaik tugas e-PBL mereka.

Dapatan

Kaedah e-PBL dilaksanakan mengikut proses yang telah ditetapkan. Terdapat tujuh proses yang terdapat dalam e-PBL yang perlu dilaksanakan oleh pelajar. Berikut merupakan perbincangan proses tersebut.

Proses 1 (Pemilihan tajuk dan isu yang hendak diterokai)

Pembentukan kumpulan adalah ditentukan oleh pensyarah. Ini memberi ruang kepada pelajar untuk mengenali kenalan baru dan berusaha membentuk elemen kerjasama dan menyemai kepercayaan semasa ahli kumpulan yang baharu dikenali. Pelajar berbincang sesama ahli kumpulan dan mengenal pasti tajuk yang hendak dipilih. Pemilihan tajuk juga berkaitan dengan isu yang hendak diteroka. Setelah itu, pelajar perlu mendapat pandangan terhadap pemilihan tajuk dan isu yang hendak diterokai bersama pensyarah. Pelajar diminta menyatakan sebab mengapa memilih tajuk tersebut. Pada sesi perbincangan bersama pensyarah, pelajar diingatkan supaya memberi komitmen yang baik pada tugas yang akan dibuat bersama-sama. Nasihat pensyarah berkaitan keterlibatan pelajar amat ditekan oleh pensyarah. Pelajar juga dinasihatkan agar memaklumkan kepada ahli kumpulan sekiranya menghadapi masalah sepanjang menyiapkan tugas.



Rajah 1. Menunjukkan Sesi Konsultasi Pensyarah Bersama Pelajar Bagi Membincangkan Tajuk Yang Telah Dibina Oleh Pelajar (Sumber: Rakaman Pengkaji)

Proses 2 (Kenal pasti kaedah pengumpulan data)

Pelajar menentukan kaedah yang digunakan dalam menyiapkan tugas mereka. Kaedah-kaedah seperti, survei, temubual, pemerhatian dan dokumentasi yang bersesuaian dengan tajuk dan isu yang dipilih.



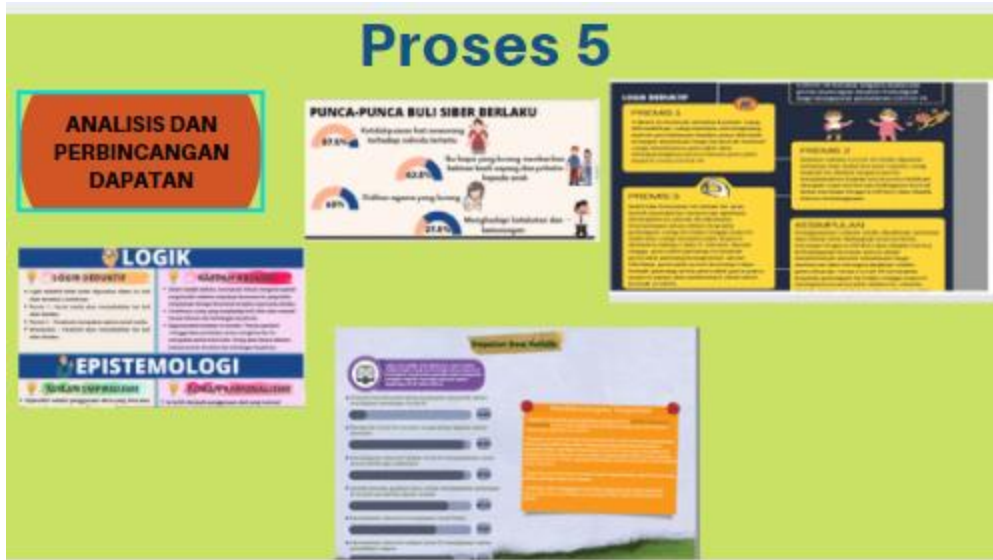
Rajah 2. Menunjukkan Proses Gerak Kerja Pelajar dalam Mendapatkan Data iaitu Menerusi Temubual dan Survei (Sumber: Rakaman Pengkaji)

Proses 3 dan 4 (Kenal pasti cabaran dan solusi sepanjang menyiapkan tugas)

Pelajar melaporkan setiap cabaran yang dihadapi sepanjang melaksanakan tugas e-PBL ini. Seterusnya, melaporkan juga solusi yang diambil bagi menghadapi cabaran tersebut. Daripada proses ini, pelajar bertindak membuat keputusan yang sesuai bagi menghadapi cabaran yang dihadapi. Semua cabaran dan solusi yang diambil direkodkan dalam video.



Rajah 3. Menunjukkan Video Yang Menyatakan Cabaran Dan Solusi Yang Diambil Sepanjang Menyiapkan Tugas (Sumber: Rakaman Pengkaji)



Rajah 4. Menunjukkan Infografik yang Mempamerkan Hasil dan Perbincangan Dapatan Pelajar (Sumber: Rakaman Pengkaji)

Proses 5 (Analisis dan Perbincangan terhadap Dapatan)

Pelajar menganalisis dapatan yang diperoleh sama ada menerusi temu bual, survei, pemerhatian dan dokumentasi. Analisis tersebut perlu menggunakan domain analisis falsafah iaitu logik, insan, metafizik dan epistemologi. Pelajar mempamerkan maklumat tersebut menerusi infografik.

Proses 6 (Pengesahan dapatan dan perbincangan bersama pensyarah)

Pelajar mengadakan sesi konsultasi bersama pensyarah bagi membentangkan dapatan dan penganalisan mereka menggunakan domain analisis falsafah. Sesi konsultasi ini merupakan pentaksiran formatif bagi meningkat kualiti dapatan dan perbincangan tugas mereka. Selain itu, senarai semak juga digunakan pensyarah bagi meneliti dapatan dan perbincangan tugas pelajar semasa sesi konsultasi.



Rajah 5. Menunjukkan Sesi Konsultasi Bersama Pensyarah (Sumber: Rakaman Pengkaji)



Rajah 6. Menunjukkan Senarai Semak yang Digunakan oleh Pensyarah Sepanjang Proses Pentaksiran Formatif dilakukan

Proses 7 (memuat naik semua maklumat berkaitan proses gerak kerja ke dalam video yang dimuat naik ke youtube.



Rajah 7. Bukti Video Yang Disediakan Oleh Pelajar (Sumber: Rakaman Pengkaji)

Semua pelajar terlibat secara berkumpulan yang terdiri dari pelbagai bangsa dan agama. Tugas dijalankan secara atas talian (e-PBL), maka sikap saling memahami keadaan ahli kumpulan jelas tertonjol dalam video yang diberikan. Saling memahami keterlibatan ahli kumpulan terutamanya aspek internet. Saling berusaha bersama ahli kumpulan dalam menyiapkan tugas, hal ini diperlihatkan dalam video.

Pentaksiran menerusi e-PBL ini berupaya mengukur keupayaan pelajar iaitu subatribut yang ditetapkan iaitu pembelajaran sendiri. Satu video dengan durasi 7 hingga 10 minit menampilkan proses/tatacara/kaedah untuk mendapatkan data dan bahan-bahan berkaitan tajuk tugas. Selain itu, cabaran yang dihadapi dan solusi-solusi yang diambil sepanjang proses menyiapkan tugas secara berkumpulan ini dinyatakan dalam video tersebut. Menerusi penghasilan video tersebut juga menampilkan minat pelajar dalam menyediakan tugas ini. Selain itu, solusi-solusi yang diambil adalah berasaskan domain analisis falsafah. Ahli-ahli kumpulan yang terdiri dari pelbagai bangsa dan agama berupaya menjalin hubungan yang baik sesama ahli kumpulan. Melalui e-PBL ini berupaya mengukur subatribut yang ditetapkan dan sekaligus mencapai CLO yang ditetapkan.

Menerusi e-PBL ini berupaya menjimatkan masa dan kos kerana semua proses dijalankan atas talian termasuk, temubual bersama responden. Sesi temubual tersebut dimasukkan dalam video sebagai proses pengumpulan data bagi menyiapkan tugas. Seterusnya, dapatan dan perbincangan yang dipamerkan menerusi infografik berupaya

mempamerkan idea baharu pelajar dengan menggunakan doamin analisis falsafah. Jadi subatribut idea baharu, boleh ditaksir menerusi infografik tersebut.

Kesimpulan

Peranan pensyarah sebagai fasilitator dalam e-PBL ini adalah asas untuk meningkatkan kemahiran menyiapkan tugas pelajar. e-PBL memberi kuasa kepada pelajar untuk membuat keputusan, berusaha menjalinkan hubungan sebagai rakan sepasukan dalam menyiapkan tugas mereka. Ini dilakukan selari dengan sokongan fasilitator. Pentaksiran formatif berjaya dilakukan pada setiap kali sesi konsultasi bersama pensyarah. Sesi konsultasi ini merupakan tunjang utama dalam menambahbaik tugas sekaligus memberi kesan yang amat mendalam dalam kalangan pelajar terutama bagi pelajar yang bermasalah dalam berperanan menyiapkan tugas. Sesi konsultasi ini juga berjaya memberi suntikan motivasi kepada pelajar dengan wujudnya interaksi antara pelajar dan pensyarah dalam kumpulan yang lebih kecil.

Rujukan

- Bell, N., & Cowie, B. (2006). *Formative Assessment and Science Education*: Springer Netherlands.
- Barrows, H and Tamblyn, R. (1980). *Problem-based Learning: An Approach to Medical Education*. New York: Springer.
- Berhannudin Mohd Saleh (2011). *Capaian nota dari: CSI PBL*. Universiti Tun Hussein Onn Malaysia
- Barrett, T., & Moore, S. (2010). *New Approaches to Problem-based Learning: Revitalising Your Practice in Higher Education*: Taylor & Francis
- Idris, R., Ariffin, S. R., & Mohd Ishak, N. (2009). Pengaruh kemahiran generik dalam kemahiran pemikiran kritikal, penyelesaian masalah dan komunikasi pelajar Universiti Kebangsaan Malaysia (UKM). *Malaysian Journal of Learning & Instruction*, 6, 103-138.
- Kasim, A. Y., & Tamuri, A. H. (2010). Pengetahuan pedagogikal kandungan (PPK) pengajaran akidah: Kajian kes guru cemerlang pendidikan Islam. *Journal of Islamic and Arabic Education*, 2(2), 13-30.
- Nordin, A. B. (2013). Kurikulum Kearah Penghasilan Kemahiran Berfikiran Kritis, Kreatif dan Inovatif. *Jurnal Kurikulum dan Pengajaran Asia Pasifik*, 1(1).
- Rahman, N. N. A. (2002). Ruang Ijtihad Dalam Amalan Fatwa Di Malaysia: Sorotan Dari Sudut Pentadbiran Fatwa. *Jurnal Syariah*, 10(2), 19-30.
- Moallem, M., Hung, W., & Dabbagh, N. (2019). *The Wiley Handbook of Problem-Based Learning*: Wiley.
- Schwartz, P. (2013). *Problem-based Learning*: Taylor & Francis.
- Saa'id, D. M. (2011). *Pelaksanaan Pembelajaran Berasaskan Masalah (PBM) dalam Matematik di peringkat sekolah menengah*. Universiti Teknologi Malaysia.
- Heritage, M. (2010). *Formative Assessment: Making It Happen in the Classroom*: SAGE Publications.
- Watanabe, K. (2010). *Problem Solving 101: A simple book for smart people*: Ebury Publishing.
- Wiliam, D. (2011). *Embedded Formative Assessment*: Solution Tree Press.

Research Products in the Limelight: Showcasing the Applications of Theories, Laws, and Principles in Teaching and Learning

Husniza Husni

School of Computing, Universiti Utara Malaysia,

06010 UUM Sintok, Kedah, Malaysia

Corresponding Author: husniza@uum.edu.my

Abstract

Theories, laws, and principles in Interaction Design (IXD) and Human-Computer Interaction (HCI) are important aspects of knowledge that serve as the fundamentals upon which we build or construct our design and ideas. The two fields share appreciation to similar theories, laws, and principles as both are dealing with user interaction and interactive products. Hence, the theories and laws may come from psychology, cognitive science, computer science, and human factors engineering, to name a few. When talking about theories, laws, and principles of IXD and HCI, or even any field, the challenge is always on how to best explain to students so they can understand and 'see' how the theories, laws, and principles are being applied into some artifact, digital or tangible interactive products, to solve certain design issues and challenges. Things get more challenging when the students have no prior experience learning the courses before, nor do they have experience working in the industry that deals with software/application/web design and development. Objectively, this paper explains the teaching and learning session where the actual, real-life applications of related theories, laws, and principles are discussed and demonstrated. The teaching and learning sessions are designed to be interactive sessions, where students are encouraged to share their thoughts, ideas (crazy, silly ideas are also welcome), and concerns. This occurs in Human-Computer Interaction and Interaction Design postgraduate classes, with a total of ten students enrolled in three semesters. Informal observations were performed during the sessions, particularly on students' participation and feedbacks on certain aspects being discussed. Students' feedbacks were promising and some admitted that it opens up a new perspective and considering making a career in this line of work, which is very much on demand and in trend in the industry, nationally and globally.

Keywords: Interaction Design, Human-Computer Interaction, Laws and principles, dyslexia, research application.

Introduction

Interaction Design (IXD) and Human-Computer Interaction (HCI) are two bodies of knowledge that share similar theories, laws, and principles as both are focusing on interaction design between human and interactive products, be it a digital product such as a website or a tangible product such as Wii or even a washing machine. IXD focuses more on interactive products in general while HCI narrows it further to human interaction with computers. The theories not only coming from computer science but originate from various fields such as psychology, cognitive science, human factors engineering, ergonomics, and sociology. With vast influence from such theories and laws from other fields, IXD and HCI stand strong and becoming more prevalent with the growing interest and trends in User Experience (UX) from the industry. Figure 1 showcases the disciplines related to IXD, HCI, and UX, which is often seen as an umbrella of the previous two.

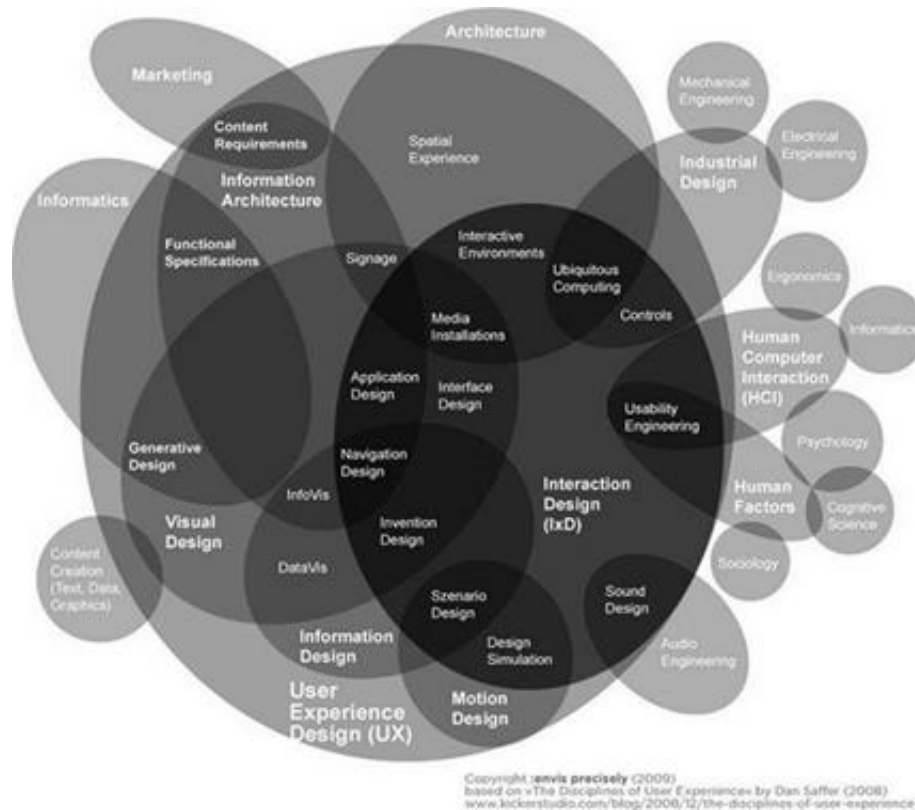


Figure 1. The disciplines of User Experience illustrating the intersections of IxD and HCI and UX (Copyright: Envis Precisely (2009)).

Introducing and explaining the theories, laws, and principles to students could be an interesting challenge, especially fresh graduates without prior experience learning the course before nor implementing any of it in their working experience. Since the theories, laws, and principles are fundamentals for us to gain more insights and constructing more knowledge and skills through our experiences, the need to understand them is of concern. That way, our appreciation to why things are supposed to be properly designed and carefully implemented increases and therefore leveraging the potential to design better products that could mean more to the potential users – some would change the lives of the people using it, especially when you are designing and developing artifacts for disabled or learning-disabled people.

In appreciation of the importance of design and how it could positively affect the lives of our users, this paper tells the story of how showcasing the actual product, based on years of research and development, would emphasize more the significance of the theories, laws, and principles when carefully applied. This paper portrays the research and development conducted for children with dyslexia, where many of the principles and laws were applied in designing and developing artifacts to accommodate and facilitate the children learning to read and eases their cognitive load. It later describes how the informal observations were performed, followed by the findings and discussion which lead to the conclusion.

Background

Inspired by some of the world gurus in the field of IxD and HCI, such as Don Norman and Alan Dix through their books, talks, and online courses, the IxD and HCI courses are designed to be conducted in such a way that encourages active participation from students by presenting some of the real-life examples of our interaction with products – a website, a washing machine or even a mug! Daily life experiences capture interest quickly and started to provoke more

intriguing thoughts. Theories, however, could be somewhat difficult to explain and illustrate. To enable students to see the mechanics – how they work and why, and later apply them in their assignments/projects, the research products are used as real examples. Hence, it is easier to explain deeper the design and interaction based on one's own years of research and development of interactive artefacts. Attempting to provide deeper understanding of the theories, laws, and principles of IxD and HCI, showcasing what we have – our products, both digital and tangible manipulative – is one promising approach.

Design Challenge – Dyslexia

Dyslexia, one of the many learning differences (or learning disabilities), has affected around 15-20% global population according to various sources (The Yale Center for Dyslexia & Creativity, 2017; International Dyslexia Association, 2021). Dyslexia causes difficulties in acquiring and using written language, i.e., processing the written language (text). This includes learning letter-sound correspondence, short-term and working memory issues, spelling, comprehension, correctly doing math operations, and memorizing number facts, to name a few. Unfortunately, it could also negatively affect the self-esteem and social-emotional development of a child. Many of the stories and struggles were presented as case studies for others to be aware of and truly understand the struggles, to empathize and learn more, to inspire others to help and contribute more to the community (Jamaludin, Husni, & Majid, 2021).

Understanding dyslexia and dyslexic children allow us to carefully consider and apply suitable laws and principles in an effort to provide them with a tool they can use to leverage their potential and eases their struggles in learning to read. The tools can be both digital and non-digital artifacts that dyslexic children can use in learning to read. The tools presented in this paper, as showcased in the classes, include BacaDisleksia 2.0 (Husni, Jamaludin, & Aziz, 2013), which is a software, and Papan Sintok (Jamaludin & Husni, 2018), which is a tangible alphabet board that has been filed for a patent (see Figure 2). Both took years of research and development effort as designing for children with dyslexia requires creative and clever applications of the laws and principles of IxD and HCI.



Figure 2. a) BacaDisleksia software and b) Papan Sintok as examples of real products to showcase the applications of theories, laws, and principles of IxD and HCI.

The design challenge is real – considering the dyslexic children's characteristics, behaviour, strengths, and limitations, what theories, laws, or principles of IxD and HCI can be applied? How can we do so in digital products and tangible products? How can we design to facilitate their learning and learning experiences? How can the design affect their reading or spelling performances? How can we accommodate their working memory and short-term memory limitations? How can we design so they can 'see' better and therefore read correctly? Can we design a tool to reduce their cognitive burden when reading? Can the tool facilitate a

positive attitude and feelings towards learning to read? These were among the questions raised earlier in the R&D and these are also the points to highlight in class.

Design Challenge – Theories, Laws, and Principles

All the basics, most fundamental, and popularly used/applied theories, laws, and principles are presented and discussed in class, stressing more in terms of how these could be applied to the design of interactive products. The ultimate aim of IxD and HCI is to achieve good usability and good UX. Among the theories, laws, and principles covered in class include Fitts's Law (1954) in MacKenzie (2018), Hick's Law (1952) e.g., in Proctor and Schneider (2018), and Liu, Gori, Rioul, Beaudouin-Lafon, and Guiard (2020), Miller's Law (1956) as explained by Harrod (in press), the Poka Yoke principle invented by Shigeo Shingo, an engineer responsible in the development of Toyota Production System (Norman, 2013), the Fundamental Principles of Interaction (Norman, 2013), Shneiderman's Eight Golden Rules (Shneiderman, et al., 2018), Nielsen's 10 Usability Heuristics (Nielsen, 2020), Norman's Action Cycle model (Norman, 2013), Gestalt's Principles (Soegaard, in press), and the classic Abowd and Beale's interaction framework (Dix, Finlay, Abowd, & Beale, 2004).

Based on the aforementioned laws and principles, although not exhaustive, BacaDisleksia and Papan Sintok are being used to illustrate how the laws and principles are translated into the design. BacaDisleksia or Papan Sintok is shown to the class and explained further in terms of the design and how it facilitates learning for dyslexic children. For example, the graphical user interface of BacaDisleksia is purposely designed to be minimalist yet optimum to facilitate the process of reading (i.e., written language processing), capturing Csikszentmihalyi's flow theory (1990) and core-affect theory (Russell, 2003) in an attempt to design an interface that allows users to feel in control, less intimidated at reading (because reading can be an overwhelming process for dyslexic children), calm yet pleasurable. Look carefully at the letters and their slightly irregular shapes, observe the eight options of background colours inspired by Irlen theory (Irlen, 2005), and the icons of a boy's facial expressions indicating the level of difficulties of the reading tasks (see Figure 3). All these elements in the design are meant to ease reading for the children and help them read correctly so they can gain more confidence and built their self-esteem in preparing them to face the real world.



Figure 3. The graphical user interface of BacaDisleksia 2.0, designed to suit dyslexic children's needs, requirements, and preferences.

What's more interesting is knowing that some of the designs could also challenge common principles. For example, the combination of background colour and foreground colour (text) where a good contrast is highly recommended for visibility. This is somehow not the case for the children – they read best when they get to choose their favourite colours for the text! Surprisingly enough, they normally choose colours that are not so contrast with the background, e.g., having white and yellow on top of the pale pink background colour. All these valuable insights and discoveries are shared with the students to enrich our discussion so we can appreciate the knowledge more.

The explanation and demonstration of the said laws and principles happen during class. Since the courses are online, hands-on activities still can be done by having the students sketch some ideas and share them on WhatsApp group or Webex during the online classes or using online tools. Many online tools such as Miro or Mural are helpful to get the students to share their ideas/concepts together on screen. This allows everybody to contribute and be actively involved and get to see everybody's responses and comments. This is the opportunity for the students to engage their creative minds and be crazy and bold in terms of the design and what they think is suitable or not suitable. After all, that's the philosophy of UX and design thinking taking inspiration from Einstein's quote "if at first the idea is not absurd, then there is no hope for it". The informal observations were performed mostly during sessions like this or just a simple discussion online after certain theories, laws, principles, or concepts have been explained, just to see the students' understanding.

Reflection and Discussion

Reflecting on the sessions we had, all ten students actively participated in every discussion. An ice-breaking session is always good to have especially when students do not know each other and the lecturer. After week 2, we usually gear up to explore the topics more, together. Having a good Internet connection is one of the privileges as well for such sessions to achieve its desired outcome and luckily students have no issues in terms of Internet connection. If they do, they always try to share their thoughts on the WhatsApp group just so they can participate and contribute their ideas as well.

The main objective of observing the students' response is to measure, subjectively, as the class progresses, their current understanding of the topic being discussed. It is to ensure the important theories, laws, and principles are well covered and explained not only to the level of knowledge and understanding but up to the higher level of Bloom's Taxonomy – apply, analyse, evaluate, and create. This way, it would be easier for them to carry on the assessment and therefore achieve the targeted course learning outcome, which is up to designing and developing their interactive prototypes. Of course, conducting a formal observation would be more accurate and more beneficial to the teaching and learning aspects but the quick and informal observation also yields some interesting points that would serve as keys to improving teaching and learning, and how to facilitate online hands-on activities. The following are some valuable comments made by the students:

"Principles and laws are important for us as a guide to design good interfaces. Papan Sintok is a good example of how the design has been implemented using laws especially Fitts's Law. It helps teachers to test how dyslexic children interact with the interfaces for spelling, word matching, and memory."

"Papan Sintok explains the law and principle. The law used is Fitts's Law and the principle used is affordances as it shows the relationship between Papan Sintok and the actions that the children can perform."

"During the class, Dr. Husniza explain the laws and principles of HCI used in BacaDisleksia and Papan Sintok. By using those as examples, she taught us why we are using

the laws and principles and the importance of using the laws and principles. It helped me to get a clear idea practically about what I should do and what I shouldn't do for any development."

"The course [is] being delivered by one of the most amazing and accommodating teachers I have ever faced is sure to exceed expectation. The good experience encountered makes me consider focusing on a career and research related to the course."

"This course helps me to gain more knowledge on the best practice on designing interfaces with the implementation of law/principle and guideline in HCI. Through this course, students become more expert to evaluate the interface of the system that we use in daily life."

"I am totally satisfied with this course. The teacher was super interactive and also used to keep us engaged during the lecture by assigning small activities."

"I had a wonderful experience. I have not enough words to thank Dr. Husniza for her extreme kindness and professionalism during [the] whole semester. She was always there to help us whenever we were in confusion or difficulty with a smiling face and politeness in her attitude. Her behaviour makes us comfortable while communicating with her..."

"I can say that the teaching method of Dr. Husniza was great. She has a unique teaching style and knows how to teach her students very well. I enjoyed each minute [of] her class and I didn't feel any boringness although [the] class was online. I learned a lot of lessons from her class and still implementing those in my current studies and developments."

Among the points worth considering are the following: 1) class ambiance; 2) trust and confidence; 3) relatable topics/examples; 4) hands-on experience; and 5) accommodation. To get started, the ambiance of the class (physical or online) has to be set up to create comfort for the students to be themselves and explore more not only on online meetings but also on group messaging app as well. This is important so they feel 'safe' and not afraid to do mistakes. Hence, it is a good practice to state clearly to the students that it is okay to make mistakes and that is how we learn best. Appreciate all responses regardless. Once such ambiance is created, usually it takes about a week or two, trust and confidence can be developed. When the students freely want to share ideas or findings and present them to the whole class that is when a true, positive learning experience happens. This is when the students are free from being afraid to voice out their opinions or share their thoughts, thinking that they might be wrong. They trust that the environment is safe for them to offer answers and they know that there is no judgment that it doesn't matter if the answers were wrong because it will be greeted with encouragement and more ideas to explore.

Although the focus of discussion is about theories, laws, and principles that can be overwhelming sometimes, bringing it down to the daily life and experiences of our students could facilitate understanding better. For example, if it is about principles of *affordances* and *signifiers*, use examples like a glass door or a chair where everybody in the class has experience interacting with those objects in real life. They might also face certain shared issues with such examples where everybody has experienced it before and can relate to it. Start simple, then move to another level by asking them to relate their current understanding to digital objects such as buttons and text boxes. Once they realized they understood it, then they will start to offer more examples and sometimes examples with problems that require a solution to improve the design of the object in terms of its affordances and signifiers, or other related laws and principles. This triggers more discussion as everybody wants to chip in and offer their thoughts or critiques, which is perfect to stimulate discussion and give appreciation to the theories, laws, and principles in the fields.

Difficult or technical topics especially involving methods are best to be performed hands-on. Various online tools can be utilized to get everybody working on the same page and share their findings/outcomes of certain design tasks. Sometimes, it is worth the while to spend a significant amount of time on hands-on activities when the related theories have been discussed. Learning by doing is always a good concept to strengthen understanding and allow

students to explore their creativity and develop skills to achieve the higher levels of Bloom's Taxonomy as aforementioned. And last but not least, always accommodate the students' concerns or issues relating to certain aspects that they might misunderstand or having problems with. Immediate intervention, just like what is recommended for dyslexic children, works best for students' learning. Whenever we sense something is wrong based on their response/answer, immediately provide them with hints or clues by asking them questions just so they can check their answers and 'see' why it is not the right response we are looking for. Offer solutions and ideas if they got stuck as it is not always easy for students to apply the laws and principles in their design, especially when it was just their first or second attempt.

Conclusion

In conclusion, the five key points highlighted do work for stimulating a positive, encouraging, and productive environment for learning especially when it comes to learning new theories, laws, and principles of IxD and HCI. By showing them the real examples of how the theories, laws, and principles can be applied to the design and development of artifacts, the students can gain more understanding of the theories, laws, and principles and at the same time could develop related skills applying the theories in their design, and later in their assignments and projects. Using our own R&D products is more efficient in teaching and learning as we, as researchers and designers of such products, could illustrate and demonstrate how the theories, laws, and principles are being applied, how it relates to the design of the products, and how such products could assist dyslexic children to learn to read and spell and improve their memories and other limitations.

References

- Czikzemihalyi, M. (1990). *FLOW: The Psychology of Optimal Experience*. New York, NY: Harper & Row.
- Dix, A., Finlay, J., Abowd, J. D., & Beale, R. (2004). *Human-Computer Interaction*, 3rd Ed. Essex, England: Pearson.
- Harrod, M. (in press). Chunking. *The Glossary of Human-Computer Interaction*. Retrieved from <https://www.interaction-design.org/literature/book/the-glossary-of-human-computer-interaction/chunking>
- Husni, H., Jamaludin, Z., & Aziz, F. A. (2013). Dyslexic children's reading application: Design for affection. *Journal of Information and Communication Technology*, 12, pp. 1-19.
- International Dyslexia Association. (2021). Dyslexia Basics. Retrieved from <https://dyslexiaida.org/dyslexia-basics/>
- Irlen, H. (2005). *Reading by the Colors: Overcoming Dyslexia and Other Reading Disabilities Through the Irlen Method*. New York, NY: Penguin Group.
- Jamaludin, Z., Husni, H., & Majid, M. (2021). *Menyingkap Kebahagian Mendidik Anak Disleksia & Diskalkulia: Pengalaman, Strategi dan Sokongan untuk Ibu Bapa dan Guru*. Sintok: UUM Press.
- Jamaludin, Z., & Husni, H. (2018). Papan Sintok: A multisensory tool to help dyslexic and struggling learners spell and read. *The 2nd International Indonesia-Malaysia-Thailand Symposium on Innovation and Creativity (iMIT SIC 2018)*. 07-08 August 2018.
- Liu, W., Gori, J., Rioul, O., Beaudouin-Lafon, M., & Guiard, Y. (2020). How Relevant is Hick's Law for HCI? *CHI 2020*, April 25–30 2020, Honolulu, USA.
- MacKenzie, S. (2018). Fitts' Law. In K. L. Norman & J. Kirakowski (Eds.), *The Wiley Handbook of Human-Computer Interaction* (1st ed., pp. 349-370). New Jersey, NJ: John Wiley & Sons Ltd.

- Nielsen, J. (2020). 10 Usability Heuristics for User Interface Design. Retrieved from <https://www.nngroup.com/articles/ten-usability-heuristics/>
- Norman, D. (2013). *The Design of Everyday Things (Revised & Expanded Edition)*. Philadelphia, PA: Basic Books.
- Proctor, R. W., & Schneider, D. W. (2018). Hick's law for choice reaction time: A review. *Quarterly Journal of Experimental Psychology*, 71(6), 1281–1299.
- Russell, J. A. (2003). Core Affect and the Psychological Construction of Emotion. *Psychological Review*, 110(1), 145–172.
- Shneiderman, B., Plaisant, C., Cohen, M., Jacobs, S., Elmqvist, N., & Diakopoulos, N. (2018). *Designing User Interface: Strategies for Human-Computer Interaction*, 6th Ed. Essex, England: Pearson.
- Soegaard, M. (in press). Gestalt principles of form perception. *The Glossary of Human-Computer Interaction*. Retrieved from <https://www.interaction-design.org/literature/book/the-glossary-of-human-computer-interaction/gestalt-principles-of-form-perception>
- The Yale Center for Dyslexia & Creativity. (2017). Dyslexia FAQ. Retrieved from <https://dyslexia.yale.edu/dyslexia/dyslexia-faq/>

Media Ethics and Law Classroom Alternative Assessments

Zuraidah Abu Talib^{*a}, Noor Aziah Abdullah^b

^{ab}School of Multimedia Technology and Communication (SMMTC)

Universiti Utara Malaysia, Sintok, Malaysia

*Corresponding Author: zuraidah@uum.edu.my

Abstract

Education transformation in the 21st century demands in-depth knowledge and understanding among students. However, the most reported problem on learning media ethics and law knowledge is poor mastery of basic concepts. One of the factors is a lack of effectiveness in the practice of assessment and evaluation tools. Therefore, the primary focus of this study is to explore the potential of applying a mock trial in media ethics and law classroom to determine its effectiveness in explaining the basic concepts of ethics, law, and media related acts in Malaysia. Mock trial is an exercise that promises to play to the strengths of modern students who learn by doing. Previous research has demonstrated that the young generation prefers group projects that involve them as active participants in the learning process and satisfy their desire to engage between them. As a time-tested group activity, mock trials have been credited with stimulating critical thinking and explaining the lesson's relevance in recent years. Our study focuses on the current undergraduate students who enroll in our media ethics and law classroom. Each individual has an equal opportunity to participate in this study. The questionnaire was developed to examine the students' knowledge and ability to explain and apply media ethics and law concepts in two phases - before the classroom started and right before the semester ended. In the second phase, the study was also to determine the effectiveness of mock trials, classroom discussion, and group assignment presentations as alternative classroom assessments. Before the classroom lesson started, students from media technology, creative industries management, business, marketing, and event management programs were found to know and able to describe media ethics and law better than students who took this course as part of their elective courses. The majority of the students agreed that classroom discussion and group assignments help them increase their knowledge and ability to explain the course content. Meanwhile, the mock trials help them apply the media ethics and law in real-life cases that they use as a roleplay. Therefore we concluded that some students were not actively involved in classroom discussion and group assignment presentations and end up not increasing their knowledge and ability to explain even after the semester ended.

Keywords: Media Ethics, Media Law, Mock Trial, Alternative Assessment

Introduction

Education transformation in the 21st century demands in-depth knowledge and understanding among students. However, the most reported problem on learning media ethics and law knowledge is poor mastery of basic concepts. One of the factors is a lack of effectiveness in the practice of assessment and evaluation tools. Therefore, the primary focus of this study is to explore the potential of applying a mock trial in media ethics and law classroom to determine its effectiveness in explaining the basic concepts of ethics, law, and media related acts in Malaysia. Mock trial is an exercise that promises to play to the strengths of modern students who learn by doing. Previous research has demonstrated that the young generation prefers group projects that involve them as active participants in the learning process and satisfy their desire to engage between them. As a time-tested group activity, mock trials have been credited with

stimulating critical thinking and explaining the lesson's relevance in recent years. Our study focuses on the current undergraduate students who enroll in our media ethics and law classroom. The primary focus of this study is to explore the potential of applying a mock trial in media ethics and law classroom to determine its effectiveness to increase the knowledge and the ability to explain and apply the basic concepts of ethics, law, and media related acts in Malaysia.

From a website known for supporting mock trials in a classroom (<https://classroomlaw.org/student-programs/mock-trial/mock-trial-in-your-classroom/>, 2020), a mock trial was stated as one of a teaching-technique that can bring exciting learning opportunities for all students. The mock trial technique is also a rich and authentic way to bring civic education and participation into the classroom. Since mock trials involve students actively participating in the classroom, this teaching technique can be concluded as one example of active learning in the classroom.

Active learning methodology has become a preferred way to change the traditional teacher-centered classroom into the newer student-centered approach to learning (Van De Bogart, 2016). The active learning methodology has become an acceptable teaching technique in a unique learning environment by instilling a sense of self-discovery and encouraging self-learning. Craig Rusbult (2007) has defined active learning as any experiences that stimulate mental activities that lead to meaningful learning. He also describes that mentally active learning of ideas and skills can occur in a wide variety of thought-stimulating activities.

Meanwhile, Hakeem (2001) noted that experiential learning is also active learning *per se*. He also agreed that experiential learning as a formal part of college and university curricula could infuse learning activities into courses and programs to make those activities more relevant for all students. Active learning experiences can provide the increasingly growing numbers of non-traditional and traditional learners with valuable opportunities to apply theory to practice. In his research about the effect of experiential learning in the Business Statistics classroom, he found that the active-learning technique encouraged students to become more involved with the course content by applying theory to real-life situations. He also found out that active-learning students better-understood statistics than students in the traditional class.

Miller and Seidler (2020) said that experiential learning opportunities are effective supplements to the traditional lecture format, and among experiential learning methods, mock trials have been proven to be effective. In addition, experiential learning provides the students with a platform to integrate and apply concepts gleaned from class. Students are challenged to write and orally communicate these concepts at a level that would be clear to those involved in the experience. Miller and Seidler (2020) also suggest that Kolb's experiential learning model provides four stages (Kolb & Kolb, 2005) for students to become genuine learners. Hence, we have applied Kolb's theory in our study but only focused on our classroom's active experimentation since the students have actively participated in classroom discussions, group assignment presentations, and mock trials.

Mock Trial as another Alternative to the Classroom Activity

According to Hirshon (2020), traditional lecture does not appeal to millennials. This millennial, who is described as the Generation Xers, have grown up in an age of constant stimulation. Parallel with the evolution of technology, young kids have been exposed to continuous video games, text messages, videos, and social media as part of their play and learning process. In other words, with such technologies, they learn and play by doing. Hence, the millennials prefer group projects that involve them as active participants in the learning process and satisfy their desire to engage with each other. As a time-tested group activity, mock trials have been credited with stimulating critical thinking and explaining the relevance of history in recent years (Hirshon, 2020). Hirshon (2020) also agreed that mock trials could help students retain the

increasing and overwhelming number of concepts they are expected to learn in a single semester of media law. To him, it was not easy to process every category of mass communication law, from copyright to libel to obscenity, in the span of a few months. Stice's (1987) study shows that students remember only 10 percent of what they read and 20 percent of what they hear. While in contrast, the study also determined that students recall 70 percent of what they say and an impressive 90 percent of what they say while doing something during a mock trial.

Therefore, we have implemented a mock trial to alternative our classroom activities other than the classroom discussion and group assignment presentation.

Media Ethics and Law Classroom

Media Ethics and Law is a mandatory subject for undergraduate students taught in the second semester of the 2nd year of the Degree in Media Technology at Universiti Utara Malaysia. This degree has existed since 2006, but it has transformed over time according to the improvement of quality of education, especially with the new technology implementation, the introduction of output base education, and the numerous curriculum improvement. Media Ethics and Law is the only law subject related to the area of the media industry in Malaysia that is taught at a degree level. The subject focuses on the basic concepts of ethics, law, constitution in Malaysia, the acts relating to the media, and evaluating media law and ethics into media mistakes.

However, the Media Ethics and Law is not only for undergraduate students of the Degree in Media Technology. But it is also listed as a compulsory course for creative industry students and students from various programs that chose Media Technology as their minor elective. Whether they are Media students or not, this course is considered new for them as they do not have any basis in media law. Upon completion of the course, students are expected to be able to 1) explain the basic concepts of ethics, law, act, and constitution in Malaysia, 2) explain the acts relating to the media, and 3) apply the media law and ethics into media mistakes.

Previously this course was thought of in a passive way where the lecturer was the only person who disseminated the knowledge content. In contrast, the students sit and take notes. As lecturers, we should think wisely to what extent our teaching style would assist them to be confident and actively involved in the learning process. Instead of listening and taking notes, it will be much better if the students get a hands-on approach to role play in a classroom. Therefore, we have implemented a classroom discussion and group assignment presentation to allow students to participate in our classroom activities.

On top of that, we are now focusing on implementing a mock trial as a new learning process. In executing a mock trial in our classroom, students must read about acts related to the media industry. Every group was assigned with one media-related act, and they needed to study the act well, find a real case related to the act, and then write a script of a case and do a mock trial.

As educators for this course, our primary goal is to increase the subject's success rate and increase student involvement in the learning process. We understand that this course is complicated enough that even law students take at least three years to master the law subject and the art of legal questioning. We have continually sought to add innovative, valuable techniques to the class experience to enhance students learning. We believe that a passive learning environment for this dry and heavy subject is not relevant anymore in this new era of young generations. The young generation nowadays is more creative, full of ideas and curiosity. Therefore, to increase the subject's success rate and achieve that students are involved in the learning process, I and my co-researcher have implemented various learning activities, including the classroom discussion, group assignment presentation, and mock trial.

Research Questions

Specifically, we aimed to identify the following questions:

1. What is the student's level of knowledge about the basic concepts of media ethics and law before and after the classroom started?
2. What is the student's ability to explain the basic concepts of media ethics and law before and after the classroom started?
3. What is the student's ability to apply the basic concepts of media ethics and law before and after the classroom started?

Research Objectives

The research is aimed to investigate the effectiveness of the classroom assessments in helping the students to increase their knowledge and ability to explain and apply the basic concepts of media ethics and law. The mock trial activity was chosen as an alternative to the current assessments in this research, including the present assessment - classroom discussion and group assignment presentation. Specifically, the research objectives are to:

1. To investigate the student's level of knowledge about the basic concepts of media ethics and law before and after the classroom started.
2. To examine the student's ability to explain the basic concepts of media ethics and law before and after the classroom started.
3. To determine the student's ability to apply the basic concepts of media ethics and law before and after the classroom started.

Research Methodology

Each student has an equal opportunity to participate in this study. The questionnaire was developed to examine the students' knowledge and ability to explain and apply media ethics and law concepts in two phases – 1) before the classroom started and 2) right before the semester ended.

In the second phase, the study was also to determine the effectiveness of mock trials, classroom discussion, and group assignment presentations as alternative classroom assessments.

Learners' Demographic Characteristics

Table 1 shows the summary of learners' demographic characteristics. One hundred seventy-eight (178) students have enrolled in this course in Semester A201. Most respondents were from Semester 4 students (66 persons) and Semester 6 students (94 persons). Both Media Technology dan Creative Industry Management students were the highest respondents with 78 students each.

Table 1
Summary of Learners Demographic Characteristics (n=178)

Characteristic	Frequency			
	Group A	Group B	Group C	Total
Number of learners	62	55	61	178
Gender				
Male	15	18	20	53
Female	47	37	41	125
Semester				
Semester 4	31	35	0	66
Semester 5	7	8	0	15
Semester 6	23	11	60	94
Semester 7	1	1	1	3
Undergraduate Programme				
B.Media Technology (Hons)	33	41	4	78
B. Creative Industry Management	17	10	51	78
BSc. Multimedia (Hons)	11	0	3	14
B. Business Administration (Hons)	0	1	1	2
B. Marketing (Hons)	0	0	1	1
B. Event Management (Hons)	1	3	0	4
B. Counseling (Hons.)	0	0	1	1

Research Findings and Discussion

Research Findings (1)

Table 2 describes the learners' knowledge and ability to explain and apply before the classroom. Most students said they knew and could explain and apply the media ethics and law even before the classroom started. Only 19 students moderately knew media ethics and law. At the same time, 28 and 31 students have the moderate ability to explain and apply media ethics and law. Even though most students from Media Technology and Creative Industry Management programs know and can explain and apply media ethics and law, but there were quite numbers who were moderately known and able to explain and apply the course contents. This is quite surprising as Media Students and Creative Industry Students have studied media since Semester 1, and they have been exposed to media ethics and law indirectly along the way.

Students from other programs like Event Management, Business Administration, and Marketing were also found to know and can explain and apply media ethics and law. It was understood that they chose Media Technology as their minor elective and has taken many media courses since Semester 3. However, students from Multimedia and Counseling were enrolled in this course as free electives were found to be moderately known and can explain and apply media ethics and law.

Table 2

Learners' Knowledge and Ability to Explain and Apply Before the Classroom (n=178)

Program	Frequency		
	Knowledge		
	Moderate	High	Total
Media Technology	3	75	78
Creative Industries Management	7	71	78
Event Management	0	4	4
Business Administration	0	2	2
Marketing	0	1	1
Multimedia	8	6	14
Counseling	1	0	1
Total	19	159	178

	Ability to Explain		
	Moderate	High	Total
Media Technology	10	68	78
Creative Industries Management	14	64	78
Event Management	0	4	4
Business Administration	0	2	2
Marketing	0	1	1
Multimedia	4	10	14
Counseling	0	1	1
Total	28	150	178

	Ability to Apply		
	Moderate	High	Total
Media Technology	10	68	78
Creative Industries Management	11	67	78
Event Management	1	3	4
Business Administration	0	2	2
Marketing	0	1	1
Multimedia	8	6	14
Counseling	1	0	1
Total	31	147	178

Research Findings (2)

Table 3 shows the learners' knowledge and ability to explain and apply after the classroom. The study shows that students' ability to explain were remained the same before and after the classroom started.

We conclude that the ability to explain is still related to the level of knowledge among the students. It is still about reading and understanding the content before explaining it. However, the number of students has shown an increase in their ability to apply media ethics and laws. Applying is relevantly related to their ability by doing, which is significant with mock trial practices in the classroom.

Table 3

Learners' Knowledge and Ability to Explain and Apply After the Classroom (n=178)

Program	Frequency		
	Knowledge		
	Moderate	High	Total
Media Technology	3	75	78
Creative Industries Management	7	71	78
Event Management	0	4	4
Business Administration	0	2	2
Marketing	0	1	1
Multimedia	1	13	14
Counseling	0	1	1
Total	11	167	178

Program	Ability to Explain		
	Moderate	High	Total
	Media Technology	10	68
Creative Industries Management	14	64	78
Event Management	0	4	4
Business Administration	0	2	2
Marketing	0	1	1
Multimedia	4	10	14
Counseling	0	1	1
Total	28	150	178

Program	Ability to Apply		
	Moderate	High	Total
	Media Technology	10	68
Creative Industries Management	11	67	78
Event Management	0	3	4
Business Administration	0	2	2
Marketing	0	1	1
Multimedia	1	13	14
Counseling	0	1	1
Total	22	156	178

Conclusion

Media Technology and Creative Industry Management programs were the largest group that took the course, followed by seven (7) other students from Business, Marketing, and Event Management programs who took this course as part of their minor courses. While another fifteen (15) students from Multimedia and Counseling took this course as their elective. Media Technology and Creative Industry Management students are directly involved in media study

since they are in Semester 1. Meanwhile, students from Business, Marketing, and Event Management have taken media courses since their third semester. So it was not surprising if they knew and were able to explain and apply media ethics and laws even before the classroom started. Our study has shown that students' knowledge has increased after learning and doing all assessments, including the classroom discussion, group assignment presentation, and mock trial. They were also found to explain and apply media ethics and law concepts.

However, there were no significant changes in the number of media technology and creative industry management students who have increased their knowledge and ability to explain and apply the basic concepts of media ethics and law before and after the classroom lesson. Hence, we have conducted another short survey to understand the phenomenon. We asked the students about all assessments and increased their knowledge and ability to explain and apply media ethics and law. The majority of the students agreed that classroom discussion and group assignments help them increase their knowledge and ability to explain the course content. Meanwhile, the mock trials help them apply the media ethics and law in real-life cases that they use as a roleplay. Therefore we concluded that some students were not actively involved in classroom discussion and group assignment presentations and end up not increasing their knowledge and ability to explain even after the semester ended.

From the finding, we also concluded that, in the future, we would remain classroom discussion, group assignment presentation, and the mock trial as alternative assessments and teaching methods in our classroom. The combination of teaching methods and assessments was proven to help students increase their knowledge and ability to explain and apply media ethics and law.

Acknowledgment

The authors would like to thank the University Teaching and Learning Centre (UTLC), Universiti Utara Malaysia (UUM), for funding this research project under the Scholarship of Teaching and Learning (SoTL) Grant Scheme (S/O Code 14761).

References

- Allinson, C. W. & Hayes, J. (1988). The learning styles questionnaire: An alternative to Kolb's inventory? *Journal of Management Studies*, 23 (5), 269-281.
- Craig Rusbult. (2007). Active learning theories (constructivism). Retrieved from <https://www.asa3.org/ASA/education/teach/active.htm>
- Hakeem, S. A. (2001). Effect of experiential learning in business statistics. *Journal of Education for Business*, 77(2), 95-98.
- Hirshon, N. (2020). The mock trial of Matthew Lyon: Teaching media law by roleplaying its past. *American Journalism*, 37(1), 98-109, DOI: 10.1080/08821127.2020.1716186
- Kolb, A. Y & Kolb, D. A. (2005). Learning styles and learning spaces: Enhancing experiential learning in higher education. *Academy of Management Learning & Education*, 4 (2), 193–212.
- Miller, J. and Seidler, T. (2020). Using a mock trial: An experiential learning opportunity. *Sport Management Education Journals*, 1-3.

Developing Historical Thinking Skills (HTS) In Malaysian Nationhood Studies: An Educator's Perspective

Mohamed Ali bin Haniff*^a, Nor Azlah Sham Rambely^b

^{ab}Department of Civilisation and Philosophy, School of Language, Civilisation and Philosophy, Universiti Utara Malaysia, Sintok, Kedah

*Corresponding Author: m.ali@uum.edu.my

Abstract

This article discusses the application of Historical Thinking Skills (HTS) in building the interest and achievement of the students in the Malaysian Nationhood Studies course at Universiti Utara Malaysia (UUM). 21st Century Learning (PAK21) is a mechanism that can fulfill the needs of the current education system. Students in Higher Education Institutions (HEI) have a negative perception by saying history-oriented subjects as boring and obsolete. Therefore, HTS is introduced to stimulate students' critical and analytical thinking skills. This can indirectly improve the interest and intellectual achievement of students and make the Malaysian Nationhood Studies course interesting and fun. The implementation of HTS enables the exploration of complex and abstract ideas through five processes, namely the skills of understanding chronology, exploring evidence, making interpretations, creating imaginations, and making rationalisations. The document analysis methods used were based on circulars, books, journals and past studies. Preliminary research showed that educators face constraints in applying HTS during their lectures on the Malaysian Nationhood Studies course. Through the initial interview method, it was shown that the majority of students were less interested in the Malaysian Nationhood course. HTS is expected to benefit educators as an alternative in learning and facilitation to increase interest in line with the New Norms. HTS is also a significant element in applying the identity and spirit of patriotism to face the survival and opportunities of the Industrial Revolution 4.0.

Keywords: Historical Thinking Skills (HTS), 21st Century Learning, Higher Education Institutions (HEI), Malaysian Nationhood Studies, Industrial Revolution 4.0.

Introduction

The explosion of globalisation has positioned Malaysia as a fast-growing country and heading towards global education. The Ministry of Education Malaysia (MOE) is actively mobilising efforts in implementing 21st Century Learning. However, there are often misinterpretations claiming that 21st Century Learning needs a better class arrangement (Irni Ismail, 2020: 5). The fact is that 21st Century Learning is a process of completing a conducive class. 21st-century learning began in Malaysia in 2014 and is centered on five basic standards (Sylviana Mantiha, 2020: 83).

21st Century Learning is a mechanism that can meet the needs of education today and is student-centered and involves elements of communication, collaboration, critical thinking, creativity, and the application of values and ethics (MOE, 2018). Therefore, 21st Century Learning can enhance interest in a history subject and help improve students' understanding in learning more complex topics. History-oriented subjects are often perceived as boring because the conventional method is a one-way process that does not involve students' thought processes. HTS, on the other hand, serves as a vehicle that can enable students to think critically and make connections between events. Learning history subject is also important because it involves

aspects of the relationship between human beings and social values in society. This is in line with the objective of Malaysian Nationhood Studies which wants to shape the identity of students towards becoming patriotic citizens.

Problem Statement

Changes have been made in the Curriculum Development Policy through the Malaysian Education Development Plan (PPPM) 2013-2025 to improve the position of the History subject (PPPM, 2013-2025: 2013). Nevertheless, it still does not change the students' views on learning History as a subject (Sarmila Tamoh Deram, 2017: 3). Students still assume that this subject is very difficult and boring (Alex Ford, 2015; Seixas, 2004). Arlene Diaz et al. Al (2008) also proved that students have a misconception of History and do not view History as a discipline of knowledge. Weakness in the teaching method of History is one of the main causes of low achievement and students' negative attitudes towards the subject (Anuar et al., 2009).

A similar perception also exists among UUM students. Many factors can be identified as the cause of students' loss of interest in the subject. Among them are unattractive learning techniques and tendencies to memorise. The learning process is also a one-way process and triggers stigma and an atmosphere of passive learning. Facilitators are also dominant in the instructional process without stimulating students to think and use learning materials. Therefore, the failed coordination makes each facilitator deliver the learning content according to their method. The conventional methods and approaches used by the facilitators also limit the students' interest and understanding. Students' negative reactions surfaced when they casually performed a given task.

Research Objective

The objective of this article is to see the initial perception of students on the Malaysian Nationhood course and HTS. It examines the weaknesses of lecture delivery with conventional approaches that contribute to students' boredom. It also observes the level of readiness and implementation of HTS in the learning of the Malaysian Nationhood Studies course by the lecturers at Universiti Utara Malaysia. Finally, it aims to summarise the challenges and expectations of HTS operations, which is expected to increase the interest and level of student achievement in the course.

Literature Review

In a challenging world, educators should manipulate the latest technological mediums that are accessible at all times (Bradenburg and Carrol, 1995). This is important to motivate students to learn the subject of History. Among the latest technologies that educators seriously need to consider are mobile phones and other gadgets that can aid learning activities. The improvement of cosmetic aspects and games in history education on the internet can be an attraction to students. The use of mobile phone technology and mobile applications simplifies the method of delivery of course content. The transition of the face-to-face delivery method to discussion and chat systems on the internet needs to take place. The implementation of this method at an early stage will also involve high costs. Yet, positive infrastructure and policy support can have a huge impact for a long period.

Ineffective and boring delivery methods are one of the main causes of History subjects being unpopular. Learning in the lecture room should involve two parties, namely between teacher and students. Teachers who only concentrate on completing the syllabus rather than the aspect of appreciation and application of historical values can cause this two-way interaction

to lose focus. The effect is that students will lose interest (Atan Long, 1982). Consequently, it will cause them to consider history as an academic burden.

Several previous studies on the implementation of online learning activity were examined by the researcher before the implementation of HTS. This is because learning using the HTS method was first introduced since the Movement Control Order (MCO). The implementation of online teaching and learning has proven to be a wise decision to prevent and avoid the spread of infectious diseases. Mohd Fairuz Jafar, et al. (2020), studied the relationship between fears of the Covid-19 pandemic with online learning readiness. The respondents in this study consisted of students at the First Degree level. The results showed that the fear factor influenced the willingness of students to be more inclined to use online learning.

Nur Fauziana Mohd Salleh (2020), investigated teachers' views on online teaching. This study also touched directly on the impact of closing educational institutions by using the online medium to deliver learning materials. Teachers' views on online teaching preparation were also considered to ensure that the Home-Based Learning (HBL) approach can be implemented efficiently. Furthermore, at the school level, teachers also prepared printed notes in cases where students with family constraints find it difficult to follow online learning (Siti Nurbaizura Che Azizan & Nurfaradilla Mohamad Nasri, 2020). In addition, Siti Balqis Mahlan and Muniroh Hamat (2020) surveyed the teaching methods based on the readiness of students to follow online learning during MCO. Similarly, Zaidatun Tasir, Jamalludin Harun, and Lim (2006) looked at the readiness of the students in terms of the factors related to computer usage, which includes their attitude, literacy, and computer facilities. The results of these studies found that students were not ready to follow online learning.

The implementation of an engaging learning approach can stimulate students' interest. Learning activities such as games can form and meet the needs of curiosity while improving knowledge, experience, and skills (Rohani Abdullah, 2004). An educator should give students space to make choices. Children's choices of games supported by a teacher or adult through discussion and question and answer sessions will promote higher cognitive achievement (Vygotsky, 1962). Attitude, interest, and effort are the major aspects that influence the success and determinants of student's excellence (Ab. Halim Mohamad and Wan Mohamad Wan Sulong, 2006).

Teaching & Learning History 11-18, Understanding the Past emphasizes the discussion of inputs that should be obtained by history educators in schools, Public Institutions of Higher Learning, and Private Institutions of Higher Learning. The main essence of the focus is that learning activities should be alternated between research, discussion, and practical practice (Kitson et al., 2011). The development of the education system in Malaysia has also changed the learning approach. Changes have also occurred in the implementation of the learning curriculum, approaches, strategies, and delivery methods. The Discovery method is one of the learning processes that can help students build new experiences and knowledge through exploration (Atkinson et al., 1987). If forcibly implemented, learning will not help students build self-confidence. Things could become complicated because the learning focus put more emphasis on books as the second reference material after teachers. This situation will make learning more distant from the real world.

Learning activity based on logical and systematic thinking is applied through the *Theory of Constraints* (TOC) technique. This technique adapts simple and concrete critical and creative thinking (Robert E. Stein, 1997). Past studies on HTS implementation in other countries have also been obtained. An article entitled *The Student Guide To Historical Thinking* claims HTS is capable of building creative and critical thinking (Linda Elder, Meg Gorzycki & Richard Paul, 2019). Meanwhile, a book entitled *Teaching History For The Common Good* provides a new perspective on the learning of history. This book outlines the pedagogical preparations that facilitators need to have (Keith C. Barton, Kinda S. Levstik,

2004). While another book entitled *New Directions In Assessing Historical Thinking* is great in discussing *Historical Thinking Skills* that students should possess. The writing is the result of research and implementation by scholars in conducting HTS (Kadriye Ercikan & Peter Seixas, 2015). The book also examines the rationale of studying history and the practice in teaching and learning history. The authors emphasise the HTS approach and cognitive development in history learning (Hilary Bourdillon, 1994).

Pendidikan Sejarah, Pemikiran, Pemahaman dan Empati (History Education, Thought, Understanding, and Empathy) is a book that focuses on the development of the history curriculum, historical understanding and thinking, empathy, and historical empathy in teaching and learning. This study opens a new dimension that sees abstract history as dynamic and futuristic (Siti Hawa Abdullah, 2019). *Sejarah Malaysia, Wacana Kedaulatan Bangsa, Kenegaraan dan Kemerdekaan (Malaysian History, Discourse on National Sovereignty, Nationhood, and Independence)* discusses HTS, which has begun to be implemented in form two history textbook. These new things include the integration of elements of historical knowledge, HTS and nurturing values as well as elements of patriotism (Abdul Rahman Haji Ismail, Azmi Arifin, 2016).

A study entitled *Kesan Penggunaan Sumber Sejarah Digital Melalui Portal Terhadap Kemahiran Pemikiran Sejarah (The Effect of Using Digital Historical Resources Through Portals on Historical Thinking Skills)* explores the effectiveness of the use of digital resources as one of the elements to build HTS among students (Renuka Muniandy @ Ramakrishnan, 2015). Meanwhile, *Kemahiran Pemikiran Sejarah Melalui Penggunaan Teknologi Maklumat dan Komunikasi (TMK) Oleh Guru Pelatih (Historical Thinking Skills Through the Use of Information and Communication Technology (ICT) by Trainee Teachers)* identifies the form of technology used by trainee teachers in teaching history subjects (Shakila binti Che Dahalan, 2015). A compilation of writings entitled *Penyelidikan Terpilih UPSI, 2001-2006 (UPSI Selected Research, 2001-2006)* discusses the various models that are the focus in teaching and learning (Abu Bakar Nordin, 2007). While the writing entitled *Hubungan antara Amalan dan Penguasaan Kemahiran Pemikiran Sejarah (The Relationship between Practice and Mastery of Historical Thinking Skills)* argues that HTS can generate critical thinking through the evaluation of historical evidence by relating a past historical event with the present. This study aims to determine the relationship between the practice and mastery of HTS and its constructs (Kaviza, 2019).

While the significant relationship between the implementation of HTS in the teaching of history teachers is scrutinised in a paper entitled *Pelaksanaan Kemahiran Pemikiran Sejarah Dalam Pengajaran Guru-guru Sejarah: Satu Kajian Kes di Daerah Hilir Perak (The Implementation of Historical Thinking Skills in the Teaching of History Teachers: A Case Study in Hilir Perak District)* (Baharuddin bin Jabar, 2003). Some highlights of the literature reviewed are very useful in providing an initial overview before the researcher delves into and implements HTS in Malaysian Nationhood Studies. Weaknesses in the teaching delivery of the Malaysian Nationhood Course can be overcome by using HTS elements which include skills in understanding chronology, exploring evidence, interpretation, imagination, and rationalisation.

Methodology

This article is preliminary research that uses qualitative methods of document analysis. The research included the preparation of a text list in the form of respondents or samples, considering the constraints in accessing data, elements of bias, investigations, strategies, knowing the data sought, ethics, and recommendations (O'Leary, 2013). The observation method was used in conducting face-to-face or online learning to obtain detailed, clear,

thorough, and accurate information on students. The research analysis was performed using sources such as Ministry Circulars, books, journals, and past studies

Implementation of Historical Thinking Skills

Students' negative perceptions towards history-oriented subjects are often debated. This is followed by learning techniques that are not contemporary and dominate the instructional process without stimulating the interest and tendency of students to think. Constraints on the facilitators, such as the level of diversity of student abilities and demographics that affect the effectiveness of learning, were also voiced by the educators (Interview with Salmah Omar). The syllabus content of ten chapters that need to be completed during the study period is also part of the reasons for students not being interested in the Malaysian Nationhood course. Such matters become serious when lecturers who are not in the field of Malaysian Nationhood are involved in the learning process. These lecturers face additional constraints because they have no solid foundation in the learning methods related to the Malaysian Nationhood course. This subject is also often sacrificed when it becomes a University Core Course with only one credit point value (Interview with Zuhlilmi Paidi).

Therefore, a model that focuses on Student-Centered Learning (SCL) and changes the learning climate to be conducive, creative as well as informative, and fun needs to be created. Such an environment can inject motivation and stimulus to students and correct the paradigm and negative perceptions of learning the Malaysian Nationhood course. It is hoped that the implementation of HTS will enhance students' interest and motivation towards other Core Courses that will be introduced later.

Before introducing HTS to students, the researcher has prepared a complete Work Instruction Form. The form contains complete information on the operation of HTS. Among the important details mentioned in the form are the number of members in a group and the responsibilities of each group member (such as note-taker, reporter, and facilitator) in the implementation of HTS. Each task needs to be performed on a rotational basis. Also stated are the dates of activities and submission of the Work Instruction Form.

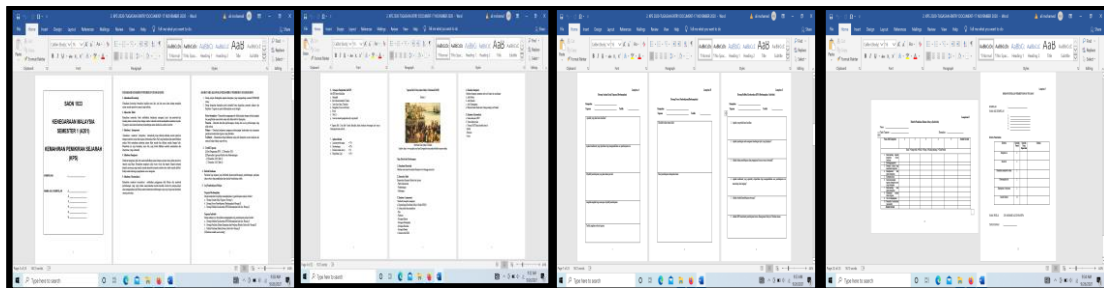


Figure 1. Work Instruction Form

HTS covers five main processes. The first stage is to understand the chronology that is to look at the past, present, and future according to the sequence of a historical event that occurred (<https://docplayer.info/29819462-Penerapan-kemahiran-pemikiran-sejarah-HTS.html>). Before delivering the task, educators need to provide clear information about the objectives that students should achieve. Students will be guided to understand the concept of chronology. Among the important elements in this phase is looking at the past, present, and future. In addition, students will be exposed to the concept of time and understand time conversion.

Evidence-exploring skills can help deepen students' understanding of history. Among

them are the skills in comparing the difference between primary and secondary historical sources. Mastery of this skill can help students to filter the information received more systematically and be supported with solid evidence (DSKP, 2015). Students will be guided to obtain information from such sources based on the assignments given on topics studied. Students will be asked to determine the significance, date, figure, location of the event, and how the event took place.

Meanwhile, interpretive skills help in interpreting the results of reading and gathering information from various historical sources. This allows students to understand the relationship between historical facts and historical interpretation better than narratively. The level of skill that requires high cognitive thinking is the skill of imagination. Imagination skills may come in the form of visuals and empathy. Empathy refers to someone who evaluates history according to the perspective of the source or historical subject involved. Historical events or information can be understood more deeply through imaginative skills. This is done visually such as through images, videos, documentaries, and also through the value of empathy (DSKP, 2015). This skill also means the past can be understood through systematic observation and interpretation. This will help lead them to a better life in the future. Therefore, students are required to make an interpretation of an event and distinguish between interpretation and perspective. Students will share experiences imaginatively and express views as if engaging in a historical event. They can also create visual imaginations and empathy for mutual sharing. This skill is very important to master so that there is no anachronism in historical facts. Students are also guided to distinguish between historical facts and historical interpretations through SCL activities such as Brainstorming, Three Minutes Each Away, Snowballing, Buzz Groups, Syndicates, and others.

Mastery of all four of these skills will lead students to achieve rationalisation skills. Rationalisation involves the use of reason to make sound judgments in solving a problem. This skill is the highest level in terms of cognitive. Students need to think critically, creatively, analyse, synthesise and evaluate historical information and events to accept or reject such information or events as historical or otherwise, rationally (DSKP, 2015). Students will be guided to collect data, hypothesise, and determine the significance of evidence as well as make inferences. Students will make rationalisation through critical study of the given materials (History Subject Management Guide, 2019). The results of group discussion will be translated into assignments according to the five skills in HTS.



Figure 2. Output of Student Assignments

One of the important parts of building students' perceptions and levels of readiness is through a presentation. Presentations will be done in groups, but each group member will take a turn to do his/her presentation. This means that each student will have the opportunity to deliver a presentation. This, indirectly, helps to build their confidence and leadership skills.

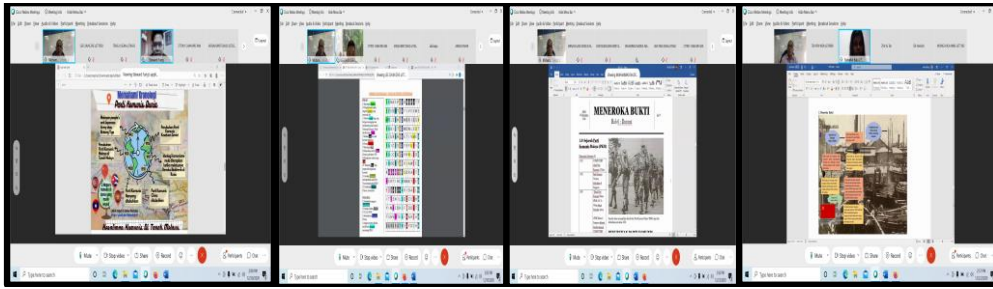


Figure 3. Students' Presentations

In conclusion, HTS is a tool that can be used to analyse historical information by inquiry. Stoel et al. (2015) stated that it is the teacher's job to create a classroom and teaching atmosphere that can stimulate and maintain students' interest and attention throughout the learning session. This situation can make the students to be involved in a higher thought process.

Reflection

The Covid-19 pandemic that has hit the world since 2020 is still lingering to this day. The devastating upward trend requires the government to make the right decision by re-establishing the MCO. The government's announcement to implement the second phase of the MCO by closing some operations also affected various sectors including the education sector (Nor Sahara Mesman, et al. 2021: 196). This education sector involves the commencement of students returning to school sessions in early 2021. However, the process was disrupted since the second phase of the MCO order was implemented following the increasing number of Covid-19 transmission cases.

Online learning has been selected as a medium to connect lecturers and students, using various applications such as *Google Meet*, *Zoom*, *Webex*, and others to facilitate them. These virtual encounters are utilised by students to get to know the subject instructors and ask questions directly to them. In this way, students can feel the atmosphere as if they are in a lecture room when the lecturer responds to students in a learning session.

In this New Norm, the learning implementation method must be flexible and cross-demographic to ensure that every UUM student who follows the Core Course is not left behind. Thus, the facilitator must prepare two different approaches to accommodate the current situation before the learning session. Activities can be implemented face-to-face, or online if environmental conditions do not permit it. The learning methods through observation, SCL activities, reflection, and *Focus Group Discussion* (FGD) are used to achieve the objectives. Student diversity based on ethnicity, gender, and demographics is taken into account by distributing internet access questionnaires before implementing learning activities.

The observation method is used in conducting learning activities in face-to-face or online classes to obtain students' information in more detail, clearly, thoroughly, and accurately. Online questionnaires (Google Form) are provided as a benchmark to measure the level of interest and inclination of students in pursuing activities. Observations must also occur during and after conducting each online activity. The interest and seriousness of the students can be translated through their involvement during the conduct of HTS-focused activities. Information obtained through these observations, which might be as expected or otherwise, can serve as important findings and references.

Brainstorming sessions can be used to generate ideas independently from each individual or group in an orderly and systematic manner. Meanwhile, *Buzz Group* is useful in small groups of three to six students. *Syndicate* can be used as a space for students to discuss.

At the next stage, a conclusion could be made based on the shared ideas. As such, students will get the accurate and up-to-date information they are looking for based on HTS. For instant information and reactions, *Three Minutes Each Way*, *Think Pair Share*, *Team Statements*, *Value Lines*, and *Snowballing* can be conducted systematically online. In handling this global educational change, the selection of teaching techniques or strategies plays a very important role in improving problem-solving skills through student-centered activities (Veknaswari Subramaniam, et al. 2019: 9).

Reflection is an important process in learning to reflect, analyse, find reasons, make suggestions, and take actions for continuous improvement. Reflection can provide evidence and technical knowledge to predict effective solutions and improvement processes consistently and continuously in HTS. During the implementation of HTS, reflection uses inquiry techniques to obtain feedback from students. Follow-up actions need to be taken either through remedial or enrichment sessions. Consistently and independently conducted reflection allows the facilitator to anticipate the outcome of action and make initial plans. Facilitators can also predict all changes and learning outcomes since students' backgrounds and abilities have been identified. To get feedback on the effectiveness of HTS, FGD is used to share ideas and operational impact. FGD can be conducted online during the New Norm learning activities. Therefore, improvements in pedagogy and learning materials can also be implemented to further strengthen the implementation of HTS.

Two topics were selected for HTS implementation. Topic Two is about the Traditional Malay Community. The findings showed that a total of 99.1% responded that the content was interestingly arranged and able to provide understanding to them. Only one student, or 0.9%, gave a 'difficult to understand' response. While 96.5% or 129 students agreed that the learning of Topic 6, which is Emergency, was interesting and important knowledge. On the other hand, 6 students, or 4.5%, stated that this topic is difficult to learn.



Figure 4: FGD Session

Various inputs were obtained by the researcher when performing FGD sessions with the students. FGD sessions were conducted in small groups of no more than 15 people. The purpose is to enable communication of transparent feedback. The input is very useful for improving the implementation of HTS. The findings of the study showed that all respondents or 100% agreed that HTS helps in learning the Malaysian Nationhood Course. A total of 15 respondents, or 11.3%, agreed that they easily understood the chronology of history. While a total of 16 people, or 12%, stated that the learning sessions conducted were very interesting. Students stated that the lecturer was able to provide interesting and comprehensive information on the Malaysian Nationhood course. They also stated that online lectures were conducted on time and the learning content was arranged chronologically. A total of 118 respondents, or 88.7%, responded to having a good relationship with the facilitator. A total of 9 people, or 6.8%, stated that they received a lot of information from the facilitator. While six students, or 4.5%, responded that the lecture was conducted in a harmonious and happy atmosphere. The findings also showed that the students showed interest in following HTS activities by contributing current issues to

the topics discussed. These activities make the Malaysian Nationhood lecture always stay fresh, relevant, and able to produce citizens who have high values of patriotism and nationalism.

The students also stated that the HTS activities provided an opportunity for the younger generation to understand, interactively, the country's history. Through discussions, students can use their minds to make appropriate judgments to solve a historical question. In addition, HTS allows the students to express their gratitude for the work and contributions of previous historical figures. They also stated that the additional information provided by the lecturers can contribute more knowledge about history, which is increasingly forgotten by the current generation.

The findings also showed that the students can perform HTS tasks online regardless of their location. Additional information can be found on websites or using *Google Book*. All information in the Work Instruction Form was submitted online and need not be written. HTS assignment submission was also done online. The use of aids such as slides, infographics, and *Padlet* is one of the attractions of HTS. Students also responded that HTS techniques such as understanding chronology, exploring evidence, making interpretations, making imaginations, and making rationalisations can improve memory and historical knowledge.

Conducting online activity is a new approach in the Malaysian Nationhood course lecture at UUM. Thus, there are still students who perceive this course as boring. The online learning medium has its limitation as a communication tool for one semester. Some students expressed dissatisfaction for not being able to have face-to-face two-way interactions with their lecturers and friends. Others stated that the breakdown of assessments and various activities was complicated. This is compounded by the relatively limited internet network access due to the demographic and socioeconomic factors of their family. Some feedbacks also claimed that online learning causes them to be flippant. The problem of internet disruptions can also cause the learning process to be disrupted. There was also a time constraint for group presentation while conducting activities sessions because the number of students is 134 people. The contribution of each group member was different in producing HTS activities. For example, a few students were passive and did not want to contribute when implementing HTS-style activities.

Hopes and Challenges

HTS is a thinking process that enables students to explore complex and abstract ideas. This method is suitable for learning history or subjects that emphasise content knowledge. The implementation of HTS will build students who are more focused, confident, and active inside and outside the learning climate with a variety of SCL-centered activities. Students' soft skills are built holistically while performing rationalisation sessions. Elements of student development and creative and critical thinking skills can be applied and measured when conducting group work. It also helps develop the ability to explore, research, analyse and interpret resources.

The challenges and the world education system are changing in line with the information technology boom. Malaysia should be prepared to face the challenges of the Industrial Revolution 4.0 which focuses on Artificial Intelligence (AI) (Mark Skilton & Felix Housepian, 2018). The development of a more just and equitable ecosystem based on human welfare with a new world environment is still being debated in the context of the New Norm. These changes are capable of transforming not only the way of life, society, values, and norms but also perceptions about the human being himself. Such matters can also be handled rationally through HTS. The element of identity needs to be strengthened in surviving the New

Norma. The application of an independent spirit and a strong feeling of patriotism can be strengthened through the implementation of HTS. The family institution is an important nerve in building great citizens and individuals who can contribute to religion and country. The patriotic spirit nurtured since adolescence will make their souls strong, and work together and act as Malaysians. They will not see themselves based on ethnicity, religion, geographical boundaries, and social background. Malaysian patriotism is an important element in building the idea of *Negara Bangsa Malaysia* (Malaysian Nation) (Alauddin Sidal, 2014).

Educators should have the creativity to attract students to appreciate the aspects of patriotism and shared values of Malaysian society. Education is an important issue in the agenda of building civilisation and the existence and strength of a nation (Mohd. Noor Yazid, 2011). The National Education Policy is one of the success factors in fostering integration and nation-building processes in Malaysia (Mohamed Mustafa Ishak, 2014).

In facing the challenges of the Fourth Industrial Revolution, the education system at the tertiary level also needs to change in line with the needs and market of the world (Nancy W. Gleason, Gleason, 2018). Efforts to foster the sharing of values, identity, and history are important components towards building a civilised nation. The development of human capital and the building of first-class minds must be nurtured and coordinated so that Malaysia is developed according to its standards. The Covid-19 pandemic should not be used as an excuse in efforts to democratise education. The epidemic that knows no boundaries of religion, race, and political ideology can be faced together by a strong, resilient, persevering, and disciplined Malaysian Nation. Therefore, it is time we live in harmony with the Covid-19 endemic. Conflicts and dissensions should be avoided. On the other hand, mature thinking must be practiced in the life of every Malaysian (*Berita Harian Online*, 12 April 2020).

In line with current development, various types of contemporary social media should be used in learning activity as a stimulus to students (Ahmad Subki Miskon, 2020: 2). Facilitators also need to find appropriate interaction spaces with students to create an interesting and conducive learning climate. Patterns that focus on students' interests and trends must also be given serious attention (Rahimah Wahid, 2020: 9). One thing that needs to be emphasised is that although the country is moving towards the Industrial Revolution 4.0, the values of patriotism need to be strengthened to produce and solidify the feeling of love for the homeland.

Conclusion

"Learning by doing" or meaningful learning helps students think and form an understanding of a problem. A paradigm shift in implementing and empowering HTS should be implemented. Mastery of pedagogical strategy needs to be accelerated so that facilitators can implement HTS among students. Such efforts can contribute to the continuity of the education system, which began at the secondary school level. SCL oriented is essential in developing a positive aura capable of triggering readiness and a conducive learning climate. New norms and challenges during the endemic transition phase should be the sacred words to achieve the aspirations of students to face the challenges of the Industrial Revolution 4.0.

References

- Abu Bakar Nordin. (2007). *Penyelidikan Terpilih UPSI, 2001-2006*. Tanjung Malim: Penerbit UPSI.
- Ab. Halim Mohamad & Wan Mohammad Wan Sulong. (2006). *Antara Minat dan Sikap Pelajar Terhadap Bahasa Arab: Satu Kajian ke Atas Pelajar Sarjana Bahasa Arab di IPTA Malaysia*. Dlm. *Prosiding Wacana Pendidikan Islam Siri ke-5*. Bangi: Universiti

- Kebangsaan Malaysia.
- Abdul Rahman Haji Ismail dan Azmi Arifin. (2016). Sejarah Malaysia, Wacana Kedaulatan Bangsa, Kenegaraan dan Kemerdekaan. Pulau Pinang: Penerbit USM.
- Ahmad Subki Miskon. (2020). Penggunaan Media Sosial Dalam Kalangan Siswa Guru Di Institut Pendidikan Guru. Seminar Darulaman 2020 Peringkat Kebangsaan (Seminar Atas Talian). 20 Oktober 2020.
- Alauddin Sidal. (2014). Semerah Darah Seputih Tulang. Kuala Lumpur: Institut Tadbiran Awam Negara (INTAN).
- Anuar. A, Rahman.S.T, A., & Abdullah.N.A. (2009). Tahap Keupayaan Pengajaran Guru Sejarah dan Hubungannya dengan Pencapaian Murid di Sekolah Berprestasi Rendah (The Relationship Between History Teachers' Level of Capability and Students' Performance in Low Performance Schools). *Jurnal Pendidikan Malaysia*, 34(1), 53–66.
- Atan Long. (1982). *Pedagogi: Kaedah Am Mengajar*. Kuala Lumpur: Fajar Bakti Sdn. Bhd.
- Barton. C. Keith, Levstik S. Linda. (2004). *Teaching History For The Common Good*. New Jersey: Inc. Publishers.
- Baharuddin bin Jabar. (2003). Pelaksanaan Kemahiran Pemikiran Sejarah Dalam Pengajaran Guru-guru Sejarah: Satu Kajian Kes di Daerah Hilir Perak. Geran Penyelidikan Universiti Pendidikan Sultan Idris.
- Berita Harian Online, 12 April 2020, diakses pada 12 April 2020.
- Bourdillon, Hillary. (1994). *Teaching History*. Routledge: CPI Rowe, Eastbourne.
- Bradenburg, A.M. and M.S. Carrol. (1995). "Your place or mine? The effect of Place Creation on Environmental Values and Landscape Meanings." *Society and Natural Resource*, 8:381.
- Díaz, A., Middendorf, J., Pace, D., & Shopkow, L. (2008). The History Learning Project: A Department "Decodes" Its Students. *The Journal of American History*, 94(4), 1211–1224. <http://doi.org/10.2307/25095328>.
- E. Stein, Robert. (1997). *The Theory of Constraints, Application in Quality And Manufacturing*. New York: Dekker, Inc.
- Ercikan, Kadriye & Seixas, Peter. (2015). *New Directions In Assessing Historical Thinking*. New York: Routledge.
- Ford, Alex. (2015). What is a History education? Marc Bloch, The Historian's Craft, and the case for an Annaliste Model of School History. Disertasi Sarjana Sastera. Universiti Leeds Trinity.
- Irni binti Ismail. (2020). *Pembelajaran Abad Ke 21*. Pasir Gudang: Irni binti Ismail.
- Interview via Webex with Dr. Salmah Omar, Malaysia Nationhood Studies Coordinator, School of Language, Civilisation and Philosophy, Universiti Utara Malaysia, 2 September 2021.
- Interview via Webex with Dr. Zulhilmi Paidi, Bachelor of Applied History Coordinator, School of Language, Civilisation and Philosophy, Universiti Utara Malaysia, 2 September 2021.
- Kitson, Alison & Husbands, Chris, Steward, Susan. (2011). *Teaching & Learning History 11-18, Understanding The Past*. England: Open University Press.
- Kementerian Pelajaran Malaysia. (2015). *Dokumen Standard Kurikulum dan Pentaksiran KSSM Tingkatan Satu. Bahagian Perkembangan Kurikulum*. Kuala Lumpur.
- Kementerian Pendidikan Malaysia. (2018). *Pelaporan Pentaksiran Sekolah Rendah*. Retrieved from anyflip.com/whpp/xgsi/basic.
- Kementerian Pelajaran Malaysia. (2013). *Pelan Pembangunan Pendidikan Malaysia*. Kuala Lumpur.
- Linda Elder, Meg Gorzycki & Richard Paul. (2019). *The Student Guide To Historical Thinking*. California: The Foundation for Critical Thinking.

- M. Kaviza. (2019). Hubungan antara Amalan dan Penguasaan Kemahiran Pemikiran Sejarah. *Jurnal Pendidikan Malaysia*.
- Mark Skilton & Felix Housepian. (2018). *The 4Th Industrial Revolution*. U.K.: Springer International Publishing.
- Mohd. Noor Yazid. (2011). *Pendidikan Pembinaan Bangsa Ke Mana Arah Tuju?*. Kuala Lumpur: Utusan Publications & Distributors Sdn. Bhd.
- Mohd Fairuz Jafar, Zetty Akmar Amran, Mohd Faiz Mohd Yaakob, Mat Rahimi Yusof & Hapini Awang. (2020). Kesediaan Pembelajaran Dalam Talian Semasa Pandemik Covid 19. Seminar Darulaman 2020 Peringkat Kebangsaan. Diperoleh daripada https://www.researchgate.net/publication/345893409_Kesediaan_Pembelajaran_Dalam_Talian_Semasa_Pandemik_COVID_19.
- Mohamed Mustafa Ishak. (2014). *Politik Bangsa Malaysia*. Kuala Lumpur: Legasi Press Sdn. Bhd.
- Nancy W. Gleason, Gleason. (2018). *Higher Education In The Era Of The Fourth Industrial Revolution*. Singapore: The Palgrave Macmillan.
- Nor Sahara Mesman & Zulkarnain Abd. Majid. (Mac 2021). Kajian Kesediaan Pelajar Mengikuti Pembelajaran Dalam Talian Semasa Perintah Kawalan Pergerakan (PKP) Membendung Covid-19 Fasa 2. *International Journal of Education and Pedagogy (IJEAP)*, Vol. 3 No. 1, 195-202.
- Nor Fauziana Mohd Salleh. (2020). Pandemik Coronavirus (Covid-19): Pembelajaran Dan Pengajaran Secara Atas Talian Suatu Keperluan di Malaysia. Diperoleh daripada <https://www.researchgate.net/publication/342886967>.
- O'Leary, Zina. (2013). *The Essential Guide to Doing Research Project*, (2nd ed.). Thousand Oaks, CA: SAGE Publications, Inc.
- Panduan Pengurusan Mata Pelajaran Sejarah Sekolah Rendah Sekolah Menengah. (2019). Jemaah Nazir Kementerian Pendidikan Malaysia, Putrajaya.
- Rahimah Wahid. (2020). Keberkesanan Pembelajaran Berasaskan Permainan Dalam Kalangan Pelajar Institusi Pengajian Tinggi. *Journal Of Education And Social Sciences*, Vol. 16, Issue 1, (October), hlm. 9-13.
- Rohani Abdullah. (2004). *Panduan Kurikulum Prasekolah*. Kuala Lumpur: PTS Publications & Distributors Sdn. Bhd.
- Renuka Muniandy @ Ramakrishnan. (2015). *Kesan Penggunaan Sumber Sejarah Digital Melalui Portal Terhadap Kemahiran Pemikiran Sejarah*. Tesis Sarjana, Universiti Sains Malaysia.
- Sarmila Tamoh Deram dan Abdul Razaq Ahmad. (2017). *Pembangunan Modul 5e Dalam Meningkatkan Kemahiran Pemikiran Sejarah*. 2nd International Conference in Education and Regional Development 20-21/11/2017, Bandung, Indonesia.
- Seixas, P., & Peck, C. (2004). *Teaching Historical Thinking. Challenges And Prospects For Canadian Social Studies*, 109-117.
- Siti Hawa Abdullah. (2019). *Pendidikan Sejarah, Pemikiran, Pemahaman dan Empati*. Pulau Pinang: Penerbit USM.
- Shakila binti Che Dahalan. (2015). *Kemahiran Pemikiran Sejarah Melalui Penggunaan Teknologi Maklumat dan Komunikasi (TMK) Oleh Guru Pelatih*. Tesis Sarjana Universiti Sains Malaysia.
- Sylviana Mantihal, Siti Mistima Maat. (2020). Pengaruh Pembelajaran Abad Ke-21 (PAK21) Terhadap Minat Murid Dalam Pengajaran dan Pembelajaran Matematik: Satu Tizjuan Sistemik. *Jurnal Dunia Pendidikan*. Vol. 2, No. 1, 82-91.
- Siti Nurbaizura Che Azizan & Nurfaradilla Mohamad Nasri. (2020). Pandangan Guru Terhadap Pembelajaran dalam Talian melalui pendekatan Home Based Learning (HBL) semasa tempoh Pandemik COVID-19. *PENDETA: Journal of Malay Language, Education and*

- Literature, 11, 46-57. Diperoleh daripada <https://doi.org/10.37134/pendeta.vol.11>. Edisi khas.4.2020.
- Siti Balqis Mahlan, Muniroh Hamat. (2020). Pengajaran Dan Pembelajaran Dalam Talian Semasa Perintah Kawalan Pergerakan. <https://docplayer.info/202576226-Pengajaran-dan-pembelajaran-dalam-talian-semasa-perintah-kawalan-pergerakan.html>, diakses pada 5 September 2021.
- Stoel, G. L., Van Drie, J. P., & van Boxtel, C. A. M. (2015). Teaching towards historical expertise. Developing a pedagogy for fostering causal reasoning in history. *Journal of Curriculum Studies*, 47(1), 49-76.
- Veknaswari Subramaniam, Mohd Faiz Mohd Yaakob, Hapini Awang. (2019). Kesan Think Pair Share Terhadap Pencapaian Dan Sikap Murid Dalam Mata Pelajaran Matematik. *Journal of Educational Research and Indigenous Studies* Volume: 2 (1), hlm. 1-17.
- Vygotsky, L.S. (1962). *Thought and language*. Cambridge, M.A: Mit Press.

Voices of Today, Leaders of Tomorrow: Implications of Female Undergraduate Students' Involvement in Clubs and Associations

Low Kah Choon^{*a}, Vally Senasi^b, Siti Syuhadah Mohamad^c, Noranida Mokhtsim^d
^{a,b,c,d}School of Government,

Universiti Utara Malaysia, Kedah, Malaysia

*Corresponding Author: kahchoon@uum.edu.my

Abstract

In this ever-challenging world, every organization requires workers with new skills in the economy. In order to employed and sustained the employees, the employers need the best breed of students to enter the labour market. Do students' involvement in clubs and associations equipped them with the best attributes that are needed in the job market? Based on past studies, there were limited studies conducted on the voices of female students and their developments in joining clubs and associations in the university. Therefore, this study aims to investigate the benefits of joining students' clubs and associations in shaping the female students' development in their undergraduate years. Focus group discussions were conducted in three phases with 24 female respondents to determine the students' involvement in clubs and associations and the impacts on their career developments. Three thematic categories of data emerged from the study, focusing on students' involvement in programs, challenges in conducting programs and future program recommendations. The present study has implications for the university's policies and budgets, student affairs department's training, and schools' infrastructure supports to encourage students' involvement in clubs and associations.

Keywords: Female Undergraduate Students, Students' Involvements, Students' Developments, Clubs and Associations.

Introduction

Student developments was an important topic in the Industrial Revolution 4.0 (IR4.0), especially for female students. Vincent-Lancrin (2008) asserted that women outnumbered men in almost all OECD countries for tertiary education while the World Atlas Gender Equality report by Fiske (2012) found that most tertiary students comprised of women from 93 out of 146 countries. In Malaysia, a statistics report from the Ministry of Education Malaysia reported females (61.04%) outnumbered males (38.96) in the enrolment into public higher education institutes (Ministry of Education Malaysia, 2020). Thus, the development of female undergraduates is essential, especially their involvement in university clubs and associations. As a result of their involvement in the university curriculum and co-curricular activities, they tend to develop a charismatic identity during university years before approaching adulthood (Komives, Lucas, & McMahan, 2013).

The objectives of this study are (1) to determine the supports needed by the female undergraduate students and (2) to propose the nature of support that further female students' development. This paper is divided into four sections namely, literature review, methodology, findings and discussions, implications and future research, and conclusion.

Literature Review

One of the theories related to women development was Josselson's Theory of Identity Development in Women. This theory was a psychosocial theory that investigated the content

of development, especially in how to define oneself, their relationships with others, and what to do with one's life (Patton, Remm, Guido, Quayle, Evans, & Forney, 2016). As development took place across the lifespan within a series of stages, the fifth stage of Erikson's Identity Development Theory - Identity vs Identity Diffusion (Confusion) was focusing on the question Who Am I? It signalled a transition between childhood and adulthood and a pushed to define oneself. Focusing on Stage Five, James Marcia introduced four identity statuses in ego identity that examined the identity development of men, namely foreclosures, moratoriums, identity achievements, and identity diffusions (Marcia, 1966). Consequently, Josselson's theory was birthed from these four statuses that focused on understanding the internal and developmental roots of identity formation in women (Josselson, 1989). Figure 1 illustrates the four statuses, namely (1) Identity diffusions: Lost and sometimes found (Drifters); (2) Foreclosures: Purveyors of the heritage (Guardians); (3) Moratoriums: Daughters of the crisis (Searchers); and (4) Identity achievements: Pavers of the way (Pathmaker).

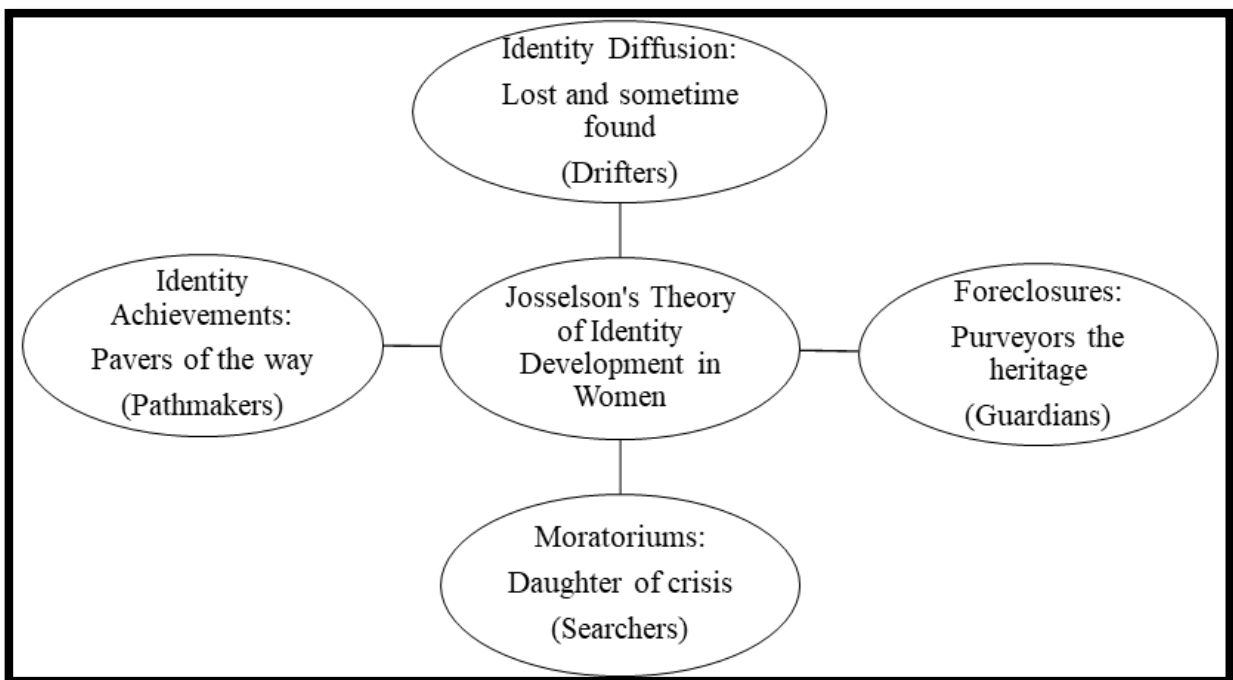


Figure 1. Four Statuses of Josselson’s Theory

According to Long (2012, p. 43), the underlying values of many psychosocial theories were “conflict, independence, interdependence, and autonomy”. For Josselson’s theory, there were two critical variables in identity formations, namely crisis and commitment (adapted from Marcia, 1966), as illustrated in Figure 2.

	No Crisis/Exploration	Yes Crisis/Exploration
No Commitment	Identity Diffusion	Moratorium
Yes Commitment	Foreclosure	Identity Achievement

Figure 2. Critical Variables in Identity Formations (Crisis versus Commitment)

Whitbourne (2012) asserted that crisis occurred at any time especially when one faced a challenge to the sense of self. However, the crisis was not necessarily a negative experience but rather act as the developmental catalyst that prompted developmental changes. The crisis

involved questioning values and goals defined by parents or other authority figures and weighing various identity alternatives (Patton et al., 2016). For example, students seek resources and advice from lecturers to explore their options. On the other hand, commitment referred to attaching ownership to pronounced choices, values, and goals (Bilsker, Schiedel, & Marcia, 1988), about which individuals were confident and optimistic (Patton et al., 2016). For example, students adopted standards about occupation-based on parental beliefs that professional employees earn better than technical employees. The section below discusses the four types of identity formations, such as identity diffusions, foreclosures, moratoriums, and identity achievement.

Identity Diffusions

Individuals may struggle with their role confusion as they delineated between how others see them and how they viewed themselves (Patton et al., 2016). Those who experienced this kind of struggle may feel confused and insecure about themselves and their relationships. Erikson (1968) labelled this state as identity diffusions whereby Josselson (1989) suggested that identity diffusions were best conceptualized as a normative developmental stage. At this stage, individuals were lack a clear sense of self or purpose. In diffusions, individuals either refused or were unable to firmly commit and had not experienced a significant crisis. In other words, individuals at this stage are disposed to withdraw from challenging situations. Their exploration of life choices had been limited due to lack of interest and they simply go with the flow and taking no account of consequences that may affect them personally. For example, female students may just focus on studying instead of joining clubs and associations in the university.

Foreclosures

At foreclosures state, individuals graduated from college with identity commitment but have experienced no identity crisis. At this stage, individuals began their quest for identity. They tend to use their childhood ideas as a basis for their direction and confidence in their life. This was because individuals are susceptible to seek security in relationships. As a result, they were not adaptable to change and were more likely to follow the person in authority. Thus, little identity change could be traced at this stage. Kapoor and Gardner-McCune (2019) found that identity development is not limited to students' involvement in the academic degree programs but the involvement and engagement they had with the broader community. For example, female students will adopt their parents' beliefs and preferences such as university is a place to study and not a place to joined and be involved in university clubs and associations. This was because the individuals believed that the CGPA results will make them outstand in their future career compared to actively joining clubs and activities that will broaden their networking in the university.

Moratoriums

At moratoriums state, individuals were facing identity crises but experienced no identity commitment. It was an unstable time for the individuals because they were searching for a new identity (Josselson, 1989). To do that, individuals began to question the beliefs of their parents while exposed to other views. They felt that their parents are overprotective and makes them too dependent on their parents. This had caused them to feel anxiety when they were facing a crisis and unsure of the directions to choose. As a result, individuals started to form their own opinions based on what they had faced, and the beliefs and values system brought by their parents and others. This was a crucial point whereby individuals will go back to the comfort of foreclosure or forge ahead to identity achievement. For example, female students will need to decide whether to join clubs and associations that will provide them with the opportunity to be appointed to a committee or not.

Identity Achievements

At identity achievements state, individuals were facing both identity commitment and identity crisis. At this stage, individuals would break ties to their childhood and reorganized the sense of self and identity by forming separate and distinct identities. Individuals would feel pride in themselves because they were able to choose their path and were more likely to take risks. With that in mind, individuals would decide how they want to contribute to other's lives. This was because the individual possesses high self-esteem when arrived at the identity achievements state (Ryeng, Kroger, & Martinussen, 2013). For example, female students were confident and know what they wanted to achieve when they join certain clubs and associations and contribute to the communities.

Methodology

Sources of Data Collection

A case-study qualitative method was used in this study to determine the supports needed by the female undergraduate students besides to propose the nature of support that further female students' development. The data collected will help to examine the implications of undergraduate students' involvement in associations and the consequences which affected student's development based on selected theories. In addition, a case study method helps to refers to an in-depth, detailed review of a small group of individuals. The characteristics are suitable to study the behaviour or experience and are in line to be applied in this research (Darke, Shanks, & Broadbent, 1998).

The qualitative approach was used to explore students' developments using the focus group method. According to Greenbaum (1998), the focus group method was a tool used to gain an in-depth understanding of social issues or perceptions about a particular topic on a group of selected respondents. This method was relevant to gather information on college students' attitudes and a tool for understanding specific college programs (Kaase & Harshbarger, 1993). Focus group interviews were conducted for data collection and to generate emerging themes related to positive and negative views from the student's association perspectives.

Participants and Settings

The overall population of the study was the 11 student's associations from the College of Law, Government, and International Studies. Public Management Association was selected because the association has won the highest high impact program compared to other associations. All 35 students from the association were the population of the Public Management Association. Only 24 of females were selected as a respondent because this research is focused on Josselson's Theory of Identity Development in Women. All the 24 females' students were divided into three focus group interviews, which involves eight students per session. Three focus group interviews were conducted because using multiple focus groups allowed the researchers to assess the extent to which saturation occurs (Onwuegbuzie, Dickinson, Leech, & Zoran, 2009).

The time frame for the data collection was approximately 2 hours, and the location is at the UUM COLGIS Meeting Room. The interactive environment encouraged the participants to feel free to discuss with each other. A set of questions was used to collect the data from the respondent. The Moderator took responsibility to conduct the focus group interview session. The moderator explained the protocols, and the interview began with the respondents started to reveal and share their thinking about the program conducted by students' associations.

Procedures

There were three phases to conduct the focus group method. The first step was to determine the purpose of the research, which was to identify student development related to the theories. Identify the respondent and plan the session were also part of the stage that needs to be done in the first phase. In this phase, students from the public management association were selected. All 24 females’ respondents have been identified and divided into a group of 8 per session. Three sessions were conducted to get data saturation.

The second phase was the focus group interview session. Developing and reviewing the question based on the participant before start interviewing the respondent was one of the aspects that need to be fulfilled in this phase. During this phase, the qualitative questions were used to gather the participants’ knowledge and perspectives about the benefits, challenges, suggestions, and impact throughout their involvement in the participation. All the responses and the feedback from the respondent had been recorded along with the session. Transcribing was done in the third phase based on the audio record and needed the researcher to analysed and interpreted the findings of the study.

Data Analysis

The data collected from the focus group interviews were transcribed immediately after each session. The data collected are subjected to the procedures of deductive analysis in order to generate themes. Thematic Analysis (TA) techniques were used to analyse and synthesize the collected data on an identified pattern that provide answers to research questions. Thus, patterns are identified through a rigorous process of data identification, data coding, theme development and revision (Braun & Clarke, 2006).

In this research, coding and theme development are driven by the theory which is a deductive approach. In this ‘theoretical’ thematic analysis, more detailed aspects of data are discussed. A specific research question was identified such as ‘the phases of commitment level’ of students (which maps onto the more theoretical approach). Thus, this research focuses on the way permissiveness plays out across the data (feature in coding the data). The research also used a semantic approach that identifies explicit or surface meanings of data. For instance, if a student-developed communication and problem-solving skills due to participating in student’s society, this shows the skill development or benefit of joining the co-curricular activities for students. The searching process in this research across data set (interviews and focus groups) aim to identify repeated patterns of meaning or saturated answers from the respondents. The steps in conducting thematic analysis are as follows in Figure 3:

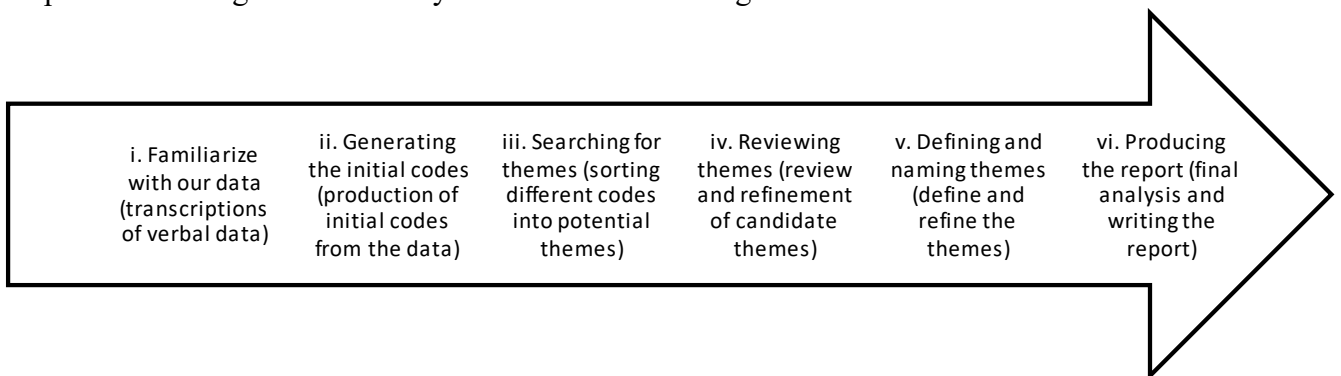


Figure 3. Thematic Analysis Steps

This method is divided into a few phrases which involve generating initial themes into key themes, reviewing themes with related theories, and writing up. All the data collected were identified and relate to Josselson’s Theory of Identity Development of Women. This type of psychosocial theory will be analysed based on the feedback from the respondent. The analysis

will determine the suitable phase and quadrant in Josselson's Theory of Identity Development of Women. Data collected were compared with other resources using the triangulation method to establish the trustworthiness of the data (Merriam, 2009). Based on the interview, there are three main themes, which is focusing on budget, training, and infrastructure support.

Findings and Discussion

Findings are drawn from the thematic analysis based on (i) student involvement in the programme, (ii) challenges on student involvement in clubs or associations and (iii) future program recommendations. The related themes with formal theory are also discussed in this section.

The Impacts of Female Student's Voluntary Involvement in The Clubs and Associations

First, the respondents (students) felt that joining the university's club or association provide them more benefits in their education life and career development later. For instance, the students could develop their communication skills, managerial skills, teamwork, and leadership. Below are the main themes involved in this analysis. Indeed, most of the students involved in the clubs or association programs agree that they develop some skill set in conducting the program. As proposed by Ceyhan and Ceyhan (2011), higher learning institutions play an important role in shaping the development of individual acceptance among university students. The benefit of student's involvement in clubs or associations indeed helpful in their self-development.

Second, the student's felt that they develop communication skills, especially English by their involvement in clubs and associations as per respondents 1 and 8 "My communication skills developed when working in teams and learn to interact with the community. And I want to sharpen my interpersonal skills via communication and confident". Meanwhile, respondent 4 says "It is important to communicate clearly to avoid any misunderstanding. Miscommunication might lead to problems in progress. Now, I can hone my conversation skills and confidently speak in public (community). Herewith, we should realize that students can develop their conversation skills with surrounding people through involvement in the university's club or association.

Third, some students felt that they develop managerial skills too, such as respondent 2 says "BakSis (community service) program has taught me to manage community activities". In addition, respondent 3 mentioned, "I learn to handle the program and enhance career skills of the students." Managerial skills are important as the students learn to organize, manage, and solve the problems in their daily life too.

Fourth, teamwork is also formed through students' participation in clubs and activities. As evidence, respondent 5 mentioned, "I joined the program as a team member which gives me satisfaction while helping people and create a close relationship with other friends". Meanwhile, respondent 6 said, "I have an understanding team member is a key success for a program".

Finally, students agree that they were able to lead a group of students or people through the program in club and association. For example, respondent 5 mentioned, "to lead the biggest program not easy. Leadership will ensure the success of the program". In addition, respondent 7 said, "good leadership will help the program to run smoothly. By participating in the program, I can improve my leadership skills to achieve success in the future". Apart from that, respondent 8 agree that she is "able to develop my leadership skills". As sayings go, "the leader leads" could learn from practical activities rather than in textbooks.

Challenges or Issues on Student's Involvement in Clubs and Associations

The challenges or issues faced by the students during their involvement in clubs or associations are presented in this subsection. Most of the students or members in clubs or associations felt that financial constraints are the main challenges in conducting programs and activities at the university level. For instance, respondent 9 mentioned, "there are biases in budget allocation for societies. For instance, law society receives more budget allocation than other societies". Respondent 12 agrees by saying "PPA just approve a small amount and society need to find their sponsor for each program" and respondent 17 says "small allocation and bias services given by PPA". This constraint particularly makes the students unable to conduct the programs smoothly. In addition, respondent 13 said, "budget and approval of the program from PPA does not depend on the impact of the program".

Management constraints in student activities are also considered one of the biggest dilemmas among students. For instance, respondent 10 says there is always a "delay in approval for the proposal from PPA". Meanwhile, respondent 14 suggest by saying "should wisely organized the task and used all the members in the team effectively and efficiently". Some students such as respondent 18 felt "bureaucratic practices such as lack of staff in handling association programs". Therefore, some action needs to be taken to close the gap between the student's association and management (PPA COLGIS) for the benefit of the university.

Apart from financial and management constraints, facilities that have been provided by the university in conducting programs and activities seems in poor condition and need to be improved. For example, respondent 11 said "facilities exist but not adequate to use by a large number of students. For example, sports courts and equipment such as ball cannot be used. In addition, respondent 15 mentioned "business kiosks without water sink are a problem for students. Thus, I would like to suggest to management to install sinks to facilitate the work of students in managing the kiosks". Respondent 16 agrees that "facilities are there but outdated. For example, LCD's in-classroom not functioning properly (vision and audio). Microphones and speakers are not clear as well. Table and chairs not well organized". Meanwhile, respondent 19 said "no water filter machine in COLGIS R&R areas. Therefore, students have to buy mineral water to drink". These constraints should hear by the management to ensure greater understanding and mutual relationship among both parties in the future.

Future Program Recommendations

The students were also asked to share their future program recommendations that are beneficial to the students, university, and community as well. Some of the student's response by saying "I recommend the intuition program of the troubled people that need moral restoration. People need to accept and give them opportunities. Changes need to start with us (respondent 20). Meanwhile, respondent 21 said "I recommend programs, dialogues, conferences with state leaders to discuss matters pertaining to finance, finance, economy, taxation and local government. It will help students identify weaknesses that need to be improved with the help of those leaders". Respondent 22 adds "suggestions for making programs for children who are not attending school. Sometimes parents do not know how to handle IC matters, birth certificates although there are Malaysians. Education programs are important to them for the future of the country". Meanwhile, respondent 23 "want to focus on children in squatter houses in the city. They are a society that is excluded even living in urban areas. Through the program, they can be provided with books and internet facilities. Should set up mini-information centre that provides a platform to develop their potential". Apart from that, respondent 24 mentioned "inspirational activity or event can create a better and resilient mindset among students. Since nowadays many students are stressed and unable to solve their problem".

From the above responses, we can conclude that the students indeed have many ideas and programs to be conducted in future for their self-development and enhancing the student

services to the community. We can realize that all the ideas for future programs rely on community services that would enhance our society in future. Therefore, collaboration and mutual understanding between stakeholders of the university (students, management, and community) are crucial to materialize the future recommendations as above.

Overall, the students agreed that their involvement in clubs and associations changed them from passive to active students. As mentioned in Josselson's theory of development, the respondents tend to avoid responsibilities and have little sense of direction before joining clubs or associations in the university. They also experienced identity diffusion where did not involve in any crisis or challenging issues around them. However, after joining the club or associations through motivation from fellow friends, they seem to learn and can challenge their capability as well. In addition, from the analysis in this research, the students are indeed able to enhance communication, managerial skills along with great teams and great leaders. Fostering shared responsibility and leadership at all levels is crucial to cultivate culture learning and development among students (Felten, 2016; Kuh, 1995). Most importantly, the students are also able to recognize the sense of self and identity which help them to overcome challenges thrown at them. Finally, identity achievement encourages them to believe in themselves and create ideas to help needy people as well.

Implications and Future Research

Implications

The implications of this research concern towards University, the Students Development Centre (PPA) and the school. Based on the findings, the implication would reflect the three main administrative levels.

The first implication is for the Universiti Utara Malaysia (UUM). Any projects or programs proposed by students would allocate a certain amount of budget. The major constraint is more on getting the budget. To get high marks (merit) in the activities, students should propose high impact projects towards the university. Usually, to implement high impact projects, students need a big budget allocation. Even though we did cooperate with outsiders for the sponsorship, but somehow, we couldn't get the full amount of budget. To ensure the high impact programs would implement for every semester, UUM is supposed to add some allocations for students' activities. The allocation is not just referring to the money, but the facilities also would impress students to doing an activity with actively. At the university level, the Students Affairs Department (HEP) is one of the important places for student's development. HEP's could support student development through training or any other support program. The training will motivate students to get involved in the activities.

The second implication is for Students Development Centre (PPA). PPA is the Centre responsible for student's development programme at the university level and of the support system for students' activities. In UUM, three PPA is registered for each College namely PPA COLGIS, PPA COB and PPA CAS. This finding refers to the PPA COLGIS. For every activity which key in by students in the system, the PPA COLGIS need to act and propose the actual budget which appropriates for the program. The research finding shows that students put on the complaint about PPA's administration. Almost all the respondents give negative feedback towards PPA. Most of them are highlighted on the budget gifted from the PPA. Even though the program would give a high impact on the student's development and UUM, but when the budget approval by PPA was not tally with the program, students intend to be unmotivated to implement the programs parallel with the first planned. PPA should always be responsible with their task and deal with professional when comes to student's activity. Regardless of any associations proposed for the activity, they must treat students with fair and professional. To ensure the UUM's name is always looks great, the management should always do the task with

honours, systematic and professional.

The third implication is towards School. Since the research has been done at the School of Government (SOG), the management of the SOG has the role to boost the students' motivation to conduct more activities. The SOG's management could support the students with good facilities such as meeting rooms, seminar rooms, a proper association room, proper kiosks for entrepreneurship programs and any facilities which easy for students to access for doing the activities at school area. Each of the facilities makes students feel comfortable and eager to join the activities with others. Besides, instead of relying on Students Affairs Department (HEP) to prepare them a training, School should organize training for them as well. Students need training which is suitable with their needed on soft skills, experience, and knowledge. The committee members of the school should plan good training for them for every semester.

Future Research

The finding of this research is focusing on the support system needed by students for student's development. There are many components of student development. For the findings of this research, the three main parties should act and need to improve their management system. The improvement of the system and professionalism would give a big impact on student development. A good idea for future research might be continuous implementation. Besides, we could get different information and experience from the other College namely the College of Business (COB) and College of Art (CAS). The information is needed for doing a good comparison for each other. The new input could help the student's development in UUM become much well and we could produce a good quality of students from the UUM.

Conclusion

In conclusion, this research has been through some of the problems related to student's development in UUM. The findings were shown the certain points which need to act with seriously by the top management. Since the Ministry of Higher Education Malaysia often highlighted the important things in student's development, UUM should move on with the new approach and the new styles for student's development. The improvement should be in terms of professionally dealing in the front desk, the facilities and support systems and the commitment by the top management would encourage students to be more active and more creative in their development of self. The students act as our clients, to make our clients feel comfortable at the place, then we should assist them with the best services to develop their self as a good quality of student. We should visualize for the ten years later of the high-quality product by UUM is started with the new styles of management. To get an actual impact, UUM needs to start with the first steps thoroughly. Nevertheless, the cooperation and full of commitment by all parties could help more sustain the holistic student development in UUM.

Acknowledgement

This work is ostensibly supported, financially and/or non-financially, directly and/or indirectly by the University Teaching and Learning Centre (UTLC) and the School of Government, UUM COLGIS, which both are from Universiti Utara Malaysia, Kedah Darul Aman, Malaysia.

References

- Bilsker, D., Schiedel, D., & Marcia, J. (1988). Sex differences in identity status. *Sex Roles: A Journal of Research*, 18(3-4), 231-236. doi:10.1007/BF00287792.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in*

- Psychology, 3(2), 77-101.
- Ceyhan, A. A., & Ceyhan, E. (2011). Investigation of university students' self-acceptance and learned resourcefulness: A longitudinal study. *Higher Education*, 61(6), 649–661.
- Darke, P., Shanks, G., & Broadbent, M. (1998). Successfully completing case study research: Combining rigour, relevance and pragmatism. *Information Systems Journal*, 8(4), 273-289.
- Erikson, E. (1968). Identity: Youth and crisis. Retrieved from https://www.academia.edu/37327712/Erik_H._Erikson__Identity_Youth_and_Crisis_1_1968_W._W._Norton_and_Company_1_
- Felten, P., Gardner, J. N., Schroeder, G. C., Lambert, L. M., & Barefoot, B. O. (2016). *The undergraduate experience: Focusing institutions on what matters most*. CA: Jossey-Bass.
- Fiske, E. B. (2012). World atlas of gender equality in education. Retrieved from <https://unesdoc.unesco.org/ark:/48223/pf0000215522>.
- Greenbaum, T. (1998). *The handbook for focus group research*. Thousand Oaks, CA: SAGE.
- Josselson, R. (1989). *Finding herself: Pathways to identity development in women*. San Francisco: Jossey-Bass.
- Kaase, K. J., & Hershberger, D. B. (1993). Applying focus groups in student affairs assessment. *NASPA Journal*, 30, 284-289.
- Kapoor, A., & Gardner-McCune, C. (2019). Understanding CS undergraduate students' professional identity through the lens of their professional development. In *Proceedings of 24th Annual ACM Conference on Innovation Technology in Computer Science Education (ITiCSE'19)*. ACM, New York, USA, 1-7. doi:10.1145/3304221.3319764.
- Komives, S. R., Lucas, N., & McMahon, T. R. (2013). *Exploring leadership: For college students who want to make a difference (3rd ed.)*. San Francisco, CA: Jossey-Bass.
- Kuh, G. D. (1995). The other curriculum: Out-of-Class experiences associated with student learning and personal development. *The Journal of Higher Education*, 66(2), 123–155. <https://doi.org/10.2307/2943909>.
- Long, D. (2012). Theories and models of student development. In L. J. Hinchliffe & M. A. Wong (Eds.), *Environment for student growth and development: Librarians and student affairs in collaboration* (pp. 41-55). Chicago: Association of College & Research Libraries.
- Marcia, J. E. (1966). Development and validation of ego-identity status. *Journal of Personality and Social Psychology*, 3(5), 551-558.
- Merriam, S. (2009). *Qualitative research: A guide to design and implementation*. San Francisco, CA: Jossey-Bass.
- Ministry of Education Malaysia. (2020). Quick facts 2020: Malaysia educational statistics. Retrieved from <https://www.moe.gov.my/tadika-muat-turun/penerbitan-dan-jurnal/terbitan/buku-informas/3719-quick-facts-2020/file>.
- Onwuegbuzie, A., Dickinson, W., Leech, N., & Zoran, A. (2009). A qualitative framework for collecting and analyzing data in focus group research. *International Journal of Qualitative Methods*, 8(3), 1-21.
- Patton, L. D., Renn, K. A., Guido, F. M., Quayle, S. J., Evans, N. J., & Forney, D. S. (2016). *Student development in college: Theory, research, and practice (3rd ed.)*. San Francisco, CA: John Wiley & Sons.
- Ryeng, M. S., Kroger, J., & Martinussen, M. (2013). Identity status and self-esteem: A meta-analysis. *Identity: An International Journal of Theory and Research*, 13(3), 201-213. doi:10.1080/15283488.2013.799431.
- Vincent-Lancrin, S. (2008). The reversal of gender inequalities in higher education: An ongoing trend. Retrieved from <https://www.oecd.org/edu/eri/41939699.pdf>.

Whitbourne, S. K. (2012). Are you having an identity crisis? Retrieved from <https://www.psychologytoday.com/us/blog/fulfillment-any-age/201203/are-you-having-identity-crisis>.

Personal Journey: My Transformation through Inspirational Academic Programme Module 6 – Scholarship of Teaching and Learning

Narentheren Kaliappen

School of International Studies, College of Law, Government and International Studies,
Universiti Utara Malaysia, Malaysia.

Corresponding Author: narentheren@uum.edu.my

Abstract

The purpose of this paper is to describe my personal journey on Inspirational Academic Programme (IAP) Module 6- Scholarship of Teaching and Learning (SoTL). IAP is a talent development program organised by UTLC that aims to produce champions, share knowledge, and provide early exposure to UUM academics about innovative teaching and learning methods. Specifically, IAP Module 6 emphasises teaching made public, and through this module, the participants understand SoTL leadership and designing SoTL training plans to become SoTL trainers. This IAP Module 6- SoTL was conducted in two series. In the first series in the beginning of July 2021, I was exposed to various activities such as revisiting SoTL, evaluating SoTL work, leadership in SoTL, mentoring programs in SoTL, publishing SoTL research and planning SoTL training. After attending the first series, I conducted my own SoTL workshop at the School of International Studies as one of the requirements of this module. Then, the second series was held in the end of August 2021, and I was given a chance to present my reflection on the SoTL training that had conducted before. I was also fortunate to listen to guest lectures, forum presentations and prepared a digital portfolio using UUM e-portfolio. Overall, it was an excellent training module, and it assisted me to transform myself from a SoTL researcher to a SoTL trainer. I feel thrilled, satisfied, and confident. I express my gratitude to my master trainers and UTLC UUM for organising this IAP Module 6-SoTL.

Keywords: Personal Journey, Inspirational Academic Program, Scholarship of Teaching and Learning, Universiti Utara Malaysia

Introduction

On 27th May 2021, I received an email from UTLC inviting me to participate in Inspirational Academic Programme Module 6- Scholarship of Teaching and Learning (IAP) (SoTL). I read over the email and the module's flow chart. At first, I declined this invitation owing to my heavy workload, but after giving it some thought, I decided to join this module due to my interest in SoTL.

This IAP SoTL module 6 is divided into two series. Both series focused on the fundamental of SoTL within the context of higher education. It incorporates interactive lectures and individual and group activities to optimise the teaching experience in becoming a SoTL researcher. Throughout, the module the participants were encouraged to critically reflect on teaching practices and bring the personal element into discussions. This practice assists in gaining in-depth discussion and acquire training skills with hands-on practices. Overall, it focuses on SoTL leadership and creating a digital portfolio.

The IAP SoTL flow chart indicates that participants must complete the first series and then organise a SoTL workshop at the school level. Those who successfully conduct the workshop will be invited to participate in a second series in which they will be required to discuss their workshop's reflection or best practices. Finally, the participants must provide the master trainers with the digital portfolio. The participants will receive a certificate indicating

that he or she has completed IAP module 6-SoTL. In this paper, I used self-reflection methodology to report on my feelings and thoughts on the entire IAP Module 6-SoTL.

Review

My SoTL journey before IAP Module 6- SoTL

My SoTL experience began in 2016 when I was awarded my first SoTL research grant from UTLC, UUM. RM 16,000 was funded on the SoTL research entitled "Simulation-Based Approach for Teaching and Learning Strategic Management." My second SoTL research project, titled "Activity-Based Teaching and Learning with a Digital Worksheet for Cross-Cultural Management," was worth RM 6,727.00 and was awarded in 2019. With these research funds, I was lucky to present my findings at the 2nd Inspirational Scholar Symposium (ISS) in 2017 and the 5th ISS in 2020, organised by UTLC, UUM and resulted in the publication of two conference proceedings. I was also invited to give a speech at EduTECH Asia 2019 in Singapore on "An innovative teaching method utilising Wizer.me and Socrative software."

Additionally, I published two Scopus articles as a result of these SoTL funds. My first article, "Educational Benefits of Using Business Strategy Games (BSG) in Teaching and Learning Strategic Management," was published in 2019 in the International Journal of Emerging Technologies in Learning (iJET). My second article, entitled "Wizer.me and Socrative as Innovative Teaching Method Tools: Integrating TPACK and Social Learning Theory," published in 2021 in the International Journal of Evaluation and Research in Education (IJERE). Until that point of time, I considered myself as a SoTL researcher. I questioned my teaching and learning practices, did SoTL research in my classroom, gathered evidence, demonstrated effectiveness, and then shared it with the public. However, my role as a SoTL researcher shifted significantly when I enrolled in IAP Module 6-SoTL.

First series of IAP Module 6- SoTL

The first series of IAP module 6-SoTL started on 5th July 2021 at 8.30 am as scheduled using Webex platform. There were two master trainers in charge of this module. The first master trainer was Prof. Dr Nurahimah Mohd Yusoff. She is very punctual, meticulous, constructive and an expert in curriculum development and SoTL research. The second master trainer was Assoc Prof. Dr Aizan Yaacob. She is very friendly, approachable, and an expert in the English language and SoTL research. Both master trainers were from the School of Education, UUM, and they were very focused on achieving this IAP module's objective.

We started with the ice-breaking session. The master trainer asked us to introduce ourselves with a selfie. We got a chance to know other participants, and altogether there were 13 participants from various schools in UUM. After the ice-breaking session, we were given a group task to revisit SoTL by watching a 12 minute video on "key characteristics of the Scholarship of Teaching and Learning (SoTL)". In that video, several experts such as Randy Bass (Georgetown University), Joanna Rent-Roe (Central European University, Budapest), Pat Hutchings (Gonzaga University), Barbara Gayle (Viterbo University), Dan Bernstein (University of Kansas), Mary Taylor Huber (Carnegie Foundation for the Advancement of Teaching), Gary Poole (University of British Columbia), Nancy Chick (Vanderbilt University), Tony Ciccone (University of Wisconsin -- Milwaukee), and Sherry Linkon (Georgetown University) were describing critical characteristics of the Scholarship of Teaching and Learning (SoTL). We summarised the video by writing the experts name and the points they discussed. We did this task in the breakout session in Webex. From this task, I understood that SoTL is all about inquiry, reflection and engagement.

After completing the ice-breaking session and the SoTL revisits task, we moved to the actual task for the day. The master trainers provided us with first and second activities based

on a teaching case entitled “The Jessica Bank’s Case” and requested us to identify the problem and ethical issues in the case. This activity allows us to think critically and exchange ideas with our groupmates. From this activity, I identified several ethical issues, consequences, and solutions. The third and fourth activities were on SoTL leadership. The master trainers requested us to differentiate the academic leadership and SoTL leadership subsequently describe the best SoTL leadership attributes and our own leadership characteristics. I compared both leadership and found that academic leadership is more about a lecturer’s teaching and learning method that is suitable for the students. In contrast, SoTL leadership focuses on identifying the problem in own teaching, doing research, collecting evidence, and coming out with innovative teaching solutions. I identified understanding learners, respect, effective pedagogy, passion, mentoring, coaching and reflection as the best attributes of the best SoTL leaders. I reflect on my leadership style as a facilitator. I would like to understand my learners and provide the proper guidance so that they can understand the lessons better and allow them to take the entire responsibility in the teaching and learning process.

Activity 5 and 6 were the most crucial task, where I felt that it changed my entire perspective about this module. Initially, I thought it would emphasise SoTL research practices, but these tasks were meant to develop us as SoTL leaders. Both activities required thinking on instilling the SoTL culture at UUM. In these tasks, I was able to find out several problems and challenges and provide several solutions to smoothen the SoTL process and highlighted the importance of a leadership role in developing the SoTL culture at UUM. This task helped me go beyond the SoTL researcher and think about the entire process of SoTL implementation at UUM. Table 1 shows several inputs from these tasks.

Table 1
Inputs from Task 4 and 5

Problems	Challenges	Solutions	Leadership roles
Lack of SoTL experts in UUM.	Not in education area/ school, difficulty in understanding the terms & pedagogy of SoTL.	IAP SoTL program to create more SoTL expert/ master trainer.	VC, DVC (AA) and DVC (RI) play role model in SoTL research.
Lack of awareness & passion about SoTL among academicians.	Lack of support from school management who does not have the SoTL spirit to make SoTL as culture in school.	Assign education experts as a mentor for SoTL group & acknowledge them and organise Dean Talk on Best SoTL practices.	Extra marks for individual KPI and SoTL recognition award.
Small amount of SoTL grant but the burden is heavy.	Publication to make it robust to get published in top journals.	In depth SoTL practice to publish in conference & top journal publication.	Increase allocation for SoTL grant and publication incentives.

Next, activities 7, 8 and 9 were on changes to SoTL practices at national and international levels. These tasks opened my eyes; before this, I thought SoTL is only used within our classroom, but through these activities, I realised that it could be conducted nationally or even internationally via research collaboration with universities and industry partners. One of the participants shared her experience of developing research collaboration on TVET curriculum development at Germany TVET College. This triggered me to explore

international collaboration for my future SoTL research. Finally, we listed down several essential criteria to be considered in developing national and international networking such as interest group, joint research and publications, tangible outcomes (intellectual property, policy paper & commercialisation). Meanwhile, activity 10 focuses on reviewing publication criteria and requirements for SoTL research. Since SoTL emphasises on teaching made public, so sharing information related to publication is vital. We were able to check the publication guidelines and selected several best journals under teaching and learning.

On the second day, we started our training module with activities 11 and 12. In these activities we discussed on SoTL initiatives in Malaysia and compared the current practices with other global universities. Table 2 clearly show the points that we developed during the training.

Table 2

SoTL Initiatives in Malaysia and Comparison to other Global Universities

SoTL initiatives in Malaysia	How does it support MOHE's needs?	How does it compare to other universities globally?
Setting up teaching and learning centres.	Delivery of quality education (SDG 4).	We are almost at par with global universities.
SoTL research grant allocation.	Ranking and rating (MyRa, SETARA) Produce quality research and publication. Create more principal investigators.	Limited SoTL research funding. Lack of quality expertise on SoTL (Professor).
Career promotion based on teaching and learning track.	Create inspirational scholar In line with MOHE's, AKEPT 4 tracks.	No clear career promotion based on teaching track.

Finally, in activities 13 and 14, we were asked to make some recommendations to further improve SoTL in UUM in our capacity as a SoTL consultant. We made some recommendations to improve UUM's SoTL implementation: establish a SoTL fellows programme and a Malaysian SoTL Association (MySoTL), increase the rewards for successful SoTL researchers, create a professional title for SoTL researchers (for example, SoTLer, SoTLlist, or ST) and allocate a research grant of at least RM 5,000.00.

At the end of the training, master trainers shared the template for SoTL training that we need to conduct at our respective schools as part of this IAP Module 6-SoTL. I prepared the SoTL template and got Prof Nura's approval before conducting my SoTL workshop at SoIS, UUM.

My First SoTL Workshop at SoIS, UUM

I chose the title "Engaging in Scholarship of Teaching and Learning (SoTL): Let's Become SoTL-Er" for my workshop because technologists have "Ts," professional engineers have "Irs," and those involved in strategic planning are referred to as "strategist," so those involved in SoTL activities could be referred to as "SoTL-ER." This term struck me as catchy and appealing. This workshop was held via Webex on August 17, 2021, from 9.30 a.m. to 12.30 p.m. I had 14 participants from SoIS and STHEM, UUM. I began the workshop with my motto, "Teaching is my passion, and I always aim to inspire my students," as well as the tagline, "Keep it Simple." I went over the synopsis, learning outcomes, icebreaker, exploring the fundamentals of SoTL, discussion scenario, SoTL engagement model, UTLC SoTL Research Grant, and UTLC SoTL Research Grant. In my 3-hour workshop, I shared my own SoTL experience,

SoTL plan (research question), reflection time, and SoTL workshop assessment. I have included my workshop brochure and padlet link in appendix.

I was initially quite nervous because this was my first SoTL workshop. I created the brochure and slides and distributed the slides before the session (1 day before). This is to ensure that my attendees were aware of what we would be discussing and mentally prepare them for the training. My feelings shifted after starting my workshop, especially after the ice-breaker session. I gained self-confidence. The attendees asked several questions, and I was able to respond to them adequately. Then I noticed that the participants had identified me as a SoTL specialist. Now I am more confident in conducting the SoTL workshop.

I was comfortable with the activities, particularly the discussion (scenario) and sharing of my SoTL experience. I devised the activity "Let us create your own SoTL plan," which I thought was crucial. My school awarded me a certificate for organising this workshop. Participants at my school were also given a certificate. I was overjoyed since my school recognised my efforts. However, I am slightly disappointed with the participants' real-time reactions. Some of them did not even turn on camera throughout the workshop. I need to work on my time management skills for the forthcoming training.

I classified lecturers into several categories based on their teaching experience using the ice-breaker questions. One of the questions is, "How do you ensure that your students learn in your class?" As a result of their responses, I discovered that some lecturers had been utilising many teaching strategies for several years without submitting a valid SoTL study grant. I emphasise the research issue "process & effectiveness" in my workshop. I noticed that many participants mentioned, "Reflection", "Engagement", "Understand the SoTL", and "Improve the T&L" during the reflection activity. They appeared to comprehend my workshop.

I used a Google form to do a post-workshop evaluation. I asked 11 questions about general training information, reactions, trainer and training delivery, and time management. I used 5 Likert scales (from strongly disagree to strongly agree) and received 14 responses. They consisted of ten SoIS teachers and four STHM, UUM lecturers. Overall, 93 per cent of respondents stated the training's general material is well defined, and 79 per cent thought the training's goal was met. In terms of reactions, 79 people thought the training was fascinating, 57 per cent said they were interested in it, 71 per cent said they learned something new, and 71 per cent stated they were eager to put what they learned into practice.

Regarding the trainer and training delivery, 100 per cent said the trainer was well prepared, 93 per cent said the trainer was knowledgeable, and 93 per cent said the trainer effectively engaged with the participants. Finally, in terms of time management, 71 per cent felt enough time was spent on each topic, and 64 said enough time was given for participant comments. Overall, I am pleased with the responses. To enhance my score in my forthcoming workshops, I would look for creative ways to keep my participants engaged in the training session and allocate more time for feedback. Finally, I have done my first SoTL workshop successfully.

Second series of IAP Module 6- SoTL

The second series of IAP Module 6-SoTL began on August 25, 2021, at 8.30 a.m. On the first day of this second series, we were asked to share our reflection on the SoTL workshop at school. I expressed my reflections based on the master trainer's six criteria: description, feeling, evaluation, analysis, conclusion, and action plan. I received some encouraging remarks from the master trainer following the reflection presentation, which boosted my enthusiasm. On the second day, we had the pleasure of hearing a guest lecture from Prof Raja Maznah Raja Hussain of Sultan Qaboos University. She gave a highly motivating speech on "My Success Stories in Conducting SoTL Work." She offered her unique expertise as a SoTL researcher and her transition as a SoTL trainer at the national and international levels. Listening to her sharing her

experience motivated me. Aside from this guest lecture, we had the opportunity attending a forum on "Conducting SoTL during the Pandemic Crisis" hosted by Assoc. Prof. Dr Zuaini Ishak and Dr Laila Suriya Ahmad Apandi from UUM. It was a fantastic forum in a timely manner, with both speakers sharing their own experiences performing SoTL research during the pandemic. I learned specific tactics and pedagogies appropriate for application in this situation, particularly when it comes to online teaching and learning. At the end of the second session, expert trainers taught us how to develop a digital portfolio using UUMIT's Mahara platform.

Post Series 1 and 2 IAP Module 6- SoTL

As part of the assessment process, we were asked to create a digital portfolio and present it to the master trainers within two weeks which carries 100 marks. It includes a teaching philosophy, evidence of SoTL research, and proof of SoTL work publication, a training brochure, evidence of training and artefacts, assessment of training, reflection, and innovation. I created a digital portfolio utilising the Mahara platform. I was excited and pleased because this is the first time, I'm creating a digital portfolio. Finally, on 9th September 2021, I sent my digital portfolio to the master trainer. My digital portfolio was reviewed by the master trainer, and she recommended that I could attend the ISS conference. UTLC UUM sponsored my conference registration fee, and I attended the ISS conference in 2021. Finally, I fulfilled all the requirements associated with this IAP module 6-SoTL. My digital portfolio link is available in the appendix.

Conclusion

How IAP Module 6- SoTL Transform me?

All of the activities in this IAP module 6-SoTL were beneficial in providing a more comprehensive perspective on the application of SoTL research. I obtained a better understanding of how to implement SoTL at the school, university, and national and international levels through this experience. The reflection exercises and completion of the digital portfolio have helped me understand the entire process better. This lesson helped me gain confidence in my ability to deliver a SoTL session to my colleagues. Both my master trainers and Prof Raja Maznah offered practical knowledge on SoTL and their experience in facilitating SoTL workshops for a variety of parties and at a variety of levels with the group.

Overall, it was a fantastic training module that supported me in transitioning from being a SoTL researcher to a SoTL trainer and facilitator. I am contented and confident at the moment. I would like to express my gratitude to my master trainers and UTLC UUM for conducting this IAP Module 6-SoTL, which met its objectives. Now, I see myself as a complete scholar who practices effective teaching and learning in my classroom and is also able to train other scholars to do better teaching and learning in their classroom. I believe this action will increase the quality of teaching and learning at higher education institutions. Therefore, I intend to begin my new path of sharing my SoTL knowledge and inspire our UUM academicians to become SoTL-ERs as much as possible. Do you wish to extend an invitation to me to perform SoTL training at your location? Please do not hesitate to get in touch with me.

References

- Center for Engaged Learning. (2013, September 9). Key characteristics of the scholarship of teaching and learning. Retrieved from <https://youtu.be/yvDKHHyx7YY>.
- Kaliappen, N., Ismail, W. N., Ghani, A. B., & Sulisworo, D. (2021). Wizer.me and Socrative as innovative teaching method tools: Integrating TPACK and Social Learning theory.

- International Journal of Evaluation and Research in Education (IJERE), 10(3), 1028-1037. <https://doi.org/10.11591/ijere.v10i3.21744>
- Kaliappen, N., & Ismail, W.N.A. (2020). Effectiveness of activity-based teaching and learning method. 5th Inspirational Scholar Symposium Proceedings UTLC, UUM, 132-140. <http://utlc.uum.edu.my/index.php/utlc/penerbitan>
- Kaliappen, N. (2019). Educational benefits of using business strategy game (BSG) in teaching and learning strategic management. International Journal of Emerging Technologies in Learning (IJET), 14(07), 209-215. <https://doi.org/10.3991/ijet.v14i07.9792>
- Kaliappen, N., & Hilman, H. (2017). Business strategy game (BSG)- Innovative teaching method for business education. 2nd Inspirational Scholar Symposium Proceedings UTLC, UUM, 46-54. <http://utlc.uum.edu.my/index.php/utlc/penerbitan>

Appendix

My SoTL workshop brochure

ENGAGING IN SCHOLARSHIP OF TEACHING AND LEARNING (SoTL): LET'S BECOME SoTL-ER
17th August 2021 | 9.30 am – 12.30 pm | Webex

Dr. Narentheren Kaliappen
School of International Studies
Universiti Utara Malaysia.

SYNOPSIS
This workshop will allow the participants to understand the fundamentals of Scholarship of Teaching and Learning (SoTL) within the context of higher education. This session will provide opportunities for the participants to familiarise themselves with SoTL engagement models. Participants will learn about designing SoTL research related to their own classroom teaching and learning. Overall, this workshop will encourage the participants to engage more in SoTL and become SoTL-er.

WORKSHOP CONTENT	WORKSHOP LEARNING OUTCOME
<ol style="list-style-type: none">1. Introduction to SoTL.2. SoTL engagement models.3. Designing SoTL research.	<p>At the end of the session, participants are able to:</p> <ol style="list-style-type: none">1. Explore the fundamentals of SoTL.2. Apply the SoTL engagement models.3. Create a central research question and a plan for SoTL research.

FACILITATOR
Dr. Narentheren Kaliappen is a Senior Lecturer at School of International Studies, UUM. He is teaching International Business Management Seminar, International Business Policy and Cross-Cultural Management courses. He has been fortunate to obtain quality teaching experience by completing two SoTL research projects on "Simulation Based Approach for Teaching and Learning Strategic Management" and "Activity Based Teaching and Learning using Digital Worksheet for Cross-Cultural Management". He has received the "Best Teacher Award" from Centre for Foundation Studies in Management, UUM in 2019 for his teaching quality. He has also delivered speeches on "An innovative teaching method using Wizer.me software and Socrative software" and "A Simple Checklist for Effective Teaching and Learning Process" at EduTech Asia, Singapore in 2019 and 2020. Recently, he delivered a speech on "How to Create an Effective Technology-Enabled Learning Activity Plan?" at an international conference in China. Teaching is his passion, and he always wants to inspire his students with his tag line "keep it simple".

Padlet link: <https://padlet.com/narentheren85/150lypa1h89x5w4e>

My digital portfolio

UUMePortfolio

07_ Dr. Narentheren Kaliappen SoTL IAP 2021

My Motto:
Teaching is my passion and I always want to inspire my students...

My Tagline:
Keep It Simple

A. About me

A. Evidence of SoTL Research

Link: <https://eportfolio.uum.edu.my/view/view.php?id=5154>

Self-Reflection towards the Journey of So TL Inspirational Academician Programme (IAP)

Hooi Sin Soo

School of Business Management, Universiti Utara Malaysia,

UUM Sintok, Malaysia

Corresponding Author: jennies@uum.edu.my

Abstract

Joining the Inspirational Academician Programme (IAP) helps to re-boost the synergy in teaching and learning innovation. IAP has two series of the workshop conducted by two facilitators. The focus of the workshops is mainly to convert the Scholarship of Teaching and Learning (SoTL) knowledge into practical ways/methods, discover and share the art of making teaching public, subsequently reflect and find improvement in teaching and learning activities. This paper is about self-reflection on the journey of IAP and the process of being an independent trainer that has struggled through tears with a big smile.

Keywords: Inspirational Academician Programme (IAP), Scholarship of Teaching and Learning (SoTL), Self-Reflection, Training

Introduction

As an educator, it is particularly important to keep students active in learning. Active learning is a well-known method for efficiently learning based on engagement-focused strategies and promotes collaborative interactions among students as stated by Freeman et al. (2014) that students engage in the learning process through activities and/or discussion in class. Active learning comprises a broad range of learning activities e.g., role-play, think-pair-share, peer review discussion, game-based learning, etc. that require a learner to understand, construct and comprehend the knowledge derived from the educational experience which simultaneously develops skills and gains abilities (Cooperstein & Kocevar-Weiding, 2004). Through active learning strategies, students are more confident in their learning hence self-efficacy can be enhanced and succeed in a course (Fencl and Scheel 2005) because students are more actively participate in their acquisition of knowledge and more effectively integrate new information with their prior knowledge (Jaeger et al. 2017).

The approaches of active learning and collaborative learning are central to my teaching philosophy of promoting student engagement. My ideal classroom is full of excitement and joy, where the students love to interact with each other. My slogan of teaching “learning through experience” is in line with one of the favorite philosophers, Xunzi who advocated learning by doing as his proverb: “Tell me and I forgot; teach me and I remember; involve me and I learn”. I am trying to make learning fun for the students and my goal is to create a comfortable yet challenging learning environment to enable the students to instill a love of learning, also inculcate a sense of responsibility in their learning. I believe that creating a fun atmosphere in the classroom is very much important than merely teaching because it can help to stimulus students’ interest to learn, also keep them ‘awake’ in the class.

I have tried many different active learning approaches in my classroom to cultivate the interest in learning, such as think-and-pair, speed dating, role play, jigsaw, group discussion, case studies, and reflective writing. I noticed that the students were enjoyed learning from doing and they have higher motivation and interaction during the activities time in class. This has motivated me to design teaching and learning activities that can engage students’

communication and interaction. One of my teaching projects has granted with Scholarship of Teaching and Learning (SoTL) in Universiti Utara Malaysia to assess the learner's soft skills development through role-playing. The evidence showed that students have a remarkable improvement in their communication skills, confidence level, comprehension, and thinking skills, thus enhance interaction in the class.

However, I found that lately I'm lacking of innovative ideas and synergy to make fun in my class. I noticed that many students are not actively engaged in class activities. As Dewey (1933) has described reflection as the process of actively, persistently, and carefully considerate of any belief and knowledge, so this has made me to think of re-designing the class activities. Coincidentally I received the email from University Teaching and Learning Centre offering the Inspirational Academician Programme (IAP) Module 6 - Scholarship of Teaching and Learning (SoTL), so I decided to join this training program with the hope to boost my energy in teaching and learning, also wish to get some direction and inspiration in my teaching career.

Self-Reflection

The IAP has 2 series of workshops which scheduled in July and August 2021. Each series of workshop is for a 2-days programme. The first series of workshops is done on 05-06 July 2021. We have been introduced to many activities by the two instructors, Prof. Dr. Nurahimah bt Mohd Yusoff and AP Dr. Aizan Bt Yaacob. At the beginning of the workshop, all the participants have some brief introduction via Padlet. A total of 9 activities for the first day were given, i.e. revisit SoTL, evaluating SoTL work, Leadership in SoTL, and mentoring programmes in SoTL. We were work in a small group discussion, contributing ideas and sharing our own practices, discussing solutions, and presenting the group assignment. We will have different group mates in each activity as assigned by the two instructors. Personally, I like this method of group discussion as the learner can mix with different people and getting some different ideas.

Everything went well for the first day of the workshop, although I felt there are too many activities while too little time for discussion. The second day of the workshop discussed SoTL initiative in Malaysia as well as in UUM. The discussion was also conducted in a small group and sharing the ideas. However, when the second half of the day, we were informed that we need to design a training brochure and even we have to conduct the training on our own. "What? Individual training session to share about SoTL knowledge?" This is the first question pop up in my mind, and yes, I didn't hear it wrong, Prof Nura explained the intention of asking each of us to have a training session individually because it is particularly important to assess each of the individuals that can be an independent trainer in SoTL field.

"Am I capable to do it?" This is the second question that appeared in my mind. Inside my heart, I'm replying to myself: "I am not an expert in this area, how could I conduct the training confidently?" Shall I give up? What should I do? I even doubt my initial decision of joining the IAP SoTL. Immediately after the workshop, I called and talked to my friend, Dr. Indraah A/P Kalandaisamy. Both of us were also shocked and never expected to have such a challenging task. After about an hour of discussion and arrived at a conclusion - just try it. Since we have promised each other to try on it, we started to motivate each other and keep remind of the deadline.

The first challenge I faced was to design the training content as well as the training brochure. For the training content, I know I am not capable of sharing the theories, ideology, and philosophy in SoTL, but I can share the criteria of getting SoTL Grant based on my experiences. So I decided to go for a topic like 'Winning a SoTL Grant'. Then for the training brochure, it is my first time designing a poster. Luckily with the aids of technology, poster designs are available on many websites. However, it took me about an hour to select my

preferable style of poster design. After decided for the poster design, I started to feed the information into the brochure, i.e. synopsis of the training, learning outcomes, date, and time and the profile of the facilitator. I even learned to create the QR code for the workshop. The training brochure has been improvised after the comments from Prof Nura and the final content and design of the training brochure as presented in Figure 1.



Figure 1. Training Brochure

After the completion of the training brochure, we faced the second challenge which is the approval to conduct the training. We have to apply to the school through the Research Committee before we get approval from the Dean. The requirement to get the approval is to submit a working paper which stated the background and purposes. The process is taking about one week. Another challenge we faced was the number of participants during the training program. The requirement was to have at least 10 participants. In fact, I have no confidence to meet this requirement as I think very few people in my school are interested in my talk. Anyway, like what I have promised my friend, just try and do it. We got help from the research committee to blast the poster and our Dean also encouraged other colleagues to support our training session.

On the day of the training session, I was surprised to have at least 17 colleagues joined my training session (see Figures 2 and 3). At the beginning of the training session, I am so nervous, so I decided to have an ice-breaking activity with the participants (Figure 4). This engagement activity is a great opportunity for me to warm up myself, also reduce my feeling of nervousness. I asked the participants to share their background, years of experience, as well as their preferable teaching style. From their sharing, I started to introduce the goals of SoTL, shared inquiry methods on students learning, explained the process of turning the teaching into research, and followed by reflective activity on their teaching practices (Figure5). After the short break of 15 minutes, I introduced the criteria of winning SoTL grant and showcased the winnable SoTL proposal.

EVENT DETAILS				
Meeting Training Programme: Thinking to Win a SoTL Grant: Tips and Tricks				
Reference: UJNIC/CSBM				
Date: 16 Aug 2021, 2:00PM				
Venue: WEBEX				
No	Staff No.	Name	Position	
1	1497	Intan Shafnaz binti Ahmad	Pensyarah Universiti (DS45)	10 4711 Dr. Anusua aip Sivapathy Pensyarah Universiti (DS51)
2	3340	Dr. Bidayatul Akmal binti Mustafa Kamil	Ketua Jabatan	11 5066 Dr. Norsharina binti Zabidi Pensyarah Universiti (DS51)
3	2889	Dr. Norzaila Binti Jamaludin	Pensyarah Universiti (DS45)	12 3416 Dr. Indrarah aip Kolondaisamy Pensyarah Universiti (DS51)
4	1829	Dr. Azelin binti Aziz	Pensyarah Universiti (DS52)	13 2883 Dr. Siti Noralish Binti Mohd Nafi KJ Peng Pemagaan & Keselamatan
5	890	Dr. Hanisah Bt A. Razak	Pensyarah Universiti (DS52)	14 6538 Dr. Salimon Manaf Ghaedbeo International Lecturer (Senior)
6	1585	Dr. Norizan bt. Haji Aziznan	Pensyarah Universiti (DS52)	15 5114 Dr. Soo Hooi Sin Pengurus Program
7	2055	Dr. Murniah Binti Khamarudin	Pensyarah Universiti (DS52)	16 1029 Prof. Dr. Sahiza Bt Md Salleh Dekan
8	4927	Dr. Chong Yen Wan	Pensyarah Universiti (DS51)	17 KS4236 Dr. Mohamad Zainol Abidin bin Adam Pensyarah Universiti (DS51)
9	2973	Dr. Hazlinda Binti Hassan	Pensyarah Universiti (DS51)	

Figure 2. List of Attendance for Training

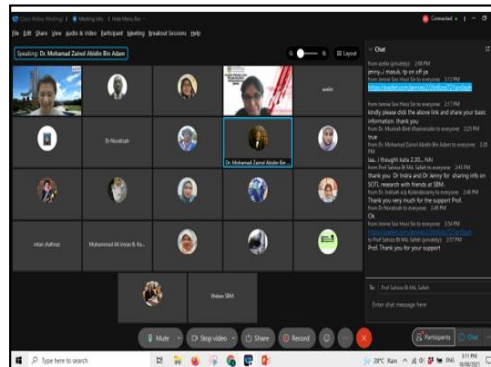


Figure 3. Photo during the workshop

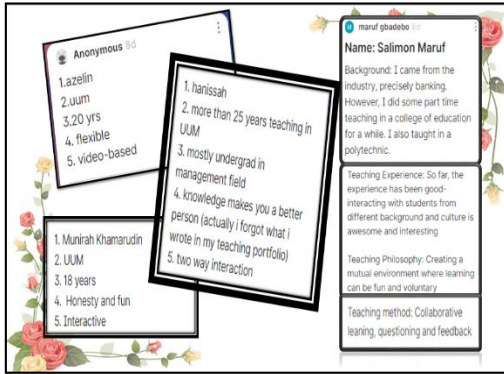


Figure 4. Ice-breaking Activity



Figure 5. Reflective Activity

During the training session, some of my colleagues have highlighted their difficulty to engage with students via online platforms because students usually mute their microphone and of the video. There is also a suggestion to refer to Course Evaluation System (eCevas) to re-evaluate own teaching and find improvements. Further, the participants requested to have similar training in the future when there is a call for SoTL proposal. I noticed that many of my colleagues are interested in SoTL. In fact, some of them are actually doing the SoTL, where they have implemented innovative ways in teaching to help with students' learning, but they didn't get it documented and published. Apart from this, I have the opportunity to discuss and communicate with senior colleagues about their teaching practices, and in return, I benefit from their experiential sharing as well.

The responses from the survey were inspiring, although I got 6 responses only. Overall, the respondents are satisfied with the training session where they rate 9-10 of the scale to this training session (Figure 6a). The respondents also rated highly on the contents and flow of presentation where they found contents are easily understood, and presentation is easy to follow (Figure 6b). Besides that, the respondents also found the training is useful, stimulating, and have a high level of understanding after attended the training workshop (Figure 6c and 6d).

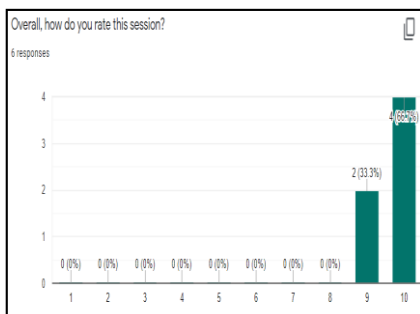


Figure 6a. Training Evaluation

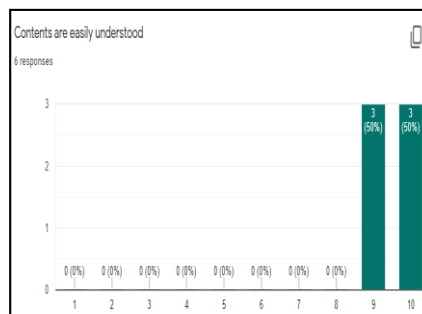


Figure 6b. Training Evaluation

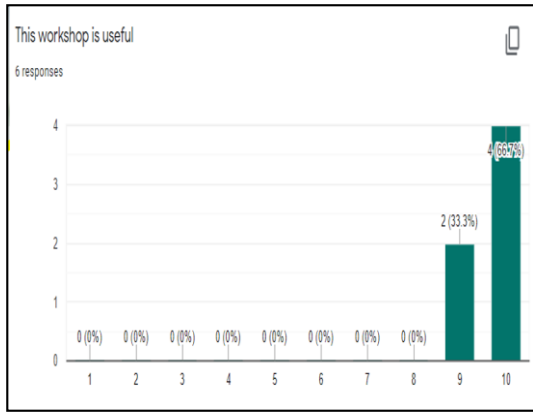


Figure 6c. Training Evaluation

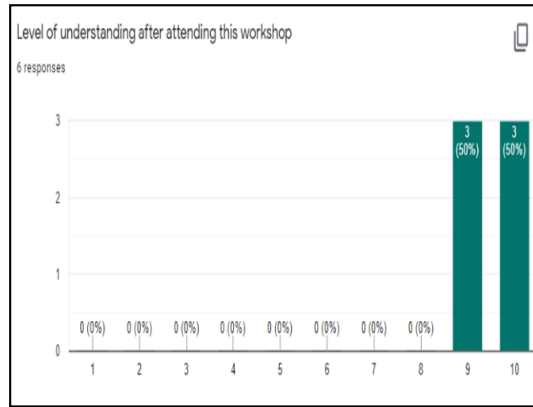


Figure 6d. Training Evaluation

When asking about things they like/dislike about this training session, the responses are very encouraging as presented in Figure 7. In addition, the respondents suggested “conduct more discussion like this”, and the need for the slides for references. With this training session, I hope my colleagues have a better idea of SoTL and can help them to apply for SoTL grant.

Respondent	Comments
1	“The discussion was so fruitful”
2	“The explanation on how to write the proposal”
3	“Clear explanation”
4	“Clear presentation”
5	“The facilitator is very knowledgeable in the subject matter, hats off”
6	“Like a lot.. open new view on SoTL approaches”

Figure 7. Respondent’s Feedback

Schön (1983) has introduced the concepts of reflection-in-action and reflection-on-action. Reflection-in-action takes place during an action, where when I give explanation to the audiences about SoTL research, I have generated more ideas on how to do my next training as well as research topic. However, I noticed that I am not confidence enough in giving training, this reflection-on-action where it takes place after the training, has alert me to think of the ways that can enhance my confidence. I plan to read more to gain more knowledge and practice more to make myself familiar with the contents so it will help me in making my presentation well.

The second series of workshops was conducted on 25-26 August 2021. This workshop provided the opportunity for all IAP participants to present their own SoTL training session and sharing reflection. We have the opportunity to hear about our peers sharing their feelings and evaluation of the training session. This has created a good platform for group learning and improvement. The sharing of reflection-in-action is actually having strong connection to reflection-for-action and it can help all of us to design of examples and succeed in our future training.

According to Farrell (2013), reflection-for-action is thinking or anticipating about future actions with the intention of improving the current practice. This type of reflection requires me to anticipate what will happen during training, as well as reflect on my past experiences before the training occurs. From my own reflection, first, I will include few mini games by using quizizz or kahoot to elicit the interest of the audiences; second, involve audience to share their experiences by inviting them; and third, include more sample writing of SoTL proposal so the audiences will have more knowledge how to write for a SoTL proposal. I felt so released once I have completed the training session and presented in the second series of the workshop. I can’t believe I can do it. I still remembered the days I doubt myself, feeling

impossible and undoable, and now, I have successfully conducted the training workshop. The feeling is so wonderful, from impossible to possible, from undoable to doable. I realized that the most important thing is to keep doing and never give up. Persistence can help in overcoming obstacles and achieving goals. The sense of accomplishment makes me so thankful to the IAP program and the two instructors for giving me an opportunity to develop myself and enhance my self-confidence. Also, the support from my friend is a great motivator for me to complete this training session. I am so grateful to have such a good friend and peers support.

References

- Cooperstein, S. E., & Kocevar-Weiding, E. (2004). Beyond active learning: A constructivist. *Reference Services Review*, 32(2), 141-148.
- Dewey, J. (1933). *How we think: A restatement of the relation of reflective thinking to the educative process*. Boston: Heath and Company.
- Farrell, T. S. (2013). Reflecting on ESL teacher expertise: A case study. *System*, 41(4), 1070–1082.
- Freeman, S., S. L. Eddy, M. McDonough, M. K. Smith, N. Okoroafor, H. Jordt, & M. P. Wenderoth. (2014). Active learning increases student performance in science, engineering and mathematics. *Proceedings of the national academy of sciences of the United States of America* 111(23): 8410–8415. <https://doi.org/10.1073/pnas.1319030111>
- Jaeger, A. J., Shipley, T. F., & Reynolds, S. J. (2017). The roles of working memory and cognitive load in geoscience learning. *Journal of Geoscience Education*, 65, 506-518.
- Schön, D. A. (1983). *The reflective practitioner: How professionals think in action*. New York: Basic Books, Inc.

Evaluation of impact of online training: Reflection-on-action of the NEEL Program

Norhafezah binti Yusof^{*a}, Saliza Abdul Aziz^b, Fathiyyah Abu Bakar^c, Tengku Faekah Tengku Ariffin^d, Hasniza Nordin^e

^{abcde}School of Education, Universiti Utara Malaysia

^{*}Corresponding Author: norhafezah@uum.edu.my

Abstract

Reflection is a good way of obtaining feedback that could facilitate the understanding of work practices as well as work-related experiences. Reflection guides future improvement for better practice. The reflection-on-action approach was applied in this study with the aim of enhancing a particular training program called the Nurturing Engaged and Empowered Learners (NEEL) program. The program was conducted in two series by five trainers, and participants were exposed to Learning Engagement and Motivation (LEM) and Learners Diversity (LD) modules. There were 18 participants for series one and 13 participants for series two. The objectives of this study were: (i) to determine the overall evaluation of the IAP module 2 online training series; and (ii) to describe the overall impact of the evaluation of this training series. To address the first objective, reflection data drawn from Likert scales was applied. Overall, the data showed support for the NEEL training program as an excellent program. Reflection data in the form of open-ended opinions of participants were analysed accordingly. The opinion reflection revealed information on the most and least enjoyable elements in the course module; the usefulness of the training for trainees' future work; the most important aspects gained from the training, and suggestions for the improvement of future NEEL training. Basically, the reflection showed that the course training fairly justified the trainers and the knowledge shared. However, improvement in terms of technology integration and more sharing of practical cases would enhance trainees' understanding of the modules.

Keywords: Online training, Evaluation, Reflection-on-action, NEEL Programme

Introduction

Online training is the new norm applied extensively in any program, activity or engagement. This is basically due to the Covid-19 pandemic and the ensuing movement control restrictions that involve avoiding crowds and maintaining social distance to stop the spread of the virus. In view of this situation, the Inspirational Academician Programme (IAP) module 2 on Nurturing Engaged and Empowered Learners (NEEL), conducted in Universiti Utara Malaysia, also opted for online engagement. Regardless of the method applied in the training session, whether face-to-face or virtual, evaluation would always be the feedback input collected from the trainees or participants at the end of the program.

Evaluation is a crucial element in any kind of program, activity, or engagement. It indirectly reflects or reveals the quality of the tasks carried out, whether at the unit, school, department, and institution or organisation level. Indeed, whilst evaluation is not an end, it could possibly be used to maintain or improve the quality of tasks or processes (Rathmore & Schuemer, 1998). The evaluation input is valuable for reflection-on-action, which could help organizers or practitioners to think about what they are doing while engaged in the process (Schön, 2011) and concerns reflecting on past actions (Hall & Hall, 2004). Hence, in evaluating any program conducted, it is best to have evaluation as well as reflection-on-action, considering that the feedback could provide some form of earlier indication on the success of the program.

This study explored reflection-on-action, based on an evaluation by the IAP module 2 participants. The objectives of the study were: (i) to determine the overall evaluation of the IAP module 2 online training series; and (ii) to describe the overall impact of the evaluation of the online IAP module 2 online training series.

Literature Review

In the process of evaluation, reflection is one of the useful learning tools available. This is acknowledged by scholars such as Dewey (1933); Jay and Johnson (2002); Hall and Hall (2004); Schön (2011); and Winkel et al. (2017). In fact, reflection is distinctive as an active, persistent, and careful consideration of any belief or supposed form of knowledge that serves as a basis for making a conclusion. In this study, the reflection was done on the IAP module 2 NEEL training, which was conducted in two series of two days each. The following gives an overview of the IAP module 2 NEEL training, conducted online in 2021.

IAP module 2 online training

Basically, the IAP module 2 online training is divided into two series: the first series is on Learning Engagement and Motivation (LEM), while the second series is on Learning Diversity (LD), focusing on the learner.

The NEEL module is information sharing on effective teaching and learning. Learning engagement is about connecting pedagogical strategies to learners' needs. Additionally, understanding diverse learners could possibly facilitate lecturers in changing from conventional conceptions of teaching and learning to more flexible and innovative teaching and learning strategies. The objectives of the NEEL module are: (i) to explain the concepts of learning engagement and diversity; (ii) to discuss purposeful deployment of inclusive pedagogy to engage diverse learners; (iii) to introduce basic tools (interactive learning/case study) in learning engagement and diversity; and (iv) to discuss different student backgrounds and choose suitable approaches to engage diverse learners.

The LD module is a series two module that aims to expose learners to more effective and interesting teaching and learning processes. The focus of the LD module is on strengthening academicians' competencies, as well as developing confidence and facilitating widespread learning engagement and diversity at the institutional level. Indeed, this module assists academics in reflecting on best practices in teaching and learning, taking into consideration both learning engagement and diversity elements. The objectives of the LD module are: (i) to engage in reflective practice; (ii) to monitor students' learning and motivation; (iii) to facilitate students to become autonomous learners; and (iv) to engage with appropriate strategies to address diversity-related issues and problems in learners.

Content of reflection

In reflection, content refers to the experience (Pammer, Knipfer, Krogstie, Wessel, Prilla, & Lindstaedt, 2012). The experience is valuable as what can be perceived in it could construct meaningful content. However, experience alone is inadequate; the ability to perceive and extract meaning among the threads of experience is also required (Rodgers, 2002). In this study, the trainees' experience of learning the LEM and LD modules was used as the basis of studying the content of reflection. In searching for the appropriate content of reflection, the experience could be linked to the past and the future. Hence, referring to the data from trainees could possibly highlight the content and reasons behind the perceptions given about the training. In fact, the content of reflection could also generate possible explanations which could be extracted from concrete experience (Pammer et al., 2012).

The outcome of reflection

The result of any reflection is the outcome of the reflection. It is not a stand-alone idea or information but has basis which is reflected as witness, evidence, proof, voucher or warrant (Dewey, 1933). Indeed, the reflection should be further refined in search of appropriate meaning and grounds of belief to support the outcome of reflection. It is also possible to link with appropriate theory, which is expected to guide practice. Further, testing of the theory, also called experimentation, would be advantageous in terms of establishing a fit meaning and reliable support in future experiences (Rodgers, 2002).

Methodology

This paper applies an evaluation method that is, trying to understand the value of something in order to do things better (Rubin, 1995). The focus is on knowing to what extent the aim of any programme carried out is achieved among the participants. It is also a form of evaluation research with careful data collection and thoughtful analysis. Indeed, reflective practice is a practical tool which requires trainers to evaluate experience, understand and learn from it for current feedback or future guidance (Britton, 2010).

The sample of this evaluation study was taken from two series of training for Module 2 NEEL under IAP training; the first was conducted on 24 and 25 March 2021 and the second on 11 and 12 July 2021. The respondents were academicians from the same group registered for the module, involving 18 participants for series one and 13 participants for series two.

The participants were given a feedback form at the end of each series, which contained 25 items of questions and a section of five open-ended opinions. The variables tested were general information, reactions, specific learning gains, trainers and training delivery, time management as well as opinions of the respondents. As for the opinion section, the questions were more on the parts of the training module that trainees liked most and least; the usefulness of the training for future work; important parts that had been learned; and any suggestions for the improvement of the training course. The respondents provided reflection feedback on the five module trainers based on their experiences in learning the module.

Findings and Discussion

Reflections on the impact of online learning in this study were collected from trainees enrolled in the IAP module 2 online training. The trainees followed two series of IAP online training, i.e., the LEM module and the LD module. 18 trainees enrolled in the first series. In the second series, the number of trainees had reduced to 13. Five trainees were unable to follow the second series and therefore failed to submit the required assignments. The reflection via evaluation on 5-Likert scale items supported the first objective to determine the overall evaluation of the IAP module 2 online training series.

The IAP module 2 trainees were trained by five trainers, consisting of two master trainers (T1 and T3) and three junior trainers (T2, T4 and T5). Trainers 1 and 2 covered the LEM module and trainers 3, 4 and 5 covered the LD module. The following findings and discussion reveal the mean score of the five trainers evaluated by 12 trainees for series 1, and 8 trainees for series 2.

Series 1 IAP module 2

Series 1 was conducted on 24 and 25 March 2021. It comprised a half day training on the LEM and LD modules and involved an enrolment of 18 trainees. The evaluation of series 1 indicated that trainees were satisfied with the presentations of the five trainers. The overall evaluation given was excellent, with a mean score of 4.45 for the master trainers and 4.26 for the junior

trainers. This mean score was derived from 25 items evaluated on five components, such as general information, reactions, specific learning gain, trainers, and training delivery as well as time management.

Generally, the trainees were satisfied and gave a mean score of 4.33 and 4.61 respectively to the junior and master trainers (refer to Table 1). The scores reflected that information about the module was clearly defined by the master trainers (i.e., T1 and T3). The trainees also agreed that the objectives of the course were achieved, and the coverage related to the topics they were required or expected to learn.

Table 1

Mean scores for Series 1 of the IAP module 2 (n = 12)

No.	Items	Mean Scores for Series 1 (24 & 25 March 2021)				
		T 1	T 2	T 3	T 4	T 5
	GENERAL INFORMATION	4.61	4.33	4.61	4.33	4.33
1.	Information about the module is clearly defined.	4.75	4.42	4.75	4.42	4.42
2.	The course covered the topics I needed to learn about.	4.50	4.33	4.50	4.33	4.33
3.	In general, the objectives of the course were achieved.	4.58	4.25	4.58	4.25	4.25

In terms of reactions (refer to Table 2), the overall mean score of 4.41 shows that the trainees perceived the training as worth attending, and had gained new knowledge from it (mean score of 4.50). The trainees' scores also support that the module was interesting; the content of the module was important for them; the knowledge gained from the training was useful for an academician; they gained new knowledge from the training; and they were willing to try to apply the knowledge gained in practice. Undoubtedly, even in items with lower mean scores (4.33 or less), the trainees reflected that the training has met their expectations; they engaged in the training; and were confident about applying the knowledge and skills gained in actual practice.

Table 2

Mean scores for Series 1 of the IAP module 2 (n = 12)

No.	Items	Mean Scores for Series 1 (24 & 25 March 2021)				
		T 1	T 2	T 3	T 4	T 5
	REACTIONS	4.41	4.41	4.41	4.41	4.41
No.	Items (continued)	Mean Scores for Series 1 (24 & 25 March 2021)				
		T 1	T 2	T 3	T 4	T 5
1.	I find the module interesting.	4.42	4.50	4.42	4.50	4.50
2.	The training has met my expectations.	4.33	4.33	4.33	4.33	4.33
3.	I was engaged in the training.	4.33	4.17	4.33	4.17	4.17
4.	The content of the module is important for me.	4.42	4.42	4.42	4.42	4.42
5.	The training is worth attending.	4.50	4.50	4.50	4.50	4.50
6.	Knowledge gained from the training is useful for me as an academic.	4.42	4.50	4.42	4.50	4.50
7.	I gained new knowledge from the training.	4.50	4.50	4.50	4.50	4.50
8.	I gained new skills from the training.	4.42	4.33	4.42	4.33	4.33
9.	I am willing to try applying the knowledge I gained from this training into practice.	4.42	4.58	4.42	4.58	4.58
10.	I am confident to apply the knowledge and skills gained from the training in actual practice.	4.33	4.25	4.33	4.25	4.25

Specifically with regards to learning gains (refer to Table 3), the trainees felt they learned from the master trainers (mean scores of 4.00 to 4.41). In addition, the trainees also

agreed that the master trainers were knowledgeable and open, and effectively engaged participants. In fact, all the trainers were valued as equipped and well-prepared for the training session. The training was perceived to have various delivery components such as lectures, brainstorming and doing reflections, but lacked group discussion and role-play activities. This was affirmed by the overall mean score of 4.15 to 4.30 for trainers and training delivery.

Table 3
Mean scores for Series 1 of the IAP module 2 (n = 12)

No.	Items	Mean Scores for Series 1 (24 & 25 March 2021)				
		T 1	T 2	T 3	T 4	T 5
	SPECIFIC LEARNING GAINS	4.41	4.00	4.41	4.00	4.00
1.	Specific learning gains	4.41	4.00	4.41	4.00	4.00
	TRAINERS AND TRAINING DELIVERY	4.30	4.15	4.30	4.15	4.15
1.	Lecture	4.25	4.00	4.25	4.00	4.00
2.	Group discussions	3.75	3.92	3.75	3.92	3.92
3.	Brainstorming	4.17	3.83	4.17	3.83	3.83
4.	Role-play activities	3.83	3.83	3.83	3.83	3.83
5.	Doing reflections	4.08	4.00	4.08	4.00	4.00
6.	The trainer was well-prepared.	4.58	4.33	4.58	4.33	4.33
7.	The trainer was knowledgeable.	4.67	4.50	4.67	4.50	4.50
8.	The trainer effectively engaged the participants.	4.67	4.42	4.67	4.42	4.42
9.	The trainer was open.	4.67	4.50	4.67	4.50	4.50

Concerning time management aspects, the trainees indicated that they were satisfied as a whole, giving an overall mean score of 4.54 for master trainers and 4.42 for junior trainers. Time spent on each topic as well as time given for feedback from the trainees were perceived as adequate (refer to Table 4).

Table 4
Mean scores for Series 1 of the IAP module 2 (n = 12)

No.	Items	Mean Scores for Series 1 (24 & 25 March 2021)				
		T 1	T 2	T 3	T 4	T 5
	TIME MANAGEMENT	4.54	4.42	4.54	4.42	4.42
1.	Enough time was devoted to each topic.	4.58	4.42	4.58	4.42	4.42
2.	Enough time was given for feedback from the participants.	4.50	4.42	4.50	4.42	4.42

Series 2 IAP module 2

The series 2 IAP training was conducted on 11 and 12 July 2021, with a half-day training on the LEM and LD modules. Basically, it was a continuation of the IAP training series 1. 13 trainees were enrolled, and scores reflected that they were satisfied with the presentations by the five trainers. The overall evaluation given was excellent, with a mean score of 4.51 for the LEM module and 4.65 for the LD module.

Referring to Table 5, general information gathered from the eight trainees revealed that the trainers' information about the LD module was clearly defined; the course covered the topics they expected to learn; and the objectives of the course were achieved (overall mean score of 4.89). In addition, the trainees were also satisfied with the LEM module trainers' information sharing, which also covered the topics they needed to learn about and achievement of course objectives.

Table 5
Mean scores for Series 2 of the IAP module 2 (n = 8)

No.	Items	Mean Scores for Series 2 (11 & 12 July 2021)				
		T 1	T 2	T 3	T 4	T 5
	GENERAL INFORMATION	4.54	4.54	4.89	4.89	4.89
1.	Information about the module is clearly defined.	4.50	4.50	4.89	4.89	4.89
2.	The course covered the topics I needed to learn about.	4.50	4.50	4.89	4.89	4.89
3.	In general, the objectives of the course were achieved.	4.63	4.63	4.89	4.89	4.89

The overall reactions of trainees to the training were also excellent for the LD module (mean score of 4.76) compared to the LEM module (mean score of 4.63). Specifically, trainees' reactions to both the LEM and LD modules were the same. They found the content of the module to be important, and the knowledge gained from the training was useful for an academician (overall mean score of 4.78 for the LD module and 4.75 for the LEM module). In terms of interest, expectations, worth, knowledge gained, new skills gained and willingness to practice, the mean score was 4.78 for the LD module and 4.63 for the LEM module. Although the mean score was slightly lower for engagement and confidence to apply the knowledge and skills gained in actual practice, the trainees still gave an excellent reaction, as seen in Table 6.

Table 6
Mean scores for Series 2 of the IAP module 2 (n = 8)

No.	Items	Mean Scores for Series 2 (11 & 12 July 2021)				
		T 1	T 2	T 3	T 4	T 5
	REACTIONS	4.63	4.63	4.76	4.76	4.76
1.	I find the module interesting.	4.63	4.63	4.78	4.78	4.78
2.	The training has met my expectations.	4.63	4.63	4.78	4.78	4.78
3.	I was engaged in the training.	4.50	4.50	4.67	4.67	4.67
4.	The content of the module is important for me.	4.75	4.75	4.78	4.78	4.78
5.	The training is worth attending.	4.63	4.63	4.78	4.78	4.78
6.	Knowledge gained from the training is useful for me as an academic.	4.75	4.75	4.78	4.78	4.78
7.	I gained new knowledge from the training.	4.63	4.63	4.78	4.78	4.78
8.	I gained new skills from the training.	4.63	4.63	4.67	4.67	4.67
9.	I am willing to try applying the knowledge I gained from this training into practice.	4.63	4.63	4.78	4.78	4.78
10.	I am confident to apply the knowledge and skills gained from the training in actual practice.	4.50	4.50	4.78	4.78	4.78

A difference in terms of specific learning gains was also noted, with an overall mean score of 4.67 for the LD module compared to 4.38 for the LEM module (refer to Table 7). The same trend was seen in trainers and training delivery components, where the overall mean score was 4.71 for the LD module and 4.49 for the LEM module. The reflection was the same as that in series 1, where there were no complaints on trainer aspects with regards to preparation, knowledge, engagement and openness (mean score of 4.89 for the LD module, and 4.63 - 4.75 for the LEM module). The reflection score was lower for training delivery aspects, namely lecture, group discussions, brainstorming, role-play activities and doing reflections. However, the trainees were still satisfied, as detailed in Table 7.

Table 7
Mean scores for Series 2 of the IAP module 2 (n = 8)

No.	Items	Mean Scores for Series 2 (11 & 12 July 2021)				
		T 1	T 2	T 3	T 4	T 5
	SPECIFIC LEARNING GAINS	4.38	4.38	4.67	4.67	4.67
1.	Specific learning gains	4.38	4.38	4.67	4.67	4.67
	TRAINERS AND TRAINING DELIVERY	4.49	4.49	4.71	4.71	4.71
1.	Lecture	4.50	4.50	4.44	4.44	4.44
2.	Group discussions	4.25	4.25	4.56	4.56	4.56
3.	Brainstorming	4.25	4.25	4.56	4.56	4.56
4.	Role-play activities	4.13	4.13	4.56	4.56	4.56
5.	Doing reflections	4.38	4.38	4.67	4.67	4.67
6.	The trainer was well-prepared.	4.75	4.75	4.89	4.89	4.89
No.	Items (continued)	Mean Scores for Series 2 (11 & 12 July 2021)				
		T 1	T 2	T 3	T 4	T 5
7.	The trainer was knowledgeable.	4.75	4.75	4.89	4.89	4.89
8.	The trainer effectively engaged the participants.	4.63	4.63	4.89	4.89	4.89
9.	The trainer was open.	4.75	4.75	4.89	4.89	4.89

Time management for the LD module reported a lower mean score of 4.22, compared to 4.50 for the LEM module (refer to Table 8). However, reflection on both modules was that enough time was devoted to each topic and for feedback from the trainees.

Table 8
Mean scores for Series 2 of the IAP module 2 (n = 8)

No.	Items	Mean Scores for Series 2 (11 & 12 July 2021)				
		T 1	T 2	T 3	T 4	T 5
	TIME MANAGEMENT	4.50	4.50	4.22	4.22	4.22
1.	Enough time was devoted to each topic.	4.50	4.50	4.22	4.22	4.22
2.	Enough time was given for feedback from the participants.	4.50	4.50	4.22	4.22	4.22

Impact of the online IAP module 2 NEEL training series

The second objective of this study was to describe the overall impact of the evaluation of the IAP module 2 online training series by applying the reflection-on-action method. The overall reflection was gathered from the trainees' responses on four opinion comments. Some of the contents of reflection based on the trainees' experiences are shared in this paper.

Parts of the module that trainees enjoyed most

Generally, trainees enjoyed the opening and introduction to the NEEL module by the master trainers, which they found to be an efficient way of conducting the course. This was supported by several views or reflections from the trainees:

"I enjoy both parts. Interesting topic and both panels conduct the course in efficient way."
(Trainee 2)

"Introduction (to) NEEL, easy to understand." (Trainee 4)

Undeniably, the introduction from the junior trainers was also enjoyed by the trainees. In fact, the trainees liked the case study design as much as the other parts discussed during series 1.

"When trainer started her session." (Trainee 8)

"All parts were interesting." (Trainee 9)

"Case study design." (Trainee 11)

In addition, the trainees also enjoyed the activities given by the master trainers as well as the knowledge sharing component. Experience sharing could assist the trainees to apply the skills in future classes. This finds support in several trainees' reflection:

"I like the sharing part." (Trainee 5)

"Experience sharing because it is helpful to me in applying the skills to my class."
(Trainee 6)

"The result of the research represented by Master Trainer." (Trainee 11)

Knowledge sharing by the junior trainers on case study and previous publications in relation to the modules also captured the interest of the trainees. The reflections given by the trainees displayed their enjoyment of the course module:

"I enjoyed learning new ways for doing research." (Trainee 3)

"Case study (LD) because it is really helpful in my future teaching plan."

(Trainee 7)

"E-portfolio, as it was done practically." (Trainee 7)

"Reflections time and the hands on practical of e-portfolio because it gives me more knowledge and understanding."
(Trainee 5)

Furthermore, the trainees enjoyed the course module because they were able to share their experiences or views. The two-way communication gave them a chance to gain direct feedback on their practices in class as well as in case study development. Indirectly, it also created engagement between trainers and trainees, especially in regards to the e-portfolio.

"I was given chance to give my idea and my experience in developing the study."
(Trainee 1)

"The engagement part where the learners were asked questions and they were able to share their experiences since doing so the trainer was able to understand us better."
(Trainee 12)

Parts of the module that trainees enjoyed least

Besides the most enjoyable elements in the course module, there were also parts of it that the trainees least enjoyed. Most of them were unsatisfied with the time and timing of the training. It was seen as too short and lacking in focus due to issues such as trainees' own class preparation and the need to reschedule their existing class in order to follow the module.

"Time was too short." (Trainee 5)

"I tend to lack of focus due have my UG class preparation." (Trainee 1)

"The program affects my class schedule that I need to reset." (Trainee 6)

Besides the time factor, trainees also found difficult to grasp educational theory and case study, which were not within their area of expertise. Despite the challenges, they enjoyed being exposed to new knowledge and experiences. The reflection on this matter was highlighted by several trainees:

"The theory part as I'm not from school of education." (Trainee 8)

"Part the scenario which I've never feel that experiences...you have to imagine the scenario."
(Trainee 10)

"Explanation of case studies maybe because the examples were not from my field of study but overall, it was good."
(Trainee 3)

The usefulness of the module in trainees' future work

Basically, the trainees agreed that the course module provided new knowledge on learners' engagement, which would function as a guide to engage better and understand in depth the differences and similarities of their learners as well as improve engagement in future. Most of the trainees highlighted this as their reflection on the usefulness of the module in their future work:

- "Guide me to engaged better with students."* (Trainer 2)
"Improve my engagement with my students for both face to face and online session." (Trainee 6)
"Ways to interact with students from diverse backgrounds." (Trainee 7)
"I would like to develop engagement after understanding differences and similarities of students via online learning." (Trainee 11)

Moreover, the course module assisted the trainees in improving their teaching and learning in regards to continuous quality improvement as well as techniques. Indirectly, the trainees' experience of using padlet software was seen as new knowledge in teaching and learning which could be applied in their own class.

- "Help me to give momentum for CQIT & L."* (Trainee 1)
"For my continuous quality improvement and can lead me for my scholarly teaching research improvement also." (Trainee 10)
"Enhanced my knowledge and skills in teaching and learning activities." (Trainee 5)
"It may help me enhancing my teaching and learning process." (Trainee 6)
"I learn about new software padlet where group discussions were made possible other than chat box which was new to me and I really like it so I will use that in my teaching method as well." (Trainee 12)

On top of the learning engagement and diversity, which would help trainees to improve in teaching and learning, case study elements could assist trainees in future work, specifically to engage and publish case studies relative to their class or course. This opinion was expressed by some trainees in the reflection form:

- "I can look into cases as a source of doing research and publishing that will help new teachers in the field to see how to cope with similar issues"* (Trainee 3)
"In conducting case study research and also publication." (Trainee 4)
"Designing a case study." (Trainee 11)

The most important things that trainees learned

In the NEEL module, almost all of the trainees agreed that the most important knowledge that they had learned was about learning engagement and diversity. This core element of the LEM and LD modules was well shared by the master trainers accordingly to their expertise. In fact, the trainees developed more confidence in dealing and engaging with diversity of learners and an openness to individual cultures.

- "Help me to improve my teaching way in identifying diversity of students."* (Trainee 2)
"Preparation for learner engagement taking into account their diversity." (Trainee 8)
"The importance of learning engagement based on diversity of learners." (Trainee 5)

In addition to the core of the NEEL module, trainees also learned most on case study research in a new perspective of teaching and learning within the classroom environment. Case study research would be different and interesting with the engagement of diverse learners, as reflected by some trainees:

“Writing case study related to teaching and learning.” (Trainee 4)

“Student’s engagement in teaching is important. And as a researcher, it is interesting area to do research.” (Trainee 6)

“Case study in conducting students engagement.” (Trainee 9)

Improvements to the training module

The outcome reflection from the trainees revealed several recommendations for improvement or future additions to the training module or course. Most of the trainees had no suggestions as they agreed that the trainers were very experienced and well prepared, with an impressive sharing session. Even though the trainees agreed that the module had been justified accordingly and the weightage as well as the coverage were wide and appropriate, there was still room for possible improvement. Hence, the ideas given could be used as future guidance in improving the course module or the online training delivery. Basically, the outcome reflection related to the following:

Technology integration in the NEEL module

Trainees expected that the NEEL module would be better in terms of media integration. Moreover, applying online tools for teaching, assessment and learning such as “Kahoots” or “Mentimeter” would also be helpful for knowledge enhancement purposes.

Improvement in case study coverage

In relation to the case study, the trainees expected to have more research case reports and teaching notes. These are important to guide them in starting on their own case study research. In fact, the trainees recommended that future training could integrate more cases based on Bloom’s taxonomy for discussion purposes, as it relates to teaching and learning for academicians.

Conclusion

Overall, the NEEL program was very well received by the trainees. Although the short time allocated for the online learning slots was a constraint raised by almost all the trainees, it was agreed that the training course was impactful in terms of allowing new lecturers to learn more from their senior counterparts, something that should be happening more frequently. The reflection-on-action revealed some interesting facts in terms of the content of training as well as the outcome reflection for future improvement and enhancement of the training modules. The reflection on impact of online training indirectly supported the experience and knowledge shared among trainers and trainees in the form of written arguments. It is beneficial to plan for future training with the same coverage as improvements could be embedded accordingly to enhance the delivery of the modules to a new group of trainees.

References

- Britton, B. (2010). Self-reflection. In Capacity development in practice, ed. J. Ubels, N.-A. Acquaye-Baddoo and A. Fowler. London and Washington, DC: Earthscan.
- Dewey, J. (1933). *How we think: A restatement of the relation of reflective thinking to the educative process*. Boston, MA: D.C. Heath.
- Hall, I. & D. Hall. (2004). *Evaluation and Social Research: Introducing Small-scale Practice*. Hampshire: Palgrave Macmillan.
- Jay, J. K. & Johnson K. L. (2002). Capturing Complexity: A Typology of Reflective Practice for Teacher Education. *Teaching and Teacher Education* 18(1): 73–85.
- Pammer, V., Knipfer, K., Krogstie, B., Wessel, D., Prilla, M. & Lindstaedt, S. (2012). Reflective learning at work – a position and discussion paper. http://ceur-ws.org/Vol_790/paper4.pdf.
- Rathmore, H. & Schuemer, R. (1998). Evaluation Concepts and Practice in Selected Distance Education Institutions. ZIFF Paper 108, Hagen: Central Institute for Distance Education Research, Fern Universitat. http://deposit.fernuni-hagen.de/1908/1/ZP_108.pdf (accessed at 30 September 2021).
- Rodgers, C. (2002). Defining reflection: Another look at John Dewey and reflective thinking. *Teachers College Record* 104(4): 842–866.
- Rubin, F. (1995). *A basic guide to evaluation for development workers*. Oxford: Oxfam.
- Schön, D. A. (1983). *The reflective practitioner: How professionals think in action*. London: Temple Smith.
- Schön, D. A. (2011). *The reflective practitioner: How professionals think in action*. England: Ashgate.
- Winkel, A.F., Yingling, S., Jones, A.A, & Nicholson, J. (2017). Reflection as a learning tool in graduate medical education: A systematic review. *J Grad Med Educ*, 9(4):430–9.

Does Reflection Matter? Evidence from Training

Indraah A/P Kolandaisamy^{*a}, Raenu A/P Kolandaisamy^b

^aSchool of Business Management, Universiti Utara Malaysia

^bFaculty of Business & Information Science, UCSI University, Kuala Lumpur

*Corresponding Author: indraah@uum.edu.my

Abstract

Reflection is an essential part as it helps to tell the whole story about teaching and learning processes. The reflection happens via thinking, talking, and writing. I always think about the impact of my teaching and learning by students. Literally, reflection process did influence my way of teaching and my professional life. At this moment, I have been directly involved with SoTL for 3 years in my institution – happened to make changes in my teaching and learning activities. Reflection in training also helps in improving my competence at work, my personal and professional development. Therefore, the main purpose of this article is to share my experiences via self-reflection (reflection-on-action) by conducting a training.

Keywords: Reflection, Training, SoTL

We do not learn from experience. We learn from reflecting on experience.

John Dewey (1933)

Introduction

Self-reflection is an essential tool for instructor which integrates theory, practical experiences and inspire deep learning. It helps instructor to improve their way of teaching and enhance participants learning processes (Dummer, Cook, Parker, Barret and Hull, 2008). As an educator, I used to reflect about what has happened in my classroom and its outcomes. Self-reflection creates an opportunity for me to improve my teaching method and students learning processes.

Self-reflection by Schon's (1991) is divided into two categories namely reflection – on – action and reflection – in – action. Reflection – on – action involves looking back after the event has occurred and converting the information into knowledge. This reflection intended to increase one's knowledge and challenges the theories and concepts. On the other hand, reflection – in – action refers to thinking about what one is doing and could redesign what is being done when dealing with particular tasks.

This article used self-reflection (reflection-on-action) by Schon's (1991) in reflecting the experiences gained through SoTL training that was conducted at School of Business Management (SBM), Universiti Utara Malaysia on 16 August 2021 (Tuesday) at 9.30 am until 12.30 pm. Total number of seventeen participants attended this training session.

Literature Review and Discussion

The session started at 9.20 am and I greeted participants with warm morning wishes. This is essential to bring the participants' attention and focus towards training. Participants' attendance was registered via QR code. I have started the session by introducing myself and indicated the main objective of this training. As an instructor, I have also explained on three learning outcomes that will be achieved by participants at the end of the training session. The learning outcomes of this training comprises of (i) describe the core elements that are incorporated in SoTL (ii) distinguish between scholarly teaching and scholarship of teaching and learning and (iii) discuss current challenges and future visions of SoTL. The participants also were well

informed on various activities that will be included in this training to enhance their understanding on SoTL.

As a starting point, I played a video about Introduction to SoTL by Professor Lee Shulman, from Stanford Education. Professor Lee describes SoTL as an outcome of the “pedagogical imperative” which inquires the consequences of an individual’s work with students, responsibility that involves individual faculty members, on programs, on institutions or disciplinary communities. He also added that scholars of teaching and learning are prepared to mess with their colleagues who are satisfied to teach well and leave it at that. They clutter with their students minds and heart, examine the quality of practices to be more effective. He did point out on the current status of SoTL in other countries.

Immediately, after the first video, I started with the first activity of the training. The activity is on describing SoTL in word. I gave few minutes for the participants to describe about SoTL based on their prior understanding. The participants enthusiastically provide their feedback on the activity. The answers include, research on our own teaching, relates our teaching styles to students learning, research to improve teaching and learning, action research, a systematic inquiry into teaching and learning with the objective of improving and improvement. A discussion continues with participants and it focused on the overall idea of SoTL that can be captured within five minutes of video presentation.

As soon as the participants understand the main concept of SoTL, I continued the session by explaining the definition of SoTL for better understanding. It includes:

- research our teaching,
- formal inquiry into our students’ learning or our own teaching practices,
- disseminate to others so that they might be able to modify and replicate good practices for their own classrooms,
- bring teaching and research together,
- SoTL bridges the gap between theory and practice and ethics.

Examples were shared based on my experiences in conducting SoTL research.

Self-Reflection: Reflection-On-Action

In order to achieve the learning outcomes of the training as well as to attract the participants’ attention, it is important to have various methods namely delivering the information’s, video presentation, group discussion as well as activities. These methods encourage participants to be more active during training session. Especially, the short video presentation and group discussion creates an enjoyable situation.

The participants’ enjoyment could be seen through the first activity. They appreciate this activity because it helps them to identify the real concept of SoTL. Discussing in group provides a platform for participants to share their ideas in many viewpoints. Even, their teamwork skills and higher order thinking skills will be highlighted. Besides, this activity helps the participants to apply theoretical concept into practical use.

I assessed the participants’ feedback in order to see their understanding on SoTL as overall. The participant’s feedback has been attached in the Appendices. This activity assists participants to understand the concept of SoTL. They clearly explain it with full of confidence. This activity also provides me with some information on participants understanding on SoTL. In summary, I am satisfied with the results and will continue the similar activity in coming sessions in order to increase the participants’ involvement in the discussion.

After the discussion on SoTL concepts, another video was shared with participants. The video is on “WHY CARE?” by Dr. Gary Poole. He shared his view on the passion that he has on teaching and learning. He did suggest on the ways to pursue the passion for teaching and learning, which are research, writing and, academic and intellectual conversations. The

continual improvement of teaching and learning can be done through investigation, exploration and conversation. This video emphasized on the reasons to continue with SoTL. I continue the session by sharing some findings on why we should bother with SoTL? The findings include:

- SoTL matters because learning matters, and can help students learn more effectively,
- Offers professors the tools to more effectively share their disciplinary passions,
- Offers lecturers an avenue for continued intellectual growth,
- SoTL can build strong cross disciplinary communities - intellectual climate,
- Crafting Institutional policy via best evidence available, and,
- Embodies a spirit of pedagogical innovation.

The findings were anticipated to provide some insights on the importance of pursuing SoTL research while not giving up on academic research.

I continued the session by explaining on five principles of good practices in SoTL. The SoTL principles are well known to the researcher, however, we should always emphasize on it in order to produce quality SoTL research. The five principles include:

- Inquiry into student learning,
- Grounded in context - Effective learning also takes place when it is context-based,
- Methodologically sound – strength or soundness of the methodology; for example, we may start earlier by evaluating our approach to teaching,
- Conducted in partnership with students, and
- Appropriately public.

The session continued with second activity. This activity is on sharing the individuals' experiences in approaching and conducting SoTL research. The participants were given Google Form link to answer the questions. The questions are (i) Do you discuss your teaching with colleagues? (ii) Do you read the educational literature in your discipline? (iii) Do you attend workshops related to teaching? (iv) Do you engage in Teaching and Learning scholarship? and (v) Do you publish Teaching and Learning scholarship? The participants were required to answer all the questions. After 10 minutes, I started to get the response form participants. Seven participants indicated their experiences accordingly. Three out of seven participants sometimes discuss about their teaching method / approach with their colleagues. Only two participants frequently read educational literature in their disciplines. Whereas, four participants rarely attended the teaching related workshops. Four out of seven respondents never engaged in Teaching and Learning scholarship. Five respondents never publish any Teaching and Learning Scholarship related publications. I can understand the situation that faced by the respondents. It is difficult for the participants to publish their work if they are not really engaged in SoTL related research.

Self-Reflection: Reflection-On-Action

In my opinion, the participants have successfully achieved training learning outcome one. They were able to understand the subtopic clearly. It can be seen through two various activities that have been conducted during training. As an instructor, we can identify and feel whether or not the participants understand and apply it throughout the process. Thus, the activities are an important method to cultivate the learning processes.

As what I can see during discussion, only few respondents were involved in explaining the answers. So, to avoid repetition, I always emphasized on take turn procedure where everybody in the training session will have an equal chance to share their ideas.

After the second activity, 15 minutes break were given to the participants to refresh themselves.

At the same time, I post the third activity Google Form link via WebEx chat box. This will give participants more time to prepare themselves in providing their feedback.

The next sharing session starts after the short break. The third activity consist of two main questions such as (i) What do you understand by good teaching? and (ii) Define scholarly teaching. This activity has been responded by six respondents. They have shared their opinion on both questions. According to responses, good teaching means ‘make students understand and learn, interaction-engaging students, teaching that can link theory and practice, when students understand the subject matter, accomplishes the learning outcomes and builds holistic learners who can meet the challenges of the dynamic and competitive world, and, students be able to understand’. Whereas, scholarly teaching means, ‘continuously review teaching and learning process, research on our teaching, doing research on your teaching: action research, it’s a teaching session that follow the correct flows, makes use of the right materials to impact the students’ learning activities which involves intellectual activities engendered to bring about evidenced based improvements in the learners, and, maybe referring to evidence based on research’.

The response from participants clearly shows that they did understand on the differences between good teaching and scholarly teaching. I continued the session by explaining on good teaching versus scholarly teaching and SoTL. Good teaching means which most lecturers attempt to do (e.g., in the form of student feedback scores, peer review, teaching portfolios, promote students learning, fulfill department’s objectives). On the other hand, scholarly teaching means knowing the literature on teaching, seek out and incorporate best practices, pay attention to students’ feedback, invite peers to evaluate them, discuss teaching issues with colleagues. Meanwhile, SoTL itself means area of inquiry about teaching and learning, using appropriate research methodology for the discipline, and makes it public through peer-reviewed presentations or publications. SoTL’s special step - strive to be reflective and informed (i.e., scholarly) about most of the best teaching practices. Besides that, I have also explained on key characteristics of inquiry based-learning such as find the truth, work with others, respect diversity of voices, seek the best possible solution and answer, solve problems, create new knowledge and resolve doubts.

Self-Reflection: Reflection-On-Action

In my opinion, the participants have successfully achieved course learning outcome two. They were able to understand the subtopic clearly. It can be seen through third activity that have conducted during the session. It really inspires me to work harder to improve my teaching and learning processes. As an instructor, we can identify and feel whether or not the participants understand and apply it throughout the process. Thus, the activity is an important method to cultivate the learning processes.

I have continued the session with reflective practice. The reflective practice is an essential element in conducting SoTL research. Critically reflective educators are inquisitive about their teaching assumptions, attentively observe their own teaching practices (sometimes in partnership with other colleagues and/or students) to cross-check with their assumptions or theoretical understandings, and may involve themselves in scholarly activities to share practices they find contextually relatable and relevant that might also be interesting to others (Chen, 2021). There are different roles of reflection on teaching and learning for educators such as educators’ reflection, students’ reflections and any other relevant stakeholders’ reflections. Examples of reflection model are by Rofle, Freshwater, and Jasper (2001) – What? What happened? So What? and Now What?; Brookfield (2005) – Autobiographical lens, learner’s lens, peer lens and theoretical lens; Bain, Ballantyne, Mills, and Lester (2016) – Level 1 (Reporting/Responding), Level 2 (Relating), Level 3 (Reasoning), and Level 4

(Reconstructing), and some other examples like, Gibbs, and Eastcott (1988) Reflective Cycle, Schon's (1991) Reflection-on-Action and Reflection-in-Action, and Kolb's (1984) Experiential Learning. I also shared two different examples of complete reflective exercise with the participants' namely social science fieldwork report and learning journal weekly reflection. It gives clear picture for participants on writing the reflective.

The session continued with fourth activity on the most difficult part in SoTL. The participants eagerly responded on this question. Participants did find literature review section is the most difficult part in preparing the SoTL proposal. They also find some difficulties in finding relevant and latest literatures pertaining the issue arises in the classroom. However, this is not only affecting the SoTL research but also other academic research. I give some solutions for the participants, (i) Choose the right platform (e.g., journal databases), (ii) Discuss with the expert of related area, (iii) Update ourself with current issues related to our area of expertise, and (iv) Networking.

The fourth activity was done to understand problems that arises among scholars in conducting SoTL research. I shared some information's on the current challenges and future visions with the participants. Current challenges include (i) Still struggling with the meaning of SoTL and related terms? How is SoTL related to traditional educational research?, (ii) Distinctions that impact support, evaluation and rewards, (iii) Challenge of synthesizing what we know, what we don't know, and what we need to know, and (iv) Many barriers to doing and applying quality SoTL work - value and rewards for SoTL, insufficient training and development, lack of funding and other rewards, lack of knowledge by peers about how to evaluate SoTL work, colleagues who are "hostile" to SoTL work, and isolation of lecturers doing SoTL from faculty members doing "traditional" research. On the other hand, the future visions include (i) Change the culture – 1) to make significant progress that will impact student learning and development; 2) include a change in our views of our roles as faculty and staff who work to enhance student learning, (ii) Consider various models of doing, supporting, understanding, and evaluating SoTL work - vary by institutional, disciplinary, or departmental culture and structure, (iii) SoTL research should be integrated into their ongoing professional life because for some SoTL will be their primary line of research; for others it may be a secondary area, and (iv) Improvements in development and support - managing SoTL grant programs, publishing SoTL work, helping and facilitate SoTL writing circles, providing resources (books, journals, web sites), editing draft SoTL grants or articles, finding SoTL mentors, assisting in the identification of SoTL funding sources, and rewarding SoTL work. The information discussed on current challenges and future visions definitely could help the participants to get clearer picture on SoTL as a whole.

Self-Reflection: Reflection-On-Action

In general, the participants participated well compared to previous sessions. They become volunteer in answering the questions. This makes me feel very much happy and satisfied because I have made the changes in themselves. The participants have understood the subject matter clearly and successfully achieved course learning outcome three. It definitely shows their interest in learning new phases of the subject. In summary, I am satisfied with their performances.

Before the session ends, I shared some of the SoTL journals for publication purposes. It might help the participants to publish their SoTL work. The participants were very happy to get the list of SoTL journals and they really appreciate it.

As overall, the participants enjoyed themselves and gained many insights on SoTL via this training. I also asked the participants to assess the training session as well as the instructor's way of delivering the knowledge on SoTL. The Google Form link on training evaluation was

shared with the participants. They did respond very well. I thanked all the participants for being very cooperative and enthusiastic throughout the training session. The participants were also request for frequent training on SoTL for continuous improvement in research related matters. The session ends at 12.30pm.

Conclusion

The reflection helps me in understanding the entire process clearly. I managed to realize and accomplish the objectives of the training. As indicated earlier, the purpose of reflection is to learn from experience by a person or a group. Self-reflection in particular offers a great opportunity for me to ask myself which part I should have done better or differently for future events.

References

- Bain, J., Ballantyne, R. & Mills, C., & Lester, N. (2016). *Reflecting on Practice*
- Brookfield, S. (2005). *Becoming a critically reflective teacher*. San Francisco. Jossey Bass.
- Chen C. J. (2021). Enabling SoTL via critical reflections. *Asian Journal of the Scholarship of Teaching and Learning*, 11(1). 1-4.
- Dummer, T., Cook, I., Parker, S., Barrett, G. & Hull, A. (2008). Promoting and assessing 'Deep Learning' in Geography fieldwork: An evaluation of reflective field diaries. *Journal of Geography in Higher Education*, 32. 459-479.
- Gibbs, G. F., B & Eastcott, D (1988) *Learning by doing. A guide to teaching and learning methods*. Birmingham Polytechnic.
- Kolb, D. A. (1984) *Experiential learning. Experience as a source of learning and development*. New Jersey. Prentice Hall.
- Rolfe, G., Freshwater, D., & Jasper, M. (2001). *Critical reflection in nursing and the helping professions: A user's guide*. Basingstoke: Palgrave Macmillan.
- Schon, D. (1991). *The reflective practitioner: How professionals think in action*. Aldershot: Ashgate Publishing Ltd.

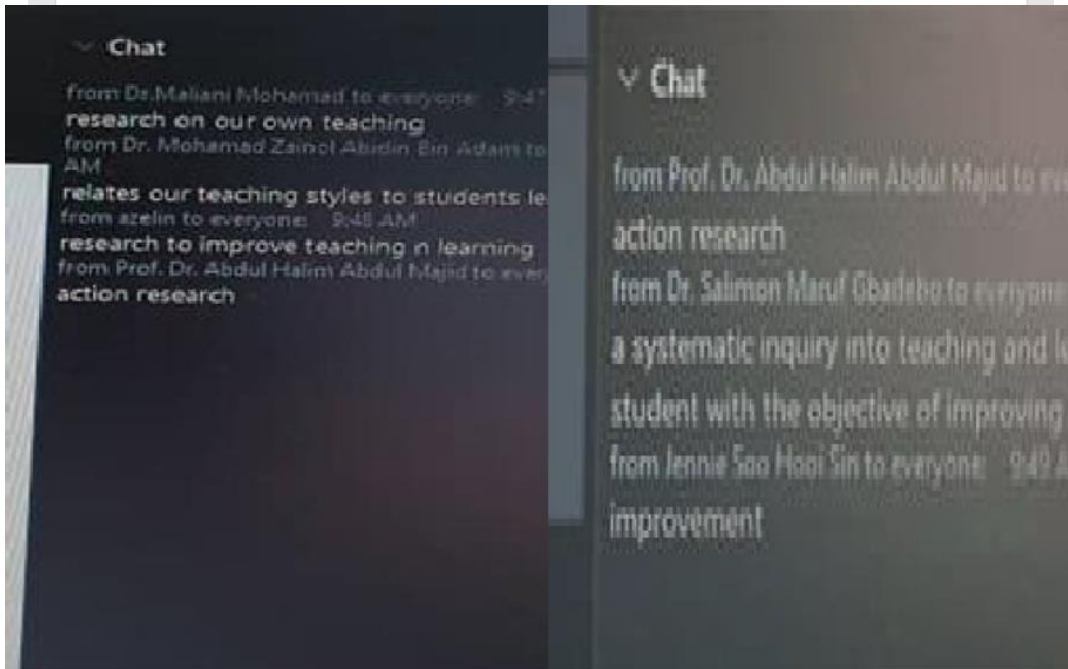
Appendices

First Activity and Feedback

SoTL ???

Activity 1

Describe SoTL in ONE word



Second Activity and Feedback



Activity 2 - SoTL

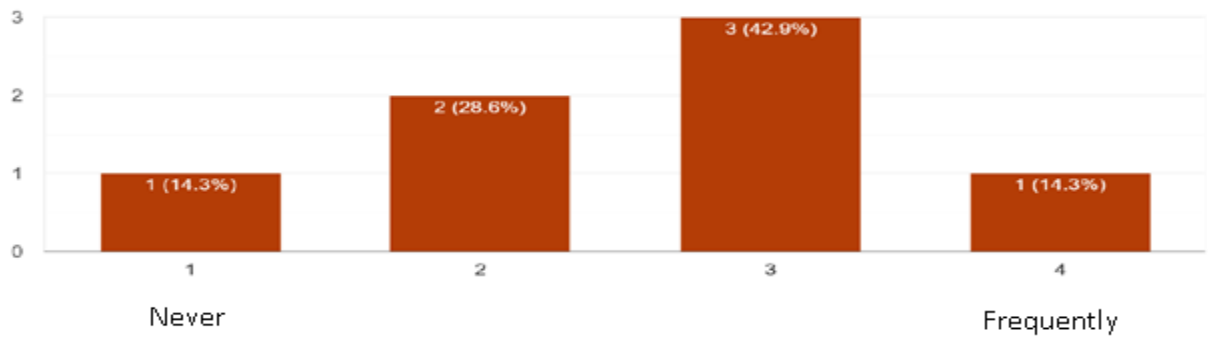
Form description

Name

Short answer text

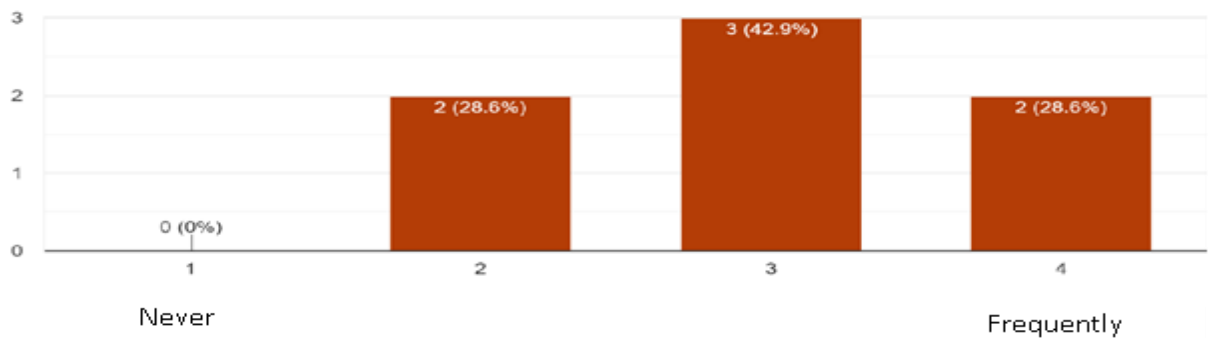
1. Do you discuss your teaching with colleagues?

7 responses



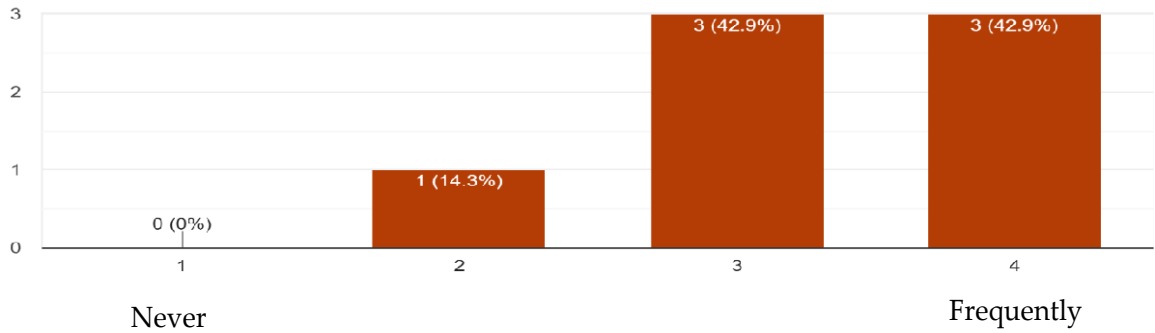
2. Do you read the educational literature in your discipline?

7 responses



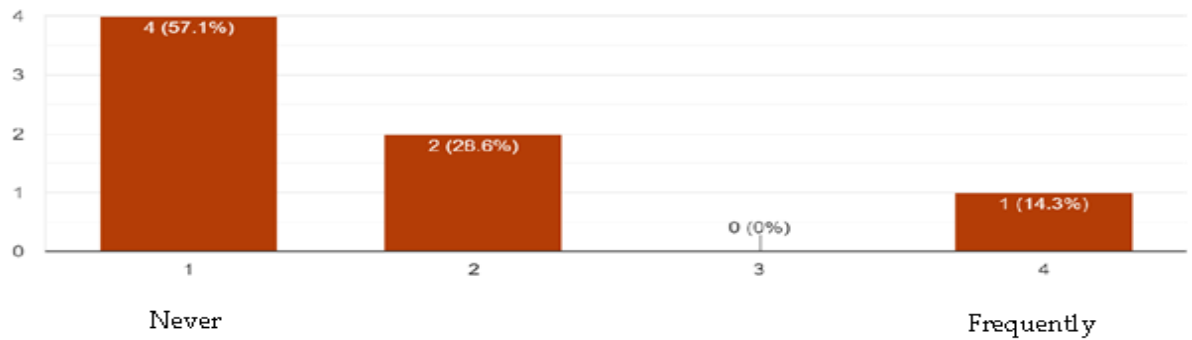
3. Do you attend workshops related to teaching?

7 responses



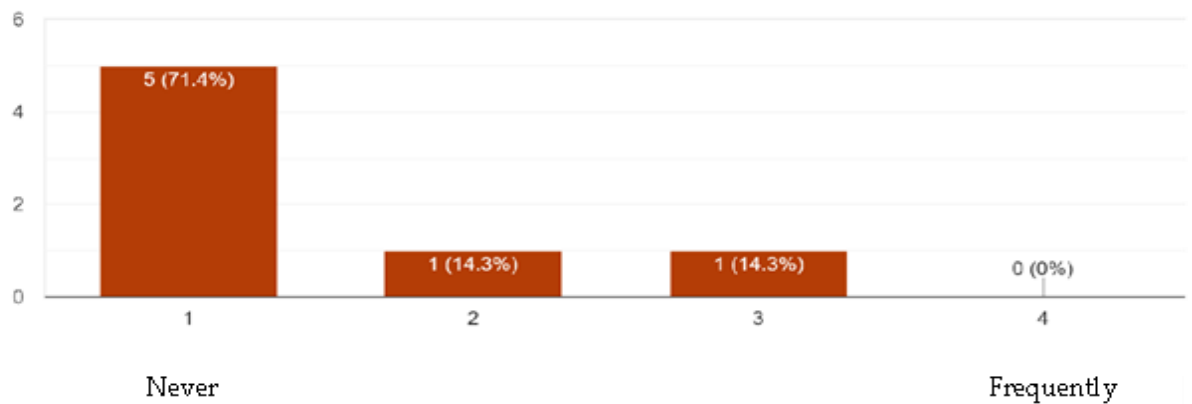
4. Do you engage in Teaching and Learning scholarship?

7 responses



5. Do you publish Teaching and Learning scholarship?

7 responses



Third Activity and Feedback



Activity 3 - SoTL

Form description

Name *

Short answer text

What do you understand by good teaching?

6 responses

make students understand and learn

interaction--engaging students

Teaching that can link theory and practice

When students understand the subject matter

A good teaching accomplishes the learning outcomes and builds holistic learners who can meet the challenges of the dynamic and competitive world

students be able to understand

Define scholarly teaching.

6 responses

continuously review teaching and learning process

research on our teaching

Doing research on your teaching : Action Research

Its a teaching session that follow the correct flows

Scholarly teaching makes use of the right materials to impact the students' learning activities. it involves intellectual activities engendered to bring about evidenced based improvements in the learners.

maybe by referring to evidence based on research

Fourth Activity and Feedback



**In your opinion,
what is the MOST difficult part in
SoTL? Why?**

1. Participants did find literature review section is the most difficult part in preparing the SoTL proposal.
2. Difficulties in finding relevant and latest literatures pertaining the issue arises in the classroom.

However, this is not only affecting the SoTL research but also other academic research.

- Solutions:**
1. Choose the right platform (e.g. journal databases)
 2. Discuss with the expert of related area.
 3. Update ourself with current issues related to our area of expertise
 4. Networking

Implementing Problem-Based Learning (PBL): What the Lecturers Said?

Nasihah binti Hashim^{*a}, Maizatul Azura binti Yahya^b

^{ab}Universiti Utara Malaysia

*Corresponding Author: h.nasihah@uum.edu.my

Abstract

Problem-based learning (PBL) approach is an educational innovation that emphasizes on the concept of student-centered learning. This approach encourages students to be active and collaborative in the classroom. At all levels of education, whether primary, secondary or tertiary level in various subjects or courses, PBL is used consistently in teaching and learning (PdP). However, today's online learning presents new challenges to the implementation of PBL in the classroom. In line with the development of the digital world in education, in this situation online learning (virtual) based on electronics (e-learning), digital classes, distance learning (remote learning) and hybrid learning are among the online PdP methods that began to be highlighted. Therefore, this paper will discuss the results of a preliminary survey on the implementation of PBL in online teaching and learning of Malay language courses at Universiti Utara Malaysia (UUM). A survey was conducted on the teaching personnel for Malay language courses offered at UUM as elective courses. Semi-structured interviews were utilized in this study to determine the extent of the lecturers' knowledge and opinions on the implementation of PBL online. The results of the survey showed that there were weaknesses and shortcomings in terms of knowledge of PBL, but the lecturers of the Malay language courses displayed positive attitudes and were willing to implement the PBL approach if given the opportunity and space.

Keywords: Problem-based learning (PBL), student-centered learning, teaching and learning of Malay language

Introduction

Problem-based learning (PBL) is one of the student-centered learning approaches commonly used by lecturers to create a more effective learning process and gain students' attention. PBL is an important development in contemporary education and it was first used in medical studies in September 1969 at McMaster University, Canada and Western Case University, United States of America (USA) by Howard Barrows (Barrows & Tamblyn, 1980). Barrow has conducted a PBL approach to medical students at McMaster University Medical School. Barrow's efforts to combine scientific knowledge with science process skills were successful when this approach showed positive effects.

PBL is a learning method with the concept of self-learning that encourages students to think critically to solve problems. PBL is designed to encourage and help students see the future role of learning relevance and problems that are authentic in nature. Authentic problems are problems that occur in daily life that are brought into the learning classroom in order to maintain students' motivation to learn and show students the importance of responsibility for professional attitudes (Hung, 2009).

Woods (2000) states that the PBL approach is a learning process that provides a conducive environment because students have to go through their own experience, that is, experience the problem-solving process themselves. Students will work in a team to solve problems in addition to self-learning activities carried out throughout the learning process. The problem solving process is monitored by a facilitator, that is, a teacher who acts as a coordinator

and motivator for students to continue thinking and encourages activities besides providing appropriate problems as learning triggers (Adenan Ayob, 2012; Tan Oon Seng, 2007; Wee, 2004). Such learning methods are not only intended to improve knowledge but also involve the activity of transferring information from the learning classroom to real life realities.

In line with the strengths and advantages of PBL as a student-centered teaching strategy that can stimulate students to be active, creative and innovative in the classroom, then PBL is one of the teaching and learning (PdP) activities that can be applied in the Malay language PdP process to attract students to learn. On this basis, PBL is proposed to be implemented in Malay language courses offered to all students of Universiti Utara Malaysia (UUM) either as an independent elective course, compulsory elective or the core of the program. The curriculum of Malay language courses at UUM is designed to provide the skills to apply the Malay language that is accurate, grammatical, practical, suitable for the audience as well as beautiful and artistic in speech and writing.

UUM as a public university with a thrust in the field of management, lists the course SBLM1053 Malay Language for Management as one of the elective courses offered to all UUM students. This course provides exposure to students on the use of Malay language that is excellent, accurate, grammatical and practical in managing organizations. In addition, at the end of the course students are able to apply the Malay language well not only in speech but also in writing, especially when producing management documents. In line with the learning outcomes of the course outlined, PBL is implemented in this course as one of the student-centered PdP methods to enhance students' language skills when communicating while creating active and interesting learning classes.

The paradigm shift of PdP in higher education institutions to online PdP certainly has implications for students, lecturers as well as PdP patterns in general. Certainly the challenges that lecturers and students have to go through are greater than face-to-face learning. The implementation of online teaching, including PBL, has required them to equip themselves with mastery of technology in achieving the goal of learning Malay language, which is to build students' language skills. Therefore, in order to realize PBL in PdP of SBLM1053 Malay Language for Management course, a preliminary survey of the knowledge, readiness and perspectives of lecturers should be conducted to study the extent to which lecturers are willing to implement PBL in the classroom virtually. The results of this survey are expected to help lecturers to design PBL better and implement it effectively thus the determined learning outcomes can be accomplished.

Research Objectives

This research was conducted based on the following objectives:

1. To identify the readiness of lecturers to implement problem-based learning as a teaching and learning activity for Malay language courses.
2. To analyze the expected challenges of lecturers on the implementation of problem-based learning as a teaching and learning activity of Malay language courses.

Literature Review

Along with the development of student-centered PdP approaches in educational institutions whether primary, secondary or tertiary level, studies on it began to expand widely, including studies on PBL. Most studies have found that PBL can not only be an alternative to the PdP method but is able to encourage students to become active in PdP sessions thus improving students' critical thinking skills.

The study of Torp and Sage (2002) for example, found that PBL focuses on learning experiences involving “*minds on*” and “*hands on*” provided through investigation and results from real problems. In PBL, students are given a real problem or situation and are required to solve it by seeking inputs from books, journals, newspapers, pamphlets, the internet and the organizations involved.

Moreover, the studies of Graff and Kolmos (2003), Beachey (2007), Lin et al. (2010) and Polyzois et al. (2010) found that, the use of PBL method is more effective in learning compared to conventional teaching methods such as lectures. PBL is very suitable as one of the alternatives from active learning to diversify teaching in order to meet the learning style of students. Students are able to cultivate critical, open and reflective thinking among students (Nabishah et al., 2009 and Shipra Vaidya, 2009).

Cornish (2007) study found that PBL brings the concept of “*learning how to learn*” in learning skills and escalate a strong curiosity and make students have continuous learning skills. Meanwhile, the study of Ab. Halim Tamuri & Siti Muhibah (2015), and Alizah Lambri & Zamri Mahamod (2015) also proved that PBL (referring to PBL in this study) is an active learning method and allows students to “*learn how to learn*” (learning by doing). PBL also changed the role of students to active information seekers. Students identify what they already know, what they currently know, and how as well as where to access new information that can assist them in the problem-solving process (Li & Stylianides, 2018).

Meanwhile, for Afandi (2006), Syakirah (2011) and Mohamad Ali, Mohan, Salmah & Nor Hanani (2019), PBL mobilizes pedagogy and teaching techniques more effectively thus improving students' communication skills. Students become more proactive and more willing to contribute to the development of broader ideas. This method has emerged as a very important and well-known teaching method in university level education in recent times. However, it is still tested in many courses offered in institutions of higher learning. PBL stimulates deep learning, students are comfortable with the learning environment and can form a knowledge that is meaningful to them (personal meaning).

Meanwhile, Nasir Hassan's (2014) study found the following: (1) Seven elements of thinking skills namely prioritizing, sequencing, comparing and contrasting, generating ideas, linking, creative and innovative and problem solving; (2) three elements of collaborative learning namely idea sharing, peer learning and information sharing and (3) seven elements of value practice namely patience, competitiveness, efficiency, volunteerism, teamwork, proactiveness and social skills. This study also found that the elements of self-attitude, time, tool and material requirements as well as expenses become obstacles and challenges during the implementation of PBL. This study generally shows that the implementation of PBL in the learning process contributes to the improvement of the quality of trainee teachers who are skilled, creative and innovative, possess personal and ethical qualities.

The strength and effectiveness of PBL in PdP is acknowledged by excellent Malay language teachers. They have chosen PBL as the main method used in online Malay language learning due to changes in educational patterns during the COVID-19 pandemic. The findings of this study are discussed by Mohd Rohiman, Rohizani and Azlinda (2021) in their study of excellent Malay language teachers in secondary schools. Indirectly, their study proves that PBL has been conducted in online PdP at the secondary school level.

Studies on the readiness and views of PBL implementers, that is, teaching staff are also widely highlighted by researchers but not very extensive. A study on the attitudes and perceptions of Malay language teachers on the implementation of PBL in the learning and facilitation (PdPc) of the literary component (KOMSAS) of secondary schools was conducted by Zamri and Jamilah (2018). This study identifies the perception of Malay language teachers referring to the level of knowledge, level of implementation skills and the level of attitude of teachers in PdPc of Malay language using KOMSAS materials. Based on their study, it was

discovered that the knowledge of teachers to implement PBL in KOMSAS is at a moderate level. Although teachers have a positive attitude of the use of PBL in PdPc of KOMSAS, but the lack of knowledge and skills to implement PBL in PdPc of KOMSAS Bahasa Melayu becomes less effective. This finding is similar to the results of a study obtained by Rosnaini Mahmud (2006) and Rohani Aziz (2011) who found that the level of knowledge of teachers in Malaysia on PBL is at a moderate level. While the findings of the study by Siti Zaleha Mohd. Nor (2015) is the opposite because it shows that teachers' knowledge is at a high level.

The study of Nor Amalina Ab Hakim and Zanaton Iksan (2018) can be concluded that although the level of knowledge of teachers is high and teachers' positive attitude towards the PBM (PBL) approach but in terms of teachers' implementation skills is still at a moderate level. It was found that the acceptance of Science teachers is quite good, it only requires exposure to PBM so that teachers can master and implement it adequately. Based on the results of the studies above show that a study on the knowledge, readiness, attitude and perception of PBL implementers should be conducted, because the results of this study will be able to provide recommendations for more effective implementation of PBL.

Research Methodology

Data collection in this study was conducted through semi-structured interviews. Respondents consisted of lecturers involved in PdP of SBLM1053 Malay Language for Management. Interviews were conducted prior to designing the PBL to be implemented. Because this course has many groups and is taught alternately by the lecturers, then all Malay language lecturers were interviewed. Interviews were conducted by filling in the form provided due to the factors of the ongoing national Movement Control Order. Transcripts of interview data were analyzed to answer the research questions. Raw data from the interviews were compiled, analyzed and interpreted to make it meaningful to the study. The method of analysis is referring to Marshall and Rossman (1999) who stated, basically the interview data analysis procedure is divided into six phases namely, i) organizing the data; ii) generate categories, themes and patterns; iii) encoding data; iv) test the understanding that arises; v) seek alternative explanations and vi) write a report. The results of the study are defined descriptively to answer the research questions that have been outlined.

Results and Discussions

This survey study involved 20 respondents, namely Malay language course lecturers at UUM. As a result of the analysis of the respondents' profile, 70% of the total respondents have 11-30 years of experience teaching Malay language courses, namely 35% (16-20 years), 20% (11-15 years) and 15% (21-30 years). While 30% of respondents have experience teaching Malay language courses under 10 years, namely 15% (1-5 years) and 15% (6-10 years).

The differences in the respondents' experience in teaching Malay language courses portray the impression that the respondents have different levels of knowledge and experience in implementing PBL in the classroom. This situation is evidenced when the survey results found that as many as 60% of the 20 respondents were found to have performed PBL in the classroom and the remaining 40% had never performed PBL in the classroom. The experience of teaching Malay language courses of more than 10 years provides respondents the opportunity to diversify their PdP methods and one of them is using PBL as one of the student-centered teaching and learning methods as well as building new experiences in the Malay language PdP process to be more interesting.

Readiness of lecturers to implement PBL online

In the context of this study, the readiness of lecturers is seen in terms of knowledge and consent or willingness of Malay language lecturers as knowledgeable and skilled teachers to implement problem-based learning (PBL) approach in the online teaching and learning process.

Based on the answers to the questions on PBL knowledge, 45% of the total respondents gave clear answers about PBL, and another 35% gave uncertain answers regarding PBL and another 20% gave less certain answers about the real goals of PBL. Most respondents said in the PBL method, students will be given a problem to solve. Among the feedback given are as follows:

- I. Problem-solving-based learning aims to facilitate lecturers and students through the learning process more effectively.*
- II. A learning process that highlights authentic problems for students to solve. Teachers only as facilitators.*
- III. Instructors create problems, or take problems that actually occur, to be discussed in class in order to test the teaching content and find solutions.*

In addition, the results of the survey showed that 100% of the respondents agreed and were interested in implementing the PBL method in PdP of Malay language online. Respondents also believe that besides creating an interesting learning environment, PBL brings benefits and positive impact to the students involved. Respondents' opinions include:

- I. I am ready and interested in implementing PBL when the pdp session is conducted. It can stimulate students' thinking thus able to create a conducive pdp atmosphere.*
- II. Something interesting because students can apply knowledge to solve problems that exist in their environment.*
- III. I am willing and interested to implement it in class.*

Respondents were also found to express readiness to strive to implement PBL in the best way and will refer to experts or attend courses to learn the methods of PBL. Among the quotations from respondents' feedback are:

- I. Things that are beneficial need to be implemented. If there is a problem, consult a specialist or acquire additional information by attending courses and so on.*
- II. Strive to design appropriate activities and implement them wholeheartedly.*
- III. I will try to implement it as best I can. Because PBL has positive impact on students.*

Overall, based on the feedback on the readiness to implement PBL shows that although there are weaknesses and shortcomings in terms of respondents' knowledge of PBL, but respondents show a positive attitude and willingness to implement PBL in the classroom. This finding is supported by Fullan and Stiegelbauer (2001) who emphasize the importance of positive attitude of teachers in determining the acceptance of a teaching innovation. Positive attitude of a teacher indirectly encourages students to be more motivated in their learning and gives them the opportunity to explore learning more meaningfully. In fact, a survey on the readiness of teaching staff for PBL is very important to be conducted to ensure that an educational innovation, especially PBL can be implemented more effectively. For Railsback (2002), educators who are less prepared will face problems to implement an innovation because for them a change is a new burden to them. The findings of this study are expected to guide and guide lecturers to plan PBL activities better and more effectively.

The challenges of implementing PBL in PdP online

Apart from readiness, this study also examines respondents' responses to the expected challenges that respondents are likely to face when implementing PBL in online PdP. Based on the feedback, there are two aspects of the challenges highlighted by the respondents, namely

the challenges arising from the involvement and commitment of the students involved, and the classroom situations and conditions that take place when implementing the activities planned in the PBL method. These findings can be seen from the quotations of respondents' feedback as follows:

- I. *Involvement of students to live brainstorming. In addition to demanding critical and innovative thinking on behalf of teachers and students.*
- II. *Readiness of students who are already accustomed to teacher-centered methods.*
- III. *100% student involvement and commitment in the implemented activities.*
- IV. *Learning period and financial constraints.*
- V. *Students are unable to follow the fully planned activities due to poor internet access.*
- VI. *Students may have trouble accessing required materials virtually.*
- VII. *The challenge for teachers is to plan problems that are truly authentic and meet the learning outcomes.*

Examples I, II and III show the expected challenges considered by the respondents from the aspect of full involvement and commitment of students in the PBL activities that have been planned by the lecturers. Meanwhile, for example IV, V and VI show the challenges from the aspect of atmosphere and situation during the PBL process, namely time and financial constraints, and the level of internet connection of students. These challenges will disrupt the smooth running of the PBL process at that time. This is acknowledged by Aliyu (2019) and Dunsmuir et al., (2017) who also found that teachers face challenges when implementing PBL because it takes a long time to implement, especially those involving aspects of planning and implementation. Dunsmuir et al. (2017) also stated that the attitudes of students during PBL who are less interested in reading, lazy, less focused, not interested in academics and do not indulge in learning are among the challenges that teachers face while implementing PBL.

Moreover, for example VII is quite different because the respondents refer to the challenges faced by teachers (referring to the lecturers in this study) themselves when planning PBL activities, namely problem planning. This situation is supported by studies. Such aspect of teacher difficulty is also stated in the study of Cwynar (2020) especially in designing problems that are authentic in nature because it demands teacher expertise.

Conclusion

Based on the study conducted, it can be concluded that despite the weaknesses and lack of knowledge of lecturers on PBL, lecturers are supportive and optimistic to implement PBL in the online classroom. However, the challenges listed by the lecturers indirectly show the concerns of the lecturers, thus this situation shows that they are not really ready and confident enough to implement PBL successfully. The discussed results of this preliminary survey are expected to be an instruction and guidance to Malay language lecturers, especially in UUM to construct appropriate PBL implementation plans. This research can also be a motivator for Malay language lecturers to design more active and collaborative PBL activities compared to the teacher-centered approach as before to produce a generation that is globally competitive and meet the 21st century job market.

References

- Ab. Halim Tamuri & Siti Muhibah Haji Nor (2015). Prinsip pembelajaran aktif dalam pengajaran dan pembelajaran pendidikan Islam. *Jurnal Pendidikan Fakulti Pendidikan*. Bil 3 (2), 28-42
- Adenan Ayob & Khairuddin Mohamad. (2012). *Kaedah Pengajaran Bahasa Melayu*. Oxford Fajar Sdn. Bhd

- Afandi Ahmad. (2006). A first attempt of PBL in microelectronic course (BKE 4423) for computer engineering undergraduates at KUiTTHO. Seminar PBM KUiTTHO 2006.
- Alizah Lambri & Zamri Mahamod (2015). Pelaksanaan aktiviti pembelajaran berasaskan masalah dalam proses pengajaran dan pembelajaran Bahasa Melayu. *Journal of Malay Language, Education and Literature*, Jil 6,98- 117.
- Aliyu, M. M. (2019). Tutors' Experiences and Perceptions of a Problem-based Learning Approach in an ESL Writing Classroom. *ASIAN TEFL Journal of Language Teaching and Applied Linguistics*, 4(2), 71.
- Barrows, H.S & Tamblyn, R.M. (1980). *Problem Based Learning.-An Approach To Medical Education*. Springer Series On Medical Education (1). Springer Publishing Co.
- Cornish, L. (2007). *Creative Teaching, Effective Learning in Higher Education*. Research in Educational Education and Sustainability School of Education. University of New England Armidale. Unpublished.
- Cwynar, E. M. (2020). The Effects of Problem-Based Learning On The Academic Achievement Of Elementary Students And Teacher Perception. 120.
- Dunsmuir, S., Frederickson, N., & Lang, J. (2017). Meeting Current Challenges in School Psychology Training: The Role of Problem-Based Learning. *School Psychology Review*, 46(4), 395–407.
- Fullan, M. & Stiegelbauer, S. (2001). *The Meaning of Education Change*. Third Edition. Teacher College Press.
- Graff, E. & Kolmos, A. (2003). Characteristic of problem-based learning. *International Journal of Engineering Education*, 19 (5): 657-662.
- Hung, W. (2009). The 9-step problem design process for problem-based learning: Application of the 3C3R model. *Educational Research Review*, 4(2), 118–141. <https://doi.org/10.1016/j.edurev.2008.12.001>
- Li, H.C., & Stylianides, A. J. (2018). An examination of the roles of the teacher and students during a problem-based learning intervention: Lessons learned from a study in a Taiwanese primary Mathematics classroom. *Interactive Learning Environments*, 26(1), 106–117.
- Marshall, C & Rossman, G.B. (1995). *Designing Qualitative Research*. SAGE Publications.
- Mohamed Ali Haniffa, Mohan Rathakrishnan, Salmah Omar, & Nor Hanani Ismail. (2019). Problem Based Learning in the teaching and learning of the Malaysian Nationhood Course at University Utara Malaysia. *International Journal of Education, Psychology and Counseling*, 4 (32), 351-366.
- Mohd Rohiman Subri, Rohizani Yaakub & Azlinda Boheran Nudin.(2021). The Implementation of Teaching among Excellent Teachers in Malay Language Subject during COVID-19 Pandemic: A Case Study PENDETA *Journal of Malay Language, Education and Literature* Jilid 12 Edisi Khas, 21-32.
- Nabishah Mohamad, Farihah Hj. Suhaimi, Srijit Das, Abdus Salam, Siti Mariam Bujang, Mohamad Arif Kamarudin, Harlina Halizah Siraj, Wan Zuriah WN. (2009). Problem based learning facilitation: New challenges to higher education educators. *International Medical Journal*, 16(4), 243-246
- Nasir Hassan. (2014). Pembelajaran berasaskan projek dalam kalangan guru pelatih Institut Pendidikan Guru Malaysia: Satu kajian kes. Tesis Sarjana Pendidikan, UUM.
- Nor Amalina Ab Hakim dan Zanaton Iksan. (2018). Knowledge, Implementation Skills and Teachers' Attitude Towards Problem-Based Learning (PBL) in Science Subject. *Proceeding ISPEN2018*, 72-82.
- Rohani Aziz. (2011). Pengetahuan, sikap dan kemahiran ICT di kalangan guru-guru Matematik di sekolah menengah Pahang. Tesis Sarjana Pendidikan. (Unpublished). Faculty of Education: UKM.

- Rosnaini Mahmud. (2006). Kesediaan teknologi maklumat dan komunikasi asas dalam pendidikan (TMKP) guru-guru sekolah menengah. Bangi: Faculty of Education: UKM
- Syakirah Shamsudin. (2011). Pembelajaran berasaskan masalah (PBM). In Nurulhuda Abdul Rahman. Strategi dan kaedah pengajaran dan pembelajaran. Pearson Malaysia Sdn Bhd.
- Shipra Vidya. (2009). The problem-based learning model for teaching entrepreneurship. In Tan O.S.(pnyt.). Problem-based learning and creativity. Thomson Asia Pte Ltd.
- Siti Zaleha Mohd Nor. (2015). Pelaksanaan Konsep 5P (penggabungan, penyerapan, pengayaan, pemulihan dan penilaian) dalam pengajaran Bahasa Melayu. Tesis Sarjana Pendidikan. (Unpublished).
- Tan Oon Seng. 2004. Enhancing thinking through problem-based learning approaches international perspectives. Thomson Learning
- Torp, L. & Sage, S. (2002). Problems as possibilities: Problem-based learning for K-16 education. 2nd edition. Association for Supervision and Curriculum Development.
- Wee, K. N. L. (2004). Jump Start Authentic Problem Based Learning. Pearson/Prentice Hall.
- Woods, D. R. (2000). Helping Your Student Gain The Most From PBL. Proceeding of Second Asia-Pasific Conference on PBL. Tematik Polytechnic.
- Zamri Mahamod & Jamilah Hassan. (2018). Malay Language teacher's perception on the use of Problem-Based Learning methods in learning and facilitating on KOMSAS. PENDETA Journal of Malay Language, Education and Literature Jilid 9, 41-50.

Student Reflection of Leadership Communication Course related to Self-Confidence

Azlina Kamaruddin

Department of Communication, Universiti Utara Malaysia

Corresponding Author: lyna@uum.edu.my

Abstract

Reflection is an influential instrument to lecturer in order to assist students to reflect in the classroom. Obviously reflection should contribute to build onto knowledge they have assimilated throughout the course. Thus, I conduct this study to achieve three research objectives including (i) to identify factors which contribute to students' confidence in classroom; (ii) to discuss strategies enhancing confidence; and (iii) to explore students' reflection about Teaching and Learning (T&L). Study conducts at Universiti Utara Malaysia, with a sample of seven informants. This study uses qualitative research methods by doing semi-structured interview, observation and reflection by the students. Data transcripts were processed through thematic analysis to produce relevant themes. The findings show that students are more influence to increase their level of confidence in public by learn from others' personality, style of teaching and learning, improve and able to change behaviour, and etc.

Keywords: reflection, leadership, communication, self-confidence.

Introduction

Reflection is an influential instrument to lecturer in order to assist students to reflect in the classroom. Obviously reflection should contribute to build onto knowledge they have assimilated throughout the course. Do reflection is so essential to Teaching and Learning (T&L)? There are some advantages of reflection among students. For instance, it allows students to realize the significance of their own learning process. Thus, students can recognize what they did well, what they failed at, what they need to change. Simultaneously, it also can offer students an opportunity to come up with solutions and strategies to improve on the learning process. In addition, reflection provides students with motivation to learn and enjoy the process of learning. This motivation comes from their reflecting on their thoughts, feelings and emotions. Entirely, the most important benefit of reflection in the classroom is for students to be able to know why they needed to learn these concepts, theories, and ideas (Rusul Alrubail, 2015). However, it depends on the skill of T&L.

Moreover, the revolution of the teaching era is increasingly showing maturity in the thinking of students. Although traditional teaching methods are still used in teaching techniques, but should be given a new lease of life by applying Student-Centred Learning (SCL) techniques thoroughly. Most universities have begun to move to a level of teaching as a result of a combination of these two teaching practices. Traditional memorization teaching and one-way communication course message, especially lecturer-centred, are seen as less effective in providing learning satisfaction for today's students.

Thus, Teaching and Learning (T&L) today is seen as no longer relevant using traditional lecturer-centred approaches only. Student-centred teaching needs to be incorporated with traditional approaches as the rapidly evolving sources of information cause students to adapt to the information sources of their environment. Lecturers need to take the opportunity to stimulate knowledge among these students so that it can be developed in the lecture hall. Existing students experience and knowledge can be enhanced with clear guidelines or rules

through teaching and learning sessions. This situation will be able to increase students' mastery of the field they have and in turn be able to adapt the knowledge or skills learned to their environment.

Literature Review

The government's efforts to produce a generation that is knowledgeable and able to lead the country to the pinnacle of success requires good education. Without a clear and systematic education system, it will be difficult for the government to determine the future of the country. All this depends on the mastery of knowledge, information, skills, values and attitudes of the students born today. In addition, an important element in the Outcome Based Education (OBE) is the curriculum used throughout the teaching and learning process carried out. According to Yusuf (2000) explained that curriculum is a word derived from the Latin word that is gives meaning as a path while Ishak (2003) sees the curriculum in a broader context that is curriculum covers the entire experience gained in and out of school as well as things that taught in the classroom and in school. Based on the report of the national education system concludes the curriculum as a plan that includes all knowledge, skills, values and norms, and elements of culture and racial beliefs in the country (Ministry of Higher Education, 2012).

Outcome Based Education (OBE) is the main approach in the teaching and learning system in the new millennium. In general, it is based on the objective of producing suitable students and meeting the needs of the market and society in driving the country towards progress. OBE can be described as an educational process that focuses on achieving specific outcomes in terms of individual student learning with various Student-Centered Learning (SCL) (Rodzah, 2011). Outcomes from teaching and learning are a priority. Students who follow this process need to understand what is desired and also what needs to be developed in their mastery of learning. If the desired result is not achieved, then this process allows the lecturer to modify or make improvements from time to time to meet the desired result. This process is seen as appropriate and in line with the National Education Philosophy which explains as follows (Ministry of Higher Education, 2012):

“Malaysian education is a continuous effort towards further developing the potential of individuals in a comprehensive and integrated manner to create a balanced and harmonious human being in terms of spiritual, emotional and physical intellect based on faith and obedience to God. This effort is to produce Malaysians who are knowledgeable, skilled, virtuous, responsible and able to achieve personal well-being and contribute to the harmony and prosperity of society and the country.”

Factors that cause lack of self-confidence

The skill of applying effective and assertive communication strategies is a major challenge for lecturers. Lecturers must have a high level of humility and courtesy. Despite that, most lecturers choose to deliver one-way lectures to their students regardless of whether the students understand and are able to master the essence of learning. The tendency to pursue one-way communication techniques by lecturers creates stress in students because they are unable to develop their self-potential and ability to reason well. As a result, students become passive, only become loyal listeners and are unable to counter-argue presenting what is implicit in the heart. Beside, according to Novita (2020) lack of pauses and visual aids performed by the lecturers make their teaching become less interesting.

On the other hand, students who are perfectionists would find public speaking pressures them to present their speech perfectly, resulting in self-imposed anxiety. Students who experienced anxiety usually have low self-confidence. Anxiety not only dominates emotional

wellbeing but also shows physical symptoms such as trembling or shaking, cold clammy hands, shaky voice, rapid heartbeat, sweating, blushing, dizziness, shortness of breath, digestive discomfort, or forgetting something you know or were about to say. Some may experience panic attack from this phobia (Katz, 2000).

In a proceeding written by Nurul Jamilah et al. (2015) students are most likely to show fear in public speaking during presentations of their work in class. These students, too, only answer questions along with the whole class rather than individually. Generally, students who have phobia in public speaking will encounter difficulties in their social life. Moreover, these students will mask off their talents because they are afraid of being judged negatively or getting themselves ashamed and subsequently make them appear less confident among everyone else's. These students, even if they possess excellent computer skills, will affect their employability chances because they will find it hard to converse in job interviews (Nurul Jamilah et al., 2015).

Kankam and Boateng (2017) acknowledged "the role of lecturers in managing speech anxiety; he counseled that instructors must evaluate speeches as positively as possible while providing constructive criticism" (p.31). The results from their study found that factors that affecting speech anxiety among students were caused by fear of derision, negative evaluation, deficiency in the use of English language comparisons among students, students' academic level and situational inducers.

Besides that, according to Zefanya Relita Trisnaningati and Frikson Christian Sinambela (2021) when student need to perform on public speaking, individuals distinguish and realize that their behaviour is being observed and appraised. Social anxiety in individuals increases when faced with situations where others will be judged. In additions, the usage of language also contributes to the lack of confidence among people. Furthermore, according to Novita (2020) stressed that story-telling and body language performed by a speaker or a lecturer are among the most stimulating aspects that make them attracted in an English speech or teaching so then they can speak another language with confidence.

Stimulating strategies in Teaching and Learning

The case study by Azlina (2019) focused on the successful combination of using ethos, pathos and logos implemented by a media celebrity, Ahmad Fedtri Yahya. Ethos is referring to the personality character, the way how Fedtri uses verbal and non-verbal communication. In this case, Fedtri has well developed his personal anecdotes and success stories until today. His track record is going smoothly and has achieved his target to become an excellent persuasive communicator. From the delivery part he used to have a meaningful eye-contact, body language, vocal variety and poise. Entirely, Fedtri has his own personal branding, which people know him as an Islamic icon and language expert.

Beside that, the storytelling style (pathos) has the power to impress the listener's attention. The story is very effective to explain the topic in question. When interest has arisen in the heart of the listener, the speaker or the persuader can submit another story so that the listeners will continue to be interested in hearing his speech. The story is a type of evidence referred to as dramatic evidence. Powerful stories raise emotional experiences to listeners. Therefore, through storytelling it will prompt people to act. While having a conversation with educated person, Fedtri attempt to use logos element in order to convince and persuade that person to accept his idea. For instance, he told the story about to gain financial support for his programme. He need to use facts and statistical point to assure those who are dealing with him, can understand very well and accepted the ideas. Then, the person will decide and take action as what he suggested (Azlina, 2019).

In addition, lecturers who call students by their name also promotes personality shaping (ethos) because the chance of getting called upon will make them ready and prepared to present

in front of the class as stated by Katz (2000), students are afraid of looking silly or being judged when they are the centre of attention. Moreover, lecturer's role in portraying a good image of being a speaker is one of indirect strategies to increase confidence level in public speaking because people learnt best through imitation; the act of copying the behaviour of someone observed (Schlag, 2011). Thus, being a lecturer – who students will look forward to – fits the role in personality shaping. In liking cue, the scholar suggested that it is easy to persuade the audience when they 'like' the speaker. For instance, Pepsi advertisement in 2010 uses Beyoncé, Pink and Britney Spears, top artists in Hollywood as the models for the product to persuade their customer to purchase Pepsi because the people 'like' them. In the same way, students like when lecturer shows professional characteristics.

Furthermore, Elaboration Likelihood Model (ELM) suggested that peripheral cues include commitment and social proof. The degree of commitment is enforced through these tasks in class. Informants agree that students' confidence level can be cultivated through group discussion. Hence, their awareness of being a member of the group makes them committed to the tasks given. In explaining reciprocity, group tasks contribute to overall course performance, meaning that students have to perform their best in class to get excellent marks, thus, the give-and-take concept. Social proof, on the contrary, is the influence of peer pressure in a situation. Study finds that informants acknowledge the presence of supportive, friendly and active friends make them feel confident in public speaking (Azlina, 2019; 2020).

Methodology

I conducted this study by using qualitative design method. Observation, reflection and semi-structured interview are used to measure students' confidence. I need to begin with a lot of activities which could contribute to enhance level of confidence in the public speaking. The more students practice stands in front of people; the more confidence they are in the future. The character as a leader should be highlight to assure students could motivate themselves as a good leader. I did implement some strategies or activities to assist students developing their potential in communication skills in class.

A detail out of the research procedures includes three basic phases:

Phase 1: Identifying problem/ issue – In the second meeting of the class, lecturer will provide a simple question regarding confidence level to the students (lecturer and students' reflection). They need to answer the questions by also giving any suggestion of activities to enhance confidence in public speaking.

Phase 2: Train students on how to use combination of Ethos, Pathos, and Logos (persuasion communication modes) to increase self-confidence. Explain the benefit of practicing these modes in their daily conversations when dealing with the society. Duration of Phase 2 is considered 3 months (beginning first week lecture until week 14).

Phase 3: By doing observation in every meeting, students participate actively in each of activities during class; the lecturer could measure or assess students' confidence. Their perception on how they feel their confidence level could be enhancing, will be noted as the assessment tools. At the end of the semester, the students need to answer question in interview session about their confidence while doing public speaking.

Phase 4: Some selected students (purposive sampling) would be joining semi-structured interview conducted by the research assistant.

Duration of the study – the whole semester.

Analysis, Discussion and Findings

Contributing factors to enhance confidence

Class Environment

Some students feel more confidence to speak in face-to-face (f2f) class compared to online class, and vice-versa. During f2f class, they will get moral support from their colleagues by doing eye-contact.

No, I lack confidence when speaking in class especially when the class is virtual. I feel more confident when speaking in class physically than in class virtually. I am an Introvert and need a lot of courage when it comes to speaking. When speaking, my hands and voice would tremble and freeze. Still, I try my best to overcome that weakness when saying important things and communicating with others (I1).

For me, it depends on the situation. Sometimes I feel confident to speak in online class. But not if in front of a face-to-face class, because I often feel restless when in front of a lot of people face-to-face. I worry if the answer I give is wrong or illogical, as well as I worry if there is a bad impression on me. But if it's an online class, I'm a little brave because it's just face-to-face virtually and I'm more confident if I don't show my face because I feel embarrassed. When I speak up, I worry if I throw out ideas that are less thoughtful and at the same time make me look unwise or exaggerated (I3).

When Question and Answer (QnA) session applied

Even one of my student ever said that, during my classroom, he feels like have a butterfly in his stomach, but he also admits that when I ask them questions, they will be more focus and prepare themselves to answer it. Even though, their answer is incorrect, but I will try to guide them to answer for the right answer.

While in class I felt unsure to speak but after being given the opportunity and answering the questions asked by Dr, it gave me the confidence to be more courageous. But there was also a feeling of insecurity, for fear the information I conveyed was inaccurate and wrong (I2).

Yes, because I was given the opportunity by Dr Azlina to give my views and opinions. It is able to increase my confidence and can relieve feelings of nervousness. By asking questions and opinions in class, it will open up space for me and other students to talk and give insights. The lecturers were also very supportive, so there was no problem for us to share ideas (I5).

In my opinion, this class can help to increase self-confidence because Dr Azlina always asks questions and shares opinions with the students in a casual style. In that way it to some extent increase confidence in the students to try to provide insights and share experiences with others. In addition, Dr Azlina also always gives constructive comments that can make students continue to try and dare to come forward (I3).

Improvement of behaviour

Students who have lack of confidence, will blame their attitude and personality. They feel ashamed, anxious, and introvert attribution in dealing with people around them.

I don't feel confident to speak in front of the class/ online in class. This is because I am a bit shy, especially if I have to give a speech in front of a crowd. Among the factors that contributed to my distrust may be due to the many eyes looking at and being attentive when I give a speech. In addition, the factor that contributes to my disbelief is also due to the attitude of being too worried about what I conveyed, fearing that the information was wrong, plates, mispronunciation or the like. In addition, I also feel restless thinking if my

dress when I speak in front of the class is inappropriate or too informal or old fashioned in the eyes of the audience especially if there were listeners who were watching every corner of my dress even though I was dressed politely and not tight (I4).

Strategies to enhance confidence

Learn from others personality

Students always observe other people to improve their quality of attitude. Consequently, they will behave properly in order to assure their behaviour is accepted by the community. Lecturer will be one of their 'role-model' in classroom. The implicit and explicit of lecturers' behaviour will guide them to be an ethical student.

In my opinion, this SCCA2103 Leadership Communication class can help me to increase self-confidence as lecturers often encourage students to pitch ideas and accept any contribution of ideas from students with an open mind. This makes me feel more confident and bold to contribute ideas to the questions posed. This class has focused on training students to speak boldly in accordance with the name of the given subject. We can associate leadership with courage, so leadership communication has trained us to be like a leader who is outspoken to express opinions (I3).

In my opinion, I agree that this class gives me the opportunity to increase my self-confidence. This is due to the lecturer who teach in this subject are more open and like to ask the opinion of each student without rejecting any opinion led by the students and even further improve the opinion. In addition, the instructors also use more approach tactics by understanding the attitudes of their students and often share experiences with each other spontaneously and also interspersed with jokes by the instructors. This makes me feel more comfortable to communicate with the lecturer (I7).

Opportunity to share opinion

Lecturer gave some spaces for students to produce their own opinion regarding any specific issue. The issue would be discussing in detail and it should be no right or wrong answer given by students. This is how dyadic communication applied in the classroom.

Yes, because I was given the opportunity by Dr. Azlina to give my views and opinions. It is able to increase my confidence and can relieve feelings of nervousness. By asking questions and opinions in class, it will open up space for me and other students to talk and give insights. The lecturers were also very supportive, so there was no problem for us to share ideas (I5).

Lecturer's style of teaching

Some people believe that sharing is caring. The style of Teaching and Learning (T&L) would encourage students to pay attention and enjoy studying in the class. They are less stress and feel more comfortable. I believe, it will help students to absorb the knowledge sharing better than if they feel ashamed or fear.

In my opinion, the Leadership Communication class gave me the opportunity to increase my self-confidence. This is because the class teaches techniques on how to communicate with others using appropriate language/ words, how to manage one's emotions, as well as provide knowledge on how to build a self-leadership style. Furthermore, class lecturers also always give students the opportunity to express their views to increase confidence and practice speaking in class online (I6).

In my opinion, this class can to some extent give me an opportunity to increase my self-confidence. This is because, before starting the learning process, Dr Azlina often says hello and likes to chat with students. Dr Azlina always communicates with students

throughout the learning time by asking questions to students. This approach is ideal for students like me to be more confident in communicating in public (I8).

General students' reflections toward Teaching and Learning

Overall reflection had given by the students, would assist me to improve my Teaching and Learning (T&L) style and existing relationship with my students.

Throughout my course of studies at UUM, I stumbled upon Dr Azlina during my 2nd semester. I remember always looking forward to joining her classes. Her genuine motherly nature and how soft spoken she is, made me feel at ease when I attended her classes. Dr Azlina always ensured her classes were interactive among one another. Hence we constantly engaged with her from time to time which I personally believe is best to ensure students focus during her lessons. Dr Azlina, is very proactive and wise. I can always begin any conversation with her regardless the topic, and she would be able to engage well as she's filled with a vast amount of knowledge, I'm beyond grateful to have crossed paths with her and will always cherish the good times I've spent with Dr Azlina (I1)

Meanwhile, while in class, Dr Azlina will use various learning strategies. He is not a fierce or overly soft-spoken lecturer. Dr Azlina is a serious and intelligent lecturer. I was impressed with Dr Azlina, she would try to remember all the names of the students in the class regardless of race or religion. Oh yes, Dr Azlina loves life-related advice. From advice on studies to advice on housekeeping. Maybe this is the stock of goodness he's trying to invest in us. (I2)

If asked to the graduates of the Bachelor of Communication UUM about the three best lecturers who have taught them throughout their studies at UUM, the average would state Dr Azlina as one of them. Apart from being student-friendly, Dr Azlina also took a more comprehensive initiative compared to other lecturers to increase the involvement of all students in the class such as activities that are closely related to the learning presented. In addition, Dr Azlina also often associates learning elements with real world examples that increase the relevance of the content presented so that students can relate what is learned and its application in daily life. In addition, the efforts made by Dr Azlina in creating a positive atmosphere in the lecture hall lead to students' interest in deepening the knowledge provided. (I3)

First of all, a genuine word from the bottom of my heart is, Dr Azlina is one of favourite lecturer in UUM. I feel really happy and proud for attending her classes throughout my university life and the real reason for this is her character being a lecturer. I'm really super happy and also very comfortable with her friendly character and the care she gives towards her students. The way she delivers the knowledge and the way she behave during the class time really made that specific subjects easy to learn and absorb it. Not only that, as a lecturer everyone should be strict with their students. Yes that's absolutely correct, but some lecturers will be strict only and won't bring the comfortable feel among the students. But Dr Azlina is totally different. She is strict, but at the same time she always give that space to their students where it will be really make her students to attend her classes without any uncomfortable or uneasy feelings. Last but not least, to be honest I would tell that I really really enjoyed her classes and the fun moments of me and my bestfriend Dinesh with her 😊 Finally, I really want to thank Dr Azlina for giving a lot of knowledge and helping a lot even after I finish my studies, such as my resume preparations and the helps during my permanent job preparations. I believe that the students who get the chance to study in her class, will be really happy and proud as me. (I4)

Most of the people would think about the memories with friends when recalling their campus life. While for me, I would think of fresh air, forest and my sweet plus most gentle lecturer a.k.a best friend in UUM. Dr Azlina is an awesome lecturer ever. You may think that

best lecturer equals to giving you a good grade to pass the exam. No, no, no! Personally, I admire her patience when come to giving lecture in the class and after class as a friend of mine. What is about after class lecture? She shared plenty of her life experience with me that I can't get from the book. She told me that in order to achieve success in life, we have to be patient and clear with our own life goals – this means that you have to set up your life goals before you run to the door of success. There is no way to sustain and maintain the consistency along the way if you do not know what you want. Take care, my best friend, Dr Azlina! (I5)

Dr Azlina is the most approachable and warmest human being in UUM. I get to know her during my first semester in UUM when it was back in 2014. It is always a two-ways communication session during her lectures, and fun filled moments for sure. It's easy for students to grasp what she intend to deliver because of her amazing explanations and skills. Undeniably she has got bunch of talents in her and one of it is writing and emceeing. I have learnt a lot from her during my varsities days. She is also really helpful and down to earth. You can reach her for anything whether it comes to solutions related to studies or someone to talk with if you're mentally depressed. Even after 3 years after graduating, we still keep in touch with each other and undoubtedly we have a great bonding till now. BCOMM students, if you don't know who is Dr Azlina it's a big loss for you. (I6)

It speaks "contains". That is the translatable symbolism of the great individual named as Dr. Azlina Kamaruddin. The application of the concept of learning means being the core of his learning and teaching process. This means that students need to interact and reflect on an issue that is discussed throughout the class. There is nothing wrong with expressing any opinion during the process. This makes the atmosphere of the class "alive" and the students are more courageous in throwing their thoughts and do not feel like in law when expressing an opinion. In other words, students are free to speak out on the appropriateness of the issues discussed but cannot touch on any aspect of the sensitivity set. (I7)

Conclusion

By nature, humans like it when their names are remembered by others. Therefore, I will make sure that I remember almost all the names of the students in the class even though the number of them reaches 70 people in the class. I will repeat calling their names with a sense of humour that is able to entertain their hearts. To be an educator, we not only need knowledge to educate, but I believe knowledge to be an entertainer is also very important. In addition, the publication of original work books is necessary to attract students to read and deepen their knowledge. The initiative I took was to focus on writing and publishing scientific and creative books.

Next, activities held in the classroom will make students more prepared to be actively involved. Activities such as telling stories about students' experiences as small leaders in associations, schools and clubs are suitable to be applied in Leadership Communication classes. Indirectly, students will recall the events and recognize the character of the self as a leader. To see future leadership, we need to prepare today's generation to lead the country one day.



Figure 1. During classroom activity

Part of the process of building student identity requires me to think about my own approach, style and approach in the learning process. It also requires me to realize that students will learn differently, levels of learning ability are also different, and my teaching must be sensitive to the individual needs of each student. To ensure the effectiveness of the T&L process, I strive to accommodate the various learning styles available in the classroom. I use a combination of approaches, including reading, writing, discussion, role-play, case studies, storytelling, reflection, and lectures.

One more thing, as an educator who educates the youth, the approach of 'making friends' with students will make them feel comfortable and reduce the feeling of 'fear' to gain knowledge. I always remember Saidina Ali R.A's message, make friends with those who are in their early 20s. They need to be educated to be prudent, noble people and know how to reason, that is, to distinguish between good and bad things. Never underestimate their abilities, try to be a 'role-model' to these young people.

I am a person who is very interested in interpersonal communication relationships between humans. Its uniqueness is very evident in the dynamic nature that each of my students possesses. The tendency to remember the names of the students and the strengths they have, becomes 'value-added' for me to build and maintain good relationships with my students. What methods or strategies do I use to build the enthusiasm and focus of my students? First, I use casual chatting techniques. Chat about anything with them especially issues that are closely related to their lives, including family, strengths, skills, interests and hobbies. Secondly, I am a person with a 'sense of humour'. This will make my students will always smile and laugh when they are in my class. I believe, a lecturer is not just an educator, but also a versatile 'performer'. Third, I like to tell about the goodness or skills of my students in front of the class, so that they feel more confident.

References

Azlina Kamaruddin and Mohd Baharudin Othman. (2019). Cultivating Students' Confidence by Adapting Persuasive Communication Modes in Leadership Communication Undergraduate Class. E-proceedings of the 6th International Conference on Communication and Media 2018. E-ISBN 9789672210337

- Azlina Kamaruddin. (2019) Enthusiastic, Persuasive Communication. In Nora Azureen Abdul Rahman. Case Studies in Management and Business. Vol. 5.107-121. UUM Press. ISBN 978-967-2363-04-0
- Azlina Kamaruddin. (2020). Rhetorical Persuasion By Adapting Logos In Public Speaking. European Proceedings of Social and Behavioural Sciences EpSBS. Article no: 26. Pages 194-20. e-ISSN 2357-1330. Doi: 10.15405/epsbs.2021.06.02.26
- Ishak Ramly. (2004). Inilah kurikulum sekolah. PTS Professional Publishing Sdn. Bhd.
- Katz, L. (2000). Public speaking anxiety. Retrieved from <http://www.columbiastate.edu/docs/default-source/Dr.-Louise-Katz/publicspeakinganxiety pamphlet.pdf>
- Kementerian Pengajian Tinggi. (2012). Asas Pembelajaran dan Pengajaran Pensyarah Institusi Pengajian Tinggi. Universiti Tun Hussien Onn Malaysia
- Lo, S. K., Wang, C. C. and Fang, W. (2005). Physical Interpersonal Relationships and Social Anxiety among Online Game Players”, *CyberPsychology and Behavior*, 8 (1), 15-20.
- Novita, L. (2020). Components of Public Speaking: The Factors that make students interested in English speech and teaching. *Inovish Journal*. 5(1), 89-98. <http://ejournal.polbeng.ac.id/index.php/IJ/article/view/1360>
- Nurul Jamilah Ismail Rani, Nursyamimi Harun, & Rahmahtunnisah Hj. Sailin. (2015). Kekhawatiran berkomunikasi dalam kalangan pelajar Kolej Universiti Islam Antarabangsa. *Proceeding of the 2nd International Conference on Management and Muamalah 2015 (2ndICoMM)*. e-ISBN: 978-967-0850-25-2268
- Rodzah. (2011). Pendidikan Berasaskan Hasil. Akses: 27 Oktober 2014. <http://rodzah.files.wordpress.com/2011/12/obe-style-siri-1.pdf>
- Rusul Alrubail. (January 3, 2015). Scaffolding Student Reflections + Sample Questions. <https://www.edutopia.org/discussion/scaffolding-student-reflections-sample-questions>
- Schierholz, R., Glissmann, S., Kolbe, L. M., and Brenner, W. (2006). Don't call us, we'll call you – Performance Measurement in Multi-Channel Environments, *Journal of Information Science and Technology*, 3 (2), 44-61.
- Schlag, K. H. (2011). Imitation and social learning. Retrieved from https://homepage.univie.ac.at/karl.schlag/research/imitation/imitation_sociallearning.pdf
- Trisnaningati, Z. R., & Sinambela, F. C. (2021, April). Self-efficacy, Emotional Regulation, Communication Competence and Public Speaking Anxiety Towards Students. *International Conference on Psychological Studies (ICPSYCHE 2020)* (pp. 68-74). Atlantis Press.
- Yu, C. S. and Lin, Y. W. (2006). Differentiating Strategy of online banking Service Quality, *Proceedings of the 7th Annual Global Information Technology Management Association World Conference, CD-Format, Orlando, Florida, USA, June 11-13 2006*.
- Yusuf Hashim. (2000). Teknologi pengajaran. Fajar Bakti.

The Impact of REV-OPOLY Augmented Reality Board Game on Students' Motivation in Learning

Noradila Nordin*^a, Nur Rasyidah Mohd Nordin^b, Wafa Omar^c

^aSchool of Computing, Universiti Utara Malaysia,
06010 Sintok, Kedah, Malaysia

^{b,c}School of Languages, Civilisation and Philosophy, Universiti Utara Malaysia,
06010 Sintok, Kedah, Malaysia

*Corresponding Author: nnoradila@uum.edu.my

Abstract

Augmented Reality (AR) technology is increasingly being used in education to improve students' learning experience. REV-OPOLY is an augmented reality board game on emerging technology revolution concepts. It consists of a board and several types of cards that contain questions, information, and various types of technology. All of the features on REV-OPOLY acts as AR markers that can be scanned to reveal AR objects. AR is used in the game as play pieces and as a component of the play cards. This study aims to examine the impact of REV-OPOLY on students' learning motivation using Reduced Instructional Materials Motivation Survey (RIMMS). It measures four dimensions of the ARCS model: students' attention, relevance of REV-OPOLY in their learning, students' confidence in using REV-OPOLY, and their satisfaction in the learning experience. The respondents in this study were undergraduate students enrolled in the Computer Application in Management course in Universiti Utara Malaysia. The findings revealed that the majority of respondents, 92.16%, were pleased with REVOPOLY's impact on their learning. 98.04 % agreed that the AR features in REV-OPOLY helped them stay focused, and REV-OPOLY succeeded in conveying the content effectively through various elements (86.28%), which boosted the students' confidence in understanding the topic (90.19%). The students expressed a desire to continue using REV-OPOLY because of its ease of use, casual and informal learning environment.

Keywords: Augmented Reality, Board game, Educational technology, E-learning

Introduction

Augmented Reality (AR) is considered a widely accessible technology as the majority of the world's population owns a smartphone. AR is a relatively recent component of educational research that enables educators to utilize virtual objects in the classroom. According to the definition of augmented reality, there are three major technological elements: the combination, alignment, and real-time interaction of real and virtual objects in the real environment and among the objects (Khan, Johnston, & Ophoff, 2019). By incorporating augmented reality into any gamification-based intervention, the player is given a more immersive and unique experience than they are accustomed to. It augments traditional games with virtual elements, allowing the virtual portion of the game to remain hidden.

The Computer Application in Management course offered in Universiti Utara Malaysia broadens students' knowledge in the study of the emerging technology revolution. It covers among others, the IT infrastructure, the Internet, information management, digital markets, and goods, IR4.0, and IT security and ethics. Thus, it can be said that the subjects of Computer Application in Management can be quite a challenge to keep up with the exponential pace of technology change that rolls out in quick succession, impacting all aspects of professional organizations and society. Due to these setbacks, the students have shown ineffectiveness in

learning, showed very little interest in the course, and lacked motivation. To combat these problems, combining teaching and learning with AR can be attempted to assist students to better acquire the concepts regarding the evolution of technology.

AR is designed to be able to engage and excite students while also cultivating their creativity and imagination (Kaliyaperumal et al., 2021). It also assists in teaching concepts that are difficult, if not impossible, to encounter in the real world. Dünser et al. (2012), for example, looked at how a book combined with the use of a Hand-Held Device (HHD) could help students understand physics in high school. They conducted a quantitative study with a group of students, with half of the students studying the book with augmentation and the other half studying without. The findings revealed that augmented reality has the potential to help teachers teach spatial ideas that would benefit from being depicted in 3D (Enzai et al., 2021). Similarly, in the classroom, gamification with AR features provides students with a choice of engaging activities – and it is capable of managing a variety of learning paths in which the main purpose can be met based on the students' personality, abilities, and other qualities.

Research Objectives

The purpose of this study is to investigate students' motivational levels using REV-OPOLY as an instructional medium in the emerging technology revolution area in an online environment. There are three main research questions that this study aims to solve: (1) What is the undergraduate students' perception towards REV-OPOLY during learning? (2) How does REV-OPOLY assist undergraduate students' comprehension level during learning? (3) How effective is REV-OPOLY in enhancing undergraduate students' comprehension level during learning?

Literature Review

Augmented Reality Board Game in Education

Many studies have looked into the usage of augmented reality board games in education as they have a good impact on teaching and learning since they allow active and student-centered learning. The combination of AR with games attracts students' interest and provides better learning effects as it introduces a new element that is relevant to the classic board game. AR displays augmented objects in the physical environment that can be represented through various forms of multimedia such as 3D, images, texts, audios, and videos as a way to connect and visualize learning.

A study by Andriani, et.al. (2020) found that augmented reality board games such as monopoly which have been altered to suit classroom learning can help aid students in understanding difficult subjects such as the structure and function of plant tissue in Biology. The study found that the material suitability of the game was appropriate to be used as a teaching tool.

Previous research has discovered that students are interested in using augmented reality (AR) as a learning tool to help increase the effectiveness of knowledge acquisition and learning motivation through AR board games (Badilla-Quintana et al., 2020; Chen et al., 2019; Sumadio & Rambli, 2010). The augmented reality board game is appropriate and can be used in a variety of educational settings, including health education (Lin et al., 2021), energy (Li et al., 2017), and culture and history (Pinto et al., 2017). AR board games are one of the most successful learning tools for motivating students to establish and sustain self-regulated learning in order to improve their academic performance.

ARCS Model

The ARCS Motivational Model is a student-centered approach that has been widely utilised to assess the impact of instructional materials on students' learning motivation (Keller, 1987). The ARCS model can be used in both face-to-face and computer and web-based instructional settings (Keller, 1999). There are four dimensions in the ARCS model that measure students' motivational levels, which are attention (A), relevance (R), confidence (C), and satisfaction (S). These elements are employed in this study to assess motivation measurements in terms of the impact and the utilisation of AR technology as a learning tool in REV-OPOLY.

The attention dimension refers to the ability of REV-OPOLY to attract and maintain the students' focus and interest in the learning process. The REV-OPOLY instructional material is strongly tied to the relevance dimension since it is created to fit with the course contents and objectives, making it relevant and perceived compatible with the students' learning experience in accomplishing the learning outcomes. Based on the learning experience, students' confidence and attitude to learn and use REV-OPOLY are measured within the confidence dimension. The final dimension is satisfaction, in which the process or results of using REV-OPOLY fulfilled the expected learning outcomes and positively influenced the students' learning experience in terms of achievements and meaningful knowledge exchange through the use of REV-OPOLY. Several elements influence students' satisfaction, including the simplicity of use and consistency of instructional materials in reinforcing learning by offering suitable opportunities and challenges to keep students engaged.

The Reduced Instructional Materials Motivation Survey (RIMMS) is used to measure students' motivational ARCS model by scoring on the dimensions of attention, relevance, confidence, and satisfaction dimensions which cumulatively result in an overall motivation score.

Reduced Instructional Materials Motivation Survey

The Reduced Instructional Materials Motivation Survey (RIMMS) is a 12-item scale consisting of 3-item measuring each of the four dimensions in the ARCS model. RIMMS is a reduced version of the Instructional Materials Motivation Survey (IMMS), a 36-item that corresponds to the ARCS model to measure the student's motivation (Keller, 2010). Previous studies by Huang et al. (2006), Houze & Marshall (2020) and Loorbach et al. (2015) validated RIMMS and found that RIMMS fits the dimensions of the ARCS model better. In addition, by reducing the number of items on IMMS, the psychometric property of the measurement is strengthened as 12-item RIMMS minimizes the risk of response biases. Similar to IMMS, the scoring in RIMMS can be done independently or cumulatively for the attention, relevance, confidence, and satisfaction dimensions.

In this study, RIMMS is adapted and modified to measure the student's motivation of REV-OPOLY. 3-item on the RIMMS are directed to each dimension of the ARCS model using a five-point Likert scale, measured from the scale of 1 (strongly disagree) to 5 (strongly agree).

Methodology

This research employs the action research model to investigate and understand the practices and situations in the online, game-based education settings to improve the effectiveness of the practices especially in using REV-OPOLY. There are four phases involved in the action research; plan, action, observe and reflect (Kemmis, et al., 2013). This paper concentrates on the observation and reflection phases by measuring the impact of REV-OPOLY on the students' learning motivation based on the ARCS model of motivational design.

Design and Implementation

REV-OPOLY is an online board game with augmented reality that is accessible using the web browser on any type of device that has an Internet connection. It was developed using HTML, CSS, JavaScript, and WebAR tools. REV-OPOLY's content is specified in the area of the emerging technology revolution. REV-OPOLY consists of an online board, 2 animated dices, 4 player pieces represented by character images that can be moved using certain keys on the keyboard, and 5 types of cards including the Title Deed cards, IR Question cards, Technological Question cards, Chance cards and Did You Know? cards. Figure 1 shows the elements of REV-OPOLY mentioned.

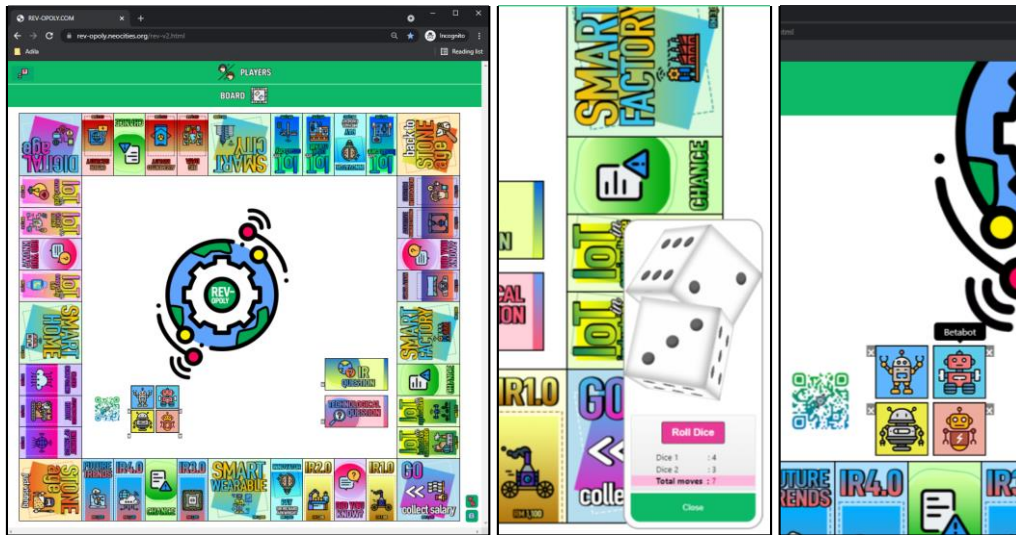


Figure 1. REV-OPOLY board interface

All of the elements on the board act as AR markers as shown in Figure 2. The player pieces can be scanned, and it will reveal a 3D representation of the character. Title Deed cards will show the information about the specific space that can be clicked to reveal texts, audios, or videos. The IR Question cards and Technological Question cards show a 3D image of a question box that the player can click from the device screen. It will generate a randomized question to be answered by the player. These AR characters and information can be customized and edited without the need to modify the board itself.



Figure 2. AR components in REV-OPOLY

REV-OPOLY is suggested to be played within a group of 4 players. To play the game, the player has to roll the dice and move their selected player piece based on the number shown by the dice. This is done to imitate the traditional board game and to ensure that players are engaged rather than passively watching the game. The players can also claim the card on the board by dragging the card into one of the boxes in the Players tab as shown in Figure 3. The player can click on the button that represents different players based on the character image.

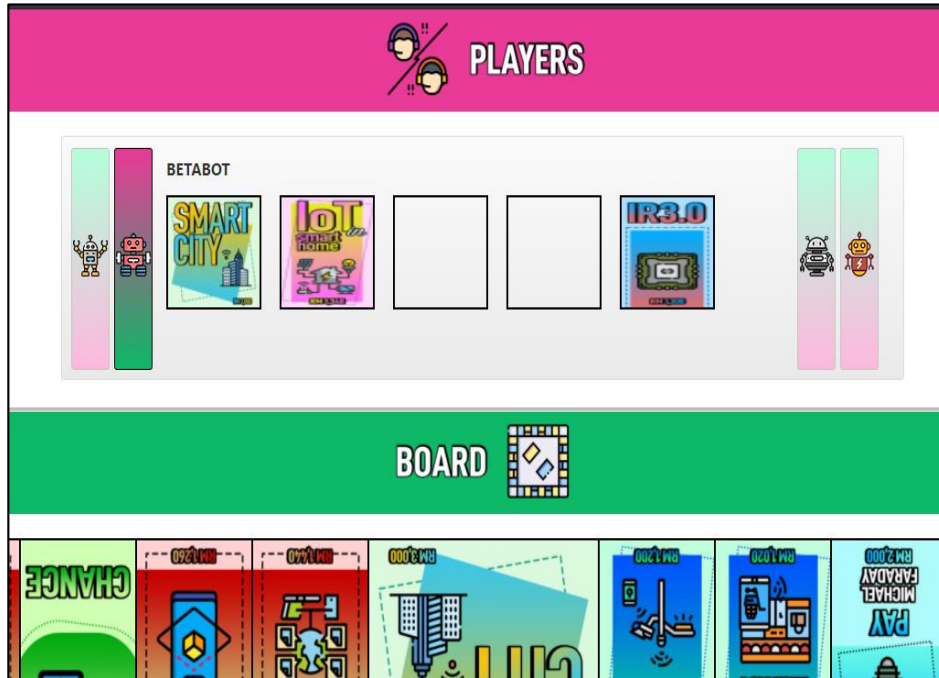


Figure 3. Players' tab containing cards

REV-OPOLY's online board game with AR provides a new learning experience for students in acquiring knowledge. REV-OPOLY can be played as a stand-alone board game. It provides students the opportunity to have an informal and more casual learning process on the same syllabus with the additional element of fun and interest with various rules, goals, strategies, interactivities, and rewards. In REV-OPOLY, the way that it is played can be modified and adapted based on the players' agreement to increase the difficulty levels. By default, REV-OPOLY is suggested to be played similar to the classic Monopoly game.

Data Collection and Sampling

This study was conducted for one semester on 2 groups of students consisting of 100 undergraduate students, enrolled in Computer Applications in Management subject in Universiti Utara Malaysia, Malaysia. All of the students were briefed and then shown a demonstration of REV-OPOLY. Prior to the study, students have learned the emerging technology revolution topic during previous lectures. They were then grouped randomly into a group of at least 4 players through Webex breakout sessions to play REV-OPOLY. This is done to accommodate students who have limitations in terms of Internet connection and bandwidth, and unsupported devices to still be involved in playing REV-OPOLY. Groups that contain more than 4 players are paired accordingly. For example, in a group with 6 players, they are paired to form and use only 3 player pieces on REV-OPOLY. Each pair can take turns and discuss among themselves before deciding on their moves.

Their interactions when playing REV-OPOLY were observed and recorded to be analyzed and reflected. Students were asked to complete a questionnaire after the game had

ended. In total, 52 questionnaires were filled by respondents but only 51 (51%) questionnaires were valid because 1 participant responded twice due to the Internet problem. The latest response is recorded. The demographic distribution is tabulated in Table 1.

Table 1
Demographic distribution (n = 51)

Profile Factors	Particulars	<i>N</i>	<i>P</i>
Gender	Female	36	70.58
	Male	15	29.41
Age	Below 18	2	3.92
	19 - 20	40	78.43
	22 - 24	9	17.65
Semester	1	9	17.65
	2	39	76.47
	3	1	1.96
	4	2	3.92
Department	School of Business Management	35	68.63
	School of International Studies	7	13.73
	School of Technology Management & Logistics	6	11.77
	School of Government	2	3.92
	Islamic Business School	1	1.96

**N* number of respondents, *P* percentage of respondents (%)

Among the 51 respondents, 36 (70.58%) are female and 15 (29.41%) are males with 2 (3.92%) respondents are aged below 18, 40 (78.43%) respondents in the range of 19-20 and 9 (17.65%) are between 22-24 years old. Computer Applications in Management subject is an elective that can be taken by students in all semesters. In this study, 9 (17.65%) were from the first semester, 39 (76.47%) from the second semester, 1 (1.96%) from the third semester, and 2 (3.92%) were from the fourth semester. The respondents are also from various fields of study where 35 (68.63%) are enrolled in the School of Business Management pursuing Bachelor in Business Administration, Bachelor in Entrepreneurship, Bachelor in Human Resource Management, and Bachelor in Marketing. 7 (13.73%) are from School of International Studies doing Bachelor in International Business Management, 6 (11.77%) from School of Technology Management & Logistic, Bachelor in Logistic & Transportation Business Administration, 2 (3.92%) from School of Government, Bachelor of Public Management and 1 (1.96%) from Islamic Business School, Bachelor in Islamic Finance and Banking. This shows that the respondents do not come from technological related backgrounds based on their field of study. However, their range of age and semesters indicate their familiarity and adaptability to using game-based AR as part of their learning process (Clement, 2021).

Questionnaire Design

The questionnaire formulated was adapted and modified based on several research studies that have administered RIMMS (Hauze & Marshall, 2020; Loorbach et al., 2015; Khan et al., 2019; Wang et al., 2020). The questionnaire was made available to respondents through Google Form. It employs 12-item RIMMS that fits the ARCS model. The questionnaire is separated into five parts, starting with the demographic of the respondents to understand the relationship of age, participants' current semester, and the department of their enrolled program. Section A is on REV-OPOLY's features in terms of the layout, design, and usability of the board and AR properties. It measures the students' attention to REV-OPOLY. Section B is on the learning aspects of using REV-OPOLY compared to the typical learning methods. It measures the relevance of REV-OPOLY and its contents. Section C is on the participants' confidence in using REV-OPOLY as an alternative tool in learning and understanding the way that it works. In the

last section, Section D is on the satisfaction which leads to the motivation to use and play REV-OPOLY again, and the participants' acceptability in using the game in general as part of their learning process. In addition, players also shared their comments, feedback, and suggestions that they have on REV-OPOLY for further refinement. In all sections, a five-point Likert scale was used, which measured from the scale of 1 (strongly disagree) to 5 (strongly agree).

Findings and Discussion

The questionnaire containing 12-item RIMMS of the ARCS model is analyzed and discussed separately into its four dimensions: attention, relevance, confidence, and satisfaction.

Scale Reliability

The validity of RIMMS is measured using Cronbach's alpha, a coefficient of reliability. Cronbach's alpha measures the internal consistency of the items in the dimensions and the overall value of the ARCS model to test the reliability of the Likert scale RIMMS. A validation study by Cook et al. (2009) reported that Cronbach's alpha for all ARCS dimensions is valid for $\alpha \geq 0.75$, with an interdimensional correlation of 0.40-0.80. Becerra & Almendra (2020), Linser & Kurtz (2018), Nel & Nel (2019), and Wang et al. (2020) in their studies have reported the acceptable reliability values of Cronbach's alpha for the dimensions are: attention α is 0.73-0.90, relevance α is 0.69-0.82, confidence α is 0.59-0.89 and satisfaction α is 0.82-0.88.

Table 2
RIMMS reliability

Dimension	α	\bar{x}	s
Attention	0.8191	4.47	0.65
Relevance	0.8904	4.44	0.67
Confidence	0.9285	4.54	0.61
Satisfaction	0.8533	4.48	0.68

* α Cronbach alpha, \bar{x} sample mean, s sample standard deviation

In this study, the overall reliability of the Cronbach's alpha α is 0.9501 (n = 51 and 12 items). This coefficient is assumed as high reliability as each dimension also showed reliability values of α in the range of 0.82-0.93 which is in the scales larger than 0.75 (Cook et al., 2009) as shown in Table 2. The relevance and confidence dimensions have higher reliability ($\alpha = 0.89$ and $\alpha = 0.93$) compared to the attention and satisfaction dimensions.

The mean values were calculated for each dimension of the ARCS model which shows the value of \bar{x} of 4.44 to 4.54 with the standard deviation between 0.61-0.68 which is acceptable. This shows that the data are slightly more spread out in terms of the respondents' measured Likert scale in each dimension. The items in each dimension will be analyzed in the next section.

REV-OPOLY Features: Attention

The 3-item in the attention dimension of the ARCS model is as shown in Table 3. In this dimension, the student's attention to REV-OPOLY is measured to understand the factors that contribute to their ability to focus and stimulate their interest and curiosity to learn.

Table 3
Attention dimension

Attention	Scale $P(N)$					\bar{x}	s
	5	4	3	2	1		
The quality of REV-OPOLY helped to hold my attention	47.06 (24)	35.29 (18)	17.65 (9)	0.00 (0)	0.00 (0)	4.29	0.76
The way the information is arranged on REV-OPOLY helped keep my attention	49.02 (25)	45.10 (23)	5.88 (3)	0.00 (0)	0.00 (0)	4.43	0.61
The variety of 3D and 2D images, texts, audios and videos, helped keep my attention on REV-OPOLY	70.59 (36)	27.45 (14)	1.96 (1)	0.00 (0)	0.00 (0)	4.69	0.51

* P percentage of respondents (%), N number of respondents, \bar{x} sample mean, s sample standard deviation

In regard to the features of REV-OPOLY, 36 (70.59%) of the respondents strongly agree that augmenting the objects in REV-OPOLY as 3D and 2D images, texts, audios, and videos, helped them to focus better. This is because, by using different types of multimedia in relaying the information, students can better and effectively retain information based on their learning styles such that those who are visual or spatial learners (through images), kinesthetic, interpersonal, and linguistic learners (through the gameplay and use of cards), and auditory learners (through audios and videos). It can also be seen that this item has the lowest standard deviation of 0.51 which supported their acceptance of REV-OPOLY features.

In addition, REV-OPOLY attracts the students' interest to learn through a game that is tailored to their learning style where 24 (47.06%) respondents strongly agreed for the quality and 25 (49.02%) in the helpfulness of REV-OPOLY. There are 9 (17.65%) respondents who were neutral regarding the quality and 3 (5.88%) in the way that the information is arranged on REV-OPOLY. Further feedback from the respondents, suggested that perhaps REV-OPOLY can be a serious game instead of a gamification type of learning where it falls into the formal learning strategy. However, one of the main purposes of REV-OPOLY is to serve as an alternative tool in an informal setting, as an addition to the lectures to provide a more holistic learning experience.

Learning Aspects: Relevance

The relevance of the materials used in REV-OPOLY is measured to ensure that students can relate the knowledge gained through REV-OPOLY to the previous lectures on the same topic of the emerging technology revolution. Table 4 shows the 3-item on the relevance dimension. 27 (52.94%) of the respondents strongly agree that the content in REV-OPOLY that are represented as images, texts, audios, and videos are related to the things that have been learned previously. This shows that REV-OPOLY has succeeded in serving the students as an alternative tool that can be used for revision purposes as more than half of the respondents (32, 62.75%) strongly agree with this statement.

Table 4
Relevance dimension

Relevance	Scale $P(N)$					\bar{x}	s
	5	4	3	2	1		
It is clear to me how the content of REV-OPOLY is related to things I already know	52.94 (27)	39.22 (20)	7.84 (4)	0.00 (0)	0.00 (0)	4.45	0.64
The content and style of REV-OPOLY convey the impression that being able to work with the game is worth it	45.10 (23)	41.18 (21)	13.73 (7)	0.00 (0)	0.00 (0)	4.31	0.71
The content of REV-OPOLY will be useful to me	62.75 (32)	29.41 (15)	7.84 (4)	0.00 (0)	0.00 (0)	4.55	0.64

The majority of the respondents strongly agree and agree that REV-OPOLY has a good impression on them in terms of its worth in their learning (23, 45.10% and 21, 41.18%). However, 7 (13.73%) are neutral, thus giving this item a higher standard deviation value of 0.71. Based on their feedback, some students were unable to view the augmented videos as it is not supported by their device. To overcome this problem and accommodate students that have a limitation on their devices or the Internet, REV-OPOLY will add lightweight images or texts as the alternatives. Thus, they can fully use and play REV-OPOLY as intended through different media.

Learning tool: Confidence

REV-OPOLY is a custom-built game for the emerging technology revolution topic in the Computer Application in Management course. Students' confidence level in using REV-OPOLY and completing the game is assessed in the confidence dimension (Table 5). 31 (60.78%) of the respondents are confident that they could learn to work with REV-OPOLY and complete the game. Before playing the game, students were shown the gameplay, thus they can anticipate the game workflow. In addition, an e-book manual and video are provided on the REV-OPOLY website that they can refer to at any time that explains the suggested way to play the game.

Table 5
Confidence dimension

Confidence	Scale $P(N)$					\bar{x}	s
	5	4	3	2	1		
As I worked with REV-OPOLY, I was confident that I could learn how to work well with it	60.78 (31)	37.25 (19)	1.96 (1)	0.00 (0)	0.00 (0)	4.59	0.54
After working with REV-OPOLY for a while, I was confident that I would be able to complete the game	60.78 (31)	33.33 (17)	5.88 (3)	0.00 (0)	0.00 (0)	4.55	0.61
The good organization of the content helped me be confident that I would learn the emerging technology revolution from REV-OPOLY	56.86 (29)	33.33 (17)	9.80 (5)	0.00 (0)	0.00 (0)	4.47	0.67

In terms of the use of a board and cards that contain the content and augmented reality objects, 29 (56.86%) strongly agree that the organization of it helped them to feel confident in learning the topic through REV-OPOLY. As a way to build the students' confidence and nurture their curiosity on the topic, images on the board and the cards provided, work as the AR marker that can be scanned to reveal information that they are expected to know and have been covered during lectures. Thus, it is expected that after playing the game, students would have a better understanding of the emerging technology revolution due to these features of REV-OPOLY.

Students' Motivation: Satisfaction

The students' satisfaction in terms of their enjoyment, accomplishment, and contentment in using REV-OPOLY were also measured. In the first three dimensions (attention, relevance, and confidence), the majority of the respondents have shown high motivation in learning through REV-OPOLY. To ensure the learning process through the use of REV-OPOLY continues, students' satisfaction based on their learning experience while using it is crucial.

Table 6
Satisfaction dimension

Satisfaction	Scale P(N)					\bar{x}	s
	5	4	3	2	1		
I enjoyed working with REV-OPOLY so much that I was stimulated to keep on working	49.02 (25)	39.22 (20)	11.76 (6)	0.00 (0)	0.00 (0)	4.37	0.69
I really enjoyed working with REV-OPOLY	64.71 (33)	23.53 (12)	11.76 (6)	0.00 (0)	0.00 (0)	4.53	0.70
It was a pleasure to work with such well-designed game	62.75 (32)	29.41 (15)	7.84 (4)	0.00 (0)	0.00 (0)	4.55	0.64

Table 6 shows that 33 (64.71%) and 32 (62.75%) respondents enjoyed using REV-OPOLY and considered the game to be well-designed. While 25 (49.02%) and 20 (39.22%) strongly agree and agree that they felt stimulated to keep on playing. In the study, students were given 30 minutes to play which was not sufficient to finish the game. Students continued playing for an additional 5 minutes, which indicates that they were engaged and focused on the game. As REV-OPOLY is an online-based game, students can use and re-play it at any time.

Based on the analysis of the RIMMS, it can be concluded that REV-OPOLY has achieved its main objective which is as a tool that the students can use to learn about the emerging technology revolution in a more casual and informal environment. The tool can also be used as part of the activity during lectures, and it is accessible at any time. The students have shown their interest and the majority of them are satisfied and enjoyed the learning experience through REV-OPOLY; the augmented reality board game.

Conclusion

This paper has evaluated REV-OPOLY, an online board game with augmented reality that was proposed and implemented as an instructional medium in the emerging technology revolution area in an online environment. REV-OPOLY is accessible using the web browser from any type of device with an Internet connection. REV-OPOLY was tested by 100 undergraduate students enrolled in the Computer Application in Management course in Universiti Utara Malaysia. The impact of using REV-OPOLY on the student's learning motivation is measured using RIMMS on the students' score on the attention, relevance, confidence, and satisfaction dimensions in

the ARCS model. Based on the findings, it was proven that REV-OPOLY has a positive impact on the students' motivation (92.16%) as it helps to assist and enhance their comprehension level through the AR features (98.04%) in addition to raise their confidence and self-efficacy (90.19%) due to REV-OPOLY's game setting compared to the rigid, traditional lectures. The results of the RIMMS proved that students are satisfied with REV-OPOLY and enjoyed playing it as an alternative and additional tool to learn and revise the emerging technology revolution topic at their own pace in the game setting.

Acknowledgment

This work is supported by Universiti Utara Malaysia SoTL Research Grant (S/O code: 14757).

References

- Andriani, F., Saraswati, R. R., Melasari, D., Putri, A., & Sumardani, D. (2020). Monopoly learning media: Education media in structure and function of plant tissue theory. *Jurnal Pembelajaran dan Biologi Nukleus*, 6(1), 81-87.
- Badilla-Quintana, M. G., Sepulveda-Valenzuela, E., & Salazar Arias, M. (2020). Augmented Reality as a Sustainable Technology to Improve Academic Achievement in Students with and without Special Educational Needs. *Sustainability*, 12(19), 8116.
- Becerra, B. L. G., & Almendra, M. P. R. (2020). Measuring Student Motivation in A Statistics Course Supported by Podcast Using Reduced Instructional Materials Motivation Survey (RIMMS). *2020 X International Conference on Virtual Campus (JICV)*, IEEE. 1-4.
- Chen, C. H., Huang, C. Y., & Chou, Y. Y. (2019). Effects of augmented reality-based multidimensional concept maps on students' learning achievement, motivation and acceptance. *Universal Access in the Information Society*, 18(2), 257-268.
- Clement, J. (2021). Age breakdown of video game players in the United States in 2020. <https://www.statista.com/statistics/189582/age-of-us-video-game-players-since-2010/>. Accessed 7 April 2021.
- Cook, D. A., Beckman, T. J., Thomas, K. G., & Thompson, W. G. (2009). Measuring Motivational Characteristics of Courses: Applying Keller's Instructional Materials Motivation Survey to A Web-Based Course. *Academic Medicine*, 84(11), 1505-1509.
- Hauze, S., & Marshall, J. (2020). Validation of The Instructional Materials Motivation Survey: Measuring Student Motivation to Learn Via Mixed Reality Nursing Education Simulation. *International Journal on E-Learning*, 19(1), 49-64.
- Huang, W., Huang, W., Diefes-Dux, H., & Imbrie, P. K. (2006). A preliminary validation of Attention, Relevance, Confidence and Satisfaction model-based Instructional Material Motivational Survey in a computer-based tutorial setting. *British Journal of Educational Technology*, 37(2), 243-259.
- Keller, J. M. (1987). Strategies For Stimulating The Motivation To Learn. *Performance and Instruction*, 26(8), 1-7.
- Keller, J. M. (1999). Using The ARCS Motivational Process in Computer-Based Instruction and Distance Education. *New Directions for Teaching and Learning*, 1999(78), 37-47.
- Keller, J. M. (2010). *Motivational Design for Learning and Performance*, Springer, New York, USA.
- Kemmis, S., McTaggart, R., & Nixon, R. (2013). *The Action Research Planner: Doing Critical Participatory Action Research*. Springer Science & Business Media.
- Khan, T., Johnston, K., & Ophoff, J. (2019). The Impact of An Augmented Reality Application on Learning Motivation of Students. *Advances in Human-Computer Interaction*.

- Li, C. T., Wang, P. Y., Chen, K. T., Kuo, C. C., & Hou, H. T. (2017). An augmented reality educational board game with situated learning and scaffolding teaching strategy for environmental protection issue. *In Proceedings of the 25th International Conference on Computers in Education*, Christchurch, New Zealand (pp. 4-8).
- Lin, H. C. K., Lin, Y. H., Wang, T. H., Su, L. K., & Huang, Y. M. (2021). Effects of Incorporating Augmented Reality into a Board Game for High School Students' Learning Motivation and Acceptance in Health Education. *Sustainability*, 13(6), 3333.
- Linser, R., & Kurtz, G. (2018). Do Anonymity and Choice of Role Help To Motivate and Engage Higher Education Students In Multiplayer Online Role Play Simulation Games?. In *EdMedia+ Innovate Learning. Association for the Advancement of Computing in Education (AACE)*, 1506-1513.
- Loorbach, N., Peters, O., Karreman, J., & Stehouder, M. (2015). Validation of The Instructional Materials Motivation Survey (IMMS) In A Self-Directed Instructional Setting Aimed at Working with Technology. *British Journal of Educational Technology*, 46(1), 204-218.
- Nel, G., & Nel, L. (2018). Motivational value of code. Org's code studio tutorials in an undergraduate programming course. *Annual Conference of the Southern African Computer Lecturers' Association, Springer*, 173-188.
- Nordin, N., Nordin, N. R. M., & Omar, W. (2021). Monopoly-based Game with Augmented Reality Intervention in Higher Education, *Knowledge Management International Conference (KMICe) 2021*.
- Pinto, D., Mosquera, J., Gonzalez, C., Tobar-Muñoz, H., Fabregat, R., & Baldiris, S. (2017). Augmented Reality Board Game for supporting learning and motivation in an indigenous community. *V Congreso Internacional de Videojuegos y Educación (CIVE'17)*.
- Ran, C. X., & Wei, H. P. (2020, August). AR Interactive Game of Monopoly Based on New Eight Scenes of Macau. *In 2020 3rd IEEE International Conference on Knowledge Innovation and Invention (ICKII)* (pp. 92-95). IEEE.
- Sumadio, D. D., & Rambli, D. R. A. (2010). Preliminary evaluation on user acceptance of the augmented reality use for education. *In 2010 second international conference on computer engineering and applications* (Vol. 2, pp. 461-465). IEEE.
- Wang, S., Christensen, C., Xu, Y., Cui, W., Tong, R., & Shear, L. (2020). Measuring Chinese Middle School Students' Motivation Using The Reduced Instructional Materials Motivation Survey (RIMMS): A Validation Study in The Adaptive Learning Setting, *Frontiers in Psychology*, 11.

Impact of Digital Tools in Teaching Cross-Cultural Management Subject

Narentheren Kaliappen^{*a}, Wan Nurisma Ayu Wan Ismail^a

^aSchool of International Studies, College of Law, Government and International Studies,
Universiti Utara Malaysia, Malaysia.

*Corresponding Author: narentheren@uum.edu.my

Abstract

The purpose of this article is to demonstrate the effectiveness of Wizer.me and Socrative in teaching Cross-Cultural Management at Universiti Utara Malaysia (UUM). The quantitative data for this study were gathered from 46 undergraduate students via an online questionnaire created with Google form. There were 27 items in total, which were classified into five categories: advantage, belief, engagement, usability, and enjoyment. The data was gathered at the completion of the semester after all activities were finished using the Wizer.me and Socrative tools. Microsoft Excel was used to conduct the analysis. The article includes demographic information and descriptive analysis for each of these 27 items. The data indicate that, on average, 72.70 per cent of students strongly agreed with advantage components, 50.38 per cent with belief components, 65.57 per cent with engagement components, 66.96 per cent with usability components, and 75.22 per cent with enjoyment components. Students gave favourable comments on all items and believe that the Wizer.me and Socrative tools have a substantial impact on their teaching and learning processes. This study examined the influence of Wizer.me and Socrative tools, which had never been examined at UUM previously. As a result of this study, university instructors now have useful insight into how to incorporate these two tools into their teaching and learning processes. Finally, this article depicts the implications, limitations, and research agenda for the future.

Keywords: Wizer.me, Socrative, Cross-Cultural Management, Undergraduate, Digital Tools.

Introduction

Today's tertiary education system's primary purpose is to prepare graduates for a shifting workplace and future job problems created by the Fourth Industrial Revolution (Ahmad, 2015). Since each student will study innovatively, attain their full potential, and build skills that will help them thrive in the future at the university level, university students must be highly creative, stirred, and motivated for the future. Innovation is an effective route to more remarkable social and cultural advancement for universities. In order to adapt to changes in the educational sector, educational institutions must be able to shift practices and delivery systems often. To practise sustainable development, people should exhibit creativity (Mróz and Ocetkiewicz, 2021).

Incorporating innovative thinking and creative problem-solving is a critical and meaningful component in the modern conception of sustainable education. When it comes to education, it is all about teaching creativity. One strategy might be using new ways and resources, while another might focus on teaching methodology and curricula. Different methods of teaching innovation were seen. The usage of technology as a support tool for new teaching methods is a widespread phenomenon.

Problem Statement

Cross-Cultural Management (CCM) is a course that focuses on both content and theory. For two semesters, A181 and A182, I taught this CCM course. According to my observations in

class, the majority of pupils were passive and disengaged with the process of teaching and learning. This was a significant setback in terms of motivation. Additionally, I got the opportunity to interview several students who are repeating this course due to past semester failures. I inquired as to why these individuals failed the CCM class. They expressed their dissatisfaction with the lecturer's instruction in class! According to some, the instructor merely read the slides! Some students have stated that they are unable to answer exam questions. They were never exposed to classroom activities that included questions and replies. Quite teacher-centered, as some pupils observed. As a result, it can be deduced that the issue is with the manner of delivery. These responses motivated me to devise a strategy that would motivate students to be active and engaged in their CCM education.

As a result, CCM was taught at Universiti Utara Malaysia using Wizer.me and Socrative. Wizer.me and Socrative, in addition to contributing in the development of unique teaching approaches, are digital tools that facilitate the implementation of active learning in the classroom. Students studying CCM make use of the Wizer.me and Socrative tools, and this effort aims to address the research question, "What effect do these tools have on student learning?" The purpose of this study is to discuss the effectiveness of employing digital worksheets (Wizer.me and Socrative) in teaching CCM to undergraduate students at UUM. This study's findings are expected to improve students' transferable skills and lecturers' delivery methods for this course.

Literature Review

Creating well-rounded, highly competent students in today's graduate school system is no easy task for educators. It is predicted that students will have an extensive range of skills, focusing on critical thinking, problem-solving, and practical job skills. The world is rapidly changing, and students must meet the increasing demand for skills, flexibility, and adaptability. Consequently, standard ideas and techniques do not work in today's businesses and unpredictable market conditions (Kaliappen, 2019). The universe of digital tools frequently changes which can be difficult for teacher educators to navigate (Kaufman, 2014). However, today's instructors should be using cutting-edge digital tools and implementing them in the classroom. TPACK—technology, pedagogy, and content-knowledge paradigm (Mishra & Koehler, 2006).

Theory

To understand how this system works, TPACK highlighted three areas of information: pedagogical knowledge, known as PK; technical knowledge, known as TK; and content knowledge, known as CK. The preparation that equips educators to use digital resources gets better with overlap among the three domains (Koehler, Mishra & Cain, 2013). In addition to integrating technology into specific subject content, teachers also need to know how to use technology for an educational purpose and where to use that expertise. Educators can employ content knowledge in conjunction with topic didactic knowledge while including pedagogical knowledge (Ahmad, 2018). To make knowledge more accessible while complementing pedagogy, the technology looks for the most satisfactory solutions. There is no doubt that a handy educational tool produced by Wizer (the digital worksheet) has aided our efforts to learn about CCM. The TPACK pedagogical paradigm illustrates a potent synergy of curriculum, instructional techniques, and learning styles to deliver and achieve the objectives of a programme. This study includes content and technology: Wizer.me and Socrative are featured in the study, and pedagogy is highlighted as being focused on authentic activity-based learning.

Wizer.me

Wizer.me is an internet software programme that academics can use for free. The Wizer worksheet builder enhances teachers' experience and creativity by allowing them to create open questions, multiple-choice easily, matching pairs, fill in the blank, fill on a graphic picture, tables, and more. Worksheets designed by Wizer.me are visually engaging and motivate pupils to study more. Lesson plans created by Wizer.me can be customised with a choice of backdrops and themes. With Wizer.me, can add rich media to create mixed worksheet (video, audio, images). Videos may captivate the mind, allowing it to master new abilities or indulge in creative endeavours. Wizer.me also saves time by automatically grading assignments or manually reviewing each one to provide more personalised feedback (Kaliappen, Ismail, Ghani & Sulisworo, 2021).

Socrative

With Socrative, making quizzes on smartphones is as straightforward as writing questions in the cloud. Also, learners can compete against one another in "Space Race" mode to launch rockets into space. There are numerous positive reasons to employ mobile educational apps in the classroom. For one, the instructor can customise the app's behaviour, such as whether the correct answer to the provided questions is always displayed on the app's screen or only on the front of the classroom space (Pryke, 2020).

Methodology

The quantitative data for this study were gathered from 46 undergraduate students who undertook the CCM subject in semester 2020/2021 at UUM. The responses were gathered via an online questionnaire created with Google form. There were 27 items in total, which were classified into five categories: advantage, belief, engagement, usability, and enjoyment. The instrument was adapted from Balta and Tzafilkou (2019). The data was gathered at the completion of the semester after all activities were finished using the Wizer.me and Socrative tools. This paper concentrated on post-research impact.

Findings and Discussions

Demographic profiles

Table 1

Respondent Profiles

Profile Factors	Particulars	f	%
Gender	Male	14	30.43
	Female	32	69.57
Program	Bachelor of International Business Management (BIBM) (Hons)	36	78.26
	Bachelor of International Affairs Management (BIAM) (Hons)	10	21.74
Semester	9-10	15	32.60
	7-8	27	58.70
	5-6	4	8.70

According to the data in the preceding table, the vast majority of responders were female students (69.57 per cent). This CCM subject is a required course for the BIBM programme, which explains why most replies came from BIBM students. BIAM students, on the other hand, can choose to take CCM as an elective subject. Finally, most responses came from students in their seventh and eighth semesters, indicating that this CCM course is taken by students in their third year and above.

Descriptive analysis

Table 2

Average score for each dimension

Dimensions	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Advantage	72.70%	20.88%	4.70%	0	0.40%
Belief	56.96%	34.36%	8.70%	0	0
Engagement	65.57%	29.35%	4.33%	0.73%	0
Usability	66.96%	29.14%	3.92%	0	0
Enjoyment	75.22%	20.40%	3.90%	0	0.44%

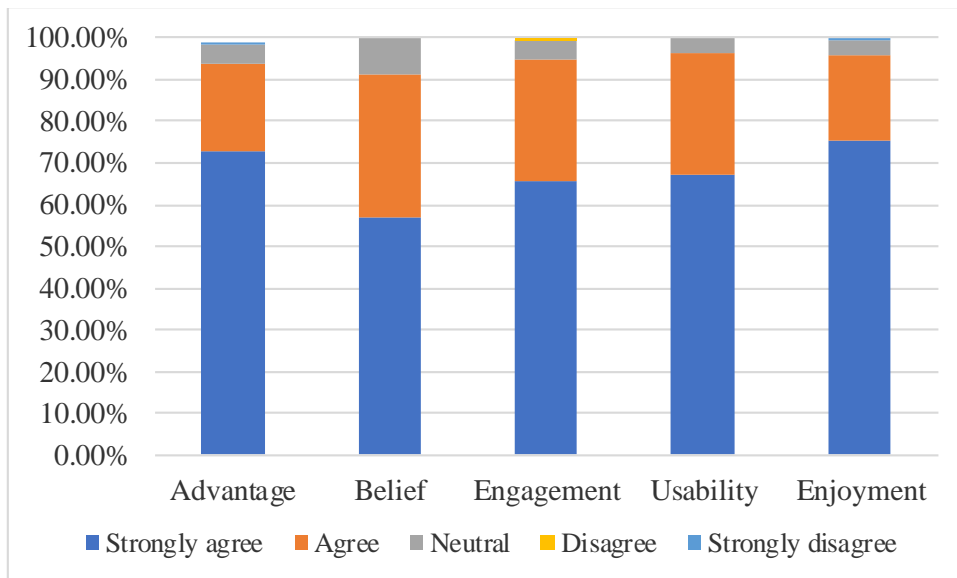


Figure 1. Average Score for Each Dimension

As demonstrated in figure 1, the average score for each dimension is shown in the following table 2: The data reveal that enjoyment (75.22 per cent) and advantage (72.70 per cent) were the top two dimensions on which the vast majority of respondents strongly agreed. We may infer from this that when educators use Wizer.me and Socrative technologies in their teaching and learning process, students have a great feeling and get an added benefit. This outcome is consistent with the findings of Sayaf, Alamri, Alqahtani, and Al-Rahimi (2021), who found that digital learning increases students' satisfaction.

Table 3
Responses by items

Dimensions	Items	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Advantage	Item 1	41 (81.9%)	5 (10.1%)	0	0	0
	Item 2	31 (67.4%)	12 (26.1%)	3 (6.5%)	0	0
	Item 3	29 (63%)	15 (32.6%)	2 (4.3%)	0	0
	Item 4	35 (76.1%)	7 (15.2%)	4 (8.7%)	0	0
	Item 5	38 (82.6%)	8 (17.4%)	0	0	0
	Item 6	30 (65.2%)	11 (23.9%)	4 (8.7%)	0	1 (2.2%)
Belief	Item 7	26 (56.5%)	19 (41.3%)	1 (2.2%)	0	0
	Item 8	30 (65.2%)	12 (26.1%)	4 (8.7%)	0	0
	Item 9	30 (65.2%)	13 (28.3%)	3 (6.5%)	0	0
	Item 10	17 (37%)	20 (43.5%)	9 (19.6%)	0	0
	Item 11	28 (60.9%)	15 (32.6%)	3 (6.5%)	0	0
Engagement	Item 12	22 (47.8%)	13 (28.3%)	10 (21.7%)	1 (2.2%)	0
	Item 13	35 (76.1%)	11 (23.9%)	0	0	0
	Item 14	35 (76.1%)	11 (23.9%)	0	0	0
	Item 15	25 (54.3%)	18 (39.1%)	2 (4.3%)	1 (2.2%)	0
	Item 16	34 (73.9%)	12 (26.1%)	0	0	0
Usability	Item 17	30 (65.2%)	16 (34.8%)	0	0	0
	Item 18	26 (56.5%)	19 (41.3%)	1 (2.2%)	0	0
	Item 19	29 (63%)	16 (34.8%)	1 (2.2%)	0	0
	Item 20	31 (67.4%)	13 (28.3%)	2 (4.3%)	0	0
	Item 21	32 (69.6%)	10 (21.7%)	4 (8.7%)	0	0
	Item 22	36 (78.3%)	9 (19.6%)	1 (2.2%)	0	0
Enjoyment	Item 23	34 (73.9%)	11 (23.9%)	1 (2.2%)	0	0
	Item 24	38 (82.6%)	6 (13%)	2 (4.3%)	0	0
	Item 25	34 (73.9%)	10 (21.7%)	2 (4.3%)	0	0
	Item 26	31 (67.4%)	10 (21.7%)	4 (8.7%)	0	0
	Item 27	36 (78.3 %)	10 (21.7%)	0	0	1 (2.2%)

Table 4
Top Eight Items with Highest Strongly agreed

Items	Percentage (%)
I like Wizer.me and Socrative when used in lectures.	82.6
Answering question with Wizer.me and Socrative are more comfortable.	82.6
Lectures are more enjoyable with Wizer.me and Socrative.	81.9
Using Wizer.me and Socrative are easy.	78.3
I enjoy using Wizer.me and Socrative.	78.3
Wizer.me and Socrative are increasing interest in the subject.	76.1
Wizer.me and Socrative make learners more active.	76.1
Wizer.me and Socrative enable to learn more in a short time.	76.1

Table 3 illustrates the percentage of each of the 27 items in the questionnaire that correspond to each of the five aspects, as determined by the questionnaire. Table 4 reveals that the top eight items with the highest number of strongly agreed replies are all in the same category. This finding demonstrates that students enjoy using Wizer.me and Socrative in lectures. They also believe that answering questions with Wizer.me and Socrative is more comfortable. Furthermore, the students have said that Wizer.me and Socrative have made their lectures more enjoyable.

Students also stated that utilising Wizer.me and Socrative is simple and that they are enjoying themselves while using Wizer.me and Socrative. They also indicated that Wizer.me and Socrative are generating more interest in the subject. They also reported that Wizer.me and Socrative encourage them to be more active and allow them to learn more in a shorter amount of time. Consequently, educators should take note of these outcomes, which demonstrate that students truly like, benefit from, and appreciate when these tools are used in the teaching and learning process. The utilisation of wizer.me and Socrative in the classroom can help lecturers make their lessons more engaging.

Implications, Conclusion and Future Research

This study aimed to determine the influence of Wizer.me and Socrative tools on the teaching of CCM to undergraduate students at UUM. It assesses the impact on five dimensions: advantage, belief, engagement, usability, and enjoyment. The research question found that the use of Wizer.me and Socrative tools in teaching CCM subjects have a favourable influence. In general, using these digital technologies increases students' enjoyment and benefits. In particular, these digital tools assist students in answering questions during class more effortlessly, feel more relaxed, and develop a greater interest in the subject.

On the contrary, numerous items elicited significant agreement from fewer students. For example, only 37 per cent of students believe these tools are phenomenal software, 47 per cent believe time passes more quickly, and 54.3 per cent believe they enable communication during group work. We want to emphasise that today's learners are extremely tech-savvy and have familiarity with various other digital tools, including Kahoot, Quizlet, and Mentimeter. Perhaps this is why they describe this software as less spectacular. Given that both of these digital technologies were designed to facilitate personalised learning, they may have various drawbacks when it comes to group collaboration. Due to a lack of group participation, students may have the impression that time is passing slowly. On the other hand, most students gave positive responses to all questions and believe that the Wizer.me and Socrative tools have a significant impact on their teaching and learning processes.

During this COVID-19 epidemic, digital technology is increasingly needed to be integrated into the educational ecosystem (Krishnamurthy, 2020). In education, digital transformation will help to strengthen the traditional face-to-face learning environment. Educators should employ digital technologies to make their lessons more engaging, informative, and impactful.

The impact of Wizer.me and Socrative tools on students' achievement on examinations could be investigated in a future study. Only 46 respondents from the CCM topic participated in this survey; in the future, the number of respondents from diverse subjects in higher education may increase. The researchers can also collect longitudinal data to evaluate a pattern or trend in the students' progress and understanding level after including these digital tools in their teaching and learning process.

References

- Ahmad, T. (2020). Student perceptions on using cell phones as learning tools. *PSU Research Review*, 4(1), 25–43. <https://doi.org/10.1108/prr-03-2018-0007>
- Balta, N., & Tzafilkou, K. (2018). Using Socrative software for instant formative feedback in physics courses. *Education and Information Technologies*, 24(1), 307–323. <https://doi.org/10.1007/s10639-018-9773-8>
- Kaliappen, N. (2019). Educational benefits of using business strategy game (BSG) in teaching and learning strategic management. *International Journal of Emerging Technologies in Learning*, 14(7), 209-215.
- Kaliappen, N., Ismail, W. N., Ghani, A. B., & Sulisworo, D. (2021). Wizer.me and Socrative as innovative teaching method tools: Integrating TPACK and Social Learning theory. *International Journal of Evaluation and Research in Education (IJERE)*, 10(3), 1028. <https://doi.org/10.11591/ijere.v10i3.21744>
- Kaufman, P. (2014). The sociology of college students' identity formation. *New Directions for Higher Education*, 2014(166), 35–42. <https://doi.org/10.1002/he.20093>
- Koehler, M. J., Mishra, P., & Cain, W. (2013). What is Technological Pedagogical Content Knowledge (TPACK)? *Journal of Education*, 193(3), 13–19. <https://doi.org/10.1177/002205741319300303>
- Krishnamurthy, S. (2020). The Future of Business Education: A commentary in the shadow of the COVID-19 pandemic. *Journal of Business Research*, 117, 1–5. <https://doi.org/10.1016/j.jbusres.2020.05.034>
- Mishra, P., & Koehler, M. (2006). Technological Pedagogical Content Knowledge: A framework for teacher knowledge. *Teachers College Record*, 108(6), 1017–1054. <https://doi.org/10.1111/j.1467-9620.2006.00684.x>
- Mróz, A., & Ocotkiewicz, I. (2021). Creativity for sustainability: How do polish teachers develop students' creativity competence? Analysis of Research results. *Sustainability*, 13(2), 571. <https://doi.org/10.3390/su13020571>
- Pryke, S. (2020). The use of Socrative in University Social Science Teaching. *Learning and Teaching*, 13(1), 67–86. <https://doi.org/10.3167/latiss.2020.130105>
- Sayaf, A. M., Alamri, M. M., Alqahtani, M. A., & Al-Rahmi, W. M. (2021). Information and communications technology used in Higher Education: An empirical study on digital learning as Sustainability. *Sustainability*, 13(13), 7074. <https://doi.org/10.3390/su13137074>

Adopting Computer-Supported Collaborative Learning: Reducing the Impact of Diverse Behaviors during the Covid-19 Pandemic

Nurul Nazihah Hawari

School of Quantitative Sciences, Universiti Utara Malaysia

Corresponding Author: nnazihah@uum.edu.my

Abstract

Advanced digital learning innovation has become progressively dominant in an assortment of instructional settings and greatly affected by the current pandemic of Covid-19 situation. Also making the role of the lecturer more demanding in managing the classroom. This study analyses the impact of the computer-supported collaborative learning which involves groups of students working together to complete a research-based project. This research involves empirical data of 34 undergraduate students of class Research in Quantitative Science I in their final year. Learning flourishes in a social environment where conversation between learners takes place. Students' attitudes and cultural beliefs should be considered to ensure the effectiveness of instructions. This finding brings the implication that collaborative learning through a digital platform during the pandemic reduced the impact of diverse behaviour between learners.

Keywords: computer-supported, collaborative learning, divers' learners' behavior, Covid-19 pandemic.

Introduction

The use of technologies in teaching and learning process has infuses classrooms with digital learning tools, supports learning 24 hours a day, 7 days a week, and builds 21st century skills. It also increases student engagement and motivation as well as accelerates learning. Collaborative learning is a learning strategy wherein two or more individuals are cooperatively engaged in a learning process (Warsah, Morganna, Uyun, Hamengkubuwono & Afandi, 2021). In this regard, among individuals within a learning group, they interact, negotiate to solve problems during learning, make use of their cognitive and metacognitive skills during interactions, and become responsible for their learning (Chatterjee & Correia, 2020; Hautala & Schmidt, 2019; Kaendler, Wiedmann, Rummel & Spada, 2015). With the aid of technology, collaborative learning metamorphoses as a tool of learning and instruction to create an environment of learning by applying various technological and pedagogical strategies (Jeong, Hmelo-Silver & Jo, 2019) and it has become more popular during the COVID 19 outbreak for most universities in Asia have decided to stop classical face to face interaction teaching-and-learning strategies (Huang, 2020).

There has been research that explored the impact of collaborative learning activities in online learning environments (Ritushree Chatterjee & Ana-Paula Correia, 2020; Chee, Yahaya & Ibrahim, 2018; Giannakos, & Darra, 2018). However, this study aims to assess the impact of the implementation of adopting computer-supported collaborative learning towards the diverse behaviors of learners during the Covid-19 pandemic. This study is conducted at Universiti Utara Malaysia which involves 34 final year students in class of Research in Quantitative Sciences I. The main purpose of this research study is to analyse the relationship between students' behaviour toward collaborative learning among online learners in higher education. This research is to answer the following questions such as (1) Is there any relationship between students' behaviour and collaborative learning in online learning environments? (2) Did diverse learner's behaviour affect the preferences of computer

supported collaborative learning? This study lays a foundation for future research work in this area and informs educators and instructional designers about better online course design to enhance student learning and satisfaction.

Literature Review

Collaborative learning is a situation in which two or more people learn or attempt to learn something together. Thus, collaborative learning is commonly illustrated when groups of students work together to search for understanding, meaning, or solutions or to create an artifact or product of their learning. Collaborative learning proposes a way of dealing with people that emphasizes individual abilities and contributions. Collaboration is considered a way of life “where individuals are responsible for their actions, including learning and respecting the abilities and contributions of their peers” (Laal & Ghodsi, 2012). According to Hei, Stribos, Sjoer and Admiraal (2015), interactions are the key to collaborative learning. There are two kinds of interactions in collaborative learning, namely cognitive interactions in that learners will be actively involved in the processes of thinking, reasoning, analyzing, and elaborating with one another concerning the learned material. The other kind is socioemotional interactions whereby learners will understand each other, complete their competences, be empathetic, and feel the essence of their collaborations with each other. In a wider perspective, Chatterjee and Correia (2020) explain that collaborative learning develops learners’ interactive competences in a range of dimensions such as affection, cognition, social, and metacognition. The broad concept of collaborative learning makes it unlimited to certain rules of learning because active interactions can be made in many ways. In brief, various learning acts such as asking each other, discussing, explaining to each other, debating, and being actively engaged in knowledge construction processes are categorized into collaborative learning (Ruys, Van Keer, & Aelterman, 2014).

Educational researchers have taken various approaches to assessing and measuring collaborative learning in online learning environments. Collaborative learning can, if designed and implemented properly, contribute to student learning outcomes, and prepare them for teamwork. To enhance the benefit of collaborative learning, teachers need more support in the design and implementation of collaborative learning to translate knowledge about collaborative learning into effective practice (Hei, Stribos, Sjoer & Admiraal, 2015). Computer supported collaborative learning is based on the reason that collective information development and critical thinking can be successfully assisted with technological innovation (Jeong, Hmelo-Silver & Jo, 2019). In online learning environments mediated by technology, online collaborative tools such as Google Docs, wikis, and discussion boards are employed by instructors to facilitate collaboration among peers (Ishtaiwa & Aburezeq, 2015). The recent endorsement of digital technologies makes the utilization of those devices even more perilous. Recently, Ritushree Chatterjee and Ana-Paula Correia (2020) did examine the students’ attitudes, both positive and negative, toward online collaborative tools used for peer-to-peer interaction to accomplish collaborative activities within an online course. Researchers now connect learning to the process of partaking in the practice of cultural impact in these systems instead of having familiarity or abilities (Alsalam, 2020). This implies that the very basic notion of learning is closely related to the contexts within which it is happening and may be different across cultural and historical perspectives. More studies need to be carried out to assess the impact of diverse behaviors of learners towards adopted computer supported collaborative learning to improve teaching and learning activities and student engagement.

Methodology

This study employed a quantitative approach aimed at investigating the correlation between the two concerned variables, the diverse behavior of students and collaborative learning, by making use of Pearson's product-moment correlational coefficient. The study was conducted at the Universiti Utara Malaysia. A total of 34 students participated in this study. They are undergraduate students at their final year who are enrolled in class of Research Method in Quantitative Sciences I. This course included collaborative learning activities using tools such as, Cisco Webex Online Meeting Platform, Google Docs, WhatsApp and Telegram, also discussion boards (forum) at the UUM online learning portal. This course also required the students to work in a group of two for a research project. A questionnaire adopted from Fatimaha, Sarbainia, Ismi Rajania and Ersis Warmansyah Abbasa (2021) is administered to the students to measure the diverse behavior among students and the relationship towards the computer supported collaborative learning. There were 3 main parts of survey with a total of 19 questions. The first part measures the extroverts or introverts which consists of 10 questions. The second part measure the individual or collectivism which consists of 5 questions. The third part measures the tendency to participate in computer supported collaborative learning which consist of 4 questions. Using SPSS software, correlation analysis is employed to measure the relationship. Figure 1 illustrates the theoretical model of this research.

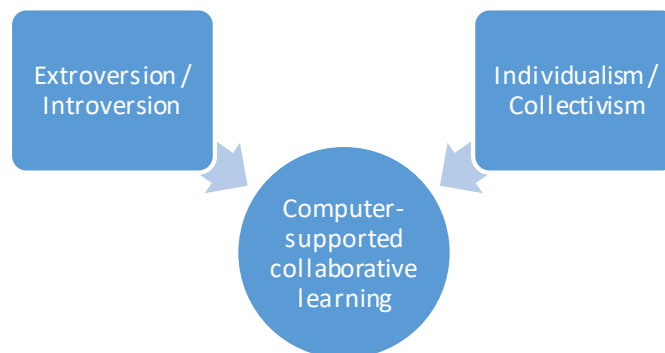


Figure 1. Theoretical framework

The proposed of this study considers the following hypotheses:

1. There is no relationship between the degree of extroversion and the tendency to participate in computer supported collaborative learning.
2. There is no relationship between the degree of introversion and the tendency to participate in computer supported collaborative learning.
3. There is no relationship between the degree of collectivism and the tendency to participate in computer supported collaborative learning.

Analysis and Finding

A total of 34 respondents, with a total of 20 variables including gender, is collected using a Google Form, and is analysed using SPSS software. There is no missing data and no outliers. Based on the data collected, 27 students are female (Figure 2).

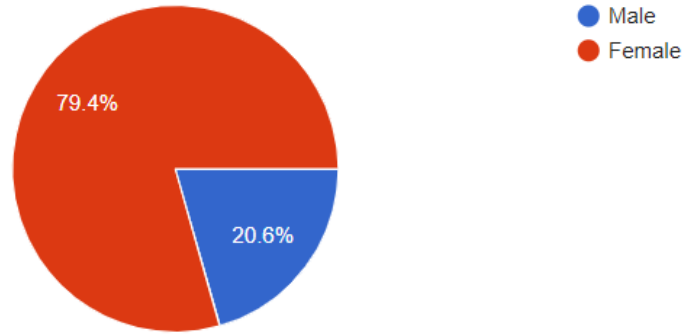
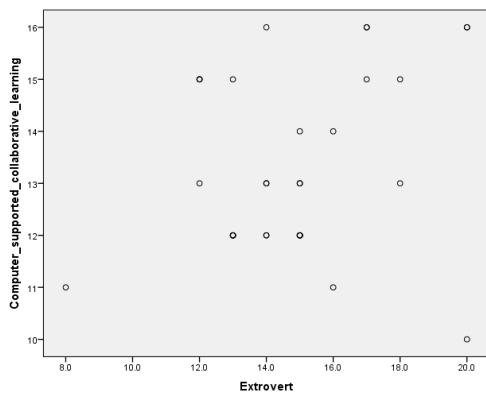
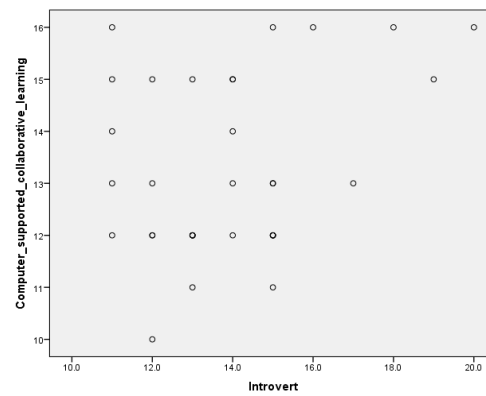


Figure 2. Gender distribution of respondents

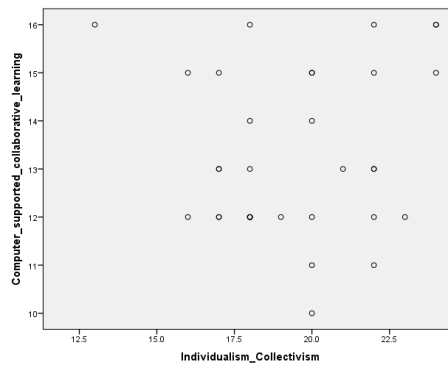
To achieve the research objective of reducing the impact of diverse behaviors among students during the Covid-19 pandemic by adopting the computer supported collaborative learning, a series of analysis have been carried out using SPSS. Firstly, scatter plots were developed to visualise the relationship of variables. Figure 3 shows the relationships of between variables under study. From Figure 3, the data is scattered, and it shows no pattern of relationship.



(a) relationship between the degree of extroversion and the tendency to participate in computer supported collaborative learning



(b) relationship between the degree of introversion and the tendency to participate in computer supported collaborative learning



(c) relationship between the degree of collectivism and the tendency to participate in computer supported collaborative learning

Figure 3. Scatter plots of variables under study

Next, the correlation analysis is conducted to test the relationship between the variables under study. Based on the above-mentioned hypotheses of study, Table 1 presents the result of correlation analysis for each hypothesis. Results from Table 1 indicates that there are no significant relationships between all variables under study. These findings affirm the impacts of extroversion/introversion, and individual/collectivism behaviour among students could be reduced by adopting the computer supported collaborative learning in classroom.

Table 1

Result of correlation analysis between diverse behaviours and computer supported collaborative learning (CSCL)

Variable	N	Correlation Coefficient	Sig. (2 tailed)	Result
Extrovert ↔ CSCL	34	0.268	0.126	Insignificant
Introvert ↔ CSCL	34	0.304	0.081	Insignificant
Collectivisms ↔ CSCL	34	0.111	0.532	Insignificant

From the analysis, we can conclude that the diverse behaviours among students did not affect the adoption of computer supported collaborative learning preferences. Thus, it is concluded that the adoption of computer supported collaborative learning can reduced the impact of diverse learners' behaviour during this pandemic season. This study involved 34 final year undergraduates' students. In future study, the researcher might increase the sample size. The findings of this study might help lecturers to manage their classroom teaching and learning activities to improve the engagement of students in class.

Conclusion

This study has been conducted to analyse the impact of diverse behaviours of learners towards the computer supported collaborative learning preferences. Collaborative learning is a learning strategy wherein two or more individuals are cooperatively engaged in a learning process. Collaborative learning has a positive impact on the processes of learners' cognitive learning, their social and emotional functions, and their psychological development. In this current era of Covid-19 pandemic, adoption of computer supported collaborative learning can reduced the impact of diverse behaviours among learners. The use of technology did enhance the teaching and learning activities and improve the engagement of learners. Findings from this research give insight to lecturers in managing the teaching and learning activity for lessons to reduce the impact of diverse behaviours among learners.

References

- Alsalam, F. (2020). The role of information technology management in supporting managerial innovation. *Management Science Letters*,10(11), 2483-2490.
- Chatterjee, R., & Correia, A. P., (2020). Online students' attitudes toward collaborative learning and sense of community. *American Journal of Distance Education*, 34(1), 53-68. <https://doi.org/10.1080/08923647.2020.1703479>
- Chee, K. N., Yahaya, N., & Ibrahim, N. H. (2018). An evaluation of the learning effectiveness of a formulated ideal social collaborative mobile learning environment application towards cognitive level in biology. *International Journal of Mobile Learning and Organisation*, 12(2), 162–189.
- Fatimaha, Sarbainia, Ismi Rajania and Ersis Warmansyah Abbasa. (2021). *Management Science Letters*, 11, 373–378. doi: 10.5267/j.msl.2020.9.032.

- Giannakos, V., & Darra, M. (2018). The implementation of Computer-Supported Collaborative Learning in Secondary Education. *International Journal of Learning and Development*, 8(4), 137. <https://doi.org/10.5296/ijld.v8i4.13794>
- Hautala, J., & Schmidt, S., (2019). Learning across distances: an international collaborative learning project between Berlin and Turku. *Journal of Geography in Higher Education*, 43(2), 181–200. <https://doi.org/10.1080/03098265.2019.1599331>
- Hei, M. S. A. De, Strijbos, J. W., Sjoer, E., & Admiraal, W. (2015). Collaborative learning in higher education: lecturers' practices and beliefs. *Research Papers in Education*, 30(2), 232–247. <https://doi.org/10.1080/02671522.2014.908407>
- Huang, J. (2020). Successes and Challenges: Online Teaching and Learning of Chemistry in Higher Education in China in the Time of COVID-19. *Journal of Chemical Education*.
- Ishtaiwa, F. F., & Aburezeq, I. M. (2015). The impact of Google Docs on student collaboration: A UAE case study. *Learning, Culture and Social Interaction*, 7, 85–96. doi:10.1016/j.lcsi.2015.07.004
- Jeong, H., Hmelo-Silver, C. E., & Jo, K., (2019). Ten years of Computer-Supported Collaborative Learning: A meta-analysis of CSCL in STEM education during 2005–2014. *Educational Research Review*, 28, 100284.
- Laal, M., & Ghodsi, S. M. (2012). Benefits of collaborative learning. *Procedia-Social and Behavioral Sciences*, 31, 486–490. doi:10.1016/j.sbspro.2011.12.091
- Kaendler, C., Wiedmann, M., Rummel, N., & Spada, H. (2015). Teacher competencies for the implementation of collaborative learning in the classroom: A framework and research review. *Educational Psychology Review*, 27(3), 505–536. <https://doi.org/10.1007/s10648-014-9288-9>
- Ritushree Chatterjee & Ana-Paula Correia. (2020). Online Students' Attitudes Toward Collaborative Learning and Sense of Community, *American Journal of Distance Education*, 34:1, 53-68, DOI: 10.1080/08923647.2020.1703479
- Ruys, I., Van Keer, H., & Aelterman, A. (2014). Student and novice teachers' stories about collaborative learning implementation. *Teachers and Teaching: Theory and Practice*, 20(6), 688–703. <https://doi.org/10.1080/13540602.2014.885705>
- Warsah, I., Morganna, R., Uyun, M., Hamengkubuwono., & Afandi, M. (2021). The Impact of Collaborative Learning on Learners' Critical Thinking Skills. *International Journal of Instruction*, 14(2), 443-460. <https://doi.org/10.29333/iji.2021.14225a>

Empowering students' Online Collaborative Learning during Covid-19 Pandemic Using Canva

Siti Nazuar Sailin^{*a}, Noor Aida Mahmorb, Mohammad Shah Kamarulzaman^c

^{abc}School of Education, Universiti Utara Malaysia

^{*}Corresponding Author: sitinaz@uum.edu.my

Abstract

During the Covid-19 outbreak, teaching and learning in the higher education in Malaysia has shifted from the conventional face-to-face into online method. Even though the teaching and learning has been conducted fully online, either synchronously or asynchronously, students are encouraged to work collaboratively to promote active engagement and critical thinking. This is important to achieve the course learning outcomes as well as the learning outcome clusters that have been mapped in the curriculum. In response to this, the study aims to seek students' online collaborative learning experience during Covid-19 pandemic in one postgraduate course. A qualitative approach is used in this study. Data was collected and analysed thematically from 21 post-graduate student's reflective writing upon completion of a collaborative project. The finding reveals that the integration of Web 2.0 tool namely Canva provide opportunities to promote student's active participation and engagement in a collaborative project work. Several themes related to collaborative learning such as communication and interaction, teamwork and group support as well as interpersonal and cooperative skills emerged from the data. These findings indicate that despite various challenges faced by the students such as the time management, internet access, and difficulty to do coordination in group work during the remote learning, meaningful collaborative learning experience can be properly addressed if the instructors are able to provide appropriate learning space and support as well as systematic instructional design.

Keywords: collaborative learning, online remote learning, online engagement, reflective learning

Introduction

Over the last decades, collaborative learning has become one of the key pedagogical strategies to promote student's teamwork in small groups to optimize their learning (Johnson & Johnson, 1999). Collaborative learning emphasizes on student's active participation through cooperative and group work. It is one of the learning skills commonly applied in higher education to promote student's active engagement and critical thinking (Sailin & Mahmorb, 2018; Timonen & Ruokamo, 2021).

It is anticipated that collaborative learning should provide opportunities for students to engage in active and meaningful learning activities or assessment task by helping each other to develop, review and reflect upon improving each other's work (McConnell, 2002). However, the shift to online learning has make collaborative learning experience to be a bit challenges for both the students and the instructors in the virtual environment (Al-Ismaiel, 2011; Qin et al., 2016). With the shift to online remote learning, instructors need to acquaint with the online teaching and learning environment and adjust the instructional approach, activities as well as assessment methods to meet the course learning outcomes. This requires instructors to fine-tuned new circumstances, making them feel difficult to adopt technology supported collaborative learning activities (Pretorius et al., 2019).

Collaborative Learning in Online Learning Environment

Online learning plays a significant role in the higher education teaching and learning practice all around the world since the Covid-19 outbreak. The outbreak has required educators to shift to online learning platform quite drastically. Video conferencing tools such as Zoom, GoogleMeet, and Webex take place to allow instructors and students meet synchronously during the class session. However, some students live in remote areas and have low access to the Internet. In this regard, combination of both synchronous and asynchronous learning would be the best options. In addition, it is essential for the educators to plan and design proper instructions as to achieve the course learning outcomes in meaningful ways.

Fortunately, there are numbers of Web 2.0 tools available for teachers and students that can be integrated seamlessly during the remote online learning as to support both the synchronous and asynchronous learning. Interactive tools such as Mentimeter, Padlet, Quizziz, Google Applications and few others has been widely used by the instructors to support online instruction even before the Covid-19 outbreak (Sailin & Mahmor, 2018, Yaacob, et al., 2021). Rather than to make the lesson interactive, these Web 2.0 tools can be utilized to develop learner-generated contents and construct new knowledge through exploration, digital content creation and reflection. With the recent development in the educational technology, many of these Web 2.0 tools can be integrated in the teaching and learning strategies to allow collaborative work among students. These make the learning activities more engaging, meaningful, and enriching (Mcloughlin & Lee, 2010; Leow & Neo, 2015; Sailin & Mahmor, 2018, Yaacob, et al., 2021). In addition, some of these tools can become a suitable platform or editor for collaborative assessment and group's project.

Previous research has demonstrated that collaborative learning by utilizing online tools can improve student's cognitive achievement, promote student's engagement, develop student's critical thinking and foster student's soft skills (Mcloughlin & Lee, 2010; Leow & Neo, 2015; Sailin & Mahmor, 2018; Zain & Sailin, 2020; Yaacob, et al., 2021). There are many factors that contributes to the success of its implementation. For example, a study conducted by Leow & Neo (2015) on the impact of conducting constructivist collaborative learning environment on student learning process found several components of constructivist collaborative learning components which mainly centred on the importance of teamwork such as group dynamics, students' prior knowledge and group processing related to task delegations. In a more recent study, Qureshi et al., (2021) found that social factors such as interaction with peers and teachers, social presence, and usage of social media positively impact active collaborative learning and student involvement, thus affecting their learning performance.

However, previous studies when relating collaborative learning with technology-based instruction mostly focusses on analysing student's collaborative activities that involved asynchronous discussion with written argumentative discourse of learners, who discuss their perspectives on certain issues or problem with the goal to acquire knowledge (Weinberger & Fischer, 2006). There is lack of study that focus on student's reflection towards their experience in an online collaborative assessment. Thus, realizing the benefits of Web 2.0 technologies namely *Canva* that would assist collaborative learning activities and assessment, this study attempts to explore student's perspective on their experience in an online collaborative project during Covid-19 pandemic using *Canva*.

The theoretical framework

This study is underpinned by the constructivist perspective of meaningful learning that assert students construct their understanding and knowledge through experience and by reflecting on those experiences (Mayer, 2002; Jonassen, et al., 2003; Howland, Jonassen & Marra; 2012). According to Mayer (2002, p. 227), meaningful learning involves the construction of knowledge, whereby students make sense of their experiences by engaging in active cognitive

processing, such as paying attention to relevant incoming information, mentally organizing incoming information into a coherent representation, and mentally integrating incoming information with existing knowledge. There are five attributes of meaningful learning, namely active, constructive; intentional, authentic, and cooperative (Jonassen, et al, 2003; Howland, Jonassen & Marra, 2012). Based on the characteristics of Meaningful Learning Attributes (adapted from Jonassen, et al., 2003; Howland, Jonassen & Marra, 2012), collaborative learning occurs when students work with peers to solve problems/tasks through collaborative activities and discussions to better learn and apply their knowledge and skill. Within the online learning environment, meaningful collaborative learning may occur through active involvement and participation of the students in the teaching and learning activities as well as in the formative assessment task.

The instructional design of this course is underpinned by the constructivist perspectives as mentioned above. Specifically, it is designed upon the Create-Share-Collaborate instructional strategies (Sailin & Mahmor 2017; 2018) that emphasizes on three aspects of student's learning experiences as follows:

- i) Students engage in group discussions and involve in gathering, analyzing, designing and creating a digital product with guidance from the instructor.
- ii) Students share their workspace online with peers and instructor as to get feedback and responses for improvements.
- iii) Students collaborate with peers and instructors to complete create or develop their product to achieve the learning outcome.

Methodology

This study is designed within the Scholarship of Teaching and Learning (SoTL) approach. As noted by Felton (2013), SoTL is a systematic research approach within the practitioner's own context, as to continually improve the existing practice or the overall instructional design of the course. This study employs qualitative methodology to obtain in-depth information on student's perspective regarding their experience in using *Canva* application in completing their collaborative assessment. In addition, the qualitative approach was used to better understand how through the reflections and critical reviews of the teaching and learning process, students learned from the perspectives of the students themselves, as well as from their instructors (Raja Hussin, 2015).

The participants of this study were 21 students from Universiti Utara Malaysia who enrolled in a 12-weeks post-graduate educational technology course. The main data source analysed for this study is from the student's individual reflective writings upon completion of their collaborative assessment that counted for forty percent of the coursework. The reflection was collected using *Google Form* with some guided questions to scaffold student's thinking. For data analysis, qualitative thematic analysis was employed based on Braun and Clarke (2006). The analysis involved familiarizing with the data, coding, searching for themes, reviewing, and defining themes. For the purpose of reporting and discussion of the findings, pseudonym is used to protect the confidentiality of the participants.

Constructive alignment of the course

Instructional design is an important element of teaching and learning practice. In this SoTL project, the collaborative assessment task was design to align with the course learning outcome (CLO) and learning outcome clusters to be achieved, as well as the teaching and learning activities, as in Figure 1.

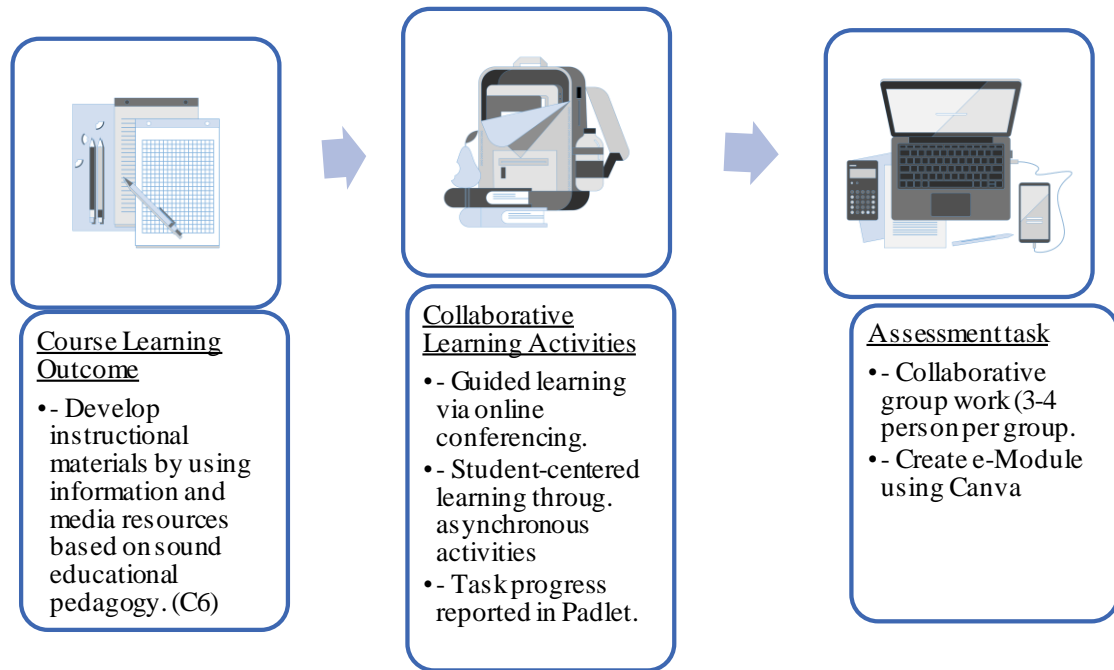


Figure 1. Constructive alignment of the course

The CLO catered in this study is “*Students should be able to develop instructional materials by using information and media resources based on sound educational pedagogy. (C6)*”. According to the Bloom’s Taxonomy (Anderson & Krathwohl, 2001), this CLO is of the highest cognitive level in which students need to come up with a creation of a digital product. To achieve the CLO, the assessment task that has been designed by the instructor requires students to work collaboratively to come up with an e-Module of a particular topic using Canva.

Canva is an online application for designing and creating digital contents such as website, graphic and video contents, presentations, e-book or e-module and others. In this course, the use of Canva application has enable students to draft and finalise their e-Module and at the same time share their work in progress with the instructor. Canva allows peers to access the same platform synchronously or asynchronously to work on their e-Module project. The instructor, who also given the collaborator access can give feedback and comments to the work simultaneously.

To facilitate students in completing the task, guided learning via online conferencing platform namely Cisco Webex were conducted. In addition, students also participated in student-centred learning through asynchronous activities utilising several Web 2.0 tools. In addition, as students progressing on their task using Canva, they reported their progress in Padlet application to be shared with other groups. Figure 2 shows an example of the e-Module created by the group of students. It has the collaborative feature in which other peers and the instructor can access the same material through the “share” function. Peeras and instructor can also leave comments in the design.

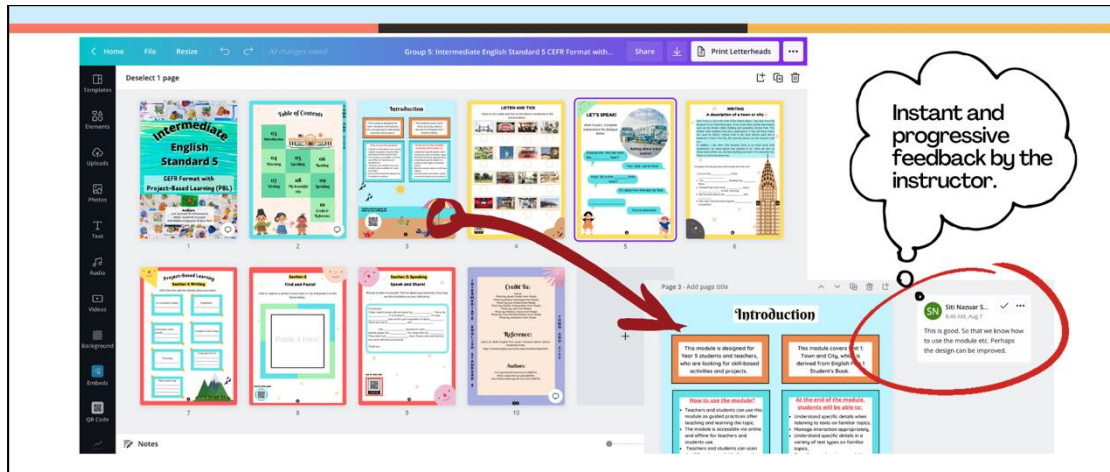


Figure 2. Example of e-Module created in Canva

Findings

The findings of this study reveal several themes related to collaborative learning experiences. As shown in Figure 3, there are four major themes found from the analysis of student’s reflection which are (i) communication and interaction, (ii) teamwork and group support, (iii) interpersonal skills, and (iv) cooperative skills.

Communication and interaction	Teamwork and group support	Interpersonal skills	Cooperative processing skills
<ul style="list-style-type: none"> •Interaction approaches & modalities •Application of different meeting tools 	<ul style="list-style-type: none"> •Leadership & decision making •Motivation and support 	<ul style="list-style-type: none"> •Building relationships with others •Managing conflicts and challenges 	<ul style="list-style-type: none"> •Teacher-led Cooperative Processing •Student-led Cooperative Processing

Figure 3. Themes and sub-themes related to student’s experience in collaborative learning

Communication and interaction emerged from two subthemes that are (i) interaction approaches and modalities and (ii) application of different meeting tools. Students reflected that through these collaborative activities, they develop themselves in terms of the communication and interaction by finding ways to interact with each other as to avoid confusion and misunderstanding. Various modalities including text, audio, and video communication were used. In addition, students also reveal that they learn to use and apply different meeting tools by exploring different communication platforms such as Whatsapp, Zoom, Webex or Google meet out of the class session to ease their communication and interaction.

Teamwork and group support emerged from two subthemes that are (i) leadership and decision making, and (ii) motivation and support. It was found from the students’ reflection that they do delegate task, identifying each member’s role and involve in several discussion and meetings to negotiate on their choices and preferences, as well as to reach an agreement among group members to complete the task given. Students also valued the support that they get from their peers as well as the instructor during and out of class time.

Interpersonal skills theme emerged from two subthemes that are (i) building relationships with others, and (ii) managing conflicts and challenges. As most of the students

are in their first semester of the postgraduate program and it was their first time attending fully remote online learning course, this theme was found to be prevalent in the data analysis. Students highlighted the importance of developing their own interpersonal skills in online learning environment as they need to get to know each other well, become active listeners, helping each other, and showing empathy to their group members. As there are some students who faced issues regarding Internet access, time constraints as they need to cope with other tasks, or even personal health related to Covid-19. In this regard, students stressed out on how they manage conflicts and challenges that occurs among the group members.

As for the cooperative skills theme, two subthemes emerged that are related to teacher-led cooperative processing and student-led cooperative processing. These themes centred on the notion of the guidance given by the instructor on what the students need to do, how they can manage to complete the task, as well as guidance related to cooperative skills to use in creating, sharing and collaborating with each other using Canva platform. Students also valued and reflected about how well they can interact as a group using the Canva platform. They valued about how they can easily contribute and see the changes or edits made to the e-Module by the group members in real-time.

Discussion

The collaborative assessment conducted using Canva has allowed students to develop their digital skills an understanding towards several ways they can integrate digital media and information in teaching and learning. The themes related to communication and interaction, teamwork and group support, interpersonal skills, and cooperative skills found in this study are important elements that enhances their collaborative learning experiences. The communication and interaction facilitated by several modalities and platforms has enabled the students to perform the collaborative tasks more effectively, allowing them to take active role in creating, sharing and collaboratively to achieve the learning goal and obtain mutual understanding (Ciampa & Revels, Levine, 2013). In addition, the cooperative processing skills are very important to successfully complete the collaborative tasks in which individual and group ability is taken into considerations to increase the satisfaction working in team (Chiong & Jovanovic, 2012). This study also consistent with Qureshi et al., (2021) that found social factors such as interaction with peers and teachers using digital media positively impact students' active collaborative learning and involvement, as well as their learning performance.

In addition, having the opportunity to create, share and collaborate in designing a real product (i.e. e-module) allow students to be engaged in a meaningful learning activities through authentic task, involved in active learning or learning by doing; and reflect on the teaching and learning processes (Sailin & Mahmor 2017; 2018). Regardless of the challenges faced by instructors and students in conducting online remote learning, collaborative learning activities and assessment using innovative online technology such as Canva has break the boundaries of the conventional teaching and learning practice. It allows for a better engagement and participatory among students to share, collaborate, and co-create digital contents with peers, facilitated by the instructors.

Conclusion

The outcome of this study has provided and insight for higher learning educators regarding instructional design and selection of an appropriate tools and learning activities to better facilitate students' engagement in the collaborative assessment. It is anticipated that through various innovative teaching and learning strategies, and by utilising appropriate digital tool, collaborative learning shall take place even in online remote learning environment. Despite the

challenges faced by the students such as the time management, internet access, personal health issues related to Covid-19 pandemic, and difficulties in group coordination during the remote learning, meaningful collaborative learning experience can be properly addressed if the instructors are able to provide appropriate learning space and support as well as systematic instructional design. The elements of collaborative learning found in this study helps to empower students' learning and enhance their motivation throughout the learning process.

References

- Anderson, L. W., & Krathwohl, D. R. (2001). A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives. New York: Longman.
- Braun, V. and Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3 (2). 77-101.
- Ciampa, M., & Revels, M. (2012). Student access to online interaction technologies: The impact on grade delta variance and student satisfaction. *International Journal of Instructional Technology and Distance Learning*, 9. 31–42.
- Chiong, R., & Jovanovic, J. (2012). Collaborative learning in online study groups: An evolutionary game theory perspective. *Journal of Information Technology Education*, 11,81– 101.
- Felton, P. (2013). Principles of good practice in SoTL. *Teaching & Learning Inquiry: The ISSOTL Journal*, 1(1), 121–125.
- Howland, J., Jonassen, D.H. & Marra, R.M. (2012). *Meaningful learning with technology*. (4th ed.). Columbus, OH: Merrill/Prentice-Hall.
- Johnson, D. W., & Johnson, R. T. (1999). Making cooperative learning work. *Theory Into Practice*, 38, 67–73.
- Jonassen, D.H., Howland, J., Moore, J., & Marra, R.M. (2003). *Learning to Solve Problems with Technology: A Constructivist Perspective* (2nd. ed). Columbus, OH: Merrill/Prentice-Hall.
- Leow, F. T., & Neo, M. (2015). Collaborative learning with Web 2.0 tools: analysing Malaysian students' perceptions and peer interaction. *Educational Media International*, 52(4), 308–327.
- Levine, J. M. (Ed.). (2013). *Group processes*. New York, NY: Psychology Press.
- Mayer, R. E. (2002). Rote versus meaningful learning: Revising Bloom's taxonomy. *Theory into Practice*, 41(4), 226-232
- McConnell, D. (2002). The experience of collaborative assessment in e-Learning. *Studies in Continuing Education*, 24(1), 73–92.
- McLoughlin, C. & Lee, M. J. W. (2010). Personalised and self-regulated learning in the Web 2.0 era: International exemplars of innovative pedagogy using social software. *Australasian Journal of Educational Technology*, 26(1), 28-43.
- Pretorius, R. W., Anderson, R., Khotoo, A., & Pienaar, R. (2019). Creating a context for campus sustainability through teaching and learning. *International Journal of Sustainability in Higher Education*, 20(3), 530-547.
- Qureshi, M. A., Khaskheli, A., Qureshi, J. A., Raza, S. A., & Yousufi, S. Q. (2021). Factors affecting students' learning performance through collaborative learning and engagement. *Interactive Learning Environments*, 1–21.
- Raja Hussain, R. M. (2015). *From just teaching to SoTL: PleaSE*. Professorial Lecture Series. Sintok: UUM Press.
- Sailin, S. N., & Mahmor, N. A. (2018). Improving student teachers' digital pedagogy through meaningful learning activities. *Malaysian Journal of Learning and Instruction*, 15(2), 143–173.

- Weinberger, A., & Fischer, F. (2006). A framework to analyze argumentative knowledge construction in computer-supported collaborative learning. *Computers and Education*, 46(1), 71–95.
- Yaacob, A., Sailin, S. N., Mahmor, N. A., Md-Ali, R. (2021). Exploring the Use of Story bird Application for Rural ESL Teachers' Professional Development. *Turkish Journal of Computer and Mathematics Education (TURCOMAT)*, 12(3), 1200–1210.
- Zain, F. M., & Sailin, S. N. (2020). Students' experience with flipped learning approach in higher education. *Universal Journal of Educational Research*, 8(10), 4946–4958.

Factors Affecting the Adoption of Cloud Storage for Learning Purposes: Evidence from Malaysian Public University Undergraduate Students

Mathivannan Jaganathan^{*a}; Nazlina Zakaria^b; Vimala Ramaniganthan^c; Logeswari Uthama Puthran^d

^{a,b} School of Business Management, Universiti Utara Malaysia,
Sintok, Kedah, Malaysia

^cCognizant, Malaysia
Ministry of Education, Malaysia

^{*}Corresponding Author: mathivannan@uum.edu.my

Abstract

The study examined the relationship between compatibility, perceived usefulness, complexity, trialability and cloud storage adoption. The study population consists of undergraduate students from a public university in Malaysia's northern region. An online survey collected the study data from 194 sampled respondents. Smart PLS 3.0 and SPSS 21 were equally used to analyze the data. The quantitative study findings indicated that the adoption of cloud storage was significantly influenced by compatibility and perceived usefulness, while complexity and trialability do not influence the adoption of cloud storage among undergraduate students. This study also makes recommendations to policymakers, ICT support system developers, and vendors for improving existing plans and policies to encourage student cloud storage adoption. Finally, recommendations for future research are discussed.

Keywords: compatibility, perceived usefulness, complexity, trialability and cloud storage adoption

Introduction

Technology has revolutionized our world and daily lives over the years. Adaptation and transformation of new technology, innovation, and development occur rapidly in today's world. All the new technologies being invented help and enable things that can make our lives move fast forward and easy to handle (Jaganathan, Ahmad, Ishak, Mohd Nafi, & Uthamaputhran, 2018; Usman, Ahmad, & Zakaria, 2019). One of the important and latest technologies used widely is cloud computing. Cloud computing has three types of platforms that provide different types of services. Those platforms are known as Infrastructure as a Service (IaaS), Platform as a Service (PaaS) and Software as a Service (SaaS). It will eventually transform into an improvement directly or indirectly with the help of cloud computing which can be widely used in many fields like government, health, education, organization and many more (Marston, Li, Bandyopadhyay, Zhang, & Ghalsasi, 2011; Taleb & Mohamed, 2020).

Cloud computing especially cloud storage usage in the academic context, can change the education system in Malaysia. The Malaysian government introduced the 1GovCloud, a cloud hosting service by the Public Sector Data Centre. The introduction of cloud-based applications like Google doc and Google Educator by Google for the students and teachers can measure the importance of cloud computing (Shahzad, Golamdin, & Ismail, 2014). The students can get to know more about the cloud when they merge the education of people with different backgrounds and communicate with students far away in real-time to work within a virtual classroom. In Malaysia, 4.9 million people were affected in schools, and 1.2 million in higher education institutions by the closure of schools and universities during the Movement Control Order (MCO) started on 18 March (Sia & Abbas Adamu, 2021; Wu & Plakhtii, 2021).

Cloud-based learning framework helps students to download course resources,

communicate with their lecturers and do tests over the internet. However, there are some challenges faced by the educational institution in terms of access and connectivity performance, security, capacity development, and software, hardware upgrade and disaster recovery management. This cloud computing technology is believed to overcome the issue likeable to reduce the cost of implementation and maintenance, increase work mobility, and increase the security concern of the repository. In addition, the rate and the prediction of the adoption of cloud computing are still slow in developing countries like Malaysia. In the recent survey done by the local university, cloud computing adoption rate is not rising (Wan Mohd Isa et al., 2020). Therefore, this study gap in knowledge by examining compatibility, complexity, perceived usefulness and trialability as a predictor of the adoption of cloud storage for learning.

Literature Review

Cloud Adoption

Several schools have recognized the potential benefits of cloud computing and new ways to interpret new knowledge and M-based content for financial reasons. Several research trials have been performed to study the benefits of cloud computing in and to suggest responses to cloud computing-based educational services universities (Abdul Razak, 2009; Al-Arabi, Ahmad, & Sarlan, 2016; G. A. M. Taufiq-Hail & Sarea, 2021)

The benefit of cloud computing was introduced by Pocatilu (2010), which demonstrates some facts regarding the cutting price of cloud computing, with higher information security, virtualization, and access probability. We further claimed that the education cloud benefit relates to the characteristics of three systems on the educational institution's cloud models: basis (educational frameworks can be run on providers), stage (an enhancement interface can refresh education frameworks with the vendor), and management. The benefits of cloud computing for higher education institutions were explored and discovered easily to offer enhanced performance, revised programming, and improved record-form similitude and protection (Bora & Ahmed, 2013). In a Commonwealth, a significant number of universities and colleges have partnered together to formalize their institutional cloud computing implementation decision. This would make it possible for a higher education institution to reduce the cost of information systems services for one year in its budget. In addition to typically situated learning speculations, cloud arrangements can also be used to support community strategies to guide by using technology as invention (Thorsteinsson, Page, & Niculescu, 2010).

Compatibility

According to Rogers (2003), compatibility is "the degree to which an innovation is perceived as consistent with existing values, past experiences, and needs of potential adopters". Roger further described it as "the degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopters". This means that the more compliant and in line with the technology, the more probable the use, acceptance and adoption of this technology. In comparison, several previous literary studies show that compatibility and adoption are important and positive (Ali, Shrestha, Osmanaj, & Muhammed, 2021; Stieninger, Nedbal, Wetzlinger, Wagner, & Erskine, 2018). In addressing respondents from the education sector (students and academics), Ajjan and Hartshorne (2008) found that compatibility is a significant and optimistic precedent of Web 2.0 adoption, either for the management to implement Web 2.0 technology or for students to use it in the learning environment. Several past studies revealed that ICT adoption significantly influences acceptance and adoption of related technology to the firm (Alam et al., 2011; Ifinedo, 2011; Kim & Ammeter, 2014; Powelson & Ness, 2012; Seyal & Rahman, 2003; Tan et al., 2009; Tan

& Eze, 2008; Tan, 2000).

Complexity

The ease of use or complexity understood in the DOI, the same but opposite direction as that described by Taylor and Todd (1995), is characterized as how quickly and understandable revolutionary technology is seen (Rogers, 1983). Taylor and Todd (1995) stated that the perceived ease of use model had an insignificant positive relationship and strong and meaningful result in the education sense. For example, Wang, Wang and Yang (2010), in their study on radio-frequency identification (RFID) adoption, found complexity is a significant inhibitor for successful implementation (Premkumar, Ramamurthy, & Nilakanta, 1994; Premkumar & Roberts, 1999). The authors also explained complexity as an inhibitor because a complex technology such as RFID will require plenty of time and cognitive effort to understand its standards and protocol prior to implementation. Therefore, numerous studies reached similar argument, higher the level of complexity most likely will lead to the low level of adoption of technology (Khong, Siong, Binshan, & Uchenna, 2009; Kim & Ammeter, 2014; Kung, Cegielski, & Kung, 2015; Low, Chen, & Wu, 2011; Singh & Mansotra, 2019; Wan Mohd Isa et al., 2020; Wang et al., 2010)

Perceived Usefulness

The perceived usefulness has different meanings but has common meanings as the degree to which the person assumes success in his / her work with technology or innovation and is believed to be best with the supersedes. Relative advantage and perceived usefulness are often used interchangeably in the literature. According to literature concepts, the study describes perceived usefulness as the degree to which the usage, approval or adoption of SaaS Cloud Computing Services is viewed as being easier to use, use, understand and use faster than the normal methods, such as the storage/upload/sharing of specific data on a local hard drive or in a local server, to improve efficiency (G. A.-M. Taufiq-Hail, Alanzi, Yusof, & Alruwaili, 2021). Correspondingly, some past studies have illustrated relative advantage as a significant predictor of technology adoption related studies (Ahmad et al., 2014; Low et al., 2011; Ong et al., 2008; Sin et al., 2016; M. Tan, 2000).

Trialability

In terms of using new technologies, trialability is essential, and concepts are based on limited time before the user is confident and benefits. For example, Rogers describes trialability as "the degree to which innovation may be experimented with on a limited basis" (Rogers, 1983). Kassim, Ramayah, and Kurnia (2012) likewise thought that seeking new ideas or inventions is a way to discover them, create our understanding, and eliminate doubt about innovation. Trialability is most applicable in the early stages of the use or adoption of any innovation when reviewing the literature. The more innovation gained by the adopter, the more likely it will be used in the early stages of the adoption process (Agarwal & Prasad, 1997). As the trials apply to innovation consumers, uncertainty is eliminated. A study of the acceptance and adoption of cloud computing using the technology, organization, and environmental framework (i.e., 15 small-to-medium-sized enterprises of service providers in Northern England) found that trialability has identified one of the important factors that play a major role with ADP in cloud services (Alshamaila, Papagiannidis, & Li, 2013). For example, several studies examined the influence of trialability on the different contexts of technology adoption (Ghani & Khalil, 2021; Hsbollah & Idris, 2009; Jaradat, 2021).

Methodology

The study used a survey method to collect the primary data from the respondents. The online survey was conducted in one of the five reputable public universities in Malaysia's northern region. The data were collected from those familiar with cloud storage using the convenience sampling technique. Convenience sampling is the most commonly used type of sampling design in social science research because it provides researchers with a usable database for statistical inference techniques.(Bakhsh, Mahmood, & Sangi, 2017; Su & Chen, 2020). G*Power was used to ensure an appropriate sample size. This research required minimum sample size of 129 with a statistical power of 0.95 using the four predictors, medium effect size convention of 0.15 and significance rate of 5%. The researchers have given more to the respondents with questionnaires in expectation of a weak rate of response, which is a common practice in data collection. For the main test, 194 usable survey responses are selected from the 210 total responses.

Data Analysis and Results

The data analysis was conducted by using Structural Equation Modeling (SEM) using SmartPLS program 3.3.3. In the SEM process, measurement and structural model measurements were conducted as validity and reliability tests and significant relationships for the hypothesis.

Table 1
Profile of Respondent

Demographic Variables	Category	Frequency	Percentage %
Gender	Male	65	33.5
	Female	129	66.5
Age	Below 18 years old	3	1.5
	19 - 21 years old	51	26.3
	22 – 24 years old	114	58.8
	Above 24 years old	26	13.4
Ethnicity	Malay	100	51.54
	Chinese	60	30.92
	Indian	27	13.91
	Others	7	3.6

According to table 1, females have a greater number of respondents than males. There is consist of 65 male respondents and 129 female respondents. For the estimated age of this study, the 22-24 years old are more than 114 (58.8%) respondents. The sample indicates the second-highest proportion of 19-21 years of age, reflecting a total of 51 (26.3%). Next, 26 (13.4 %) was above the age of 24. The lowest number of respondents below 18 years is just three (1%). Most of the survey respondents are Malay, comprising 100 (51.54%) respondents, while others only 7 (3.6%).

Table 2
Results Summary for Reliability and Validity of the Constructs First

Construct	Item	Loadings	AVE	CR
Adoption of E-Wallet	ADP1	0.83	0.75	0.92
	ADP2	0.88		

	ADP3	0.9		
	ADP4	0.86		
Compatibility	COMPT1	0.91	0.83	0.95
	COMPT2	0.93		
	COMPT3	0.92		
	COMPT4	0.88		
Complexity	CMPLX1	0.84	0.75	0.92
	CMPLX2	0.86		
	CMPLX3	0.87		
	CMPLX4	0.86		
Perceived Usefulness	PU1	0.85	0.72	0.91
	PU2	0.86		
	PU3	0.85		
	PU4	0.83		
Trialability	TRIAL1	0.77	0.68	0.89
	TRIAL2	0.83		
	TRIAL3	0.85		
	TRIAL4	0.83		

To assess the internal consistency reliability of the construct, composite reliability (CR) was determined. In this procedure, all items' loadings for reflective constructs were tested to exceed a cut-off value of 0.5, as Hair, Hult, Ringle, and Sarstedt (2016) recommended. Table 2 shows that all items were loaded on their respective constructs item. All the item loadings exceeded the recommended cut-off value of 0.5.

In this study, convergent validity is evaluated by the latent constructs' average variance extracted (AVE). AVE values describe the average variance shared between a construct and its related items (Fornell & Larcker, 1981). Usually, AVE values should exceed 0.5, indicating that a construct reflects more than half of its indicators variance (Chin, 2010; Hair, Risher, Sarstedt, & Ringle, 2018). As shown in Table 2, all the constructs in this study exhibited high levels of convergent validity as the AVE values ranged between 0.676 and 0.831.

Table 3
Fornell-Larcker Criterion

	Adoption	Compatibility	Complexity	Perceived Usefulness	Trialability
Adoption	0.87				
Compatibility	0.73	0.91			
Complexity	0.63	0.69	0.86		
Perceived Usefulness	0.67	0.71	0.64	0.85	
Trialability	0.58	0.65	0.63	0.66	0.82

Note: Diagonals (in bold) represent the square root of AVE while the other entries (off-diagonal) represent the correlation.

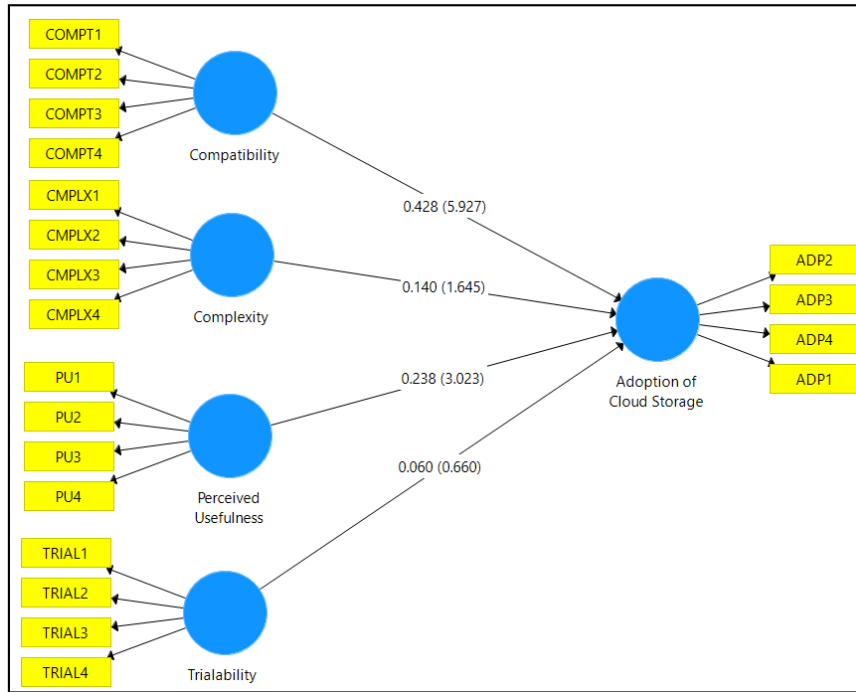


Figure 1: Measurement and structural model - Output SmartPLS.

Table 3 illustrates that all the AVE values square root were larger than other correlation values among the latent variables, indicating that several constructs used in the model belong to distinct entities. In essence, the measurement model displayed good discriminant validity among constructs.

Table 4
Path coefficient of the variables.

Hypothesis	Relationship	Std Beta	Std Error	t-value	Decision
H1	compatibility > adoption cloud storage	0.43	0.07	5.93	Supported
H2	complexity -> adoption cloud storage	0.14	0.09	1.65	Not supported
H3	perceived usefulness -> adoption cloud storage	0.24	0.08	3.02	Supported
H4	trialability -> adoption cloud storage	0.06	0.09	0.66	Not supported

Structural models are tested through computations of beta (β), R², and respective t-values with the use of a bootstrapping technique, according to resampling of 5000 (Hair et al., 2017). The finding illustrated that compatibility significantly influenced adoption ($B=0.43$ and $t=5.93$) and perceived usefulness ($B=0.24$ and $t=3.02$). However, this research found an insignificant result between complexity ($B=0.14$ and $t=1.65$) and adoption. In addition, trialability also found not supported ($B=0.06$ and $t=0.66$) (see Figure 1.0).

Table 4 presents the respective effect sizes of the variables in this study. (1988) (1988) describes f^2 values of 0.02, 0.15 and 0.35 as small, medium and large respectively. Therefore, this study shows that f^2 of complexity, perceived usefulness, and trialability relatively small effect size while compatibility indicated medium effect size.

Table 5
Effect Sizes of Exogenous Latent Constructs

Construct	F squared (f^2)
Compatibility	0.17
Complexity	0.02
Perceived usefulness	0.06
Trialability	0.00

Discussion

Hypothesis 1 that was invariably based on a positive relationship between compatibility and adoption was supported, and the output of the PLS also indicated statistically significant with the t-value=5.93. Moreover, this result is in accordance with prior literature on the critical role of compatibility on adoption as significant (Ali et al., 2021; Stieninger et al., 2018). One other possible reason for this finding is that the more compatibility to the systems and applications that the user has while using the services of clouds, the more helpful and feasible the adoption of cloud computing do occur.

Hypothesis H2 was not supported since PLS analysis indicated an insignificant relationship with the t-value=1.65. The results obtained align with previous literature findings (Kim & Ammeter, 2014; Kung et al., 2015; Singh & Mansotra, 2019; Wan Mohd Isa et al., 2020). This result is not surprising as being accustomed to something, and it is more likely not to make further changes or influences in the way the individual acts, their attitude to use, accept, or adopt Cloud Storage services.

Hypothesis H3 posited the positive relationship between perceived usefulness and adoption. The result is not surprising as prior research has similar findings on this significant relationship and gained support theoretically (Ahmad et al., 2014; Low et al., 2011; Sin et al., 2016). A possible explanation for these results may be attributed to information technology supporting the user in his/her tasks. It is evident that the perceived usefulness of information technology gives the user advantage and increases the usage of information technology.

Hypothesis H4 was not supported since PLS analysis indicated an insignificant relationship with the t-value=0.66. Similar findings were found in previous works in that trialability does not influence adoption (Hubert et al., 2019). This finding can be interpreted as university-level individuals are already acquainted with cloud storage services based on their daily usage of many applications inside or outside the academic work/study.

Conclusion, limitation and implication

In terms of education, economy and the environment, the various benefits of Cloud Storage are more compelling than ever for cooperation between universities and governmental sectors. By properly educating university students, the skills to deal with innovative SaaS technology will be reflected. This will help future generations develop new solutions when they join work as they are well qualified. They will be the leaders of the future among these students. The government should fund more cloud storage projects for universities to find solutions for cloud storage in the Malaysian business sector, which can eventually generate revenues for their country and create innovative ideas for it.

This study focuses only on public universities, which is a limitation where this research result will not reflect the whole higher education sector. The nature of the study has another limitation since it is a cross-sectional quantitative study in which data are only collected once. People's behaviour changes over time, and what now applies can in other times, not be considered. This limitation can therefore be avoided by conducting a longitudinal study.

References

- Abdul Razak, S. F. (2009). Cloud computing in malaysia universities. 2009 Innovative Technologies in Intelligent Systems and Industrial Applications, CITISIA 2009. <https://doi.org/10.1109/CITISIA.2009.5224231>
- Agarwal, R., & Prasad, J. (1997). The role of innovation characteristics and perceived voluntariness in the acceptance of information technologies. *Decision Sciences*. <https://doi.org/10.1111/j.1540-5915.1997.tb01322.x>
- Ahmad, S. Z., Abu Bakar, A. R., Faziharudean, T. M., & Mohamad Zaki, K. A. (2014). An Empirical Study of Factors Affecting e-Commerce Adoption among Small- and Medium-Sized Enterprises in a Developing Country: Evidence from Malaysia. *Information Technology for Development*, 1102(May 2015), 1–18. <https://doi.org/10.1080/02681102.2014.899961>
- Al-Arabiati, D., Ahmad, W. F. W., & Sarlan, A. (2016). Cloud computing role to address Mobile Learning barriers: An exploratory study of HEIs in Malaysia. 2016 3rd International Conference on Computer and Information Sciences (ICCOINS), 553–558. IEEE. <https://doi.org/10.1109/ICCOINS.2016.7783275>
- Alam, S. S., Ali, Y., & Jani, M. F. M. (2011). An Empirical Study of Factors Affecting Electronic Commerce Adoption among SMEs in Malaysia. *Journal of Business Economics and Management*, 12(2), 375. <https://doi.org/10.3846/16111699.2011.576749>
- Ali, O., Shrestha, A., Osmanaj, V., & Muhammed, S. (2021). Cloud computing technology adoption: an evaluation of key factors in local governments. *Information Technology and People*. <https://doi.org/10.1108/ITP-03-2019-0119>
- Alshamaila, Y., Papagiannidis, S., & Li, F. (2013). Cloud computing adoption by SMEs in the north east of England. *Journal of Enterprise Information Management*, 26(3), 250–275. <https://doi.org/10.1108/17410391311325225>
- Bakhsh, M., Mahmood, A., & Sangi, N. A. (2017). Examination of factors influencing students and faculty behavior towards m-learning acceptance: An empirical study. *International Journal of Information and Learning Technology*. <https://doi.org/10.1108/IJILT-08-2016-0028>
- Bora, U. J., & Ahmed, M. (2013). E-Learning using Cloud Computing. *International Journal of Science and Modern Engineering (IJISME)*, 1(2).
- Chin, W. W. (2010). How to Write Up and Report PLS Analyses. In V. E. Vinzi, W. W. Chin, J. Henseler, & H. Wang (Eds.), *Handbook of Partial Least Squares* (pp. 655–690). Heidelberg, Dordrecht, London, New York: Springer. https://doi.org/10.1007/978-3-540-32827-8_29
- Cohen, J. (1988). *Statistical power analysis for the behavioural sciences*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Fornell, C., & Larcker, D. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 18(1), 39–50. <https://doi.org/10.2307/3151312>
- Ghani, E. K., & Khalil, N. A. (2021). Adoption intention of e-wallet services among small medium enterprises in retail industry: An application of the diffusion of innovation theory factors influencing. *Universidad y Sociedad*.
- Hair, F. J., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2014). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. In SAGE Publications. <https://doi.org/10.1016/j.lrp.2013.01.002>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24.

- <https://doi.org/10.1108/EBR-11-2018-0203>
- Hsbollah, H. M., & Idris, K. M. (2009). E-learning adoption: The role of relative advantages, trialability and academic specialization. *Campus-Wide Information Systems*. <https://doi.org/10.1108/10650740910921564>
- Hubert, M., Blut, M., Brock, C., Zhang, R. W., Koch, V., & Riedl, R. (2019). The influence of acceptance and adoption drivers on smart home usage. *European Journal of Marketing*, 53(6), 1073–1098. <https://doi.org/10.1108/EJM-12-2016-0794>
- Ifinedo, P. (2011). An Empirical Analysis of Factors Influencing Internet/E-Business Technologies Adoption by SMEs in Canada. *International Journal of Information Technology & Decision Making*, 10(4), 731–766. <https://doi.org/10.1142/S0219622011004543>
- Jaganathan, M., Ahmad, S., Ishak, K. A., Mohd Nafi, S. N., & Uthamaputhran, L. (2018). Determinants for ICT adoption and problems: Evidence from rural based small and medium enterprises in Malaysia. *International Journal of Entrepreneurship*, 22(4).
- Jaradat, M. I. R. M. (2021). Exploring the influence of security/privacy, trialability, output quality and anxiety on the adoption of mobile decision support systems among nurses: a developing country context. *International Journal of Mobile Learning and Organisation*, 15(3), 251. <https://doi.org/10.1504/IJMLO.2021.116508>
- Khong, S. T., & Eze, U. C. (2008). An empirical study of internet-based ICT adoption among Malaysian SMEs. *Communications of the IBIMA*, 1, 1–12.
- Khong, S. T., Siong, C. C., Binshan, L., & Uchenna, C. E. (2009). Internet-based ICT adoption: evidence from Malaysian SMEs. *Industrial Management & Data Systems*, 109(2), 224–244. <https://doi.org/10.1108/02635570910930118>
- Kim, D., & Ammeter, T. (2014). Predicting personal information system adoption using an integrated diffusion model. *Information and Management*, 51(4), 451–464. <https://doi.org/10.1016/j.im.2014.02.011>
- Kung, L., Cegielski, C. G., & Kung, H.-J. (2015). An Integrated Environmental Perspective on Software as a Service Adoption in Manufacturing and Retail Firms. *Journal of Information Technology*, 30(4), 352–363. <https://doi.org/10.1057/jit.2015.14>
- Low, C., Chen, Y., & Wu, M. (2011). Understanding the determinants of cloud computing adoption. *Industrial Management & Data Systems*, 111(7), 1006–1023. <https://doi.org/10.1108/02635571111161262>
- Marston, S., Li, Z., Bandyopadhyay, S., Zhang, J., & Ghalsasi, A. (2011). Cloud computing — The business perspective. *Decision Support Systems*, 51(1), 176–189. <https://doi.org/10.1016/j.dss.2010.12.006>
- Normalini, Ramayah, T., & Kurnia, S. (2012). Antecedents and outcomes of human resource information system (HRIS) use. *International Journal of Productivity and Performance Management*, 61(6), 603–623. <https://doi.org/10.1108/17410401211249184>
- Ong, J., Poong, Y., & Ng, T. (2008). 3G services adoption among university students: Diffusion of innovation theory. *Communications of the IBIMA*, 3(16), 114–121. Retrieved from <http://www.ibimapublishing.com/journals/CIBIMA/volume3/v3n16.pdf>
- Pocatilu, P. (2010). Cloud Computing Benefits for E-learning Solutions. *Oeconomics of Knowledge*, 2(1).
- Powelson, S. E., & Ness, L. R. (2011). An Examination of Small Businesses' Propensity to Adopt Cloud-Computing Innovation (Walden University). Walden University. Retrieved from <http://search.proquest.com/docview/963525817?accountid=147552>
- Premkumar, G., Ramamurthy, K., & Nilakanta, S. (1994). Implementation of Electronic Data Implementation An Innovation Interchange: Diffusion Perspective. *Journal of Management Information Systems*, 11(2), 157–186.
- Premkumar, G., & Roberts, M. (1999). Adoption of new information technologies in rural small

- businesses. *Omega*, 27(4), 467–484. [https://doi.org/10.1016/S0305-0483\(98\)00071-1](https://doi.org/10.1016/S0305-0483(98)00071-1)
- Rogers. (1983). *DIFFUSION OF INNOVATIONS* Third Edition. Journal of Continuing Education in the Health Professions. <https://doi.org/10.1002/chp.4750170109>
- Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). New York: New York, Free Press.
- Rogers, E. M. M. (2003). *Diffusion of innovations* (5th ed.). New York: New York, Free Press.
- Seyal, A. H., & Rahman, M. N. A. (2003). A Preliminary Investigation of E-Commerce Adoption in Small & Medium Enterprises in Brunei. *Journal of Global Information Technology Management*, 6(2), 6–26. <https://doi.org/10.1080/1097198X.2003.10856347>
- Shahzad, A., Golamdin, A. G., & Ismail, N. A. (2014). Opportunity and Challenges Using The Cloud Computing In The Case Of Malaysian Higher Education Institutions. *Proceedings of 6th Annual American Business Research Conference*.
- Sia, J. K. M., & Abbas Adamu, A. (2021). Facing the unknown: pandemic and higher education in Malaysia. *Asian Education and Development Studies*. <https://doi.org/10.1108/AEDS-05-2020-0114>
- Sin, K. Y., Osman, A., Salahuddin, S. N., Abdullah, S., Lim, Y. J., & Sim, C. L. (2016). Relative advantage and competitive pressure towards implementation of e-commerce: Overview of small and medium enterprises (SMEs). *7th International Economics & Business Management Conference*, 35(October 2015), 434–443. Elsevier B.V.
- Singh, J., & Mansotra, V. (2019). Factors affecting cloud computing adoption in the Indian school education system. *Education and Information Technologies*. <https://doi.org/10.1007/s10639-019-09878-3>
- Stieninger, M., Nedbal, D., Wetzlinger, W., Wagner, G., & Erskine, M. A. (2018). Factors influencing the organizational adoption of cloud computing: A survey among cloud workers. *International Journal of Information Systems and Project Management*. <https://doi.org/10.12821/ijispm060101>
- Su, C.-Y., & Chen, C.-H. (2020). Investigating university students' attitude and intention to use a learning management system from a self-determination perspective. *Innovations in Education and Teaching International*, 1–10. <https://doi.org/10.1080/14703297.2020.1835688>
- Taleb, N., & Mohamed, E. A. (2020). Cloud Computing Trends: A Literature Review. *Academic Journal of Interdisciplinary Studies*, 9(1), 91. <https://doi.org/10.36941/ajis-2020-0008>
- Tan, K. S., Eze, U. C., & Chong, S. C. (2009). Factors Influencing Internet-based Information and Communication Technologies Adoption Among Malaysian Small and Medium Enterprises. *International Journal of Management and Enterprise Development*, 6(4), 397. <https://doi.org/10.1504/IJMED.2009.024232>
- Tan, M. (2000). Factors Influencing the Adoption of Internet Banking. *Journal of the Association for Information Systems*, 1, 1–42.
- Taufiq-Hail, G. A.-M., Alanzi, A. R. A., Yusof, S. A. M., & Alruwaili, M. M. (2021). Software as a Service (SaaS) Cloud Computing: An Empirical Investigation on University Students' Perception. *Interdisciplinary Journal of Information, Knowledge, and Management*, 16, 213–253. <https://doi.org/10.28945/4740>
- Taufiq-Hail, G. A. M., & Sarea, A. (2021). An Empirical Evaluation of the Credibility, Trust Perceptions, and Compatibility with Cloud-Based Services: The Case of Higher Education in Malaysia. *Advances in Intelligent Systems and Computing*. https://doi.org/10.1007/978-3-030-69717-4_70
- Taylor, S., & Todd, P. A. (1995). Understanding information technology usage: A test of competing models. *Information Systems Research*. <https://doi.org/10.1287/isre.6.2.144>
- Thorsteinsson, G., Page, T., & Niculescu, A. (2010). Using Virtual Reality for Developing Design Communication. *Studies in Informatics and Control*, 19(1).

- <https://doi.org/10.24846/v19i1y201010>
- Usman, U. M. Z., Ahmad, M. N., & Zakaria, N. H. (2019). The determinants of adoption of cloud-based ERP of Nigerian's SMEs manufacturing sector using TOE framework and DOI theory. *International Journal of Enterprise Information Systems*, 15(3), 27–43. <https://doi.org/10.4018/IJEIS.2019070102>
- Wan Mohd Isa, W. A. R., Hakim Suhaimi, A. I., Noordin, N., Fathiyah Harun, A., Ismail, J., & Awang Teh, R. (2020). Factors influencing cloud computing adoption in higher education institution. *Indonesian Journal of Electrical Engineering and Computer Science*, 17(1), 412. <https://doi.org/10.11591/ijeecs.v17.i1.pp412-419>
- Wang, Y. M., Wang, Y. S., & Yang, Y. F. (2010). Understanding the determinants of RFID adoption in the manufacturing industry. *Technological Forecasting and Social Change*, 77(5), 803–815. <https://doi.org/10.1016/j.techfore.2010.03.006>
- Wu, W., & Plakhtii, A. (2021). E-Learning Based on Cloud Computing. *International Journal of Emerging Technologies in Learning*. <https://doi.org/10.3991/ijet.v16i10.18579>

Teaching Criminal Procedure: Opportunities and Challenges using Technology during the COVID-19 Pandemic

Aida Abdul Razak

School of Law, University Utara Malaysia, Sintok, Malaysia

Corresponding Author: aidarazak@uum.edu.my

Abstract

The pandemic of Covid-19 has resulted in Malaysian schools and universities closure in March 2020 and partially reopened in April 2020. Thus, during the pandemic, there is a shift from conventional methods to remote learning. The purpose of this article is to describe how the course GLUP4013 Criminal Procedure I is taught using various technology tools and to examine the opportunities and challenges of using technology in teaching the said course. This article reports on surveys and data relating to the activities and perceptions of learning GLUP4013 Criminal Procedure I with web 2.0 technology tools. A survey was distributed to students from GLUP4013 Criminal Procedure I class from the 2020/2021 session and reflections were collected from the said students after each week of classes. The findings outline the opportunities and challenges of using technology especially web technology tools 2.0 particularly in teaching criminal procedure law. It can be concluded that interactive tools are suitable to be conducted in the classroom, albeit during online classes or in the traditional lectures needs to be further explored.

Keywords: legal education, criminal procedure, technology, online learning

Introduction

Due to the COVID-19 pandemic, education institutions are rushing to transition the physical teaching and learning to remote learning. Due to this transition, students and educators faced challenges to prepare with remote learning which involves technology infrastructure. The flexibility of resources and tools encourages a diversity approach to teaching and learning. The emergence of Information Communication Technology (ICT) and the Internet has had a significant impact on how knowledge is transmitted. Thus, it is safe to say that technology is transforming the way we teach law, practice law, conduct legal research and provide legal services (Broussard, 2009). Technology advancement in the twenty-first century is extremely rapid and every new tool is frequently regarded as having a significant and long-lasting pedagogical impact on law schools (Broussard, 2009). To fully comprehend how technology could be used to teach law students, educators must evaluate how they teach and whether law schools are achieving legal education goals.

Objective

This section outlines the objectives of this article. The first objective is to describe how the course GLUP4013 Criminal Procedure I is taught when there is a shift from conventional methods to remote learning and finally, the second objective is to examine the opportunities and challenges of using technology in teaching GLUP4013 Criminal Procedure I.

Research Questions

This study embarks on the following questions:

1. What are the types of web 2.0 technology tools that can be adopted to enhance the teaching

and learning experience of the course GLUP4013 Criminal Procedure I during remote learning? and

2. What are the opportunities and challenges of using technology in teaching GLUP4013 Criminal Procedure I?

Background of the Study

GLUP4013 Criminal Procedure I course is offered to Fourth Year of Universiti Utara Malaysia's (UUM) Bachelor of Laws (LLB) students. There is no pre-requisite to this course. Nevertheless, since this is a procedural law course, it is most suitable for students when they are in their fourth year (final year) of LLB. Before the Covid-19 pandemic, this course was conducted via face-to-face lectures and tutorials. The pandemic of Covid-19 has resulted in Malaysian schools and universities closure in March 2020 and partially reopened in April 2020. The Covid-19 pandemic has raised consequential challenges for the higher education worldwide (Luo et al., 2020). Educators need to adapt to online teaching since face-to-face classes are not permitted. Thus, during the pandemic, there is a shift from conventional methods to remote learning.

Prior to January 10, 1976, criminal procedure was governed by four distinct sets of codes, namely the Criminal Procedure of the Federated Malay States, the Criminal Procedure of the Straits Settlements, the Criminal Procedure of Sabah and the Criminal Procedure of Sarawak (Singh, 2015). To date, criminal procedure has been governed in the main Criminal Procedure Code (Act 593).

Thus, the objective of the Criminal Procedure Code Act 593 is to set out a body of rules, which must be followed in the investigation, inquiry and trial of offences under the Penal Code as well as offences under other Acts. In respect of other Acts, the code will not apply if there is a special procedure prescribed under other Acts, unless the special procedure is not complete in respect of all matters (Baker, 2018). The Criminal Procedure Code (Amendment) Act 2016 (Act A 1521) which came into force on March 1, 2017 has introduced several controversial provisions (Alagan, 2018).

Accordingly, by focusing on the objectives of the Criminal Procedure Code Act 593, GLUP4013 Criminal Procedure I is designed to introduce students with the fundamental constitutional rules that govern the criminal justice process. It is primarily an adjectival law that governs the process within which the principles of criminal law operate. The primary goal of criminal procedure is to establish the rules, practices and procedures necessary to ensure a proper and efficient administration of criminal justice. The Criminal Procedure Code provides a machinery for the punishment of offenders against the substantive criminal law. There are certain provisions of the code which stands independently in the nature of substantive law. It puts in a clear and precise form the substance or the subject matter for enforcing its breach (Baker, 2019). In total, there are 10 topics covered in GLUP 4013 Criminal Procedure I; particularly, introduction to criminal procedure, criminal courts, arrest, search, prevention of offences by police, investigation process, powers of public prosecutor, transfer of cases, initiation of proceedings and charges. Thus, this course discusses from the stage of arrest up to prosecution. Students will be introduced to the jurisdiction of courts as well as the procedure that should be adhered to and this will also include the topics of juvenile court. Focus will also be given on the area of power of arrest, investigation, power of public prosecutor and prosecution which involves the public prosecutor and the police. Other topics such as preliminary inquiry and transfer of cases are also discussed.

Before the pandemic COVID-19 struck the world globally, GLUP4013 Criminal Procedure I was taught via face-to-face learning where the course content and course learning outcomes were delivered whereby the teaching and learning took place at the same time. However, during the pandemic of COVID-19, there has been a shift to remote learning whereby

classes were conducted using various web technology tools 2.0 to enhance the teaching and learning experience.

Literature Review

Education in the twenty-first century has evolved whereby traditional lecture methods such as using overhead transparencies and white board are no longer used in delivering lectures. The introduction of digital technology has drastically changed norms and practices in almost every aspect of human lives (Mishra and Koehler, 2006). Education 4.0 is the current trend that changes the process of learning through the integration of new technologies. This trend is supported by educationalists who argue that the process of learning should be modified to attract learners from younger generations and to ensure the effectiveness of the education system. As mentioned, this trend involves the integration of technologies and tools in the teaching and learning. Thus, formal education should be transformed to allow new forms of learning required to address complex global challenges.

Twenty-first century learning must be different from the traditional approaches. There are numerous factors that can influence students learning and in order to improve students learning, it is important to understand the learning process of the students (İlhan Beyaztas & Senemoglu, 2015). There is not a one size fits all, therefore personalized learning is important to consider. There should be a two-way interaction compared to the traditional teaching where only the teachers have a say. Nowadays, students can also share on their experiences and their opinions. Informal and virtual opportunities must be provided as technology is a need nowadays. The learning environment needs to be transformed to integrate Technological Pedagogical Content Knowledge (TPACK) and to encompass personalized and collaborative learning. Lee Shulman has developed a TPACK framework which constructs of pedagogical content knowledge that includes technology knowledge (Mishra and Koehler, 2009).

Methodology

Data was collected from class lessons which consists of 60 law students in GLUP 4013 Criminal Procedure I. They are in their final year of the 2020/2021 academic calendar at Universiti Utara Malaysia. A survey was conducted to determine the expectations of the students at the beginning of the semester and the problems that students are facing amidst this COVID-19 pandemic where all classes are conducted remotely online. Reflections were collected every week. At the beginning of the class, students were informed that the class will be conducted using various web technologies 2.0 tools to manage and support the class activities.

This study adopted the quantitative method in collecting and analysing data with applying self-administered surveys. The survey was broken into five sections comprising (1) Student Background, (2) Student Interest, (3) Student Achievement, (4) Student Motivation and (5) Higher Education Improvement. The survey form was developed based on close and open-ended question. For the close questions, the survey form was developed based on two scales namely nominal and ordinal scale. The survey has been created and distributed via UUM Online platform.

For data analyses, descriptive analysis are used to explain the basic elements of the data in a study, while content analysis involves open ended questions, where the data have categorised based on themes and concepts and finally analyse the result.

Findings

Due to the COVID-19 pandemic, there were highs and lows in this semester. Since there was a Movement Control Order (MCO) by the government, classes were to be conducted remotely online. Thus, classes were held via Webex. A survey was distributed at the beginning of the class where data collected assisted the instructor in collecting information which helped to plan how to meet students' needs for the course GLUP4013 Criminal Procedure I.

Markkanen et al. (2020) contend that students' diverse needs in remote learning can cause challenging situations for instructors. The first step is to identify students' problems during online learning. This can be illustrated as in Figure 1 below which shows the issues that students encountered during online learning. Students are not able to concentrate or focus during online classes due to other problems that may be caused by unstable Internet connection or time of lecture. The second issue relates to the lack of participation by students during the class itself and the third issue is students complaining that there are too many assessments for each course that needs to be submitted within a stipulated time.

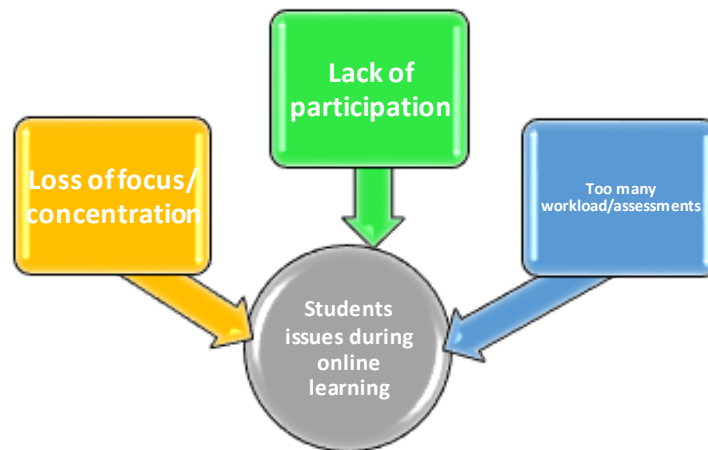


Figure 1. Identifying the students' problem

Figure 2 below exhibits students' expectations when they enrolled for GLUP4013 Criminal Procedure I. All of the students expect to gain knowledge. As it is a procedural course, they would like to have a hands-on approach on the procedure and how to apply the law in practice.

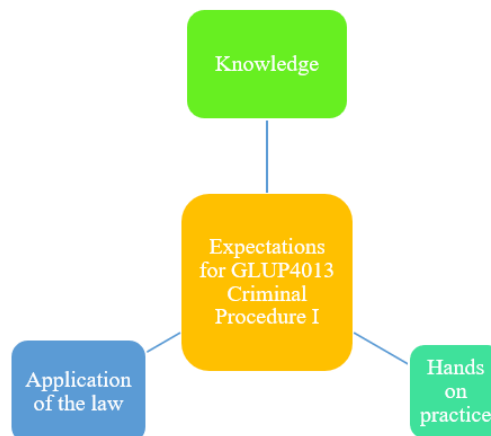


Figure 2. Students' expectations for GLUP4013 Criminal Procedure I

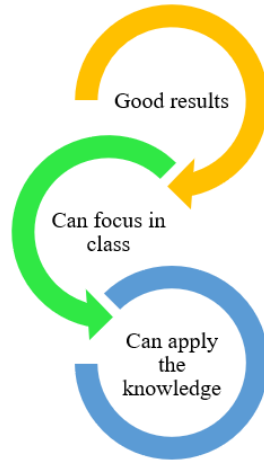


Figure 3. Students’ goals for GLUP4013 Criminal Procedure I

Figure 3 above illustrates the students’ goals for this said course. All students aim for good results. Since classes are conducted remotely, they hope they can focus in class just the same as if it was a conventional lecture. Application of knowledge seems to be the most favourable answer throughout the survey.

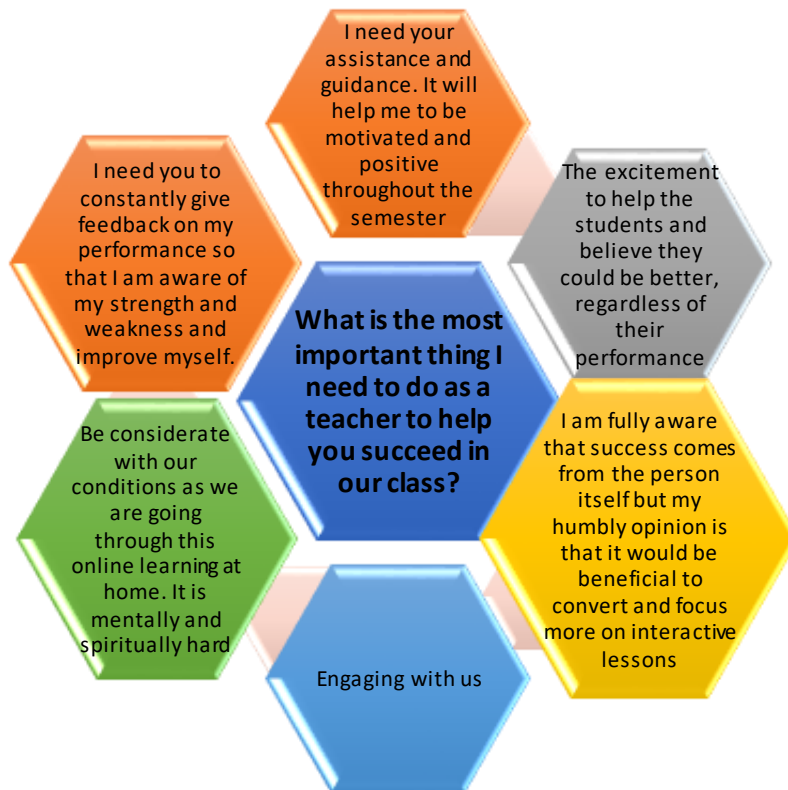


Figure 4. Suggestions by the students

After identifying the issues, expectations, and goals of the students, students were asked for suggestions on what the instructor can do to help them during class. Based on Figure 4, there were a lot of interesting suggestions; however, for the purpose of this reflection, only a few suggestions were chosen for discussion. Majority of the students suggested the class to be interactive so there can be engagement during online classes. However, for interactive classes, 50% of the students preferred it to be synchronous classes while the other 50% preferred it to

be asynchronous. This is due to their internet connection at home. Nevertheless, students enjoy interactive classes as this will help them to stay focus. Some students also emphasized on empathy where instructors should be considerate with the online learning situation where it is emotionally and physically exhausting.

Opportunities of using technology

After taken consideration of all issues and expectations, the instructor needs to plan and strategize the best method to teach GLUP4013 Criminal Procedure I. Factors that can impact students' learning and engagement were also taken into account.

Classes should be conducted with a more dynamic and interactive method. The application of power points, videos and multimedia, real pictures that show real situation and attractive pictures are applied in the delivery methods. For presentation of contents, Microsoft PowerPoint, Prezi, Genially, Canva, Nearpod, and screencast recordings (Screencast-O-Matic / Loom / Jing) were used. For formative assessments, Kahoots! Quizzlet, Padlet, Mentimeter, Poll Everywhere, Wakelet and Edpuzzle were the instructor's favourite choices.

Figure 5, 6, 7 and 8 and displays some web technology tools 2.0 that the instructor has applied in her classroom. This includes Slido, Webex Breakout Sessions, Google Jamboard, Mentimeter, EdPuzzle, Poll Everywhere, Nearpod and others. Some interactive classes were conducted asynchronously while some were conducted synchronously. During the classes, it can be seen that the students were excited to be involved with the activities, thus the engagement during the class was very good. The students were very excited to participate and collaborate with their ideas.



Figure 5. Using Slido for an interactive presentation

Slido is a Q&A polling platform which is suitable for induction sets or even formative assessments. The instructor will ask some questions to know the students' level of understanding about the lesson. It is an interesting method for students to be an active learner. The same applies to Mentimeter. However, the instructor prefers to use Mentimeter for formative assessments. It is suitable to test students' knowledge and also for gathering feedbacks.

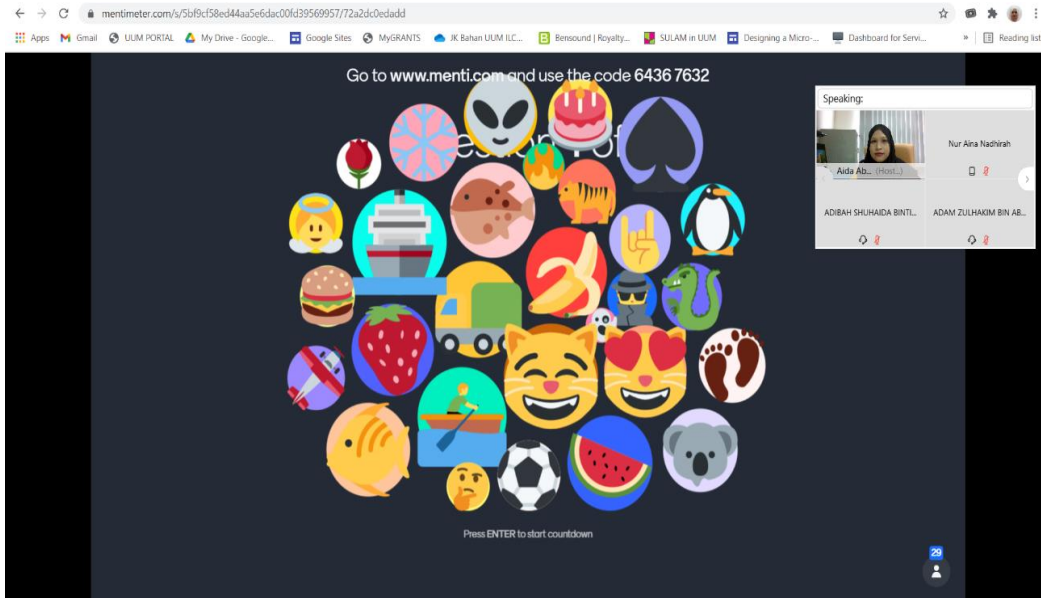


Figure 6. Using Mentimeter for formative assessments

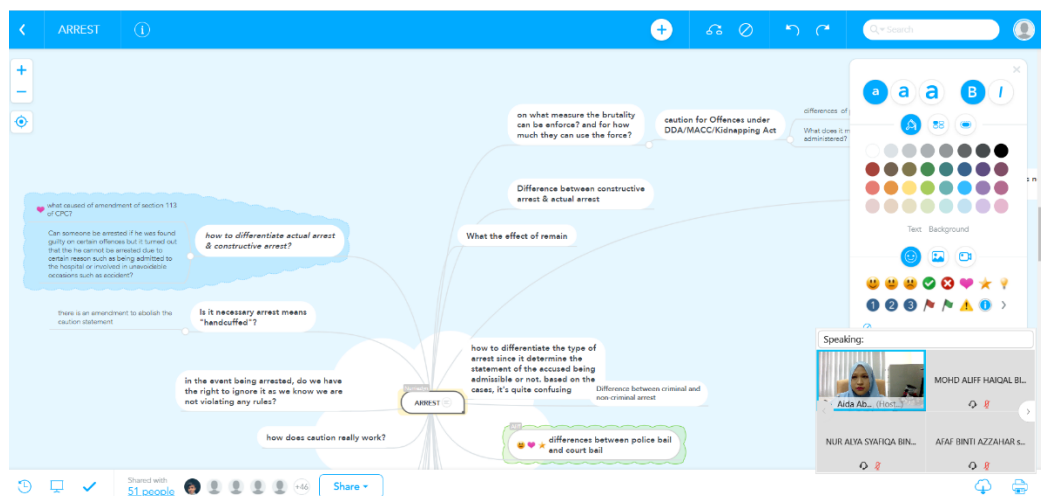


Figure 7. Collaborative Mindmapping with Mindmeister

For collaborative learning, Google Jamboard, Mindmeister and Canva is often used. Tasks were given during breakout sessions where students need to discuss in groups and collaborate using the platform given. For every lecture, there will be a collaborative task. This is to ensure that the students participate and understand the lesson for that session.

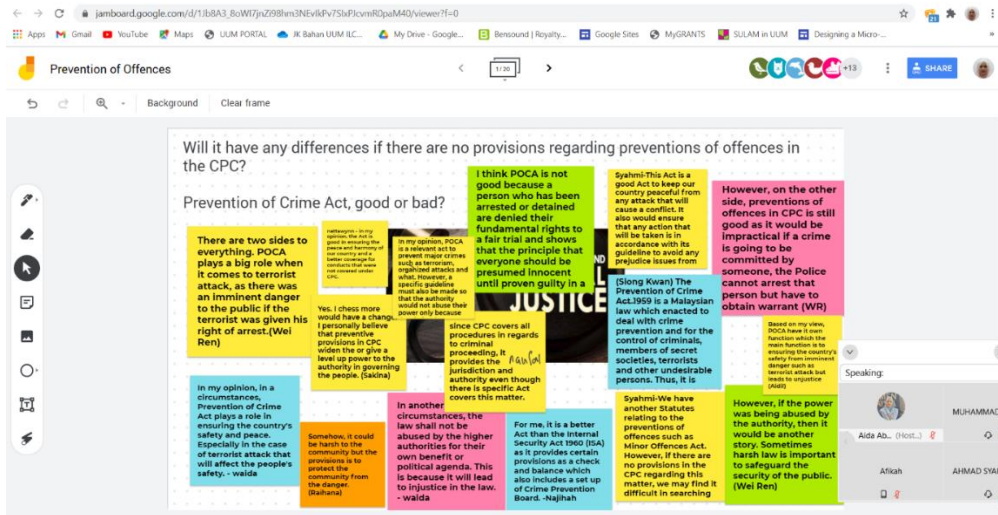


Figure 8. Synchronous classes with Google Jamboard

Challenges of using technology

After implementing some teaching strategies that incorporate interactive learning, the instructor therefore requested students to reflect on their learning experiences. Markkanen et al., (2020) contended that by analysing students’ reflections guided by the Gibbs’ reflective cycle (Gibbs, 1988), the instructors’ teaching methods can be improved to focus on reflective learning gleaned from challenging experiences. The intention of a reflective practice is to assist the instructors to evolve and develop the quality of their teaching by the continuation of personal development (Markkanen et al., 2020).

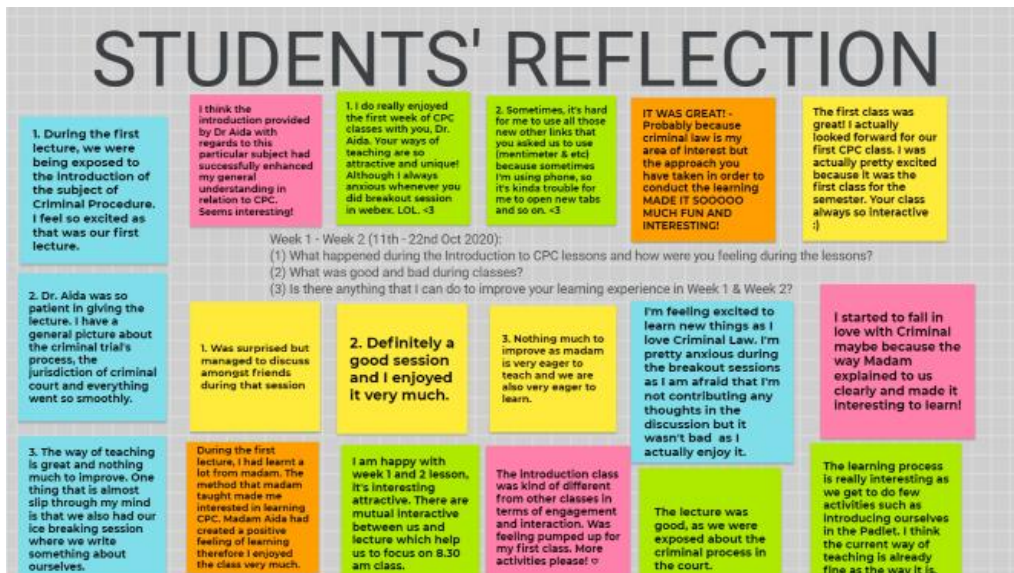


Figure 9. Students’ Reflection

Figure 9 illustrates the some of the students’ reflections after lessons. There were positive and negative feedbacks as well. For example, one student commented that “*Sometimes I cannot focus on the lessons because my internet connection is not so good.*” This shows that poor network infrastructure is a constraint when lessons are conducted using web technology tools 2.0. Students need a good network infrastructure to support their learning. Another student commented that “*Sometimes, it's hard for me to use all those new other links that you asked us to use (mentimeter & etc) because sometimes I'm using phone, so it's kinda trouble for me to*

open new tabs and so on.” This shows that unreliable devices and software can cause students to have problems in accessing the learning materials. Technology has the potential to be a powerful tool. However, devices and software’s must be stable and dependable for it to become a viable option for the new normal.

Reading through the students’ reflection and digesting through all their comments and feedbacks made the instructor realised that there is an improvement if the instructors change the way they teach. Through the survey and reflection, the instructor tried to have a better understanding from the students’ point of view in respect of their lack of focus and participation during online learning. It is an opportunity for the instructor to learn, review and improve her teaching delivery. There must be a shared understanding of learning goals for an effective online learning. It requires interdependence, participation, collaboration in a learning community. According to Vonderwell and Zachariah (2005), it is important to monitor student’s participation because the patterns of participation can help instructors identify student needs and scaffold learning accordingly.

Conclusion

Emerging technologies can be key instruments to help create more equality in higher education. The COVID-19 pandemic has no doubt reshaped the way many of the instructors’ approach pedagogy. UUM itself has adopted online and blended learning approaches way before the COVID-19 pandemic. Thus, when the global education had to resort to remote learning due to the COVID-19 pandemic, the instructors in UUM took up the challenge. Various technology tools were adopted to enhance the teaching and learning experience of GLUP4013 Criminal Procedure I. By implementing interactive tools in teaching, it does encourage participation in the classroom and the students will have a better concentration.

In the future, it is advisable for the instructor to ask the students to complete an introductory survey where the instructor can have a better understanding of her students. Even though lesson plans are usually constructed earlier; ie, before the semester begins, it will have to be reviewed again after the students complete the introductory survey. This will give the instructor a chance to implement suggestions by the students and to take into account any expected problems encountered by them. Lesson plans needs to be constructed and systematic where it should list all the activities that is to be conducted. The activities must be varied as well so that the students will not be bored and each class will induce excitement. Thus, there will be engagement and full participation in class.

Interactive tools that is suitable to be conducted in the classroom, albeit during online classes or in the traditional lectures needs to be further explored. Communication with and between the students is also important where this is also another factor for participation in class. Reflection by the students and instructor’s own reflection on her practices should also be continued. To conclude, to be a reflective practitioner, the instructor needs to consider all feedbacks from the students and improve accordingly.

For best teaching to occur, one must be creative and revise their teaching strategy through experience. As an educator, each day in the classroom is an opportunity to further improve and enhance their teaching.

References

- Abu Baker, H. S. (2018). *Janab's Key To Criminal Procedure*. 4th ed. Malaysia: Janab Law Series.
- Alagan, S. (2018). *The Criminal Procedure Code: A Commentary* (2nd ed). Malaysia: Sweet & Maxwell
- Broussard, C. (2009). Teaching with Technology: Is the Pedagogical Fulcrum Shifting, *New York Law School*, 53(4), 903-915.
- Gibbs, G. (1988). *Learning by doing. A guide to teaching and learning methods*. Oxford Polytechnic: Oxford.
- Ilhan Beyaztas, D. & Senemoglu, N. (2015). Learning Approaches of Successful Students and Factors Affecting Their Learning Approaches. *Education and Science 2015*, 40(179), 193-216.
- Koehler, M. & Mishra, P. (2009). What is Technological Pedagogical Content Knowledge (TPACK)?. *Contemporary Issues in Technology and Teacher Education*, 9(1), 60-70.
- Luo, J., Rajendra, J., Roberts, M., Rapallo, N., Khan, F., Mardon, A. & Mardon, C. (2020). *Education During COVID-19*. Golden Meteorite Press.
- Markkanen, P., Välimäki, M., Anttila, M., & Kuuskorpi, M. (2020) A reflective cycle: Understanding challenging situations in a school setting. *Educational Research*, 62(1), 46-62, DOI: [10.1080/00131881.2020.1711790](https://doi.org/10.1080/00131881.2020.1711790).
- Mishra, P. & Koehler, M.J. (2006). Technological Pedagogical Content Knowledge: A Framework for Teacher Knowledge. *Teachers College Record*, 108(6), 1017-1054.
- Sindhu, B.S. (2015). *Criminal litigation process*. Malaysia: Sweet & Maxwell.
- Vonderwell, S., & Zachariah, S. (2005). Factors that Influence Participation In Online Learning. *Journal of Research on Technology in Education*, 38(2), 213-230, DOI: [10.1080/15391523.2005.10782457](https://doi.org/10.1080/15391523.2005.10782457).

Empowering Learners in Elementary Statistics Courses Using Concept of ‘No One Left Behind’: A Case Study

Nor Intan Saniah Sulaiman^{*a}, NorHisham Haron^b

^aSchool of Quantitative Sciences Universiti Utara Malaysia, Sintok, Kedah, Malaysia

^b Institute of Strategic Industrial Decision Modelling (ISIDM), Universiti Utara Malaysia, Sintok, Kedah, Malaysia

*Corresponding Author: norintan@uum.edu.my

Abstract

The inclusiveness concept resulted in facing the class by ‘remote learning’ starting in the middle of semester A192 in Universiti Utara Malaysia till recent semester. This happen due to the COVID19 pandemic when, in a very short time, universities had to adapt the educational process for exclusively as remote learning. This concept prioritizes inclusiveness, high empathy for students at the same time ensuring the continuity of quality learning. For this study we analyzed students’ performance regarding online learning, their capacity to assimilate information. The method of acceptance by students is based on the inclusiveness concept, the students and lectures need to wisely know how to share the information in sustaining self-pace learning and remote learning. The involvement of students is not only towards the lecturers, but also their reaction to the channel of teaching materials. Feedback as quickly as possible, in order to increase student motivation in maintaining communication with lecturers. The results of the study revealed this inclusiveness concept is really significant. The challenges arise in online learning changes in the context of the crisis caused by the pandemic. The approach of conducting classes via recorded Webex, preparation of short videos recorded in advance as a 'backup' if there is an internet disruption, manual demonstrations via Telegram groups and also reflections via menti.com are seen to be able to impact students. All these approaches are something new in content-wise to be implemented for the teaching of this subject, which has not been emphasized before. The advantage of this approach is that it requires inclusive and proactive involvement from students. Lecturers also constantly evaluate and improve the quality of two-way communication. In addition, the quality of high performance by the students also can be sustained even in the pandemic mode. Indirectly, this approach is able to strengthen humanistic, emphatic and communication skills between students and lecturers as well as students' knowledge towards enriching the learning experience of new norms.

Keywords: inclusiveness, remote learning, high empathy, involvement

Introduction

This case study experienced-based resulted from facing the class by ‘remote learning’ starting in the middle of semester A192 following the COVID19 pandemic. The challenge are faced by both parties, from the student itself and from the lectures too. The readiness by the lecturers also contributing to the acceptance of transition of remote learning since COVID19 pandemic begin. The readiness by the lectures also should be coming by their own internal spirit besides support from the management of university. It supported by study from Shaharane et.al(2020) found out that lecturers in university are ready for online teaching during the lockdown period. However, several issues need to be rectified by the management of the university in preparing lecturer to convert their teaching and learning to online learning.

From this approach prioritizes inclusiveness, high empathy for students and continuity of quality learning. The method of acceptance by students is based on the concept of they need

to wisely process the information into self-paced learning and remote learning. The involvement of students is not only towards the lecturers, but also their reactions to the teaching materials given. Feedback as quickly as possible, in order to increase student motivation in maintaining communication with lecturers. Being honest with students is also very significant in this learning mode transition situation. The approach of holding classes via recorded Cisco Webex (virtual face-to-face), preparation of short videos recorded in advance as a 'backup' in the event of internet disruption, manual demonstrations via Telegram groups and also reflection via Menti.com are seen to be able to impact students for this semester. The advantage of this approach is that it requires inclusive and proactive involvement from students. Lecturer also constantly evaluates and improves the quality of two-way communication. Indirectly, this approach also is able to strengthen students' communication skills and knowledge towards enriching the learning experience of new norms.

Implementation 'learn by doing' concept as a medium of assessment for nurturing engaged and empowered learners in Statistics is discovered. To achieve this, the Elementary Statistics course was chosen, SQQS1013 from Group D and R. This course is act as service course for mainly students in the College of Business and College of Law and Governance. Basically, this course covers basic aspects of statistics include sampling, data collection and descriptive data, central tendency and dispersion measurement and elements of how to find probability for certain random variables and sample distribution. The students are expected to use the Microsoft Excel as a problem-solving tool.

Background of the Case Study

To ensure virtual student engagement at an optimal level, the respective lecturers have made surveys from time to time on the physical, mental, and emotional needs of students so that they are able to follow the learning of new norms. This is to ensure that none of the students are left behind in attending classes no matter what challenges they face. In addition, one of the lecturer in this project also experienced anxiety attack, adding to the anxiety in the lecturer's own heart in the involvement of her students.

Indirectly, the lecturer also can feel empathically that students must also have emotional instability during remote learning. For example, some students also experience panic attacks and anxiety with this learning transition, a challenge that must be faced jointly between lecturers and students. It shows that students' mental and emotional health was also considered. Students discovered that they are feeling frustrated over the inability to move about with their peers since they are mainly in home (Azman & Abdullah, 2021). They expressed frustration over the uncertainty of the current situation and some of them also being the breadwinner of the family. Same as other students in the world, Malaysian students' anxiety and stress resulted from related issues including they absolutely have to catch-up new technology (to submit assignments and exams), concerns over not receiving the full range of face-to-face services and a lack of confidence in the new online class approach (Kerr, 2020, Wang & Zhao, 2020). In this situation, they keep raised concerns about the quality of their learning experience and expressed worries over the accessibility of online learning materials. (Jalli, 2020). This study also have shown that students have difficulties managing their learning online, as they tend to multi-task, check email, chat with friends, and surf the Internet while attending online lectures (Bao 2019; Bao & Zhang 2018). Therefore, the spirit of togetherness and belonging to each other should always be strengthened in this study so that students do not feel sidelined for this course. This study prioritizes inclusiveness, high empathy for students and continuity of quality learning. The intended involvement is the distribution of teaching and learning materials to students. The method of acceptance by students is based on the concept of self that they need to wisely process the information to self-pace learning and remote learning. The involvement of students is not only towards the lecturers, but also their reaction to the teaching materials

channeled. Feedback as quickly as possible, in order to increase student motivation in maintaining communication with lecturers. If this is not the case, being honest with students is also very significant in this learning mode transition situation. The approach of handling classes via recorded Webex (virtual face-to-face), preparation of short videos recorded in advance as a 'backup' if there is an internet disruption, manual demonstrations via Telegram groups and also reflection via Menti.com are seen to be able to impact students for the second these two semesters. All these approaches are something new to be implemented for the teaching of this subject, which has not been emphasized before. The advantage of this approach is that it requires inclusive and proactive involvement from students. Lecturers also constantly evaluate and improve the quality of two-way communication. Indirectly, this study is able to strengthen communication skills between students and lecturers as well as students' knowledge towards enriching the learning experience of new norms.

Criteria for effective virtual engagement

As aforementioned, there is a situation where when a student experiences a block-out challenge in his or her home while he or she is taking an online test, the lecturer needs to have empathy and high courtesy to further extend the test period for the student. This trait is of all that has it. This is because lecturers also have their own diversity of backgrounds and challenges. The strategy is not limited only to such challenges, it can also be adapted to different but not similar situations, for example students have internet disruption or relatively limited access coverage when facing online assessments, Student involvement is significant to always be responsive to challenges, which they go through for lecturers to understand and deal with together.

In a different example, there was a situation where a student who had tested positive for COVID19 and she was in a very depressed state because when he tested positive the time of assessment 2 online just, around the corner. So, the lecturer always 'follow up' on the student and always has some plan for the student who is facing a positive COVID19 by informing to the coordinator of this subject. In order to ensure that inclusive learning can be implemented, requiring all students to open videos during online class sessions is not the best option at the moment. This is by considering students who have limitations on the data they subscribe to. Undoubtedly, optimal teaching and learning satisfaction cannot be achieved at this time.

However, according to e-learning theory (Syed Chear and Mohd Nor, 2020), students can actually control their learning better through collaborative, interactive and private learning opportunities. The learning environment is based on the principle of '-just-in-time', with the competence of 'anywhere, anytime, anyone'. This project is a new dimension of learning. In addition, there are students who really like this learning environment. They are very happy, especially to have the opportunity to actively participate in online discussions and activities. Cheung and Cable (2017) also identified eight principles for effective online teaching and learning, such as: reassuring contact between students and faculty, cooperative learning, fast feedback, active learning, assignment time—reassuring students to allocate more time for completing tasks, extraordinary-expectations—showing that, the lecturer should communicate their expectations in order to encourage and motivate students, diversified learning, and technology application.

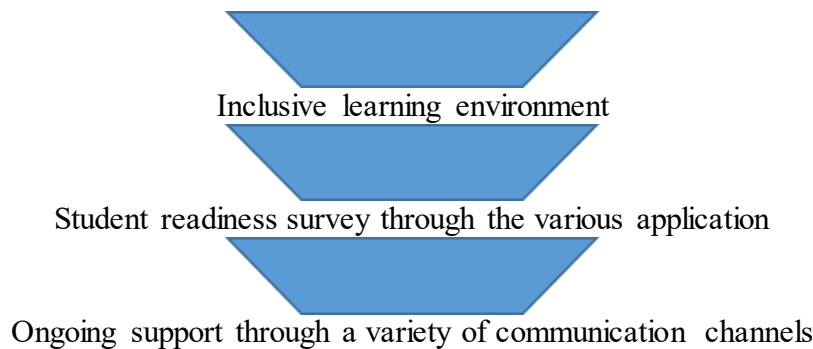


Figure 1

This case study also maps to the research objective of investigating the role of ‘learn by doing’ in nurturing and empowering learners in Statistics courses. Doing mini research-based assignment extraordinarily fits for catching wide reactions to learner’s diversity encounters, which obscure disciplinary limits and offers a comprehensive and solidly emancipatory way to deal with intelligent practice.

Objective of Study

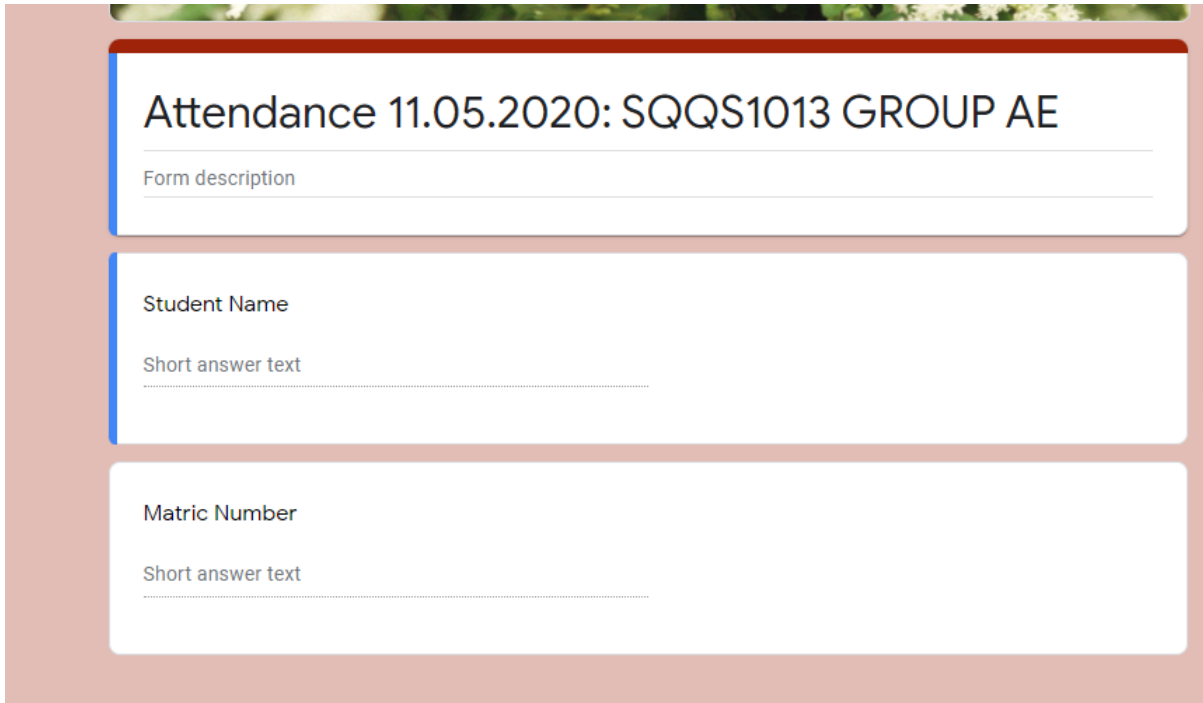
The main objective of this study is to enhance the empowerment skills among Elementary Statistics students for online teaching implementation. At the same time, they should feel their lecturer is always listening to all their problems. The significance of this study is to provide an understanding of the situation of acceptance and readiness in remote learning among university students

Students are constantly exposed to information channels on various support facilities such as counseling services in dealing with the challenges of learning new norms, technical challenges, socio-economic and emotional. Since this subject is a course that involves a lot of logic and calculation, it is very important in ensure students do not fall behind in any of the learning objectives of this subject. In addition, the other objective of the study also ensures the constant attention to the lecturer should be emphasized in class so that students have a sense of responsibility to continue learning this new norm. The role of classmates is also very significant especially in completing group assignments.

Methodology

Strategy 1: New Norm Teaching Approach

The best approach is to always ensure that students can follow the learning through ‘Google-form’ and ‘Menti.com’ surveys as well as quick response to them. Undoubtedly, many lecturers use this approach, however there are some situations for these lecturers, the solution used is a bit unique according to the comfort of the students. A series of Google attendance form will be used if students have trouble to scan attendance QR code. This attendance is importance as evidence for auditing purposes as in Figure 2. The lecturer also knows the emotion of students by boosting up the emotional motivation after finding that many people experienced anxiety after conducting a survey through ‘Menti.com’ as in Figure 3. This is a periodic reflection activity a few weeks after the new norm class begins. This situation is very noticeable for semester A192. This is very significant to always see the involvement of students.



Attendance 11.05.2020: SQQS1013 GROUP AE

Form description

Student Name

Short answer text

Matric Number

Short answer text

Figure 2. Example Of Google Form Attendance



Figure 3. Quick-Survey the current feelings through Menti.com

The third situation, a somewhat different concentration is necessary to the repeating student for this subject. The group was also more responsive to the questions posed by the lecturers because they had a clear goal. The fourth situation, when international students who were in the class should not be disregarded. For semester A192, which is the transition period of Covid-19, one Bangladeshi student repeated several times for this subject. The lecturer still has to put attention for the student as in Figure 4. The communication challenges was experienced were overcome diplomatically as well as the encouraging support of his classmates even within the new norms.

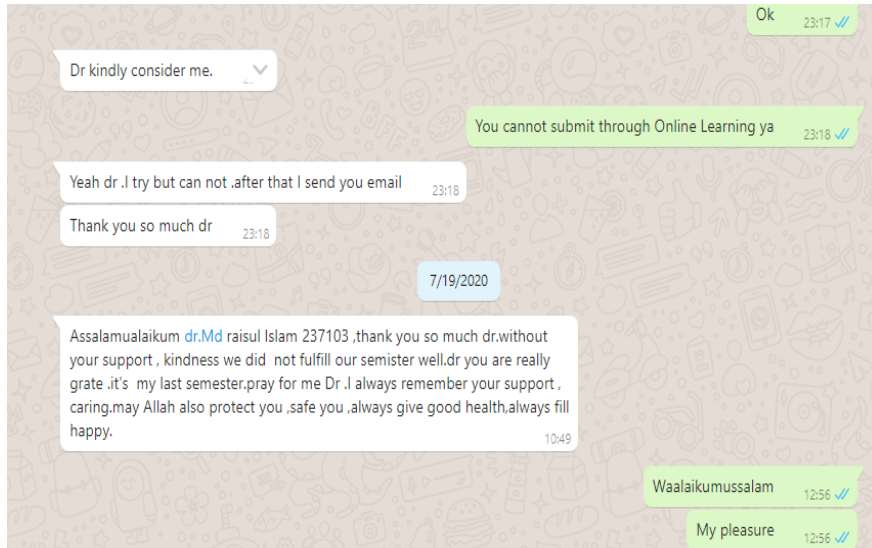


Figure 4. The Repeated Student Give the Appreciation for 'Inclusiveness' Effort

At the same time, there is one international student (Indonesia) who tested positive for COVID-19 and the positive support of the lecturer is very necessary to provide peace of mind for the student at the end of last semester A201 as in Figure 5.

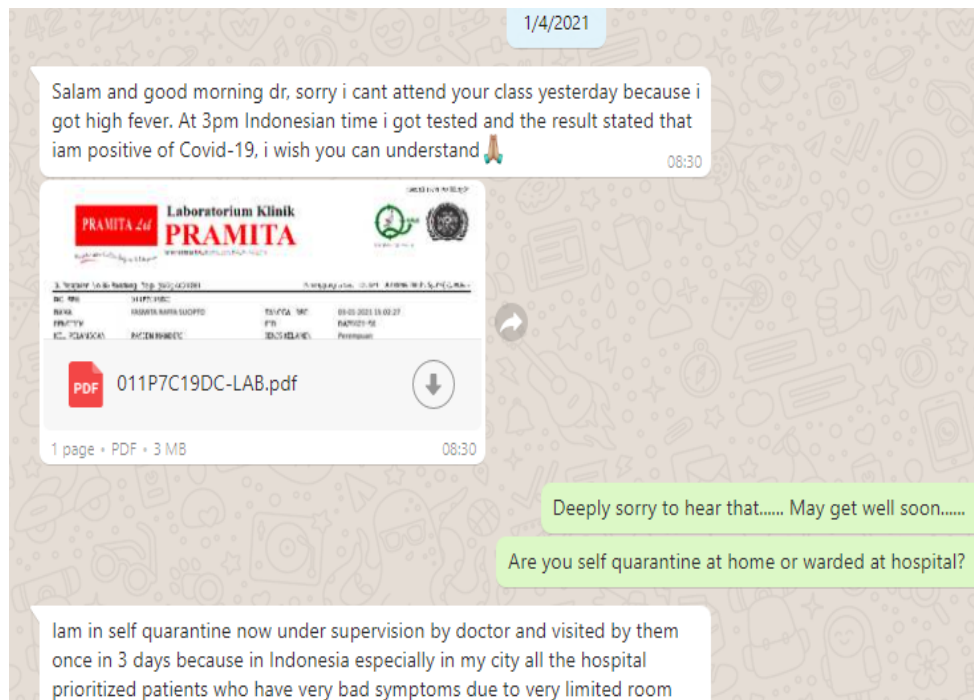


Figure 5. Communcation via Whatsapp and the lecturer should play significant role for the student

The caring approach and student response is very encouraging, this is very important in new norms approach. Lastly, all this new norm also heavily depends on the willingness of the student to inform the lecturer on the basis of trust in the lecturer. If not, how could the lecturers know because the information channels are all online and the students are still in their respective hometown.

Students will greatly appreciate when an inclusive approach or ‘no one is left behind’ especially when assessment time is conducted online for the first time. It is very important that lecturers do not want students to feel pressured by constantly considering what is happening to students. For example, a situation that once happened, there was a student who experienced a ‘black-out’ in her home and her laptop also did not work, hence, the importance of noticing empathy in this situation and extra time given for ‘submission’ of the test results. The second situation, in addition to the online classes, the lecturer will also record almost all the learning sessions, so that students with internet line disruptions can follow back with the video recording sessions provided. The third situation, students are always given the opportunity to equally improve the quality of learning so that they do not feel disregarded. This can also increase ‘self-esteem’ among students and their ‘self-confidence’ can also be improved. The fourth situation, students are also not forced to open the online class as video takes place because some of them have data limitations. They inform if they need to open this video will increase data usage. This will burden them. Two-way sessions are not only limited during class sessions but can even be optimized through WhatsApp groups.

Strategy 2: Learn by Doing

Summary of Case Study Task

The students need to identify a scenario of interest for a small statistical study where data collection will be conducted (as example prices of favorite drink, daily runs, and online shopping). They have to outline the initial ideas and get an approval from the lecturer. Related to this, the course learning outcome (CLO) chosen is CLO 1 which is explain the basic concept of statistics and its application in real life. The problem-solving skill can be showcase through this activity. The rationale of choosing this CLO 1 is to expose students to the fundamental concepts and statistical applications in their respected field. Besides that, CLO 2 also adapted in the end if the activity where is about to describe the data whether in terms of presenting or measuring statistical value and its interpretation their experiences and to show their creativity presentation of primary data. The type of case study involved is descriptive case study since it is the task is focused and detailed approach. This case study requires the students to describe their own data collection plan such as questionnaire or interview for primary data. The students also need to explain the concepts in data collection and descriptive data, central tendency and dispersion measurement, and their applications they need to provide the relevant working steps as below clearly and they need to submit the exploration, discovery and development part as a formative assessment.

- Explore -For this stage, they need to brainstorm for ideas on how best they can collect data/information (to understand what they need to do) – gather the information to get started (e, g, can do the mind mapping on the most related issue).
- Discover - During this stage, the students need to use the data in “Data Analysis and Result” part to discover the connection between the qualitative and quantitative variable in organize the data, and present them in different types of graph .
- Develop - Then, the students have developed their statistical interpretivism within comparison and comment on the numerical values for grouped and ungrouped data.
- Reflection - Finally, at end of the writing report, students have to express their experience in completing the project.

To promote good teamwork and nobody left behind concept, despite working remotely, a peer evaluation, 2% from their coursework is applied, and all comments shall be kept anonymous. The link of the peer evaluation form will be given to them upon submission of the group assignment. They are required to rate fairly of themselves and their team members with reference to the unique member's number.

Study Findings

The background of the class selected from Group D and Group R as in Table 1 below. From the Table 1 represent the diverse of learners and various academic entrances from these both groups. Group D consists of 48 students comprising of 14 male and 34 female students. Chinese and Malay students made majority of the class by recording number of 19 respectively, followed by 2 Indians and 8 others where international students from Indonesia. As for their academic background, 35 of them came from UPU channels (STPM and Matriculation), followed by 2 students from UUM Foundation Programme, and 6 students from diploma background and also 5 as other channels entrance to UUM. Meanwhile Group R consists of 46 students comprising of 8 male and 38 female students. Malay students made majority of the class by recording number of 25 respectively, followed by 12 Chinese, 7 Indians and 2 others where international students from Indonesia. As for their academic background, 40 of them came from UPU channels (STPM and Matriculation), followed by 4 students from UUM Foundation Programme, and also 2 as other channels entrance to UUM.

Table 1
Background of Students from Group D and Group R

Variable		Group D	Group R
Gender	Male	14	8
	Female	34	38
	Total	48	46
Race	Malay	19	25
	Chinese	19	12
	Indian	2	7
	Others	2	2
	Total	48	46

Entrance	UPU(STPM & Matriculation)	35	40
	UUM Foundation	2	4
	Diploma	6	0
	Others	5	2
	Total	48	46

Table 2
Result of Students from Group D and Group R

Gred	Group		Total
	D	R	
A+	31	23	56
A	13	13	26
A-	2	2	4
B+	1	1	2
B	1	5	6
B-	1	0	1
C+	0	1	1
C	0	1	1
C-	0	0	0
D+	0	0	0
D	0	0	0
F	0	0	0
Total	48	46	94

Note:

1. Group D - majority students are doing well in SPM and the class on 2.30-4.00pm.
2. Group R – majority 1st year finance students and the class on 10.00am to 11.30am

Further study regarding their similarities revealed that 33 out of the 48 total students from Group D are in the performing well (obtain grades A+, A- and A) in subject Mathematics during SPM. Same thing happened from Group R where 38 out of 46 performing well (obtain grades A+.A- and A) .The excellence of their result are contributing 20% from the good marks of their group assignment as well. This might reflect their levels of maturity in understanding the course and carrying out the assignment given. Furthermore, most of them came from UPU channels such as STPM and matriculation, indicating unity in their previous performances before undergraduate study. However, most all of them have never doing quantitative survey before and had zero experience with that. Moving on to their differences, they are separated in their existing mathematical knowledge explain the basic concept of statistics and its application in real life as their problem solving. The difference is also noticeable in the students' level of creativity and technology-based capability, since very few of them are incapable to handle online survey individually according to the requirements given.

Students interpreting learning through assessment up to the end of the semester for its cognitive aspects. Students feel belongings after self-support is given. From the perspective psychomotor, students do not feel too burdened and are always given the opportunity to further improve their skills in managing a laptop or smartphone. Indirectly, optimizing skills of communicating through gadgets increases. From that, their motivation is awakened where the lecturers always show concern for them and always give opportunities if they have facing difficulties. Implicitly, involvement in interacting virtually can be sown as well as the diversity of students' characters can be seen. This feedback has also been expressed in the evaluation of reflection.

Increased interaction either through WhatsApp or Telegram is very helpful for students (Syed Char and Mohd Nor, 2020) as well as lecturers always give the opportunity to listen to their problems. Apart from reflection activities such as Menti.com which are conducted in online classes, students also always could send messages or call lecturers. Compared to face - to -face learning, the interaction between students and lecturers is only concentrated in class and rarely contact the lecturer after class, but when the class is online, the increase in volume

in frequency is very significant especially through WhatsApp and Telegram and chat room during class through the platform. Webex. More holistic involvement is also very significant in the activities of 'Menti.com' as well as the 'Padlet.com' platform. This can be seen that students always try to give the best response, including the training that needs to be delivered. Indirectly they know and realize they need to prove their seriousness and commitment to soft skills (soft skills). The percentage of giving feedback in any activity carried out is also always good. This very encouraging interaction can be seen when the lecturer asks to answer the survey, reflection questions in the Padlet platform or menti.com (with evidence via print screen in the attachment). This feedback was also expressed in the reflection assessment for semester 192 and Ecevas for semester A201. This approach is particularly significant in changes in students' attitudes and cognitive behaviors. They are motivated even in a very bitter atmosphere to complete all exercises, assignments, quizzes, and assessments which are implemented 100% online. Classmate support through group assignments also had an impact on this change. Students who repeat can also improve results with better grades. Not surprisingly when many students for semester A192 and semester A201 obtained excellent results. In addition to the constant effort and resilient attitude they exhibit, the lecturers always instil a spirit of never giving up for the students. In addition to inclusive concepts that can provide significant in attitude and cognitive behavioral changes of students. This is because in a pandemic environment, students' emotions are actually unstable. For example, in online learning sessions, lecturers always try to provide indirect motivation so that students feel they are valuable in any situation. This happens because the lecturer also goes through an unstable spirit and needs to be strong for the students. The motto given is a return to the spirit of the lecturers so that they are strong together. Furthermore, students are seen as gems and are constantly reminded of them to stay motivated and remember their 'big why' in higher education on an ongoing basis. Alhamdulillah, there are no students in this lecturer's class who 'drop' courses, fail or withdraw from university studies. As example for semester A201, the majority of students from Group A and Group R comes from semester 1 students and still no longer set foot on campus physically and the injection of motivation into them was very significant and they have very strong motivation in sustaining the spirit in strive the excellence.

Although this concern and empathy may seem trivial, the lecturers are confident that a small contribution can sustain their studies at the university. The factor of students who also have a good mathematical background of their results while in school, diploma, or matriculation, further increased the percentage rate of 81% (group D) and 78% (group R) who obtained A+ and A for semester A201.

Discussion

In ensuring that the class is implemented by remote learning, learning has been done online using Webex platform, video recording, Whatsapp and Telegram groups and google form) in an inclusive and comprehensive manner for all students and no one is left out or ignored. This inclusive concept coincides with the concept of 'Rahmatan lil alamin' and the quality of service to students is preserved. In ensuring that students can master the basic concepts of statistics refer to the relevant CLO which is: 'explain the basic concept of statistics and its application in real life. Problem solving'. The concept of probability in this course includes the application of the concept in real life, the lecturer always tries to relate the COVID19 pandemic situation in this new norm session.

To ensure that there is no lag in communication between students and lecturers, large groups were divided into small groups during the training activities. Lecturers will monitor when small group discussion activities are conducted in the webex platform. On the other hand, subjects that require the use of the left brain should be combined with the use of the right brain

such as reflection activities as a whole so that students do not lose focus. Learning outcomes can be maintained where the extent of students' mastery can be translated through coursework marks. Chapter -by -chapter exercises should be submitted for lecturer review as well as student preparation to sit for assessments including quizzes and online tests.

Limitation

This approach of inclusive learners has potential but need to improve the elements and need refining what is crucial is how all what relate to teaching and learning and students' engagement that can influence their performance. The questions and evidence on learning engagement because of your lessons. Furthermore, this approach is not really novelty globally, but perhaps this approach would be expanding the execution to all lecturers who is teaching this course. It means the lecturers need to see the innovation in communicating with the mass class and have the best mechanism for achieve it. Even though the innovation usage of Menti.com dan Google Form seems like new norm, the combination of web 2.0 and the formative assessment need to scrutinize more detail for the big class. Besides that, the effect and involvement also need to be highlight more as example the acknowledgement from the dean or community-based project base as their formative assessment

Recommendation

From this approach, even though the students seem can achieve the best result as they expect with their target, sometimes the peer evaluation also can be the issue for each team members. It also makes lectures need to take extra effort to investigate for this issue. Perhaps the group leader needs to be firmer and always ensure the team members are doing their part. This approach also very compliance with the remote learning approach. The lecturers also need to be friendlier to students if they have communication breakdown between the peers. This can as solution if attitude problem arisen especially in handling the online assessment. The lectures need to have a few assessments set to prepare if any unpredictable situation happen during the assessment

Conclusion

Students' achievement in terms of their knowledge increased and this can be seen through the examination results for the two semesters involved. No student fails and for repeat students can also improve grades. Exposure to virtual communication knowledge has also become a mandatory matter for students. If before, the option to communicate with lecturers or classmates was only optimized in the classroom, but through virtual learning, this can be improved. Knowledge of digital gadgets can also be indirectly through this virtual engagement. The knowledge aspect in digital learning is also well received by students.

Student achievement in terms of skills increased especially communication skills, skills in using applications for assessment purposes, preparation of video assignments and reports. As an example of online learning etiquette, etiquette asking questions to the lecturer via Telegram or What'Apps (Syed Chear and Mohd Nor, 2020). Meanwhile, the skill of using a scanner application (scanner via smartphone) to submit test papers for assessment purposes is also very significant for students. Virtual student involvement also seems to be an obligation and dependence among classmates is also decreasing due to being in their respective homes. There is no such thing as 'please ask for me on behalf'. Self -reliance is enhanced immediately for the continuity of students' understanding in the learning session.

In summary, the remote learning within inclusiveness concept is still new among Malaysian users. The sudden change and shift from physical lessons to online learning platform when the COVID19 pandemic hit Malaysia has greatly impacted all users. All students and

lecturers were suddenly required to adopt online learning extensively. The experiences of online learning during the past year should be used to develop various strategies to make significant improvements and deal with the issues and challenges of the online learning platform. Future investigations and research should be carried out to better understand online learning by interviewing the relevant parties involved in developing the online learning platform to determine the best solutions for the current problems and challenges.

References

- Azman, N. and Abdullah, D. (2021). A Critical Analysis of Malaysian Higher Education Institutions' Response Towards Covid-19: Sustaining Academic Program Delivery. *Journal of Sustainability Science and Management* Volume 16 Number 1, January 2021: 70-96
- Bao, W. and Zhang, X. (2018). The Multidimensional Structure and Influence Mechanism of Student Academic Involvement In China. *Fudan Education Forum*, 6, 20-28.
- Bao, W. (2019). Bridging The Gap Between Research and Practice: Identifying High Impact Educational Practices for Chinese Undergraduate Education. *Peking University Education Review*, 1, 105-129.
- Cheung, C. and Cable, J. (2017). Eight Principles of Effective Online Teaching: A Decade-Long Lessons Learned in Project Management Education. *Project. Manager. World J.*, 6, 1–16
- Jalli, N. (2020). Commentary: E-Learning Sees No Smooth Sailing in Malaysia and Indonesia. Retrieved from <https://www.channelnewsasia.com/news/commentary/coronavirus-covid-19-malaysia-indonesiaschool-e-learning-online-12616944>
- Kerr, E. (2020). Students Stress Out Due to Coronavirus, New Survey Finds. Retrieved from <https://www.usnews.com/education/best-colleges/articles/how-collegestudents-are-managing-coronavirus-stress>
- Shaharane, D. I. N. B. M., Bakar, . M. S. A., Nordin, . H., , Jamil, . J. M. & Ang, . J. S. (2020) Assessing Lecturer's Readiness for Online Learning Implementation during COVID -19 Outbreak. *Elementary Education Online*, 19 (2), 79-84. doi:10.17051/ilkonline.2020.02.109
- Syed Chear, S.L and Mohd Nor, M.Y. (2020). Intervensi pembelajaran di portal e-Pembelajaran melalui aplikasi Whatsapp dan Telegram berdasarkan Model Lima Fasa Needham. *Evaluation Studies in Social Sciences*. 9, 11-27
- Wang, C. and Zhao, H. (2020). The impact of COVID-19 on anxiety in Chinese university students. *Frontiers in Psychology*, 11, 1168.

Do Accounting Information Systems Students e-Learning Preferences Differ Based on Topics Discussed in Online Learning

Raja Haslinda Raja Mohd Ali*^a, Saliza Abdul Aziz^b, Fathiyah Abu Bakar^c
^{abc}Tunku Puteri Intan Safinaz School of Accountancy, Universiti Utara Malaysia
Sintok, Kedah, Malaysia

*Corresponding Author: rj.linda@uum.edu.my

Abstract

People we meet in life are usually different from us and they have had different experiences than we have. It is similar to the learning process in which each student learns differently using their preferred method of learning. Importance of understanding students learning preferences has been highlighted in various studies especially in the online learning environment where students are alone in front of their computer. The student e-learning preference may differ from the one individual to another, one groups to another, one course to another and probably one topics to another. This article aims to gain understanding on students e-learning preferences based on topics discussed (concepts and technical) in online learning environment. Data was collected from 103 accounting information students enrolled in database management system course via questionnaire survey. Results shown that respondents' ranked first of findings information and solving solutions from research in the internet for topics related to concepts, and ranked first for information based on their own reading and experience for technical topic. For both types of topics, respondents ranked seeking information and solving solution from friends as their last option. The results of the study will shed some light for the educators to have a prior knowledge of their student e-learning preference to ensure that they can prepare and plan the appropriate e-learning activities (such as group discussion, preparing individual mind map, or research over internet) to increase their students understanding on the topics discussed.

Keywords: Accounting Information Systems, e-Learning, learning preference, online learning.

Introduction

People we meet in life are usually different from us and they have gone through different experiences than we have. It is similar with the learning process where every students learn differently with their own preferences method in learning. Therefore, it is important for the educators to know the preferences learning method of their students to maximize the potential of their students (Tomlinson, 1999) especially for online students who are alone in front of a computer (Gulbahar n Alper, 2011). The student e-learning preference in online learning environment may differ from one individual to another, one group to another, one course to another and probably one topics to another.

The importance of understanding students learning preferences has been highlighted in various studies. A recent study by Training Industry suggested that educators should pay attention on students learning preferences on differences training to increase students understanding on the subjects (Miller,2021). In addition, Mkonto (2015) suggested that learning preference awareness may also enable students to take ownership of their learning and achieve success. There are various students learning preferences such as using music or audio, explain understanding to others, own company when learning, and use pictures and images in learning.

Based on the importance for the educators to know their students preferences in

learning, therefore this study tries to answer the question on “Do students e- learning preferences differ based on topic discussed (concepts and technical) in online learning environment?” Thus, this study aims to gain understanding on students learning preferences based on topics discussed (concepts and technical) in online learning environment.

Literature Review

Since the outbreak of Covid-19 pandemic, most universities around the world has shifted their teaching and learning approach from traditional lecturer (face-to face) to online learning. This new landscape requires lecturers, students and the management of universities to equip themselves with the new norms and be prepared to conduct the classes online. Historically, the online education was started in the 1990s with the advent of the Internet and World Wide Web and continued to develop as information and communication technologies (ICT) advanced and became more sophisticated (Szopinski & Bachnik, 2022).

Online learning is a web-based learning where the process of teaching and learning occur primarily via the Internet by utilizing information technology (Simonson, Zvacek & Smaldino, 2019) to enhance educational quality. Proponents of online learning believe that it may enhance convenience and accessibility to information regardless of location or time. However, online learning also has barriers to the students such as unstable Internet connection, a lack of motivation, and a lack of instructions (Muflih, Abuhammad, Al-Azzam, Alzoubi, Muflih & Karasneh, (2021; Muthuprasad , Aiswarya, Aditya & Girish, 2021).

In online learning, students more likely to engage in self-regulated learning (Jansen, Leeuwen, Janssen, Conijn & Kester, 2020) where they have to learn independently and will always refer to internet to find the information and answers. The students’ learning preferences may vary from one student to another depending the task in hand and (Mkonto, 2015; Parilla, 2021). Some students prefer to do the task based on their own reading, experience and judgments when they see what is presented to them and written form (Parilla, 2021). In addition, they may discuss with their colleagues to get the information and explanation (Mkonto, 2015; Parilla, 2021, Hao, Wright, Barnes, Branch, 2016).

Methodology

The study employed convenience sampling data as a method of data collection. Data was collected via online survey using GoogleForm platform at the end of second semester 2021. The data was collected from 103 students who enrolled in Database Management System (DBMS) course in the current semester. They were chosen because it is believed that they are capable to answer the questionnaire as they have an experience discussing both types of topics namely, concept and technical, in the current course.

Instruments

All the participants completed the questionnaire survey that have three sections. The first section related to the participants’ demographic, second section related to the technology readiness on online learning and the last section related to their reflection of the learning method which include their preferred e-learning method based on the different types of topics discussed. There are two statements related to their preferred learning in gathering information and finding solutions based on topics. The first statement refers to topics on concept, which relates to reasons of studying file system before database. The second statement refers to technical topics, which relates to analysing table normalization in database.

For each statements, the students were required to assess themselves on their preferred learning method to gather information and finding solutions, then ranked their options. The

options ranged from 1 (Explain the reasons / Normalised the table based on my reading and experience), 2 (Ask my friends or colleagues) and 3 (Find the reasons / Look at the similar question and answer from website). A major learning method to collect information and finding solutions is ranked by participants with first option number, followed by the second option number, and the last option number is the least preferred method to gather information and finding solutions. Table 1 below shows the details of each items.

Table 1
Items for Assessment on Preferred Learning Method

Items	Options
1) If you are required to explain reasons of studying file system before database can be designed, what would you do?	<p><i>Please rank from your most likely option to your less likely option.</i></p> <p>(1) Explain the reasons based on my reading and experience.</p> <p>(2) Ask my friends or colleagues and discuss the reasons.</p> <p>(3) Find the reasons from website</p>
2) If you are required to normalise the table above, what would you do?	<p><i>Please rank from your most likely option to your less likely option.</i></p> <p>(1) Normalised the table based on my reading and experience based on my reading and experience</p> <p>(2) Ask my friends or colleagues.</p> <p>(3) Look at the similar question and answer from website.</p>

Research Code	Research Area	Research Leader	Research Budget	Employee Number	Employee Name	Department No.	Department Name
RC01019	Tax	Ali Abdullah	RM10,000	2100	Jamal Subaimi	02	Accounting
RC04001	AIS	Adam Ahmad	RM50,000	2100	Jamal Subaimi	02	Accounting
RC04001	AIS	Adam Ahmad	RM50,000	0078	Omar al-Khatab	03	Accounting Information System
RC01019	Tax	Ali Abdullah	RM10,000	0111	Jamil Abu Hurairah	02	Accounting

Findings

Summary of Participants' Demographic

The demographic of the participants is presented in this section. A total of 103 Accounting Information Systems students enrolled in the Database Management Systems course participated in this study. As shown in figure 1, most of the participants are Malays, followed by Chinese and Indians. This is in line with the percentage of student's race in this course.

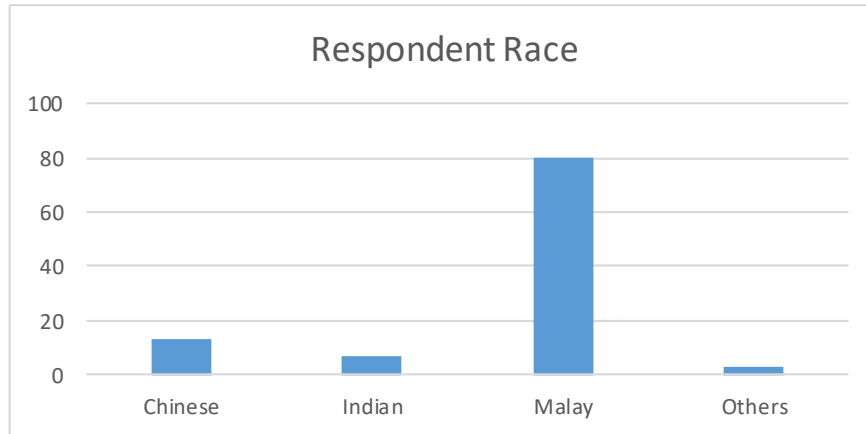


Figure 1. Respondent Race

Figure 2 below shows the percentage of respondents by semester of the study conducted. Majority of the students (94%) is in semester four, followed by four percent in semester 2, and one percent each in semester three and others. This findings might be due to the structure of this program (Bachelor in Accounting (Information System)) that this course is taken by semester four students.

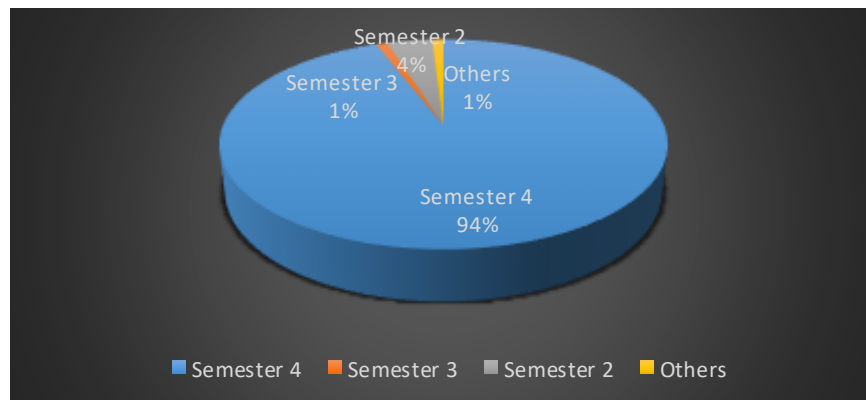


Figure 2. Respondents by Semester

Figure 3 presents the location of the respondents during online learning. The chart shows that majority of respondents accessed from their own home with 83 percent and the others accessed from the university.

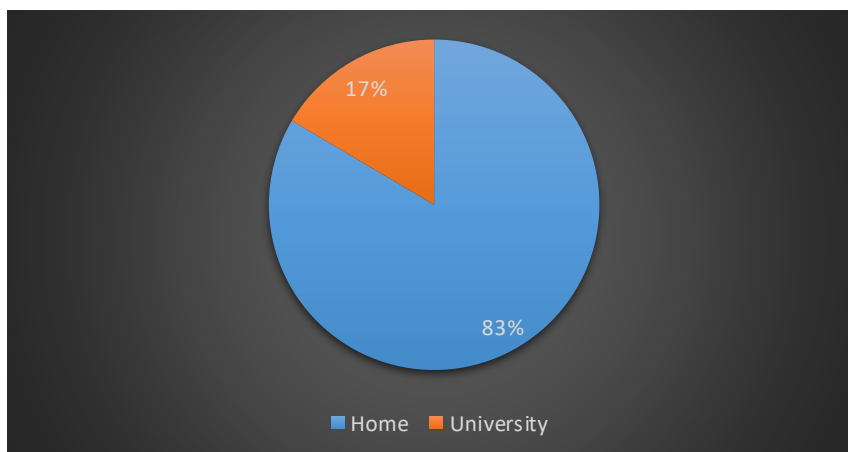


Figure 3. Respondents location when Accessing Online Learning

Readiness of Online Learning

This section presents the findings based on the respondents' readiness after the course has been conducted via online learning. Figure 4 below shows that majority of the students used their own laptop and smartphone, while some used tablet and very few used desktop. The findings also found that some students used more than one device when attending and participating in online learning sessions.



Figure 4. Most devices used by respondents

Respondents were also been asked on their affordability on using internet for online learning sessions. As shown in Figure 5 below, majority of the respondents answered that they afford the internet connection cost, while some responded "less affordable" and very few answered "highly affordable". This findings suggest that majority of the students do not have problems in using the internet in terms of cost.

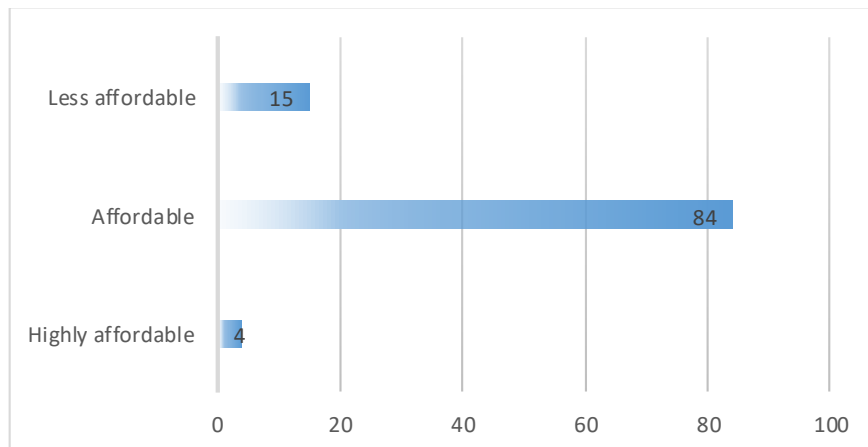


Figure 5. Affordability on internet usage for online learning

Respondents also were asked to rate their feeling of confidence in using the Internet (Google, Yahoo) to find or gather information for online learning. Figure 6 presents that majority (96) responded strongly agree or close to strongly agree that they have confidence in using Internet to find or gather information, while the lowest is two who responded close to strongly disagree.

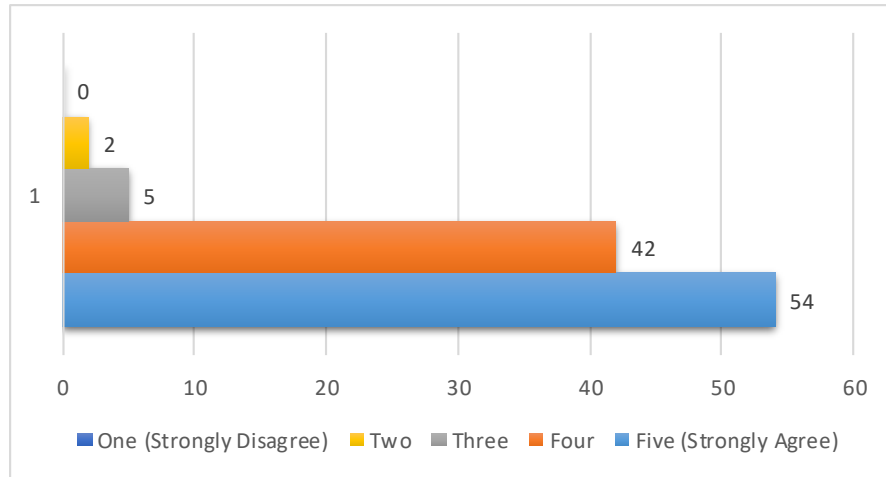


Figure 6. Respondents' confidence in using internet to find information

Respondents e-Learning Preference in Finding Information and Solutions Based on Difference in Topics Discussed

This section presents the respondents e-learning preference in finding information and solutions based on differences in topics discussed. Respondents were given two items, in which one items refers to the concept topic and the other item refers to the technical topic.

Items Related to Concept Topic

Figure 7 below shows the respondents most preferred e-learning activity when finding information and solutions for concept topic. It could be seen that majority of respondents (52%) chose finding information from internet, followed by from own reading and experience (33%) and lastly, asking friends and colleagues (16%).

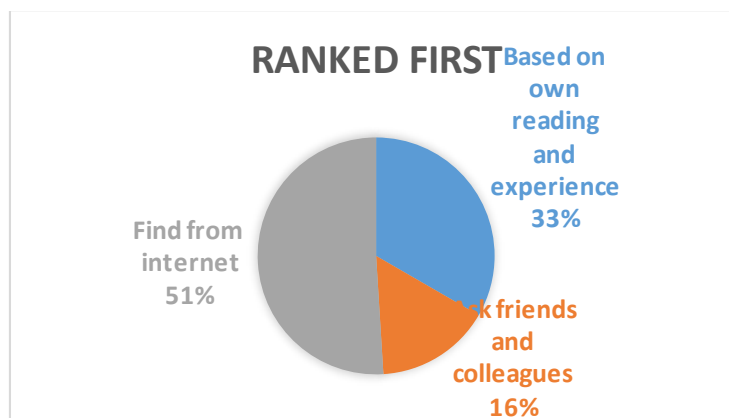


Figure 7. Respondents Most Learning Preferences on Concept Topics

Figure 8 below shows the findings of respondents' second choice of learning preferences on the concept topic. Same as the above results, majority of the respondents chose finding from internet (42%) as their second preferred choice. Differs with the above results, second option with 34% is "ask friends and colleagues", and the last is "based on own reading and experience".

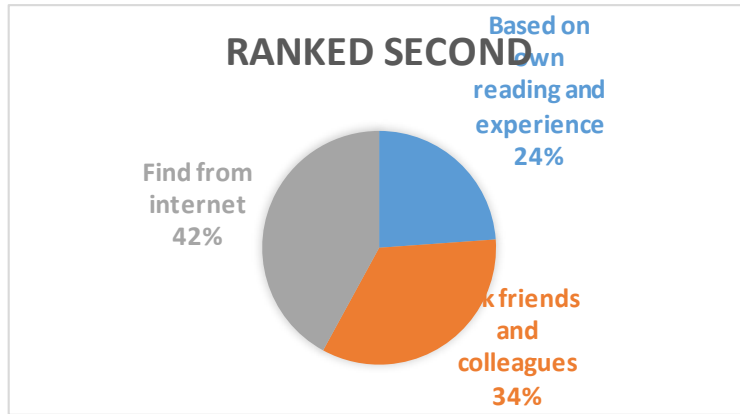


Figure 8. Respondents Ranked Second in Learning Preferences on Concept Topics

Figure 9 below shows the respondents’ third option in finding information and solutions for the concepts topic. Majority (49%) opted for “ask friends and colleagues”, followed by “based on own reading and experience”, and lastly “find from internet” with 7%.

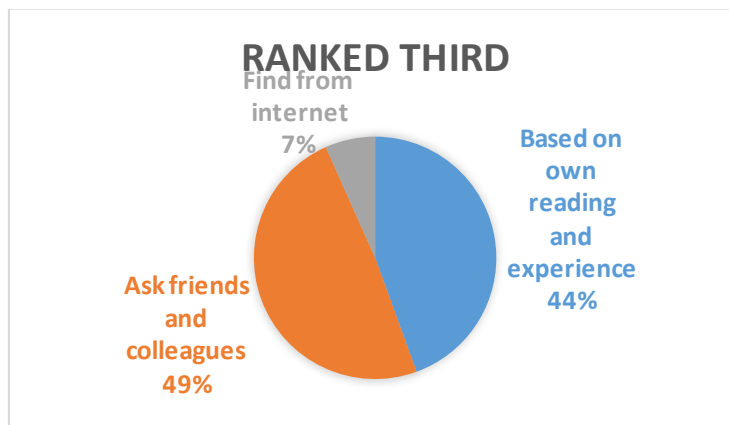


Figure 9. Respondents Ranked Third in Learning Preferences on Concept Topics

In sum, the results presented above shows that for the topic discussed related to concept, respondents are more likely to gather information and find solution from internet, followed by the participants own reading, and last choice is seeking information from friends and colleagues. This may be due to majority of the respondents are afford to use internet and have confidence in using internet find information. Furthermore, the information in internet on various concepts is wide and huge, accessible by any internet users, and is free. All users need to know is the keyword of the concepts.

Item Related to Technical Topics

Figure 10 below shows the respondents most preferred e-learning activity when finding information and solutions for technical topic. It could be seen that majority of respondents (64%) chose own reading and experience, followed by finding information from internet (26%) and lastly, asking friends and colleagues (10%).

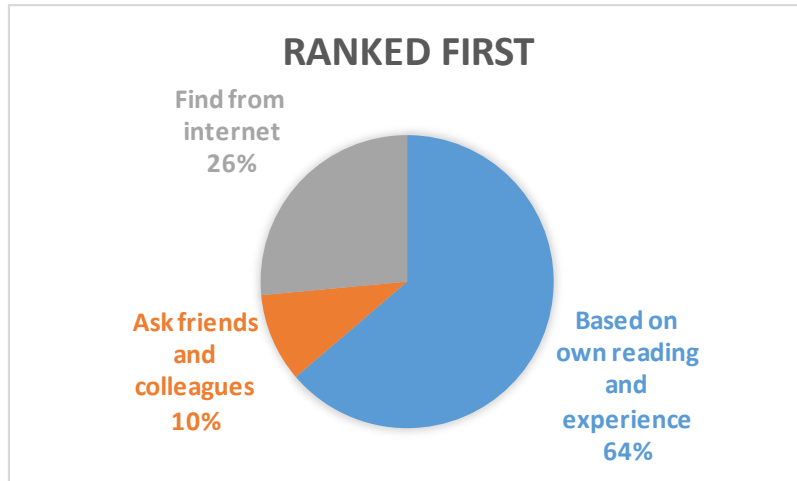


Figure 10. Respondents Most Learning Preferences on Technical Topics

Table 11 below shows the findings of respondents’ second choice of learning preferences on the technical topic. Majority of the respondents chose “find from internet” with 42% and “based on own reading and experience” with 41% as their second preferred choice.

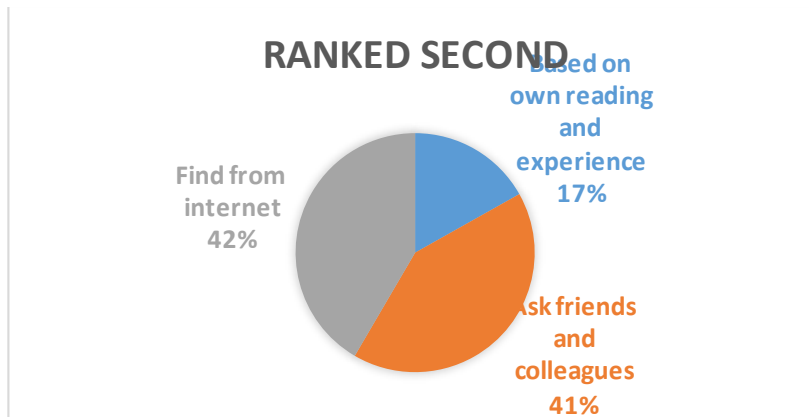


Figure 11. Respondents Ranked Second in Learning Preferences on Technical Topics

Figure 12 below shows the respondents’ third option in finding information and solutions for the technical topic. Majority (49%) opted for “ask friends and colleagues”, followed by “find from internet” with 36 percent and 15 percent for option “based on own reading and experience”.

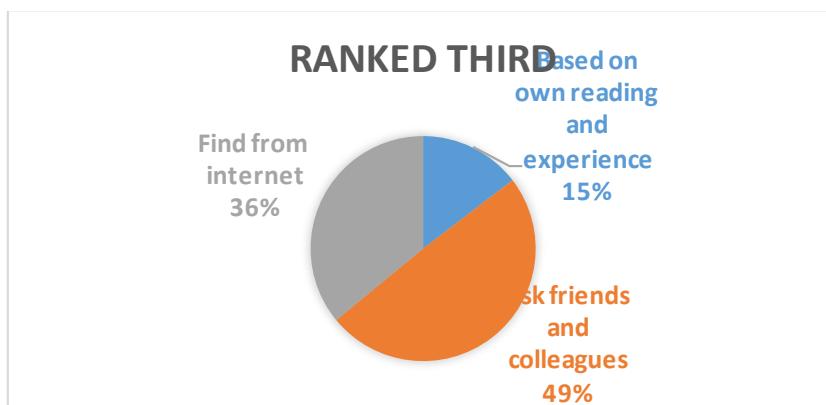


Figure 12. Respondents Ranked Third in Learning Preferences on Technical Topics

In sum, the results presented above shows that for the topic discussed related to technical, respondents are more likely to gather information and find solution based on their own reading and experience. This may be due majority of the students are in semester four and all students have taken and passed the Systems Analysis and Design (SAD) course. The SAD course is a pre-requisite course for database course. In the SAD course, students have been introduced to database from the usage of MSAccess software. The second option is finding information from internet and seeking information from friends is the last option.

Discussion

The study aims to gain understanding on the differences of students e-learning preferences based on topic discussed (concepts and technical) in online learning environment. The findings suggested that respondents ranked first for finding information and solutions over the internet on concepts topics, and ranked second for technical topics. This might be due to the easiness of finding information over internet, reduce researching time, and include a wide information on any topics of interest. The results is in line with Apuke and Iyendo (2018) who found that their respondents preferable in the usage of internet due to it enables them to perform research ahead of time and widens their scope of reading and learning.

Furthermore, the respondents do not have any problems with the internet usage. It could be seen from the findings that majority of them can afford the cost of internet connection. Most of the respondents also used mobile devices such as laptop and smartphones for their online learning. Both devices are high in mobility and is convenience to use. Campbell (2018) stated that these mobile devices enable students to access online learning anywhere. In addition, results also shows that majority of the respondents feel confident in using the Internet (Google, Yahoo) to find or gather information for online learning.

In addition, for technical topic, respondents of this study ranked first for finding solution based on their own reading and experience in topics related to technical. This may be due to respondents have prior experience on the software MsAccess which is the main software used for this course. Majority of the respondents were in semester four when the data collection took place. In the semester before, they had took a system design (SAD) course, which they have been introduced to the same software used in this course.

As for both topics, respondents ranked last for finding information by asking friends. This situation might be due to the difficulties of the respondents to discuss and interact with friends in the online learning environment as majority of the respondents having their online learning at their own house. This result is supported Alawamleh et.al (2020) who found that the online learning reduced the communication levels between students.

Conclusion and Limitation

This article highlights the difference e-learning preference among students related to concept and technical topics discussed in an online learning environment. The results suggested that students have difference learning method in finding information and solving solutions when discussing different types of topics. It is important for the educators or lecturers to have a prior knowledge of their student e-learning preference to ensure that they can prepare and plan the activities (such as group discussion, preparing individual mind map, or research over internet) that is suitable for their students' learning preference especially in the online learning environment.

This article has some limitations whereby the data collection is employed using convenience sample. All respondents already had knowledge and experience on the technical topics used in the question items. In future, it is suggested that respondents with have no prior

knowledge or experience on the technical topics are chosen as sample. The period of data collection was during the pandemic COVID19 where online learning was fully practices.

References

- Alawamleh, M., Al-Twait, L., & Al-Saht, G. (2020). The effect of online learning on communication between instructors and students during Covid-19 pandemic. *Asian Education and Development Studies*. ahead-of-print. 10.1108/AEDS-06-2020-0131.
- Campbell, C. (2018). *Mobile Technologies And Mobile Learning: Critical Issues*. Chapters in *Technology and The Curriculum 2018*, Pressbooks 2018. <https://techandcurriculum.pressbooks.com/chapter/critical-issues-with-mobile-technologies/>
- Gulbahar, Y. & Alper, A. (2011). Learning Preferences and Learning Styles of Online Adult Learners. *Education in A Technological World: Communicating Current and Emerging Research and Technological Efforts*.
- Miller, C. (2021). Why Learning Preferences Are More Important Than Learning Styles, BizLibrary, accessed 24 September 2021, <https://www.bizlibrary.com/blog/learning-methods/learning-preferences-versus-learning-styles/>.
- Mkonto, Nosisana. (2015). Students' Learning Preferences. *Journal of Studies in Education*. 5. 212 -232. 10.5296/jse.v5i3.8125.
- Muthuprasad, T., Aiswarya, S., Aditya, K.S. & Girish, K. Jha (2021). Students' perception and preference for online education in India during COVID -19 pandemic. *Social Sciences & Humanities Open*. 3, <https://doi.org/10.1016/j.ssaho.2020.100101> Received 28 April 2020; Rec
- Parilla, Eric. (2021). The Mediating Effects of Student Attitudes on the Association between Learning Preferences and Perceived Academic Stress towards Online Education During the Period of Pandemic. Conference paper. Accessed 25 September 2021, https://www.researchgate.net/publication/350214580_THE_MEDIATING_EFFECTS_OF_STUDENT_ATTITUDES_ON_THE_ASSOCIATION_1_The_Mediating_Effects_of_Student_Attitudes_on_the_Association_between_Learning_Preferences_and_Perceived_Academic_Stress_towards_Online .
- Simonson, M. Zvacek, S. M. & Smaldino, S. (2019). *Teaching and Learning at a Distance: Foundations of Distance Education*, seventh ed., 2019.
- Szopinski, T. & Bachnik, K. (2022). Student evaluation of online learning during the COVID-19 pandemic. *Technological Forecasting & Social Change*, <https://doi.org/10.1016/j.techfore.2021.121203>

Towards Applying Natural Language Approach in Improving Students Writing Skills: Lecturer Feedback Tools (LeFT)

Hasniza Nordin^{*a}, Juhaida Abu Bakar^b, Tengku Faekah Tengku Ariffin^c

^aSchool of Education, Universiti Utara Malaysia,
Sintok, Kedah, Malaysia

^bSchool of Computing, Universiti Utara Malaysia,
Sintok, Kedah, Malaysia

^{*}Corresponding Author: nizadin@uum.edu.my

Abstract

Automatic Text Summarization is the process of providing a concise and fluent description while retaining key information quality and overall context. The time restrictions of the lecturers were the catalyst for this study. Writing, on the other hand, is an important skill for students because it is widely used, especially in English writing. Many students, however, are still struggling with their writing abilities. Many students do not receive feedback when they make mistakes in their writing, which is one of the causes behind this. Writing, known as scaffolding, requires the involvement of someone who is good at writing essays to evaluate and review student work. Scaffolding helps students engage in learning and enhances learning outcomes, and has been considered as an effective instructional strategy. To solve this problem, we introduced Lecturer Feedback Tools (LeFT), which is a Natural Language Processing web application system. LeFT is a tool that allows lecturers to provide students with feedback in order to develop their writing skills. Using an open-source software library, this tool aims to provide a feature that can summarize the text. SpaCy, Gensim, Natural Language Toolkit, and Sumy are the four summarizers used in text summarization. This tool is unique in that it can store all documented operations in a database. As a result, the effect will enhance lecturers' production while also increasing the productivity of students and lecturers' work. Based on the evaluation results, it shows that the respondents strongly agree with the usefulness of the system with 66.7% and ease-of-use of the system with 83.3%. Both results of the study show high satisfaction from the respondents.

Keywords: Text summarization, Scaffolding, Natural Language Processing, Writing skills, Web-based application

Introduction

Natural Language Processing (NLP) is a subfield of artificial intelligence aim at making computers understand human language when there is interaction between the two. The process of providing a concise and fluent description while retaining key information quality and overall context is known as text summarization. Several approaches for automated text summarization have been developed in recent years and have been widely used in a variety of domains (Allahyari et. al, 2017).

Many websites and software that use NLP are now available for users' convenience. Educational websites, or more specifically, websites that help students improve their skills, are now very prominent. As a result, lecturer feedback tools (LeFT) were developed. This tool focuses on helping students improve their writing skills. Kolej Poly-Tech MARA Alor Setar, Kedah, will use the findings of this study. This study is intended to assist lecturers in helping their students develop their writing skills.

Writing is an important skill for students because it is widely used, especially in English.

It can be used for a variety of tasks, such as writing a report or creating a CV and resume. Many students, however, are still unable to master the art of writing. One explanation for this is that most students are not corrected when they make errors in their writing. As a result, they've been making the same mistake over and over again. Scaffolding, also known as writing, necessitates the participation of someone who is skilled at writing essays to assess and review student work. Scaffolding helps students engage in learning and enhances learning outcomes and has been considered as an effective instructional strategy (Belland et al, 2017; Doo et al. 2020). Students are unable to succeed without the assistance of lecturers. Furthermore, by including lecturers in the study of their work, students were able to acquire new knowledge through experience.

Scaffolding is a method of developing excellent student writing skills because of this process is providing assistance from person to person like writer assist another writer. However, it has become challenging due to time constraints and a large number of students. As a result, the concept of creating resources to solve this problem was created. LeFT is a tool that will assist lecturers in reading and providing input on student essays. The aim of creating these resources is to help students improve their English writing skills. This method will assist you by summarising the essay that you have uploaded. Summarization techniques generate summaries by selecting a portion of the original text's sentences. The most relevant sentence is normally included in these summaries. Lecturers can easily provide input with this review, and students can use it to enhance their English writing.

Natural Language Processing (NLP) technology was used in the development of LeFT, and it is intended to help students improve their writing skills. Students have benefited greatly from the use of NLP in education, according to the study in (Chary et al, 2019; Lende and Raghuvanshi, 2016; Yu et al, 2020). This is due to its efficiency in assisting users in the scientific learning process, especially in language learning. NLP is a technology that can aid the teaching process in addition to assisting students. Furthermore, NLP has the ability to assist teachers in experimenting with various teaching approaches for their students. This is clear: NLP will aid teacher growth and have a positive effect on students.

Methodology

The study was conducted following the Rapid Application Development (RAD) methodology proposed by Martin (1991). RAD is an adaptive software development approach which involves prototyping in gathering the requirements for the systems of apps. Although software development methodology transformed continuously Jnr et.al (2018), RAD is still relevant and being used widely by software developers. It consists of four main phases namely requirements planning, user design, construction, and cutover. The flow of the phases is illustrated in Figure 1.

Obtaining the specifications of a web-based for Lecturer Feedback Tools (LeFT) is part of the requirements preparation process. Unified Modelling Language (UML) diagrams, such as use case, activity, and class diagrams, are used to document and visualize the specifications. According to Adediran and Al-Bazi (2018) and Hussain et al. (2014), UML diagrams are widely used to present device specifications. The user interface of the web application is built simultaneously with the user concept and construction phases. Users are active in the design and construction process, providing input on how to improve the LeFT's user interface and information flow. Finally, during the cutover phase, an evaluation of the LeFT's usability is performed. The following sections discussed on the phases in detail. In the Design and Development of LeFT section, the requirements planning, user design, and construction phases are covered, while the cutover phase is explained in the Evaluation section.

Literature Review

This section describe the related studies to Automatic Text Summarization (ATS) and its development using web-based application. There are three types of ATS approaches: extractive, abstractive, and hybrid. The extractive method chooses the most relevant sentences from the input document(s) and concatenates them to create the description. The abstractive method converts the input document(s) into an intermediate representation before generating a description of sentences that differ from the originals. Both the extractive and abstractive approaches are combined in the hybrid approach (El-Kassas et al. 2020).

spaCy is an example of extractive summarization. These techniques work by extracting various pieces of text, such as phrases and sentences, and piling them together to create a summary. As a consequence, specifying the required sentences for summarization is crucial in an extractive approach. Filtering tokens by measuring word frequency, normalizing the list, and weighing each sentence based on the frequency of the token present in each sentence are all essential steps in spaCy summarization. The result is saved as a key-value pair in `sent weight`, where the keys are the sentences in the string `doc` and the values are the sentence weights. The final step is to summarize the string with the function `nlargest`. Gensim, NLTK, and Sumy are three other state-of-the-art summarizers that were used in this study. Although the Gensim package has an inbuilt summarization feature, it is not as effective as spaCY. This work is based on a study conducted in Agbe (2019).

Findings

Following the first three phases of RAD, this section explains the design and development of a web-based for LeFT. The section is divided into two subsections: (1) web-based requirements for LeFT, and (2) prototype development of LeFT, which is a web-based established to demonstrate the gathered requirements.

One of the techniques used in the requirement gathering phase was observation. For comparison, observations are made on both the client and the previous method. An analyst may define a process flow, measures, pin points, and opportunities for improvement by observing users. In addition, observations of systems that are similar to ours were made. Improvements to the prototype would be more successful, according to the observation. This is because the flaws in the previous framework will be able to be fixed correctly as the implementation process is ongoing. All of the tables, diagrams, and use cases seen are in the early stages of the development. Since the enhancements would almost certainly make it to the final product, the resulting system will not always be the same as it was before.

Table 1 show the six most important requirements (and their priority) that emerged from the early requirements gathering phase. New user registration and login to the website are among the criteria, as are assignment management, summarization management, marks management, and usability experience management. Table 2 lists two non-functional specifications, including problems with reliability and usability.

Table 1

Functional requirement

No.	Requirement ID	Requirement Description	Priority
	LEFT_01	<i>Registration</i>	
1.	LEFT_01_01	Student and lecture can fill in the register form The system verify registration	M
2.	LEFT_01_02		M
	LEFT_02	<i>Login</i>	
3.	LEFT_02_01	Student, lecture, and admin can fill ID and password	M
4.	LEFT_02_02	The system shall display homepage	M
5.	LEFT_02_03	The system will authenticate lecturer and student password	D
6.	LEFT_02_04	Student and lecturer can logout from system	M
	LEFT_03	<i>Manage assignment</i>	
7.	LEFT_03_01	Student can insert their assignment	M
8.	LEFT_03_02	Student and lecturer can review assignment	M
9.	LEFT_03_03	Student can view their marks	O
	LEFT_04	<i>Manage summarization</i>	
10.	LEFT_04_01	Lecturer can create summarization text	M
11.	LEFT_04_02	Lecturer can read summarization text	M
12.	LEFT_04_03	Lecturer can update summarization text	M
	LEFT_05	<i>Manage marks</i>	
13.	LEFT_05_01	Lecturer can read marks	M
14.	LEFT_05_02	Lecturer can calculate marks	M
15.	LEFT_05_03	Lecturer view marks	M
16.	LEFT_05_04	Lecturer can update marks	M
	LEFT_06	<i>Manage usability experience</i>	
17.	LEFT_06_01	Users can read 'About' information	O
18.	LEFT_06_02	Users can fill 'Contact us' information	O

Table 2

Non-Functional requirement

No.	Requirement ID	Requirement Description	Priority
	LEFT_01	<i>Reliability issues</i>	
1.	LEFT_01_01	For a single user, the system should crash no more than once per 10 hours.	M
2.	LEFT_01_02	The system should be reloaded and works perfectly when it is crashed.	M
	LEFT_01_03	For a single user, can't access the system by using more than one device.	M
	LEFT_02	<i>Login</i>	
3.	LEFT_02_01	Student, lecture, and admin can fill ID and password	M
4.	LEFT_02_02	The system shall display homepage	M
5.	LEFT_02_03	The system will authenticate lecturer and student password	D
6.	LEFT_02_04	Student and lecturer can logout from system	M

The requirements presented in Table 1 were translated into the computer system functionality. The next process is visualizing and modelling the requirements of the app using the appropriate modelling method and tools. In this work, the Unified Modelling Language (UML) was used to visualize and model the requirements. The models used in this work are

two behavioural diagrams namely use case and activity diagrams, and a class diagram that represents the structural components of the app. The diagrams were drawn using StarUML. The structural components LeFT lists are represented in a class diagram as illustrated in Figure 1. The class diagram shows the attributes and operations of LeFT. The interactions between the classes are illustrated clearly in the diagram.

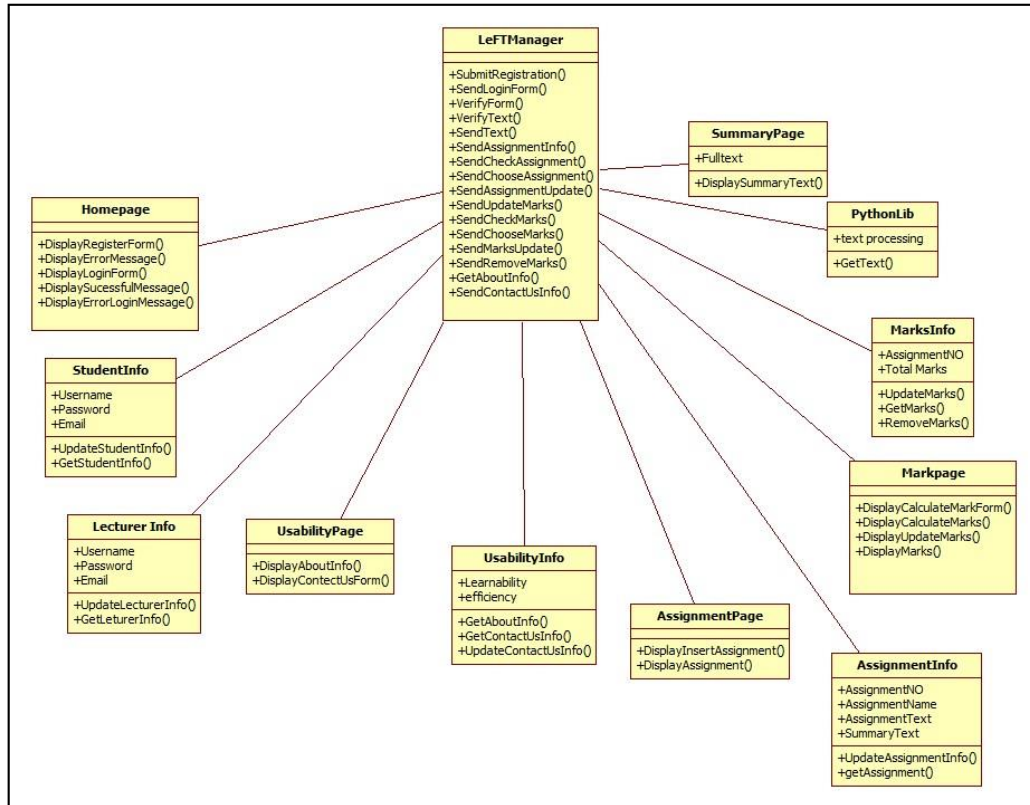


Figure 1. LeFT class diagram.

A prototype of LeFT was developed. It represents the requirements explained in the previous subsection. Software prototyping is a standard way of demonstrating the software requirements so that further comments and suggestions could be obtained from the users based on their experience in interacting with the prototype. The Dreamweaver was used as the main integrated development environment (IDE) tool. Further, the Pycharm development platform was used to facilitate crucial functions. SQLite has been used as a database for data storage. Screenshots in Figures 2-8 shows the selected interfaces of LeFT.

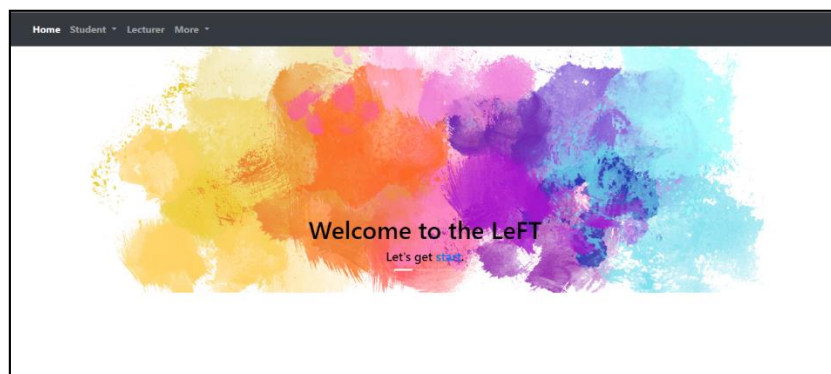


Figure 2. LeFT homepage.

Figure 2 shows a homepage that has four menus. All users can view this homepage and the user will choose whether to enter as a lecturer or student as contained in the menu. There are two types of users, which are students and lecturers. All users can access the menu and contact us.

The screenshot shows a registration form titled "Student Registration". It contains the following elements from top to bottom: a text input field labeled "No Matric"; a text input field labeled "Username"; a text input field labeled "Email Address"; a text input field labeled "New Password"; a text input field labeled "Repeat Password"; a checkbox labeled "I accept the Terms of Services"; and a green button labeled "Register".

Figure 3. Registration page.

Figure 3 shows a registration page for the student. This register function is only for students who are new to using this tool. Lecturers do not need to register because their username and password have been set as default.

The screenshot shows a login form titled "Login". It contains the following elements from top to bottom: a text input field labeled "Username:" with the placeholder text "Enter Username"; a text input field labeled "Password:" with the placeholder text "Enter Password"; a checked checkbox labeled "Remember me"; and a green button labeled "Login".

Figure 4. Login page.

Figure 4 shows the login function, which is necessary for students and lecturers to enter the correct username and password. Entering the wrong information will cause users to not be able to access these tools.

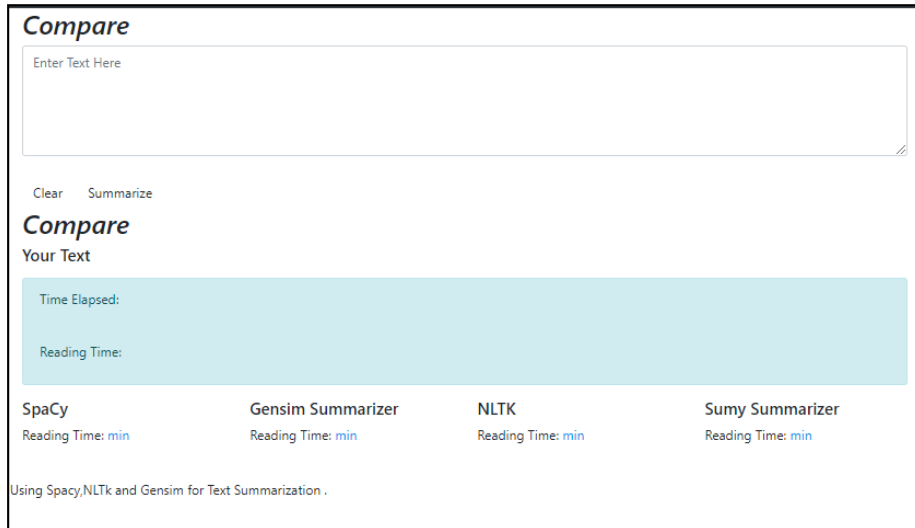


Figure 5. Summarization based on SpaCy, Gensim, NLTK and Sumy page.

Figure 5 shows the summarization page of this tool. In this page, the lecturer can do summaries based on assignments that have been submitted by students. The space above is a place where lecturers can put text to summarize. After that, the lecturer needs to click on the 'Summarize' button and the system will produce four types of summaries. Four types of summaries will appear below in Figure 6 as a result of the text that has been summarised previously.

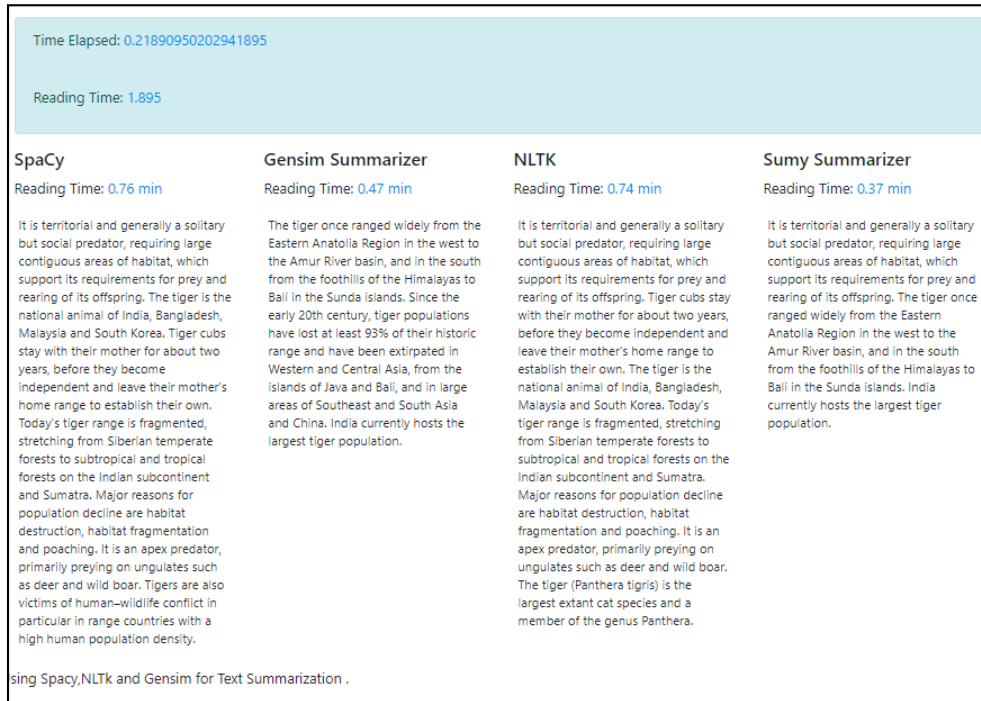


Figure 6. Summarization Result page.

No	Assignment	Name	Assignment	Summary	Mark
10001	Assignment 1		Elasmosaurus was a large marine reptile in the order Plesiosauroia. The genus lived about 80.5 million years ago, during the Late Cretaceous. The first specimen was sent to the American paleontologist Edward Drinker Cope after its discovery in 1867 near Fort Wallace, Kansas. Only one incomplete skeleton is definitely known, consisting of a fragmentary skull, the spine, and the pectoral and pelvic girdles, and a single species, E. platyrurus, is recognized today. Measuring 10.3 meters (34 ft) long, the genus had a streamlined body with paddle-like limbs or flippers, a short tail, and a small, slender, triangular head. With a neck around 7.1 meters (23 ft) long, Elasmosaurus was one of the longest-necked animals to have lived, with the largest number of neck vertebrae known, 72. It probably ate small fish and marine invertebrates, seizing them with long teeth. Elasmosaurus is known from the Pierre Shale formation, which represents marine deposits from the Western Interior Seaway.	Only one incomplete skeleton is definitely known, consisting of a fragmentary skull, the spine, and the pectoral and pelvic girdles, and a single species, E. platyrurus, is recognized today. long, the genus had a streamlined body with paddle-like limbs or flippers, a short tail, and a small, slender, triangular head. With a neck around 7.1 meters (23 ft) long, Elasmosaurus was one of the longest-necked animals to have lived, with the largest number of neck vertebrae known, 72. It probably ate small fish and marine invertebrates, seizing them with long teeth. Elasmosaurus is known from the Pierre Shale formation, which represents marine deposits from the Western Interior Seaway. The genus lived about 80.5 million years ago, during the Late Cretaceous. The first specimen was sent to the American paleontologist Edward Drinker Cope after its discovery in 1867 near Fort Wallace, Kansas.	80
10021	assignment2		The concept of the Balkan Peninsula was created by the German geographer August Zeune in 1808.[6] who mistakenly considered the Balkan Mountains the dominant mountain system of Southeast Europe spanning from the Adriatic Sea to the Black Sea. The term of Balkan Peninsula was a euponym for Rumelia	The concept of the Balkan Peninsula was created by the German geographer August Zeune in 1808.[6] who mistakenly considered the Balkan Mountains the dominant mountain system of Southeast	70

Figure 7. Manage marks page.

Figure 7 shows a page that can calculate student scores based on the assignment submitted. On this page, there is a rubric and space to fill in the marks. In each row there is a description to make it easier for the lecturer to give marks. After filling in the marks in the space, the lecturer needs to click on the 'Calculate score' button to get the total score as in Figure 8.

Criteria/Scoring point	0 - 1	2 - 3	4	5	Marks
Idea and Content	The student expresses not original, and confused ideas. The majority of ideas are not informative	The student expresses limited original ideas. The Majority of ideas are not every informative	The student expresses some original ideas. The Majority of ideas are related to education and informative	The student expresses many original ideas. Most of ideas are related to education and informative	<input type="text" value="5"/>
Post frequency	The post frequency is well below course expectations.	The post frequency is slightly below average.	The post frequency is slightly above average.	The post frequency is greatly exceeds course expectations.	<input type="text" value="4"/>
Writing quality	Post are very poor quality, there is little to no evidence of reading other information in order to form new meaning of the topics at-hand.	Posts show below average writing style. overly casual writing style with lack of attention to other reading and mostly regurgitate previous personal views.	Posts show above average of writing style, the content demonstrates the student needs moderately, and attempts to synthesize information and form new meaning.	Posts are well written, and are characterized by elements of strong writing style. The content demonstrates that the student is well read, synthesizes learned content and construct new meaning	<input type="text" value="3"/>
Use of enhancements	Did student did nothing to enhance or personalize the weblog space.	There is very little evidence of multimedia enhancement and the student blog is primarily text-based.	The student enhanced their weblog to some extend using video, audio, images or other add-ons.	The student greatly enhanced their weblog space using video, audio, images or other add-ons.	<input type="text" value="3"/>

Marks: 75.00

Figure 8. Calculate mark page.

Discussion

Evaluation Setting

In reviewing the system, there are approximately 30 respondents which is UUM students, two of UUM's lecturer and seven of UUM staffs that will be undergoing testing system. Google

form links have been distributed via WhatsApp. Video on how to use these tools is also disseminated by sharing the video link involved along with the google form link earlier. To collect the opinion of the system, a questionnaire given and there are 2 sections of the questionnaire to be answered. Section A is respondent demography and background information and Section B is about the usefulness and the ease on Lecturer Feedback tools (LeFT). The respondents should answer all the questions that have been given.

The Respondent's Demographic Information

There are 30 respondents that had been answered the questionnaire distributed to them. Based on the result obtained for demography and background information 53.3% is respondents are male and another 46.7% are female. The result shows the highest number of respondents is from age 21-25 years old which is 73.3% from overall. Other result show 13.3% is from 26-35 years old, 10% from age group 36-45, and the rest in the class aged 46 years and above. The result also shows 90% choose to use the internet 'daily' while the rest is 10% choose 'weekly'. Besides, there are 80% of the respondents never heard about Lecturer Feedback Tool. Therefore, there are **53.3% of respondents never used this system before, meanwhile another 3.3% said that maybe they used this system before and another 43.3% said that they already used this system before.**

The usability of LeFT

An analysis was conducted on the respondents' responses in the Section B of the post LeFT task questionnaire. The section measures the respondents' perception towards usefulness and ease of use. It also measured the respondents' satisfaction towards LeFT.

Table 2

The Usefulness of Lecturer Feedback Tools (LeFT)

Usefulness task		Categories	Count	Percentage (%)
1.	I am able to complete the task quickly using this LeFT.	1	0	0
		2	0	0
		3	6	20
		4	11	36.7
		5	19	63.3
2.	Whenever I made mistake while using this LeFT, I can recover quickly and easily.	1	0	0
		2	0	0
		3	0	0
		4	10	33.3
		5	20	66.7
3.	This LEFT has all functions and capabilities I expect it to have.	1	0	0
		2	0	0
		3	1	3.3
		4	9	30
		5	20	66.7
4.	All functions and capabilities work or behave exactly as anticipated.	1	1	3.3
		2	0	0
		3	1	3.3
		4	14	46.7
		5	14	26.7
5.	The terminology is clear and precise.	1	0	0
		2	0	0
		3	1	3.3

		4	16	53.3
		5	13	43.3
6.	There is too much inconsistencies in this LEFT.	1	22	75.9
		2	5	17.2
		3	2	6.9
		4	0	0
		5	0	0
7.	The LEFT gives error messages that clearly tell me how to fix the problem.	1	0	0
		2	1	3.3
		3	3	10
		4	11	36.7
		5	15	50
8.	Overall, I am satisfied with this LEFT.	1	0	0
		2	0	0
		3	0	0
		4	10	33.3
		5	20	66.7

Table 3
The Ease of use of Lecturer Feedback Tools (LeFT)

Ease-of-Use task		Categories	Count	Percentage (%)
1.	It is easy to learn how to use this LeFT.	1	0	0
		2	0	0
		3	6	20
		4	11	36.7
		5	19	63.3
2.	I feel comfortable using this LeFT.	1	0	0
		2	0	0
		3	0	0
		4	13	43.3
		5	17	56.7
3.	I feel in control and have freedom when using this LeFT.	1	0	0
		2	0	0
		3	1	3.4
		4	11	37.9
		5	17	58.6
4.	Navigation through this LeFT is easy.	1	1	3.3
		2	0	0
		3	1	3.3
		4	13	43.3
		5	16	53.3
5.	I always know where to get the information I wanted to.	1	0	0
		2	0	0
		3	0	0
		4	13	44.8
		5	16	55.2
6.	The interface of this LeFT is pleasant.	1	0	0
		2	0	0
		3	0	0
		4	12	40
		5	18	60

7.	I like the interface of this LeFT.	1	0	0
		2	0	0
		3	0	0
		4	12	41.4
		5	17	58.6
8.	The help provided in this LeFT is informative.	1	0	0
		2	0	0
		3	2	6.7
		4	9	30
		5	19	63.3
9.	Menus and screens are laid out in logical fashion.	1	0	0
		2	0	0
		3	1	3.3
		4	11	36.7
		5	18	60
10.	All content (information, dialogue or graphics) in this LeFT are relevant.	1	0	0
		2	0	0
		3	1	3.3
		4	13	43.3
		5	16	53.3
11.	Overall, I am satisfied with how easy it is to use this LeFT.	1	0	0
		2	0	0
		3	0	0
		4	5	16.7
		5	25	83.3

From the tables above, Table 2 and 3, most respondents agree and strongly agree with the statement. For example, in the usefulness task, 67.7% of respondents strongly agree with the task ‘Whenever I make a mistake while using this LEFT, I can recover quickly and easily’, and ‘LEFT has all the functions and capabilities I expect it to have.’ When asked a question such as "There are too many inconsistencies in this LEFT." 75.9% of the respondents answered 1 means I strongly do not agree. 66.7% or 20 respondents strongly agree that this web-based system is useful. In overall, the respondents strongly agree with the usefulness of the system with 66.7%. Meanwhile, for the ease-of-use task, 83.3% of the respondents strongly agree that the overall system is easy to use. Both results of the study show high satisfaction from the respondents.

Expert review

LeFT has get a skilled reviewer to be an expert who will review this project as in Figure 11. Reviewer is a lecturer from Politeknik Tuanku Syed Sirajuddin. From the review, she stated that there is a need for improvement in this tool. She recommend the system need to include session so that only the correct users can view their assignment and also this tools need to provide search function for search no matric and no assignment.

Recommendation:

- 1) It is recommended that the system would include session so that only the correct users can view their assignment. Existing system did not implement the session which resulted that all the assignment from the entire users be listed on the page. This is dangerous because other user can edit and delete the assignments that is not their own assignment.
- 2) Lecturer should have a search function to search on the required assignment based on student's matric number. This will ease the process of searching the correct assignment that the lecturer wants.

Review by:

Name:

Position:

Date:



RUZIANA BINTI MOHAMAD RASLI
Pegawai Pendidikan Pengajian Tinggi
Jabatan Teknologi Maklumat & Komunikasi
Universiti Teknikal Tuanku Syed Sirajuddin,
618/2020

Figure 11. LeFT Expert Review.

Conclusion

This paper described the design and development of LeFT. There are many aspects of LeFT can be studied. In the future, we plan to expend the functionality of LeFT by providing some extra features. For example, adding the save function to the summarized text. as well As the total number of marks, adding the save function so that the marks can continue to be saved without returning to another page to enter the marks. In addition, further increase security by adding sessions so that other students can't see the work of other students, students can only see the work they submit only.

In conclusion, LeFT given some benefit to the users especially for students because these tools were developed is to improve students' writing skills. However, the effectiveness of this project on students remains unknown. But, it's effectiveness in easing the burden of lecturers to give feedback to students and save time are the features found in this project.

Acknowledgment

This work is supported by the Malaysian Ministry of Higher Education and Universiti Utara Malaysia under SO Code 14603.

References

- Martin, J. (1991) Rapid application development: Macmillan Publishing Co., Inc.,
- Jnr, B. A., Majid, M. A., and Romli, A. (2018) An Empirical Study On Predictors Of Green Sustainable Software Practices In Malaysian Electronic Industries, Journal of ICT, vol. 18, pp. 347-391.
- Adediran, T. V. and Al-Bazi, A. (2018) Developing Agent-Based Heuristic Optimisation System For Complex Flow Shops With Customer-Imposed Production Disruptions, Journal of ICT, vol. 18, pp. 291-322.
- Hussain, A., Mutalib, N. A. and Yasin, A. (2014) jFakih: Modelling mobile learning game, International Conference on Computer and Information Sciences (ICCOINS), pp. 1-6.
- Lund, A. M. (2001) Measuring usability with the use questionnaire, Usability interface, vol. 8, pp. 3-6

Student Experiences in Attending Lectures in Shared Virtual Worlds

Juliana Aida Abu Bakar^{*a}, Adzira Husain^b, Ulka Chandini Pendit^c

^{ab}School of Creative Industry Management & Performing Arts,
UUM College of Arts & Sciences
Universiti Utara Malaysia

^cFaculty of Information and Communication Technology
Universiti Teknikal Malaysia Melaka

* Corresponding Author: liana@uum.edu.my

Abstract

Remote classes where students attend class from anywhere are considered essential in this new norm. They are supported by face-to-face teaching using remote class technologies, ranging from synchronous online video conferencing platforms to shared virtual worlds. Compared to online video conferencing platforms, literature on student experiences in shared virtual worlds is relatively scarce. Hence, this study evaluates student experiences when participating lectures in shared virtual worlds. Adapting action research, students were observed in terms of presence, social presence, communication methods, avatar, and application features. This article provides significant findings on students' experiences in attending lectures in virtual worlds, guidelines for lecturers in meaningful student experiences, and insights about possible improvements for the shared virtual worlds.

Keywords: Remote class, Presence, Social Presence, Avatar, Synchronous Teaching

Introduction

COVID-19 pandemic has disrupted education in more than 150 countries around the globe. Face to face classes have been switched to remote classes in order to establish a safe and productive teaching and learning environment. Therefore, shared virtual worlds (VW) have been introduced as a meeting place for most educators and students in higher learning institutions. The uses of VW are varied and can be adjusted to various class requirements. Some may use the shared virtual world as a meeting space, a place to share their project progress, inexpensive excursions or virtual field trips and many more engaging activities.

Remote Class

The early response to education during the pandemic has focused on introducing remote classes as an alternative method. Remote learning is when educators, students and sources of information do not exist physically in traditional classroom settings. It may offer a similar style to online courses but at the same time may integrate a few other teaching methods as well. Remote classes can be implemented asynchronously and synchronously.

Asynchronous learning means that teaching and learning content is not viewed in real time. For example, students watch pre-recorded lecture videos or lessons at any time they choose and browse through narrated PowerPoint presentations uploaded by the course instructor beforehand. Using an asynchronous mode of learning, students can communicate with each other and educators through forums and discussion boards. The advantages of this learning mode is that students can work at their own pace and at their convenience.

Meanwhile, synchronous learning happens at the same time for both educators and students. Similar to face to face setting, but synchronous learning happens through online platforms such as video conferencing using Google Meet, Zoom and Webex Meetings. In this

learning mode students can ask questions and give feedback in real time using a microphone and also type it in the chat box. However, video conferencing somehow changes the learning context. It does not provide the same level of immersion or the feeling of being with other people in a virtual environment that could enhance the sense of presence.

Virtual Worlds

Virtual worlds (VW) are computer-generated environments in which participants adopt an avatar (a computer-generated representation of themselves) to navigate and have some degree of control in such environments. Avatars can interact with each other, and with objects inside the environment.

The VW provides a space for students to work on projects together. This collaborative use provides engagement as well as it allows students to collaborate with other students when other educational means are not possible. Due to its visually engaging features, VW really benefited students with a kinaesthetic type of learner. This type of students prefer to be fully engaged through touching and interacting with objects and doing this with their hands during the learning session.

There are a few VR platforms that have been used for the virtual learning environment namely, the Mozilla Hubs and AltSpaceVR. Mozilla Hubs is a tool for communicating and collaborating privately, and allows to connect with people and bring in resources from around the internet for meetings and virtual events. It lets users enter into immersive virtual rooms and spaces. Users can collaborate and interact with others using tools. This platform is very easy to use and uncomplicated since users do not need to create an account or download an app when using Mozilla Hubs.

AltSpaceVR is the premier place to attend live shows, meetups, cool classes, and more with friendly people from around the world. It offers the opportunity to share VR experience personally and professionally. Users can organize their own events as well as attending public events that were arranged by other users. There are a few useful key features provided by AltSpaceVR such as public event calendar, content channels, VR world and Microsoft Mesh compatibility. This platform is powered by Microsoft so it is among the most reliable social virtual platforms. Also, it is entirely free for use using the consumer version.

Related Work

Remote classes use online interactive technologies to reach students at homes and other physical sites. Most of these technologies have features such as video and/or audio conferencing, chat rooms, and social networking services. One of these technologies is the virtual world which provides a shared 3D environment with an avatar to represent teachers and learners. Previous work in education has examined the use of VW in teaching and learning and its affordances to facilitate learning.

Teaching and Learning in Virtual Worlds

Educators have begun to examine teaching and learning in VW. Second Life (Baker, Wentz, and Woods, 2010; Dickey, 2011), Active Worlds (Dickey, 2011; Peterson, 2006), and Whyville (Neulight, Kafai, Kao, Foley, & Galas, 2007). The typical setup for teaching and learning in VW is replicating the ones in real-world environments. Most of the output is in the form of guidelines to perform teaching and learning in VW for educators and teachers such as stated in Ma, Oikonomou, & Zheng (2009).

Student Experiences

While many have discussed positives on affordances and learning outcomes, the increasing use of VW has raised concern on users' cognitive overload due to massive information available (Jestice et al., 2010). However, teacher presence is paramount in controlling the amount of information released (Kuznetcova, Lin & Glassman, 2021).

Yushimora and Borst (2021) compares student experiences in attending lectures and doing presentations in between VR and desktop viewing but there is lack of discussion on student experiences inside the shared virtual worlds. In their experiment, they have found higher presence for the use of headsets in viewing and presenting. Presence in this context is defined as the subjective sense of being in a specific location, even though they are in different environments. It is found that presenting using a headset gets more attention than viewing through a desktop and using a headset. Moreover, for presentations using a headset, there may be a tendency towards higher behavioral interdependence and perceived emotion than viewing using desktop. In this study, presence is defined as the sense of being there in a shared virtual world.

Social presence is the level to which one believes there is a companion and not secluded, being aware of the other, and the other also being aware of one's existence (Harms and Biocca, 2004). Social presence may have a significant relationship with presence as in Slater et al. (2000).

Materials and Methods

In this study, the action research steps outlined by Aksoy and Ceylan (2021) were adopted. Accordingly, the action research process is made up of various steps which are (1) identifying the problem, (2) planning the data collection process (i.e., how and how often), (3) collecting and analyzing data, (4) preparing an action plan based on the findings obtained, and finally (5) reporting/sharing the findings. The dynamic and flexible structure of action research allows for a distinctive planning for each study. This current study was designed in a dynamic and flexible structure that focuses on solving the problems that arose during the application rather than a predetermined, fixed process.

First, the current situation and problem were determined. In the current situation, teachers were forced to adopt video conferencing platforms for synchronous teaching approaches, while they almost never used shared VW. This situation was seen as a problem in terms of conducting successful classroom interaction in shared VW. While there are numerous studies in attaining learning outcomes using shared VW, there is a lack of studies focusing on student experiences in attending lecturers in shared VW, hence, there is a need to improve such experiences in order to provide meaningful teacher-learner-peer interaction. It was decided that this problem could be solved through action research.

Then, the data collection process was conducted in classrooms during the semester. Student behaviour was observed and activities were designated to keep them occupied. Finally, findings from the observation would be an input to future class for better experience.

Participants

Participants were taken from two classes undertaking Virtual Reality courses in two consecutive semesters, summed up to 46 students. This adopts a convenience sampling of 46 participants: 17 male and 29 female students, with the range of age between 21 to 25 years old. As it is purposive sampling, all students were taken from two classes of Virtual Reality in two semesters. Table 1 summarizes the distribution of demographic profiles of the participants. Adapts guidelines from Baker, Wentz & Woods, 2009.

Table 1
Percentage Distribution

Profile Factors	Particulars	f	%
Gender	Male	17	36.96
	Female	29	63.04
Age	21-25 years	46	100.00
	26-30 years	0	0
	30-34 years	0	0
Experience in Virtual Environment and/or 3D games	0 - 6 months	3	6.52
	7 - 12 months	8	17.39
	13 - 18 months	9	19.57
	18 months and above	26	56.52
Internet Connection	Poor	0	0
	Intermittent	4	8.69
	Fast	42	91.31

All participants have experience using VW and/or playing three-dimensional (3D) games. This indicates the exposure of these participants which may contribute to the technical ability of controlling and manipulating VW. However, the perks of having shared VW is due to heavily dependent on strong Internet connection which resulted in four drop-outs. These drop-outs were entertained in other chat rooms such as WhatsApp and Padlet channels.

Procedure

Action research aims to understand some elements and situations in the teaching environment by collecting data (Johnson, 2008). Data collection was conducted during two classes of two hours. Prior to the session, this study adapted guidelines from Baker, Wentz & Woods (2009). An educational objective was set in which the students need to discuss collaborative features and functions of the shared VW. There is also a need to prepare a contingency plan as the new environment perhaps at one point does not cooperate with the rest of the original plan. In this study, it is anticipated an intermittent Internet connection will occur due to unforeseen circumstances, hence another channel of communication and interaction is set up in WhatsApp and Padlet platforms. Few ground rules are also set to avoid unpleasant experiences especially when encountering strangers in the shared virtual world as the world is also open to the public. For a start, the virtual world used is the default environment which is freely available and needs less modification. The students only need to select ready avatars and provide their names to identify themselves through a few steps upon entering the virtual world.

Inside the virtual world, they were gathered in the designated space to undergo class activities. The activities for each class were listed as in Table 2.

Table 2
The Activities in the Shared Virtual Worlds

Task	Activities	Minute(s)
I	The students were informed on the objectives of getting to the virtual world and briefed on selection of avatar and ground rules in the virtual world.	16
II	The students were asked to gather at the main hall to attend a 20-minute lecture session and feel free to ask questions.	30
III	The students were asked to describe their experience in the shared virtual world by thinking out loud.	20

IV	The students were asked to put their screenshot of their best experience in the class bulletin board (Padlet) and briefly describe in writing.	30
V	The students were debriefed about the session by sharing take-aways and notable experiences.	20
<hr/>		
	TOTAL	120
<hr/>		

While students were doing their activities, the lecturer observed their behaviour such as the navigation and control over the objects inside the virtual world, as well as their engagement in class in terms of their presence and social presence. Apart from the observation, Tasks III and IV would serve as evidence to capture student experiences. The following section prevails the findings of this study and further discusses them.

Results & Discussion

Prior to the day of remote classes, students were occasionally reminded that the class would take place in the virtual world. The registration process to the virtual world was rather smooth and quick. This implies that the students have somehow experienced registration to VW elsewhere.

However, once students entered the virtual environment they were somehow looking a bit lost. They kept looking for familiar faces but somehow the avatars looked unfamiliar and the names hardly represented real names. Hence, the entrance shall have either an avatar as a tour guide or a signage or a map to assist and direct them to the meeting venue.

The observation findings throughout the session have been discussed according to student experiences with features and functions available in the shared VW are mentioned in bold to denote their significance.

Navigation and Control

It is found that the shared VW are easy to navigate and control. Slightly delayed due to the selection of avatar upon entry, the process is actually exciting and smooth for students. There were not many choices for them as only animal characters and futuristic characters are available. However, they just made do with whatever avatars and disguised themselves using names whom the lecturer was not familiar with. Thus, guidelines to represent themselves in the case of avatar should be made available so that the lecturer would not end up playing guessing games.

The availability of spatial sound is perhaps a mood changer as persons farther away could not hear as clear as to those in the closer distance from the speaker. This spatial sound, however, barely helps in doing lectures as students need to find a spot inside a certain radius in order to listen to the lecture. This has affected the crowd volume in front of the speaker or lecturer to be massive as they gathered to listen to the lecturer.

Navigation mode, by default, is walkthrough the virtual world. The availability of fly navigation mode is certainly not simulating the real ability of humans, somehow the mode seems to capture the interest of many. It is refreshing to see the virtual world from the birds' eye view soon after lecture, which is probably not happening in real life classes unless drones were used or one lives at the high-rise building.

For communication purposes, various formats are available to accommodate the types of peer-to-peer discussion such as chat box, voice and camera features to capture participants' engagement with one another. However, the camera only captures a limited viewpoint therefore they used a screenshot for better quality (hence, no wonder the instruction said so).

It is observed that participants had struggles to use communication features at first. As they

have experience playing the 3D games prior, they managed to self-taught and helped each other communicating and exploring the shared virtual world.

Presence

Presence, or sense of being there, is evident as soon as they embodied themselves well in their avatars. They were aware that they were inside the virtual world and they could navigate and control the objects. Even though they have prior experience in dealing with virtual reality and 3D games, the registration process and the sudden entrance to the virtual world had them lost in space, particularly in the case of the participant, P9. Several feedback from the participants who accessed the Mozilla Hubs virtual world shows how this experience excites them to learn (as quoted from P9) and how one picked the avatar that can provide the closest resemblance to him/her (P15), their details as follows:

P9: “At first, I did not know what to press or where to go because it was too sudden. If I can read the manual prior, (the experience) would have been better. After I tried to explore everything, it felt exciting! Best experience for learning. (It is) fun like a game.”

P15: “I can choose an avatar that has a close resemblance to me. I have a big figure so I opt for a bigger (in size) avatar.”

P21: “Interesting because of the characters as they are cute. Then, it allows us to put objects around. Still have much to explore. ... and the audio can be mute as well like any other (video conferencing) apps.”

They mentioned their avatar the most because they care about their self-representation in a classroom situation, as it is a formal ambience. This supports the findings that by making an avatar ‘real’ is to demonstrate its suitability for serious application such as in business and education settings (Schultze, 2017). Full body avatar is certainly the choice of many, especially those in photo realistic full body human avatar (Pakanen et al., 2022).



Figure 2. Screenshots show the participants represented by their avatars in a shared virtual world.

There is also another perspective that promotes performative logic whereby an avatar represents what they want to be instead of their real selves. Figure 2 provides few scenarios in the shared virtual world showing representational, performative, and fantasy avatars chosen by the participants.

It is also observed that the selection of avatar did not impede the presence of students,

though it is quite pestering for the lecturer to see various forms of embodied entities in his/her classroom. In order to avoid such a scene, the rules of avatar selection to only use human-like characters may need to be adhered to. However, this may diminish the excitement of students to enter the shared virtual world, as they may care about their best representation of themselves.

Social Presence

Social presence is the sense of togetherness with others in the virtual world. During the second class, participants were asked to gather in the other virtual world which is AltSpaceVR. Figure 3 provides some screenshots of the incidents that happened in the virtual world. The experience of getting into the virtual world has somehow improved and expecting similar excitement awaits, those who have successfully entered the virtual world, were eager to explore on their own. This reflects that the use of the virtual world is capable of making an impression on the students and sparks their curiosities. The similar situation occurs whenever they feel presence in the virtual world, they feel attached to the environment and comfortable to move around by themselves (Slater et al., 2000; Yushimora, 2021).

It is observed that once they entered the virtual world, they were busy looking for their friends. This indicates similar representation in the real-world as when entering unfamiliar surroundings, it is rather common to search for familiar faces. Unlikely in the virtual world, they would not find any due to the avatar which is way too different from their self-being. Hence, they used another method of communication such as chatbox and live video to find their friends.



Figure 3. Screenshots from their conversation over WhatsApp platform in informal Malay dialect show that (a) P20 eager to explore the new environment, (b) P11 asked for their friends to join the discussion, and (c) P15 alerted colleagues of a nearby stranger.

The feeling of being there with peers would surely reassure them that the shared virtual world is safe. There were times when they encountered strangers in the AltSpaceVR virtual world and they shared their anxiety when meeting with weird characters. This reflects that there is a need to protect space and safeguard the world from others. This can be done by using the proprietary builder belonging to the virtual world to create a specific virtual world only meant for the class or choosing the unpopular scenes to avoid the masses.

It is also observed that during the class, they preferred to interact with the lecturer and peers in talking rather than typing. At random occasions, they had fun teasing each other

because they disguised themselves, hence, the other person kept asking who, as they could only hear the voice.

Conclusion

This article introduced the VW and student experiences attending lectures in such worlds. By implementing action research, it discussed the problem facing remote classes and proposed a solution of having lectures in the virtual world. It continued to conduct planning, data collection, and sharing the observation findings to assist lecturers on doing lectures in the VW.

In a nutshell, students can navigate and control the virtual world according to their needs, hence presence prevails. Students can have their embodied entities being represented by avatars, whereby self-representation and human-like characters must be emphasised for classroom setting. Virtual world excites them, hence proper planning must be done prior to avoid any unforeseen circumstances. Students also interact and communicate well, via talking instead of typing, with their peers, hence denotes the evidence of social presence. They feel safe which makes them comfortable to move around the virtual world and they could foresee the excitement and fun which normally associated with the virtual world.

The findings are encouraging; however, student experience may vary according to the nature of courses. Also, learning outcomes in the shared VW are perhaps equally important as student experience and warrant further research. Besides lecture, there are other classroom activities that can be done inside shared VW such as presentation, lab works, and collaborating with more than one institution, which perhaps can provide insights on student experiences in the shared VW.

References

- Aksoy, M. and Ceylan, T. (2021). An Action Research on Improving Classroom Communication and Interaction in Social Studies Teaching, *Education Research International*, Volume 2021, <https://doi.org/10.1155/2021/9943194>
- Baker, S.C., Wentz, R.K. and Woods, M.M. (2009). Using Virtual Worlds in Education: Second Life as an Educational Tool, *Teaching of Psychology*, 36, 59–64, Taylor & Francis Group, LLC. ISSN: 0098-6283/1532-8023 DOI: 10.1080/00986280802529079.
- Childs, M. (2010). Learners' Experience of Presence in Virtual Worlds. PhD thesis University of Warwick.
- Dickey, M.D. (2011). The pragmatics of virtual worlds for K-12 educators: investigating the affordances and constraints of Active Worlds and Second Life with K-12 in-service teachers *Education Tech Research Dev*, 59, 1–20, DOI 10.1007/s11423-010-9163-4
- Harms, C., and Biocca, F. (2004). "Internal consistency and reliability of the networked minds measure of social presence," in *Seventh Annual International Workshop: Presence 2004 (Valencia)*, 246–251.
- Jestice, R.J. (2010). The Effectiveness of Virtual Worlds for Education: An Empirical Study, *Americas Conference on Information Systems AMCIS*.
- Johnson, A. P. (2008). *A Short Guide to Action Research*, Boston: Allyn and Bacon.
- Kuznetcova, I., Lin, T. J., and Glassman, M. (2020). Teacher Presence in a Different Light: Authority Shift in Multi-user Virtual Environments, *Technology, Knowledge and Learning*, 1-25.
- Minhua, M., Oikonomou, A. and Zheng, H. (2009) Second Life as a Learning and Teaching Environment for Digital Games Education. In: *Proceedings of the 12th Annual International Workshop on Presence (PRESENCE 2009)*. International Society for Presence Research, Los Angeles. ISBN 9780979221736.

- Pakanen, M., Alavesä, P., Berkel, N., Koskela, T. and Ojala, T. (2022). “Nice to see you virtually”: Thoughtful design and evaluation of virtual avatar of the other user in AR and VR based telepresence systems, *Entertainment Computing*, Volume 40, 100457, ISSN 1875-9521, <https://doi.org/10.1016/j.entcom.2021.100457>.
- Schultze, U. (2014). Performing embodied identity in virtual worlds. *European Journal of Information Systems* 23, 84–95.
- Slater, M., Sadagic, A., Usoh, M., and Schroeder, R. (2000). Small-group behavior in a virtual and real environment: a comparative study. *Presence* 9, 37–51. doi: 10.1162/105474600566600
- Toh, W. and Kirschner, D. (2020). Self-directed learning in video games, affordances and pedagogical implications for teaching and learning. *Computers & Education*, 154, Article 103912. <https://doi.org/10.1016/j.compedu.2020.103912>
- Yoshimura, A. and Borst, W.C. (2021). A Study of Class Meetings in VR: Student Experiences of Attending Lectures and of Giving a Project Presentation. *Front. Virtual Real.*, <https://doi.org/10.3389/frvir.2021.648619>
<https://www.frontiersin.org/articles/10.3389/frvir.2021.648619/full>

Ethics in Online Learning Context: A Reflection

Ratnaria Wahid

School of International Studies, Universiti Utara Malaysia

Corresponding Author: ratnaria@uum.edu.my

Abstract

The use of information and communication technology has grown at an unprecedented rate and provides a revolutionary way of learning. This paper presents a reflection towards ethical concerns when teaching students online. It specifically looks into the use of tracking system, in UUM Online Learning Management System that enables report on students' activities, course participation, as well as activity completion. It discusses the excitement of being able to track students' participation and performance as well as the hype of making things open and accessible for further improvement. This reflection identifies several ethical concerns when engaging in online learning. The concerns involved the issue of privacy or surveillance; interpretation of digital data; as well as the potential bias and discrimination surrounding the tracking system. This reflection also provides some ways on how to respond to the concerns suggesting the way forward.

Keywords: online learning; privacy; surveillance; discrimination; assessment; ethics

Tracking down Students

Given the difficulty of monitoring students while they are engaged in online learning, I chose to utilise the tracking mechanism provided by the UUM Online Learning Management System (LMS). Whenever students participate with the weekly online activities or formative assessments that I provide, I collect data or digital trails about them. The system enables the collection of digital traces and the generation of customised reports on students' actions, course participation, and activity fulfilment. These statistics are created as students interact with the LMS's online activities. When students complete an assessment, read a page, respond to a forum post, or create an essay, digital systems record a variety of data about these actions. This data may include the number of views and downloads, the start and end times, the amount of time required to complete various stages of the work, patterns of engagement, who replies to whom, what was written and deleted, and what pictures were submitted and when. These digital activities, which were previously difficult to quantify using traditional face-to-face teaching techniques, can now be regularly collected by digital technologies. The LMS automatically collects and archives data, including patterns of interaction within the learning platform, through the 'routine operations' of digital devices and systems (Selwyn, 2015).

Being a “Big Brother”

I was astonished the first time I saw their data tracking. There were several students who remained silent throughout the online class discussion, yet their data monitoring revealed an entirely different personality. It was incredible to see how many times students looked at the resources I gave, how many times they attempted the exercises, how many times they properly answered, and how much time they spent on each activity. It was as if each individual was studying at a distinct period, time, and effort level. The majority of pupils were definitely engaged and dedicated, while a handful appear to be inactive, making fewer attempts and participating less. I will not dispute that tracking students' activities is time consuming, but there is no doubt in my opinion that it is also one of the most pleasant tasks! I take tremendous

pleasure in watching my students participate enthusiastically in the asynchronous class activities. Their involvement also demonstrates how they are attempting to learn privately despite unable to attend classes at the institution. Numerous students' evaluations indicated that they have access to and are capable of completing the tasks assigned to them although not being in the university!

I learned how much information I could obtain on my students. With this understanding, I felt strong. I had the distinct impression of being a Big Brother - a reality television programme in which participants are constantly monitored while living in a home via live cameras, personal audio, and microphones. I could monitor my pupils, extracting information about their activities, and a more detailed examination of the data would allow me to more clearly assume the students' behaviours. My interest in data analytics or learning analytics continues to develop, and I believe that measuring, collecting, evaluating, and disclosing information about students' data may help optimise learning. Additionally, by utilising learning analytics, I would be able to provide more timely interventions, such as additional concentration or assistance on more difficult tasks. Learning analytics give me with information regarding pupils' comprehension of certain important topics. It astounds me when I am able to detect and see so many things that were previously impossible. I occasionally utilise this information to make judgments or form my own views about the students. My impression of the students is now fairly "data-driven."

I feel that learning analytics can give insight into my pupils' personal learning patterns and even inspire them to develop further. As a result, I demonstrated to my pupils their tracking report, their progress, and their level of contribution or involvement in class activities in comparison to their peers. I discovered that the majority of my students who frequently used the LMS were unaware they were being tracked. They were unaware until I demonstrated their data tracking and performance throughout the online lesson! I demonstrated to the pupils my capacity for knowledge. They were taken aback. Students, as predicted, are motivated to participate in all of my activities. It was fantastic to witness the pride that the majority of participants had in their efforts, and some even grew more enthusiastic about participating. At the same time I also wonder if I am doing the right thing. Maybe I had unwittingly instilled anxiety instead of providing a tool for motivation to my students.

Making sense out of the situation

After several months of utilising the UUM Online Learning data monitoring system, I became aware of certain ethical concerns about data tracking in online learning. Additionally, scholars and practitioners of digital data have recognised that the use of digital trace data in education and learning has major ethical issues (Eynon, 2013; Ferguson, 2012).

Privacy

Consistent with several research, I recognised that individual privacy may be jeopardised in scenarios involving online learning. Privacy may refer to the right to control and limit the flow of personal information. Privacy is a function of autonomy, that is, to be able to make decisions for oneself, based on one's own reasons and one's own values, when one wishes to (Rubel & Jones, 2016). In general, technology both facilitates and jeopardises private privacy. Additionally, students' privacy may be infringed since their online actions can be traced and their private information, such as data and training results, may be revealed to an unwanted public. For instance, I could easily cut and paste and publish my student's grades into my teaching portfolio and showed online. I could easily take a snapshot of any forum discussions or messages and paste it to my PowerPoint presentation, oblivious to the fact that it may contain students' name and data. By and large, technology makes personal privacy and sensitive information both accessible and insecure.

Data privacy is frequently equated with surveillance, or dataveillance (Hope, 2018). Selwyn (2015) proposes that data surveillance involves the monitoring, mining, and processing of data, which enables the identification, categorization, and representation of social entities via automated data profiles. This somehow enhances and normalises surveillance of students, fosters a performative culture, and functions as a method for behaviour control (Manolev et al., 2019). I concur with Watson et al. (2017) that data surveillance is problematic and that such tactics jeopardise trust and student autonomy.

Interpretation

Additionally, studies revealed ethical problems about the nature of digital trail data and the different assumptions that underpin data analytics operations. It comes to me to wonder to what degree data analytics solutions accurately depict real-world phenomena, as well as the integrity (namely, the completeness, correctness, and consistency) of digital data. Clayton and Halliday (2017), emphasize that Big Data typically contains only clearly quantifiable and measurable information: exam scores, attendance rates, time on task, and completion rates during exercises. Slade and Prinsloo (2013) argue that focusing only on statistics that demonstrate what can be measured can often obscure the fact that the information is, at most, a partial picture of what one desires to know. Certain facets of students' online learning activities may be obscured by learning analytics data. As Valetsianos et al. (2016) clarify, some elements, such as students studying at their own workstations, activities conducted online but off-platform, and the broader social environment of students' life outside the LMS, may be omitted from the tracking logs. Other major research examined the reductionist character of digital trail data and its analytics (See Selwyn, 2015, Slade & Prinsloo, 2015). All of these issues raised ethical concerns about what data is acquired, what data is not captured, and even when data is captured.

Numerous studies also emphasise that much of the data will require further rigorous filtering, categorization, and standardisation to turn the digital trace data into databases, as well as the representation of complicated data (Edwards, 2015). Sometimes the LMS itself may provide missing and incomplete data around its usage. This leaves me to make my own assumptions, based on my own perspectives and could potentially result in subconsciously biased interpretations. Often, I would contact students and obtain information on why they spent more than an hour to complete the task but still do not complete it. From the students' feedback, I found myself inwardly questioning the reliability and validity of the analytics or data. I have easily and unquestionably trusted the system to form my perception about the students. I realized that some of my perception about some students are faulty. A data may show that a student is inactive, do not participate in the activities. After contacting the students, I realized that he is getting his second-hand laptop to be repaired. But he kept himself updated about the class from his friends. I know because when I asked him what we learnt in class, he manages to answer my questions showing that he did make an effort to keep up with the subject despite the challenges that he faced. I felt bad for my misjudgement against him. I encourage him to contact me personally if he needs more elaboration. What I learnt from this is that the analytics or data is not perfect but may require extra effort to verify it.

Bias and Discrimination

The tracking system could also lead to increase bias and discrimination toward certain learner groups. I sometimes wonder whether students from a privileged background, that often have greater digital skills, could result in more successful engagement in digital environment. These disparities do not reflect an actual gap in academic ability but could cause bias against students from low-income families. I wonder how the data works against students with disabilities, those who have vision problem, colour blind, hearing problem. Not to mention, those who are more of an outdoor type of person or of older generation, who might be less likely to succeed on

computerized task, and thus, the algorithmic predictions are less favourable for them, and thus might be detrimental to their educational prospects. They may not be able to be at the computer at most time they wish. Such has also been discussed in Harel Ben Shahar (2017). Hence, they may be vulnerable or educationally at risk leading to ethical concerns which may disproportionately affect these disadvantaged students. It is a matter of concern on how I can be fair to the students and not being too much driven into believing the data at face value.

The way forward

As much as I love technology, I place a higher premium on my pupils' trust. While technology can assist us in making decisions, I owe my pupils their right to privacy, the duty to analyse in the most objective manner possible, and the right not to be discriminated against. This entails comprehending the many elements that may impact the data, as well as the analytics offered by the data. To make sense of the issue, I trust that technology and analytics are based on data, yet data might be skewed due to a variety of different factors.

This prompted me to research into what I now realise is referred to be as datafication bias and has been widely documented from the rise of MOOCs and till recent times. I found that the claim where digital trace data can improve the quality, efficiency or equality of educational system is still a significant focus of debate (Selwyn, 2015). There is increasing attention to the ethical considerations surrounding the use of such data for learning and education such as privacy, data protection as well as the assumptions that drive algorithms used in data analytics (Hakimi et al, 2021). I agree with Williamson et al, (2020) that the ethical implications of the use of digital trace data in education require academic scrutiny. Individuals frequently make use of data in ways that detach it from an awareness of its original social context. It is also questionable to what extent one can fully understand the implications of agreeing to the use of these data as commonly raised by studies (Tsai et al., 2019).

To my perspective, the level of student persistence, growth mindset and the desire to do better makes it worth continuing using the tracking system. Having said that, ethical considerations remain critical. Yes, there were a few issues with data monitoring that raised some ethical concerns. This has taught me to be more circumspect and careful when comparing various students in my analysis. I've been using the tracking method for over a year and a half now, and each time I focus on a different aspect of the multi-faceted difficulties shown by the previous semester's findings. Following these realisations, I found it more beneficial to assess through conversation or one-on-one interaction. I discovered that through engaging in conversation, I gained a deeper grasp of the subject and discovered more effective methods to assist the students. My proposed solution to privacy-related ethical problems entails more openness, trust, and learner participation, as well as a continuous permission procedure.

References

- Clayton, M., Halliday, D. (2017). Big data and the liberal conception of education. *Theory and Research in Education*, 15(3), 290–305. <https://doi.org/10.1177/1477878517734450>
- Edwards, R. (2015). Software and the hidden curriculum in digital education. *Pedagogy, Culture & Society*, 23(2), 265–279. <https://doi.org/10.1080/14681366.2014.977809>
- Eynon, R. (2013). The rise of big data: What does it mean for education, technology, and media research? *Learning, Media and Technology*, 38(3), 237–240. <https://doi.org/10.1080/17439884.2013.771783>
- Ferguson, R. (2012). Learning analytics: Drivers, developments and challenges. *International Journal of Technology Enhanced Learning*, 4(5/6), 304–317. <https://doi.org/10.1504/IJTEL.2012.051816>
- Hakimi L, Eynon R, Murphy VA. The Ethics of Using Digital Trace Data in Education: A

- Thematic Review of the Research Landscape. *Review of Educational Research*. 2021;91(5):671-717. doi:10.3102/00346543211020116
- Harel Ben Shahr, T . (2017). Educational justice and big data. *Theory and Research in Education*, 15(3), 306–320. <https://doi.org/10.1177/1477878517737155>
- Hope, A. (2018). Creep: The growing surveillance of students' online activities. *Education and Society*, 36(1), 55–72. <https://doi.org/10.7459/es/36.1.05>
- Manolev, J., Sullivan, A., Slee, R. (2019). The datafication of discipline: ClassDojo, surveillance and a performative classroom culture. *Learning, Media and Technology*, 44(1), 36–51. <https://doi.org/10.1080/17439884.2018.1558237>
- Rubel, A., Jones, K. M. L. (2016). Student privacy in learning analytics: An information ethics perspective. *Information Society*, 32(2), 143–159. <https://doi.org/10.1080/01972243.2016.1130502>
- Selwyn, N. (2015). Data entry: Towards the critical study of digital data and education. *Learning, Media and Technology*, 40(1), 64–82. <https://doi.org/10.1080/17439884.2014.921628>
- Slade, S., Prinsloo, P. (2015). Student perspectives on the use of their data: Between intrusion, surveillance and care. *European Journal of Open, Distance and E-Learning*, 18(1), 291–300. <http://oro.open.ac.uk/41229/>
- Tsai, Y. S., Perrotta, C., Gašević, D. (2019). Empowering learners with personalised learning approaches? Agency, equity and transparency in the context of learning analytics. *Assessment & Evaluation in Higher Education*, 45(4), 554–567. <https://doi.org/10.1080/02602938.2019.1676396>
- Veletsianos, G., Reich, J., Pasquini, L. A. (2016). The life between big data log events: Learners' strategies to overcome challenges in MOOCs. *AERA Open*, 2(3), Article 7002. <https://doi.org/10.1177/2332858416657002>
- Watson, C., Wilson, A., Drew, V., Thompson, T. L. (2017). Small data, online learning and assessment practices in higher education: a case study of failure? *Assessment & Evaluation in Higher Education*, 42(7), 1030–1045. <https://doi.org/10.1080/02602938.2016.1223834>
- Williamson, B., Eynon, R., Potter, J. (2020). Pandemic politics, pedagogies and practices: Digital technologies and distance education during the coronavirus emergency. *Learning, Media and Technology*, 45(2), 107–114. <https://doi.org/10.1080/17439884.2020.1761641>

Teacher's Instructional Design Competency: Exploring Students' Perspectives

Norliza Kushairi

School of Education, Universiti Utara Malaysia

Corresponding Author: drnk@uum.edu.my

Abstract

The current climate of increased dependency on advanced educational technology witnesses many educators shifting their learning aids into digital platforms, online tools and apps. This encouraging scenario reflects teachers' desire to "speak in the students' language" in order to make learning relevant in the context of 21st century education. However, despite teachers' eagerness to create various activities for their students, the degree of teachers' instructional design competency remains debatable. Under the premise that instructional design competency should be evaluated through the lens of students as the design's subject, this action research explored students' reflection on my instructional design via an intervention called PEiEP4flipped. The instructional design competency is translated in teacher's roles as learning planner, manager, facilitator, motivator and assessor. The findings suggest that despite the struggles I faced in designing meaningful and engaging lessons for them, they reported a highly rating towards my competency (mean value of 4.55, SD.36). In light of these findings, the reflective practitioner tenets within the technologically-laden educational setting of 21st century is conversed through the lens of lifelong learning manifestation.

Keyword: instructional design, flipped learning, online teaching and learning strategies, action research, continuous professional development, teacher-educator, self-reflection

Introduction

The current climate of increased dependency on advanced educational technology witnesses many educators shifting their learning aids into digital platforms, online tools and apps. This encouraging scenario reflects teachers' desire to "speak in the students' language" in order to make learning relevant in the context of 21st century education. Committed educators and teachers all over the world are struggling in preparing attractive lesson plans, encompassing varied learning materials (video, podcast, physical materials, quizzes, poll, etc). Some of them really invested their effort, in terms of money, time and brain to curate resources to be usable for their class.

Literature also documented teachers and university lecturers flipped their lectures with the aid of technology-based tools infusing problem-solving activities —such as small group analytical exercises and computer simulation tasks—and utilized several interactive activities such as question-and-answer sessions using an instant response clicker such as Clicker, Quizziz, Kahoot and the like (Baepler, Walker, and Driessen, 2014; Dill, 2012; Ruddick, 2012; Clark, 2013; Lape, Levy, & Yong, 2014).

In all of the above cases, teachers are the ones who are responsible in designing learning that could promote engagement demonstrated in students' collaborative work, communication skill, problem solving and decision making activities. The above review illuminates the importance of pedagogical content knowledge of a subject that a teacher should obligately possess: that is knowledge of how to represent the subject, how students learn the subject, how curricular materials are organised, and how particular topics are best sequenced in the curriculum (Wilson, Shulman, & Richert 1987). This is combined with the process of

pedagogical reasoning which involves the following: comprehension of the subject matter, transformation of the ideas for representation to students, instruction, evaluation, and reflection, leading to new comprehensions (Shulman, 1987).

However, what seems lacking under this debate is how students' value or view the competency of teachers in designing the learning activities for them. To what extent students see or value the activities designed by their teachers? To what extent students feel engaged in the activities subjected to them? Do they value the competency of their learning designer? Are they given the rooms to express themselves in terms of the improvement they feel needed?

The review above paved to the gap in the discourse in flipped learning within the action research paradigm; there is sparse discussion on students' view on the designed subjected to them. Hence, this paper highlights one overarching question: How do students view teachers' competency in planning, managing, facilitating, motivating and assessing their learning? This findings serve as a heuristic device to gauge the improvements needed by the instructor.

Reflection: The problem I faced

The difficulties I encountered using the online learning platform during the A201 session, which was the shift from face-to-face (F2F) to totally virtual platform, triggered some reflective questions in me. In sum, the following difficulties were identified: 1) unable to ask all pupils to participate actively, except for 60% of them due to limited data on the students' part. 2) some of the instructions provided via the web platform were poorly translated by my students. This flaw was discovered when some of them performed significantly diverted tasks from the original goals. This paved to my next weakness 3) poor skill in supporting my students' learning via online platform.

In solving these issues, I discovered a scarcity of knowledge on how teachers could create online activities. There is also a scarcity of information in the body of literature relevant to action research or the classroom-based research paradigm on how instructors leverage students' voice from their learning experience by manifesting reflective practitioner role. What is commonly reported in the media are the challenges and stressors that teachers encounter in ensuring their pupils participate in online class activities. While this is not wrong, equally important is the extent to which teachers reflect on their capability to plan and implement lessons that leverage the students' needs. In other words, while designing the lessons, do teachers 'speak in the students' language and listen to students' voice'? What follows from this single issue is a cascade of queries on my ability as a learning designer.

Literature Review

Measuring Teachers' Instructional Design Competency

Learning designer or instructional designer is not a new terminology. It refers to a role that is recently becoming popular due to the 21st century trends of digital learning environment. Teacher's learning design competency is a contesting concept making its definition a challenging task. Despite its contesting concepts, both terms are not new; it paves back to several decades ago during a period where terms such as teaching style and teacher efficacy spurred in literature (Gagné, Briggs and Wager, 1992; Dick and Carey, 1990; Kenny, Zhang, Schwier, & Campbell, 2005).

However, this study will spare the discussion of these definitions. Instead, this study reiterates that, in this 21st century learning context, a teacher must inevitably possess pedagogical content knowledge which entails information and communication technology (ICT) literacy in order to manage effective lesson in the classroom, be it physically or virtually. That said, this study defines learning designer as a teacher who also acts as a curriculum

developer; identifies problems and opportunities, plans the teaching, outlines and prepares the learning materials and assessment, curate resources, and implements the lessons in class while reflecting and revising them every now and then, as their professional development. A teacher, as they develop and reconcile the curriculum with the national educational system, carries the notion as a learning designer.

To assist the measurement on instructional design competency, this study adapts the variables based on how teachers carry out their role evaluated in five constructs: learning planner, learning controller, learning facilitator, learning motivator and learning assessor. These five constructs are stipulated in Standard 4 of Malaysian Education Blue Print or commonly known as Transformasi Sekolah 25 (TS25); which is known as the Standard Kurikulum dan Pentaksiran Malaysia Rubric (SKPMG) by which all teachers need to refer. The rubric is used by school administrators and inspectorate to evaluate teachers. The purpose of using this rubric in this study is two-fold: the respondents are enrolled in education programme, hence the rubric would inspire them to respond accordingly once they are out in the field. Secondly, as I am the supervising lecturer or mentor for my trainee teachers, I needed to digest these roles to align with the demand in school. Besides, being a role model in planning and implementing good lesson, is a bonus to my trainee teachers.

Hence, this work of mine expands the ideas of supporting students' learning engagement, by seeking students' responses about the designed subjected to them. The gist is to treat them as co-learners and co-designers in planning out their activities. The following description on the basic elements of 21st century learning informed the constructs, or aspects to be measured, or explored in the study.

Four basic elements in learning

Teachers are posited to tap onto students' engagement while teaching by infusing the basic four skills of 21st century learning, namely, communication, collaboration, creativity and critical thinking (P21, 2009). The following description illustrates the definition of the skills entailing teacher's competency in crafting lessons that allow students to unleash their potential creatively and constructively:

Communicate Clearly

- Articulate thoughts and ideas effectively using nonverbal and multiple media and technologies communication, Communicate effectively in diverse environments (including multilingual and multicultural)

Collaborate with Others

- Demonstrate ability to work effectively and respectfully with diverse teams, Exercise flexibility and willingness to be helpful, Assume shared responsibility for collaborative work, and value the individual contributions made by each team member

Creativity and Innovation Creativity

- Use a wide range of idea creation techniques, Create new and worthwhile ideas, Demonstrate originality and inventiveness in work, Elaborate, refine, analyze, and evaluate original ideas to improve and maximize creative efforts, Be open and responsive to new and diverse perspectives; incorporate group input and feedback into the work, View failure as an opportunity to learn;

Critical Thinking

- Reason effectively by using various types of reasoning (inductive, deductive, etc.) as appropriate to the situation, Use Systems Thinking to analyze how parts of a whole interact with each other to produce overall outcomes in complex systems, Make Judgments and Decisions.

The descriptions above were read together with the Rubric of Teacher’s Role (SKPMG2 Std 4), while identifying the variables which later informed the development of instruments in this study, namely PEiEP inventory.

Four pillars of Flipped Learning

Within 21st century learning discourse (21Partnership), flipped learning is renowned for enabling students to follow classes that they missed. Flipped teachers typically create video content from their lectures to allow students to catch up with the content (Johnson, Adams Becker, Estrada, & Freeman, 2015; Bergmann & Sams, 2012, Kushairi & Ahmi, 2021). By allowing for the materials, to be retrieved, accessed, reviewed and repeatedly studied at students’ own pace, dropouts ceased and engagement increase (Bergman & Sams, 2012; Flumerfelt & Green, 2013; Missildine, Fountain, Summers, & Gosselin, 2013; Wilson, 2013; Tune, Sturek, & Basile, 2013; Smit, Brabander, & Martens, 2014; Yarbrow, Arfstrom, McKnight, & McKnight, 2014).

Flipped learning is built on the same framework as constructivism, which emphasises student-centered learning. The flipped learning concepts encapsulated in the acronym FLIP: Flexible Environment, Learning Culture, Intentional Content and Professional Educator. A flexible environment aids in the creation of a Learning Culture with Intentional Content, which necessitates the presence of a Professional Educator (Hamdan, McKnight, McKnight, and Arfstrom, 2013). In a similar vein, the European Commission's Creative Classrooms Lab urged teachers around the world to use emerging technologies to help them in their roles as facilitators of classroom learning (Panzavolta & Carvalho, 2013). As a result, student-centered learning environments, student empowerment, and higher levels of student satisfaction with learning are expected to emerge (Smit et al., 2014).

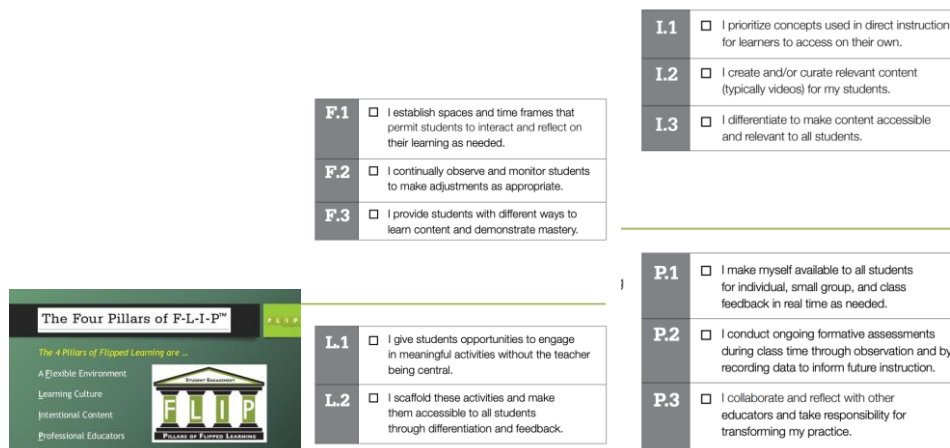


Figure 1. The four pillars of FLIP Learning

The characteristics of four pillars are illustrated in the following items that could help teachers or practitioners visualise the situation in flipped classroom. The flipped learning student-centered pedagogy, which emphasises on collaborative work with the aid of technology, mirroring nowadays heutagogy, cybergogy and peeragogy, has gained interest from all levels of academia. Recent empirical studies have documented this latest trend in the field.

Technological-pedagogical-content knowledge (TPACK)

Ubiquitously, within the avalanche of technology, technological-pedagogical content knowledge (TPACK) of a subject is a necessity for effective teaching (Mishra & Koehler, 2006; la Velle & Leask 2019): that is knowledge of how to represent the subject, how students learn

the subject, how curricular materials are organised, and how particular topics are best sequenced in the curriculum. This is combined with the process of pedagogical reasoning which involves the following: comprehension of the subject matter, transformation of the ideas for representation to students, instruction, evaluation, and reflection, leading to new comprehensions.

TPACK, can be used alongside Anderson’s (2011) online learning as a framework for teachers’ competency. Anderson (2011) outlines six forms of interaction and three were found to be related to the present study: (1) Student-content interaction, (2) Student-student interaction, and (3) student– lecturer interaction. The first interaction refers to students’ interaction with the online learning content as the content is expected to be designed in a way that adapts to a student’s needs, while the second refers to the communication and collaboration between peers during the activities. This student to student interaction denotes skill of collaboration and communication among peers, a skill of which indicate learner’s capacities to reciprocally learn from each other. While the third refers to the online learning communication between students and teachers. The interaction may be in the form of asynchronous or synchronous feedback. It is also noteworthy that, the ‘student-teacher’ interaction should not be seen as teacher-centric; it is one form of interaction for effective online learning that should promote student participation.

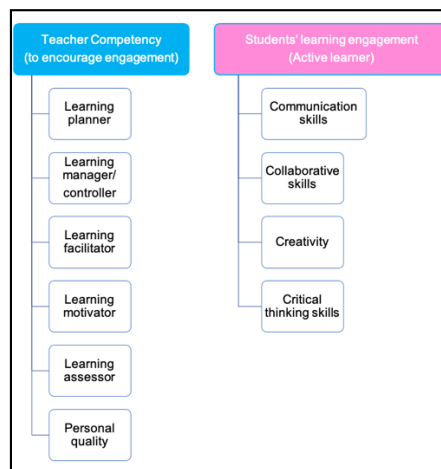


Figure 2. Proposed constructs to comprehend the relationship between teacher competency and students learning engagement

Methodology

This study adapts a research action research design (Kemmis & McTaggart, 1988; McNiff & Whitehead, 2009; McNiff, 2013) using multiple instruments to collect both quantitative and qualitative data simultaneously. For this paper, only quantitative findings are presented. This study was subjected to 53 students undertaking Research Methodology course. Owing to the Covid19 outbreak, lessons took place on a virtual platform with a weekly teaching time of three hours. This timetable gave me plenty of time to put my modified flipped classroom into action and perform research on my question. The quantitative data was gathered from a set of questionnaires that included open-ended questions.

The intervention: PEiEP4Flipped

PEiEP4Flipped is a teaching and learning process innovation in which teachers can 'peep' into students' thinking while they underwent learning activities. The word PEiEP (Kushairi, 2018)

stands for the **engagement (E)** activities embedded throughout inside and outside class hour, namely the Pre-class (P), in-class (i) and post-class (P) sessions. It employs a flipped learning approach carried out using a combination of digital/cloud computing and grounded (conventional) pedagogical facilities. While '4Flipped' refers to the four FLIP (for Flipped Learning) pillars that teachers should consider when planning their flipped classroom, they are as follows: flexible environment, learning culture, intentional content, and professional development.

Students were then asked to reflect on the learning experience after each class, using Exit Slip. The cycle of the research spun over ten weeks of a 14-week academic semester. The reflection includes their perception of their ability to communicate, collaborate, and think critically, creatively to solve or address an issue or problem identified as their research focus in the course.

The diagram below is provided to help understand the flow of PEiEP4Flipped procedures.

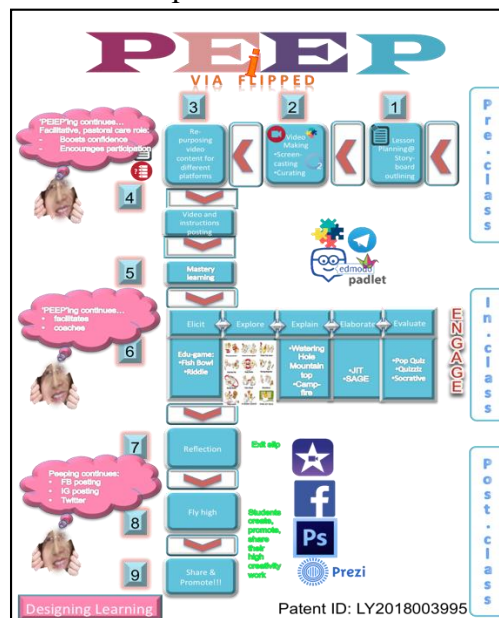


Figure 3. Overview of PEiEP4Flipped flow

The following describes the specific strategies used in the lesson

- **Appetiser: Supplication (du'a)**

The opening routine for the class was to make supplication. They were required to recite *dua and salawat* to the Prophet (saw) while bearing the intent of their deeds for the benefits of their parents and those they loved including themselves. I deliberately infused and explicitly preached the meaning of '*barokah*' of a learning process to instill the sincerity in learning.

- **Alertness: Success criteria statement:**

On reflection, I love creating alertness in them before class started. This was done by asking them to write 'success criteria' prior to class. They posted the behaviour they needed to achieve, for the upcoming lesson in Telegram (Figure).

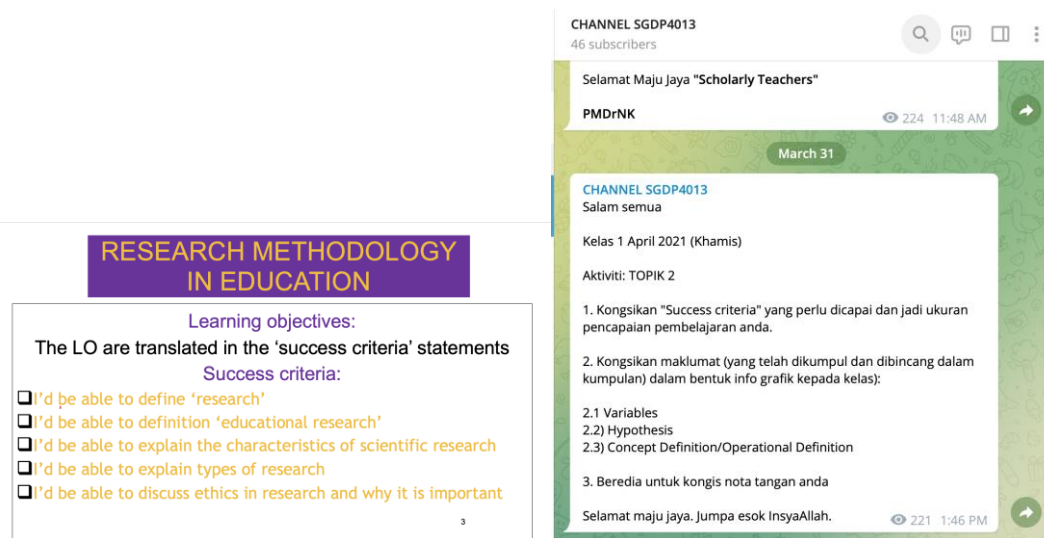


Figure 4: 'Success criteria' instruction

This was to train them to be mindful ahead of the lesson to be learnt. This ensured that their behavior was navigated towards the objectives as they knew what were expected from them. The following excerpts captured their responses:

- ***Pleasant force/disturbance***

Asking audience to prepare cue and clue while listening. Pausing presentation at 10-15 minutes interval and then asked another person in the group to continue. Then, audience, were called up to share their note (clue/cue statements that would help in grasping the gist of the presentation). They were to turn on the video to display their note to others. Comments and feedback were encouraged.

- ***Consistent appraisal***

Naturally, it became my routine which I did not realise until I found it in their reflective writing.

- ***Positive interdependency: We are a family***

This is nurtured by assigned them family member title when they did group work like calling them cordially as 'kak long' abang long' 'kak ngah' etc. This is to create a sense of belonging and nurturing the *esprit de corp* among team members.

- ***Flexibility, democracy in learning***

Exit slip is a way to listen to their voice. They were encouraged to express their learning experience to benefit themselves. Co-learner and co-designer notion were iterated to the students to build rapport between teacher and students.

- ***Continuous assessment***

My philosophy in 'continuous improvement' was manifested while I exercised formative assessment consistently. Reminding myself not to rush to complete the syllabus due to rising awareness on the potential 'immature dropout' if teachers were impersonal about their learners' needs. This practice seemed to have attracted their attention positively as expressed in their responses.

Instrument

A self-response survey with 59 closed items was used to collect quantitative data measuring

five constructs (Figure 2) of teacher roles as specified in SKPMg2 Std 4 (KPM, 2020). The items, in particular, bore the intention to measure the extent to which students see the communication, collaboration, critical thinking, and creativity is incorporated into their learning. Table 1 also summarises the questionnaire content and structure.

Table 1
Summary of the items in the questionnaire

Section	Aspect/construct	No of items
Part A	Demography	6
Part B: Instructor dimension		
2	Learning planner	8
3	Learning controller	9
4	Learning motivator	9
5	Learning facilitator	20
6	Learning assessor	5
7	Instructor personal quality	8

Students expressed their level of agreement with a specific statement on a five-point Likert scale (i.e. *strongly disagree*, *disagree*, *neither agree nor disagree*, *agree*, *strongly agree*). Respondents answered the questionnaire only once during the 10th week. The statistical software IBM SPSS V23 was used to analyse the quantitative data gathered from the questionnaire. During analysis, these data was collapsed into three categories: ‘disagree’ (*strongly disagree* and *disagree*), ‘neutral’ (*neither agree nor disagree*) and ‘agree’ (*agree* and *strongly agree*) to get insights on the distribution of responses.

Pilot study

The questionnaire was piloted to 35 students from a nearby teacher training institution. The reliability test using Cronbach alpha gives a value of .975. A closer look on inter-item statistics showed that all the items were best to be retained (highest Alpha if an item were to be deleted would be .976), which shows that deleting will not critically influencing the Alpha. Alpha coefficients ranged from .92 to .94, which signifies that there is good to strong reliability (Pallant, 2013) within the 59-question instrument. Once the pilot study accomplished, the instruments was prepared for the main data collection. Prior to data collection, approval for the research was gained from the human research ethics office (RIMC) of the university.

Results

Demography

The instrument contained questions intended to produce specific demographic data about the students. These questions included questions about gender and specialisations programme. The majority of the respondents were female by 84.9. The remaining was male (15.1%). This is quite normal as the population of female to male students at higher education institution is larger in the ratio of 70:30 (

Table 2).

Table 2
Gender distribution of respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
Female	45	84.9	84.9	84.9
Male	8	15.1	15.1	100.0
Total	53	100.0	100.0	

Table 3 depicts the distribution of respondents according to race. The majority of respondents were Malay (94.3%).

Table 3
Ethnic distribution of respondents

Programme	Frequency	Percent	Valid Percent	Cumulative Percent
Malay	50	94.3	96.2	96.2
Chinese	2	3.8	3.8	99.9
Other: Bumiputera	1	1.9	1.9	100.0
Total	53	100.0	100.0	

For the measured constructs, the responses were categorised into three groups: disagree (1-2.59), moderate (2.60-3.39), and agree (3.40-5.00). De Vaus (2002) states, "This approach to collapsing categories has the advantage of letting the data define what is low, medium or high rather than us imposing some external, unrealistic definition." (p.165). In this analysis, the maximum mean of 5 is divided equally into five categories. This division gives equal size of range that balances these categories (Pimentel, 2019).

Table 4
Likert scale range

Likert Scale	Interval	Difference	Description
1	1- 1.79	0.79	Disagree
2	1.80-2.59	0.79	
3	2.60-3.39	0.79	Moderate
4	3.40-4.19	0.79	Agree
5	4.20-5.00	0.80	

Adapted from: De vaus, 2002; Pimentel, 2019

In general, results show that majority (88.9%) of the respondents agree that online learning strategies I designed illustrates my competencies as learning (1) planner (2) controller or manager (3) facilitator (4) motivator and finally (5) assessor (

Table 5). Mean for overall constructs is 4.55 (SD .36) (Table 6).

Table 5
Distribution of respondents' perceptions

	Frequency	Percent	Valid Percent
--	-----------	---------	---------------

Disagree (1-2.59)	1	1.9	1.9
Neutral (2.60-3.39)	5	9.4	9.4
Agree (3.40-5.00)	47	88.7	88.9
Total	53	100.0	100.0

Table 6
Mean and standard deviation for instructor’s competency

Dimension	Mean	Std. Deviation
Instructors’ competencies	4.55	.36

N=53

Mean for each construct

Five constructs for learning engagement served as the basis for measuring the extent of instructor’s competency in manifesting engaging learning activities perceived by students. To analyse each construct, mean and standard deviation (Table 7) was calculated for each construct of instructor’s strategies and approaches.

Table 7
Mean and standard deviation of perceptions

Constructs:	Mean	Std. Deviation
A. Competency in Teaching		
1. Learning Planner	4.68	.39
2. Learning Manager/Controller	4.58	.47
3. Learning Facilitator	4.62	.42
4. Learning Motivator	4.71	.41
5. Learning Assessor	4.00	.31
6. Instructor’s Personal Quality:	4.69	.37

N=53

Table 7 shows that the highest mean is gained by “Learning Motivator (mean=4.71, SD.41) with slight different mean from the second lowest score namely “Instructor’s personality” (mean=4.69, SD.37).

Discussion: Bridging the parts to the whole

Earlier on, I wrote about my teaching philosophy. Individual needs, in my opinion, are an essential part of a teacher's job. Hence, I enjoy mirroring my philosophy through my students’ behavior. “I am an ‘educator’ by principle not only by profession” echoes the philosophy I uphold which encapsulated in the following words:

Curriculum that emphasizes opportunities for students to develop self-directed learning behavior promotes lifelong learning (Blumberg & Michael, 1992).

As a 'baby boomer' assigned to teach a cohort of alpha generation students this semester, I was curious to learn about their perceptions of my instructional design competency. I was aware that my technological-pedagogical content knowledge (TPACK), particularly during remote online learning, such as during the Covid-19 pandemic was being put to test. The following excerpts depict the surprises they discovered after being subjected to my ostensibly tech-savvy approach:

“Pada saya Dr adalah pensyarah yang pertama kali saya jumpa paling banyak guna tool..ICT...dalam kelas..memang paling advanced lah setakat ni saya pernah jumpa...betul... menarik sangat denga pelbagai kaedah...”(R211)

All of these responses reflect the tone of newness in pedagogy, innovative, creative, and engaging activities that my students experienced throughout my teaching sessions. The excerpts demonstrate their appreciation for my efforts and demonstrate the TPACK competency I possessed. For a teacher in the mid-century age, the above remark is a mind-booster to keep me energetic and confident as I face the 21st century learners. The preceding remark also indicates the extent to which the ‘Intentional Content’ pillar of flipped learning approach served as the conceptual foundation for my teaching design.

I also sensed their appreciation for being their motivator. By incorporating a spiritual component into their learning process, I instill the concept of 'tabayyun' (investigate and be vigilant) to infuse morale and ethique as a citizen/netizen; how to react to rumours or gossip, by investigating the rumors before judging, as well as to make them aware of how they would react in social media on any issues.

I also made it a habit for them to start the class by reciting du'a in turn. In addition, I embed some related hadis with the topic as set induction. This is vividly depicted in many of their responses as exemplified below:

“Perkara yang paling saya suka dari pengajaran Dr ialah Dr kaitkan dengan ilmu Agama Islam dimana Dr selalu kaitkan dengan Doa dan Al-Quran”.

“..saya suka apabila Dr menyelitikan potongan hadis yang berkaitan dengan pembelajaran atau topik kita. Kelebihan dia ialah, ia membuka minda saya dengan luas dan membuatkan saya berfikir seketika. Jarang sekali dalam mana-mana pembelajaran berlaku kaitan sedemikian.’

Further study

This study resulted in a newly developed questionnaire adapted from a rubric that was previously used by teachers, inspectors, and school administrators to assess the six domains of teaching and learning (SKPMG2 Std4). This questionnaire could be useful for supervisors conducting clinical observations on trainee teachers. Future research could look into how the instrument could be revised in order to improve the existing SKPMG2 Std 4 Rubric. The current rubric only meant for third party use for evaluating teachers. The one that can be used by teachers as a self-report questionnaire is still absent. The instrument can be used as an institutional support to help supervisors guide their trainee teachers to incorporate the basic four C skills during lesson planning.

Conclusion

It is noteworthy that the debate on online coaching, or facilitation that requires instructor competence, is not new, as evidenced by numerous studies since Dewey's era, up until the recent 2020s (Dreer et al, 2021; Hayes et al, 2021; Kang, 2021; Orland-Barak, & Wang, 2021; Ersin & Atay, 2021).

As a reflective practitioner, being a teacher and a researcher is a constant battle between the limited energy I have and the desire to devote to the profession I love. Despite the conflicting demands, the dual-role provided an opportunity for me to grow. While it initially

appears to expose my own weaknesses, gradually it opens up more opportunities for me to discover my own strengths. All of the weaknesses pointed out by my students in their reflection, which previously seemed insignificant and unworthy of my attention, are actually allowing me to become more innovative in my search for solutions.

Noteworthy, motivating student to stay engaged in the era of online learning is not a straightforward task. Particularly when it comes to stimulating their communication among group members during group work or class discussion. These reports provide evidence of the widespread debate over teachers' competence. Effective lesson plan, motivation, adequate facilitation, alternative assessment skills, and imparting continuous participation and collaboration among students would forever be center of discourse in teacher professional development as there is 'no one model fits all'.

While changing and innovating the strategies, I encountered gradual newness in my teaching: from the original PEEP, into PEiEPviaFlipped, and now the PEiEP4Flipped. These are the reflective actions that spiral in my dual role as teacher-researcher, trying and retrying new things to improve myself in order to understand 'myself' more than I need to understand my learners, as in the words of Stenhouse:

"it is teachers who, in the end, will change the world of the school by understanding it." (Lawrence Stenhouse, 1978)

All of these observations indicate that a teacher is more than just a professional knowledge transmitter. Equally important, the journey made me realise that as a teacher, I am more obligated to become a learner who constantly relearns and unlearns. Hence, the willingness to embrace the transformational process of action research as part of 'learning to teach' serves as the foundation for me to continue improving and upgrading my competency as a learning designer in the 21st century education.

References

- Anderson, T. (2011). *The theory and practice of online learning*. (2 nd Edition). Edmonton, AB: AU Press.
- Baepler, P., Walker, J. D., & Driessen, M. (2014). It's not about seat time: blending, flipping, and efficiency in active learning classrooms. *Computers & Education*, 78, 227e236.
- Bergmann, J., & Sams, A. (2012). *Flip your classroom: Reach every student in every class every day*. Washington, DC: International Society for Technology in Education.^[1]^[SEP]
- Clark, K. R. (2013). *Examining the effects of the flipped model of instruction on student engagement and performance in the secondary mathematics classroom: An action research study* (Retrieved from ProQuest Digital Dissertations).^[1]^[SEP]
- De Vaus, D. (2002) *Surveys in Social Research*. 5th Edition, Routledge, London.
- Dill, E. M. (2012). *The impact of flip teaching on student homework completion, behavior, engagement, and proficiency*. Completed to meet the requirements of university of New England MS Ed. Program. Retrieved from <http://www.lessonpaths.com/learn/i/flipped-classroom-research-paper/17-flipped-research-paper-action-research-effects-of-flipped-classroom>.
- Dick, W., & Carey, L. (1990). *The systematic design of instruction*. Glenview, IL: Scott Foresman.
- Gagné, R.M., Briggs, L.J., & Wager, W.W. (1992). *Principles of instructional design*. Orlando FL: HBJ.
- Dreer, B. (2021). The significance of mentor–mentee relationship quality for student teachers' well-being and flourishing during practical field experiences: A longitudinal analysis. *International Journal of Mentoring and Coaching in Education*, 10(1), 101-117. doi:10.1108/IJMCE-07-2020-004

- Ersin, P., & Atay, D. (2021). Exploring online mentoring with preservice teachers in a pandemic and the need to deliver quality education. *International Journal of Mentoring and Coaching in Education*.
- Hayes, N., & Pridham, B. (2019, July 29). The Role of Mentoring in Teacher Education. *Oxford Research Encyclopedia of Education*. Retrieved 26 Mar. 2021, from <https://oxfordre.com/education/view/10.1093/acrefore/9780190264093.001.0001/acrefore-9780190264093-e-851>.
- Kang, H. (2021). The role of mentor Teacher–Mediated experiences for preservice teachers. *Journal of Teacher Education*, 72(2), 251-263. doi:10.1177/0022487120930663
- Kemmis, S., & McTaggart, R. (1988). *The action research planner* (3rd ed.). Geelong: Deakin University.
- Kenny, R.F., Zhang, Z., Schwier, R.A., & Campbell, K. (2005). A review of what instructional designers do: Questions answered and questions not asked. *Canadian Journal of Learning and Technology*, 31(1). [Online Journal]. Retrieved July 4, 2006 from <http://www.cjlt.ca/content/vol31.1/kenny.html>.
- Flumerfelt, S., & Green, G. (2013). Using lean in the flipped classroom for at risk students. *Educational Technology & Society*, 16(1), 356e366.^[1]_[SEP]
- Hamdan, N., McKnight, P., McKnight, K., & Arfstrom, K. (2013). The flipped learning model: A white paper based on the literature review. Retrieved from the Flipped Learning Network website http://researchnetwork.pearson.com/wp-content/uploads/WhitePaper_FlippedLearning.pdf.
- Johnson, L., Adams Becker, S., Estrada, V., & Freeman, A. (2015). NMC horizon report: 2015 higher education edition. Austin, Texas: The New Media Consortium.
- KPM (Kementerian Pendidikan Malaysia). 2020. Laporan Tahunan 2020 Pelan Pembangunan Pendidikan Malaysia. https://www.padu.edu.my/wp-content/uploads/2021/09/LT2020_PPPM_Final.pdf
- Kushairi, N. & Ahmi, A. (2021). Flipped classroom in the second decade of the Millenia: A Bibliometrics analysis with Lotka's law. *Education and Information Technologies*/10.1007/s10639-021-10457-8
- Kushairi, Norliza (2018). PEiEP via Flipped: Supporting students learning engagement via cloud and grounded learning facilities. ISBN 978-967-16226-1-2. Patent ID: LY2018003995. Norliza Kushairi: Kedah
- Lape, N., Levy, R., & Yong, D. (2014). Can flipped classroom help students learn? We are trying to find out. *Slate*. Retrieved from http://www.slate.com/articles/technology/future_tense/2014/04/flipped_classrooms_can_they_help_students_learn.html.
- la Velle, L. & Leask, M. (2019). [Learning To Teach In The Secondary School](#). (8th Ed.). Routledge. pp 19
- McNiff, J. (2013). *Action Research*. London: Routledge, <https://doi.org/10.4324/9780203112755>
- McNiff, J., & Whitehead, J. (2009). *Doing and writing action research*. Sage Publications.
- Mishra, P., & Koehler, M. J. (2006). Technological Pedagogical Content Knowledge: A new framework for teacher knowledge. *Teachers College Record*. 108(6), 1017-10
- Missildine, K., Fountain, R., Summers, L., & Gosselin, K. (2013). Flipping the class- room to improve student performance and satisfaction. *The Journal of Nursing Education*, 52(10), 1e3.
- Orland-Barak, L., & Wang, J. (2021). Teacher mentoring in service of preservice teachers' learning to teach: Conceptual bases, characteristics, and challenges for teacher

- education reform. *Journal of Teacher Education*, 72(1), 86-99. doi:10.1177/0022487119894230
- Pallant, J. (2013). *SPSS survival manual : A step by step guide to data analysis using IBM SPSS (4th ed.)*. Crows Nest, NSW: Allen & Unwin.
- Panzavolta, S., & Carvalho, J. M. (2013). Policy maker Scenario: Flipped classroom. Retrieved from the Creative Classroom Lab project website <http://creative.eun.org>.
- Pimentel, J (2019). Some Biases in Likert Scaling Usage and its Correction. *International Journal of Sciences: Basic and Applied Research (IJSBAR)* 45(1):183-191
- P21(2009). P21 Framework Definitions. Partnership for 21st Century Skills (P21)
- Ruddick, K. W. (2012). Improving chemical education from high school to college using a more hands-on approach (Retrieved from ProQuest Digital Dissertations).
- Smit, K., Brabander, C. J., & Martens, R. L. (2014). Student-centered and teacher-centered learning environment in pre-vocational secondary education: psychological needs, and motivation. *Scandinavian Journal of Educational Research*, 58(6)
- Tune, J., Sturek, M., & Basile, D. (2013). Flipped classroom model improves graduate student performance in cardiovascular, respiratory, and renal physiology. *Advances in Physiology Education*, 37(4), 316e320. ^[1]_{SEP}
- Wilson, S. G. (2013). The flipped class: a method to address the challenges of an undergraduate statistics course. *Teaching of Psychology*, 40(3), 193e199.
- Wilson, S., Shulman, L., & Richert, A. (1987). 150 different ways of knowing: Representations of knowledge in eaching. In J.Clderhead (Ed.), *Exploring teachers' thinking* (pp 104-124). London: Cassell.
- Yarbro, J., Arfstrom, K. M., McKnight, K., & McKnight, P. (2014). Extension of a review of flipped learning. Retrieved from [http://flippedlearning.org/cms/lib07/VA01923112/Centricity/Domain/41/Extension of Flipped Learning Lit Review June 2014.pdf](http://flippedlearning.org/cms/lib07/VA01923112/Centricity/Domain/41/Extension%20of%20Flipped%20Learning%20Lit%20Review%20June%202014.pdf).

Analysis of Students' Satisfaction with Online Collaborative Learning in the New Normal

Zuaini binti Ishak*^a, Shamharir bin Abidin^b
^{ab}Tunku Puteri Intan Safinaz School of Accountancy,
Universiti Utara Malaysia,
06010 UUM Sintok, Kedah, Malaysia.
*Corresponding Author: zuaini@uum.edu.my

Abstract

This study assesses students' perceived satisfaction with collaborative learning through online platforms during the unexpected Control Movement Order (MCO) period. While students must use collaborative learning methods, the primary issue is that students must deal with unfamiliar technology or tools to interact with content, instructors, and other students. Time constraints and limitations in internet connectivity are other obstacles that prevent students from collaborating via technology. All of these elements potentially affect their experience, and hence their satisfaction in doing the online collaborative learning. Based on the 78 responses from students who had experienced online collaborative learning, the results, in general, suggest that most students view online collaborative learning as enjoyable but impactful. Students seem to appreciate the role of instructors in enhancing their collaborative learning and acknowledge the effectiveness of the methods. The present paper suggests that online collaborative learning should be used more widely in teaching and learning.

Keywords: Online Learning, Collaborative Learning, Pandemic, Higher Education.

Introduction

Students at the higher learning institution were obliged to use online learning on short notice due to the government's Movement Control Order (MCO) to combat the spread of Covid-19. Many instructors were not well trained to use internet as a teaching medium initially, and students were equally unfamiliar with the new environment. There have also been complaints regarding slow and insufficient internet connectivity and a lack of appropriate gadgets. The battle was inescapable because many parents and households had to work from home at the same time. As a result, the issue has necessitated prompt action by the government, and universities have taken many steps to ensure that effective learning continues, even from a virtual distance.

The innovations in education brought about by the Covid-19 contributed to the growing popularity of collaborative learning in the online environment around the world. While students must use collaborative learning methods, the primary issue is that students must deal with unfamiliar technology or tools to interact with content, instructors, and other students (So & Brush, 2008). Time constraints and limitations in internet connectivity are two more obstacles that prevent students from collaborating via technology (Robinson et al. 2017). It should be emphasized that activities designed to improve student engagement that are misused or overused to encourage student interaction may negatively impact students' learning (So & Brush, 2008). As a result, students may be dissatisfied, and instructors may have difficulty giving sufficient and meaningful opportunities for collaboration and interaction.

Thus, this study aims to assess the students' perceived satisfaction with collaborative learning through online platforms during the unexpected period of Control Movement Order (MCO). As both students and lecturer were not fully prepared (in terms of exposure and

handling of the platform) to experience the teaching and learning online, the result of this study is interesting on its own.

First, responses to questions about students' experiences (for example, do students struggle with online collaborative learning? Do they believe it is beneficial? Does online collaborative learning have an impact on their learning?) Will give instructors helpful feedback on how to enhance the teaching aspects. Second, the findings of this study assist university administration in devising a better policy to encourage and foster effective teaching and learning practices.

The rest of this paper is structured as follows. The section that follows discusses similar prior work on collaborative learning, both traditional and online. It is followed by a discussion of the research method, particularly the construction of questionnaires and data collection. The results of the analysis are then reported in the following section. The final section of the paper ends the paper and makes some recommendations.

Literature Review

The term collaborative learning is defined as a learning method that entails "working in a group of two or more to achieve a common goal, while respecting each individual's contribution to the whole" (McInnerney & Robert, 2004, p. 205).

Collaborative Learning

According to Smith and MacGregor (1992), "Collaborative learning" is a term referring to a variety of educational approaches that involve combined intellectual effort by students or students and teachers working together. Students are typically working in groups of two or more, exploring for mutual understanding, answers, or meanings, or developing a product. Collaborative learning activities vary greatly, but the majority focus on students' exploration or application of course material, rather than the teacher's presentation or explanation of it.

Smith and MacGregor (1992) add that the collaborative learning reflects a substantial departure from the traditional teacher-centred or lecture-centred environment found in college courses. The lecturing/listening/note-taking process does not fully disappear in collaborative classrooms, but it coexists with other processes centred on student conversation and actively involve with course material. Teachers who utilize collaborative learning approaches see themselves as expert designers of intellectual experiences for students, rather than as expert transmitters of knowledge to students.

Numerous studies have shown that collaborative learning produces higher achievement, better psychological connections, greater psychological health, social competence, and self-esteem than competitive or individual learning (An et al., 2008; Smith, 1995). Schultz (2003) has suggested that incorporating well-planned collaborative activities into online education benefits both teachers and students, because higher order thinking skills are more likely to be generated. It also improves socialization skills and enhancing critical thinking (Jegade, 2002). Reflection, peer feedback (Ruhleder & Michael, 2000), and the reduction of social anxiety are some of the other advantages of online collaboration that have been mentioned (Gokhale, 1995).

Online Collaborative Learning

Harasim (2012) develops the theory of Online Collaborative Learning (OCL) from a theory originally called computer-mediated communication (CMC), or networked learning. The Online Collaborative Learning Theory is then known as Collaborativism Theory, as proposed by Harasim (2017).

Online collaborative learning, or online constructivist learning, is a type of

constructivist instruction that takes the form of instructor-led group learning. Instead of memorizing right answers, students at online collaborative learning are encouraged to address challenges jointly through discourse. The teacher serves as both a facilitator and a member of the knowledge community under study. The approach, along with many other online teaching approaches, functioned in an asynchronous, location-independent environment. Students are usually allowed to participate in class discussions on their own time (up to a limit) and can join on from any computer with an internet connection.

Online collaborative learning model differs from other approaches is that discussion is considered as important to learning and textbooks and other materials as complementary. According to Harasim (2017) there are three phases of discourse in collaboration: i.e., idea generating, idea organising, and intellectual convergence, where students learn how to build knowledge and how to collaborate. In the final part of the discourse, students will reach the intellectual convergence stage, where the final product (paper, presentation, project, assignment) is produce once the students reach consensus. This differs from standard online courses in which texts are the primary source of information and discussions are secondary. Students in typical online courses may tend to avoid debate because they regard it as extra work outside of what they will be graded for.

On the other hand, problem-based learning is the approach that applies a collaborative learning strategy. A problem is given to students to be solved in groups over a given period. The process begins with the formation of small groups, and each group works collaboratively to discuss ideas, learn and find the solutions to the problem and then communicate their results in the form of presentation, paper, or product to exit from the problem (Larmer et al., 2015). Lecturer provides scaffolding activities and facilitates the process. The collaborative process can be performed using a variety of online collaborative platforms or tools that allow collaboration and exchange of information online whether synchronously or asynchronously. These online technologies mediate and enhance communication but do not control or replace human interaction.

Table 1
Benefits and problems of e-learning

Benefits	Problems
<ol style="list-style-type: none"> 1. Low participants and shy students sometimes open up. 2. There are minimal off-task behaviors. 3. Delayed collaboration is more extensive and rich than real time; real time is more immediate and personal. 4. Students can generate tons of information or case situations on the Web. 5. Minimal student disruptions and dominance. 6. Students are excited to publish work. 7. Many forms of online advice are available. Practitioner, expert, instructor and student online feedback are all valuable and important. 8. With the permanence of online forum postings, one can print out discussions and perform retrospective analyses and other reflective activities. 9. Discussion extends across the semester and creates opportunities to share perspectives beyond a particular course or module. 10. E-learning encourages instructors to coach and guide learning. 	<ol style="list-style-type: none"> 1. Online learning tasks can quickly overwhelms students who lack experience in this area. 2. Even students with extensive technology experience can become confused and lost on the Web. 3. Students are too nice to one another on the Web, perhaps because they have minimal face- to-face interactions and limited shared histories. 4. Students' comments too often lack justification or examples that connect their online comments to specific course concepts. Moreover, they sometimes simply tell stories unrelated to the class. While off-task behavior is rare online, students still may not realize that they are supposed to justify their reasoning.

Benefits and Problems of e-Learning

According to Yew et al. (2011), the learning process in PBL cannot rely exclusively on individual self-directed learning but must also strongly rely on group collaboration. It was discovered that collaborative learning is most effective and useful when students are given the opportunity to voice their opinions, discuss, and work together toward a collective solution to a problem (Gabriel, 2004). Bonk et al., (2003) list the benefits and problems of e-learning as in Table 1.

Satisfaction on Online Collaborative Learning

Lane et al. (2021) argue that emotional aspects of students are just as crucial as cognitive elements when constructing collaborative learning activities. In order to boost student satisfaction, lecturers must interact with students while handling instructional activities that are consistent with the students' learning objectives. Several aspects influence students' satisfaction, including course structure, emotional support, and communication medium (So & Brush, 2008); confirmation, perceived usefulness, and perceived enjoyment (Munoz-Carril et al., 2021).

Research Methods

Context and Participants

Seventy-six students (69 female and 7 male) who enrolled in Corporate Secretarial Practice course during the first and second semester of 2020/2021 at Universiti Utara Malaysia were participated in this study. The course was taught by the first author of this paper. Most participants were Malaysians, from diverse background, taking accounting degree program. Participants ranged in age from 20-22 years old and logged in to the course from locations throughout Malaysia, in states such as Kedah (24), Perlis (1), Kelantan (2), Johor (4), Pahang (4), Perak (12), Pulau Pinang (11), Selangor (12), Terengganu (2), Wilayah Persekutuan Kuala Lumpur (1), Sabah (2) and Sarawak (3).

The students in the course were taught utilizing a Problem Based Learning (PBL) approach, in which a group of students worked together to solve a problem and develop a product. The instructor formed groups of five to six students at random. Each group was provided with a group discussion board using an online collaborative platform such as Office 365, MIRO, Coggle, or Padlet, throughout the semester. They were also encouraged to use alternative modes of contact, such as the phone or email. The instructor may occasionally intervene in group discussions, for example, to aid students in answering project-related questions. The work of the group, rather than the efforts of any individual, was used to assess students.

Questionnaire Development and Data Collection

This study's primary data was gathered using a self-completion questionnaire. The questionnaire was developed from previous research by Munoz-Carril et al (2021). The questionnaire was created using the web application Google Form. Munoz-Carril et al., (2021)'s original version has 26 items that ask respondents to assess their agreement on seven constructs: perceived ease of use, perceived usefulness, attitude, confirmation, perceived enjoyment, satisfaction, and perceived impact on learning. We also include a set of questions based on Hernández-Sellés et al., (2019) that ask students for their agreement on the aspect of teacher-student interaction when having online collaborative learning. The adaptation is required because the original version was tested in different environments and cultures.

To avoid the perception that this exercise would affect their grade, the instructor requested class participants to complete an online survey after the course was completed.

Furthermore, students were guaranteed of the survey's anonymity, and participation is entirely voluntary. Students were free to leave the survey at any time. The survey was administered online using Google Forms and was divided into two parts. Part 1 was created to gather demographic information and learning history from students. Gender, year of study, race, and semester were all included. There are additional questions concerning their computer ability and prior experience with online collaborative learning.

Part 2 consists of 29 items designed to examine their perceptions of their online collaborative learning experiences. Students were asked to score their level of agreement with the survey items on a four-point Likert scale: 'Completely disagree,' 'disagree a little,' 'Agree a little,' and 'Completely agree.' The following are examples: Table 2 lists the questions that were given to the students.

In addition, there is one open-ended question asking students to reflect on how the online collaborative tools utilised in the class benefited them.

Table 2
Items Surveyed and Variable Names

	Survey Items	Variable Name
	Perceived ease of use	
1	Working collaboratively in a virtual environment was easy for me.	peou_1
2	I found it easy to use a methodology based on collaborative online work to learn within the framework of the course.	peou_2
3	As I progressed through the course, I found it easier to work in a collaborative virtual environment.	peou_3
4	In general, I think it was easy to work collaboratively and remotely with members of my group.	peou_4
	Perceived usefulness	
5	Collaborative work processes have improved my academic performance in the subject. Working collaboratively with my group has improved the efficacy of my learning about issues covered in this course.	puss_1
6	Working collaboratively has helped me to learn the course content better.	puss_2
7	The collaborative work we did in my group was useful for me to achieve the course competencies.	puss_3
8	The collaborative work we did in my group helped me to effectively complete the various tasks and activities required by the course.	puss_4
	Attitude	
9	I enjoy learning collaboratively.	attt_1
10	Collaborative work is a good method of learning.	attt_2
11	For me it is rewarding to do academic tasks collaboratively.	attt_3
12	I like the idea of working collaboratively to learn.	attt_4
	Perceived impact	
13	My experience of working collaboratively in a virtual environment was better than I expected.	conf_1
14	Having used a method of working collaboratively as a learning system during this course, it was better than I thought it would be.	conf_2

1 5	Generally, most of my expectations were met about the online collaborative working methods used in the course.	conf_3
	Perceived enjoyment	
1 6	Working collaboratively in the virtual environment was enjoyable.	penj_1
1 7	I enjoyed working collaboratively with the members of my group.	penj_2
1 8	I enjoyed the sensation of working collaboratively in a virtual environment.	penj_3
1 9	After having done the course, I feel satisfied to have used online collaborative working processes as a method to learn.	sati_1
	Satisfaction	
2 0	I am satisfied with the online collaborative working methodology used in the course	sati_2
2 1	I love the experience of working collaboratively in virtual environment during the course	sati_3
2 2	I am satisfied with the level of skills acquired during the course thanks to online collaborative working.	sati_4
	Learning impact	
2 3	Having used a method based on online collaborative working during the course, it has made a positive impact on learning the subject.	piml_1
2 4	Being part of a virtual collaborative working team was a significant, valuable help to me in improving my learning processes.	piml_2
2 5	I gained better understanding of some concepts and practices in the course thanks to the online collaborative work with the members of my group.	piml_3
2 6	Online collaborative working helped me to perform academically	piml_4
	Instructor role	
2 7	The lecturer guided their students in the process of forming the collaborative work groups.	teac_1
2 8	The lecturer accompanied the students in an appropriate way to favor learning within their work group.	teac_2
2 9	The lecturer guided their students to develop teamwork skills that allow them to work more effectively.	teac_3

Results

The survey was completed by 78 students. All surveys returned were suitable for analysis. Because all items were required to be answered (with the exception of the open-ended question), none of the returned questionnaires include a missing item.

Demographic analysis

The demographic profile of the respondents is shown in Table 3. The majority of respondents are Malay (53 percent). Only nine men responded, with the remainder being women. Surprisingly, only 27% of those who enrolled in the course had prior experience with online collaborative learning. Interestingly, 17 respondents (21.79 percent) claim to be computer specialists, while the remaining 78 percent believe they have intermediate computer skills.

Table 3
Demographic profile

Demographic	Responses (n=78)	
	#	%
Gender (Male)	9	11.54
Race:		
<i>Malay</i>	53	67.95
<i>Others</i>	25	32.05
Prior OCL (Yes)	21	27.18
Computer Skill:		0.00
<i>Novice</i>	0	0.00
<i>Intermediate</i>	61	78.21
<i>Expert</i>	17	21.79

Finding of the survey

Table 4 summarizes the responses to the all-items survey. Furthermore, means score displays descriptively the number of respondents who (1) completely disagree, (2) disagree a little, (3) agree a little, and (4) completely agree with each option. The majority of respondents indicated that they "Agree a Little" or "Completely Agree". We then grouped and labelled these options as "All Agree". However, because some respondents selected "Completely Disagree" and "Disagree a Little" we combined the two responses as "Disagree". Looking at the last two columns, it is clear that the vast majority of respondents believe that online collaborative learning is simple and effective. Except for item peou 3- "As I progressed through the course, I found it easier to work in a collaborative virtual environment"; and item peou 4- "In general, I think it was easy to work collaboratively and remotely with members of my group" and item puss 2- "Working collaboratively and remotely with members of my group". There are 13, 16, and 13 respondents who disagree with the statements, respectively.

In general, respondents agree with the survey's findings regarding attitudes toward online collaborative learning. The "Attitude" components' mean scores range from 3.29 to 3.41. Overall, online collaborative learning meets their satisfaction (sati_1 to Sati_4) and confirms the expected impact of collaborative learning (conf_1 to conf_3). All items in the "Satisfaction" and "Learning impact" categories have mean scores greater than 3.20. Compared to other categories' means, the items indicating how enjoyable students find the online collaborative process (penj_1 to penj_4) show a low score. The low mean scores for perceived enjoyment are consistent with the item peou_4 (under perceived usefulness) "I think it was easy to work collaboratively and remotely with members of my group" which has a mean value of 2.94. As a result, while the majority of students enjoy working collaboratively in a virtual setting, a small number of students do not enjoy collaborative learning for various reasons.

Interestingly the category dealing with the instructor role scores the highest mean. They agree that the instructor guided them through the collaborative group works' process, accompanied them through it and guided them to create collaboration so that they could work effectively together. Only two to three respondents disagree that they received effective guidance from the lecturer in their collaborative work.

Table 4
Summary of responses

Items	Mean	S.E.	1		2		3		4		Disagree		All Agree	
			#	%	#	%	#	%	#	%	#	%	#	%
Perceived ease of use														
peou_1	3.17	0.07	1	1.28	5	6.41	52	66.67	20	25.64	6	7.69	72	92.31
peou_2	3.15	0.07	0	0.00	11	14.10	44	56.41	23	29.49	11	14.10	67	85.90
peou_3	3.13	0.08	1	1.28	12	15.38	41	52.56	24	30.77	13	16.67	65	83.33
peou_4	2.94	0.08	2	2.56	14	17.95	49	62.82	13	16.67	16	20.51	62	79.49
Perceived usefulness														
puss_1	3.19	0.07	0	0.00	10	12.82	43	55.13	25	32.05	10	12.82	68	87.18
puss_2	3.21	0.08	0	0.00	13	16.67	36	46.15	29	37.18	13	16.67	65	83.33
puss_3	3.32	0.07	0	0.00	6	7.69	41	52.56	31	39.74	6	7.69	72	92.31
puss_4	3.41	0.06	0	0.00	2	2.56	42	53.85	34	43.59	2	2.56	76	97.44
Attitude														
att_1	3.29	0.09	1	1.28	11	14.10	30	38.46	36	46.15	12	15.38	66	84.62
att_2	3.41	0.07	0	0.00	6	7.69	34	43.59	38	48.72	6	7.69	72	92.31
att_3	3.32	0.07	0	0.00	5	6.41	43	55.13	30	38.46	5	6.41	73	93.59
att_4	3.31	0.07	0	0.00	8	10.26	38	48.72	32	41.03	8	10.26	70	89.74
Perceived impact														
conf_1	3.29	0.07	0	0.00	8	10.26	39	50.00	31	39.74	8	10.26	70	89.74
conf_2	3.36	0.07	0	0.00	4	5.13	42	53.85	32	41.03	4	5.13	74	94.87
conf_3	3.21	0.07	0	0.00	9	11.54	44	56.41	25	32.05	9	11.54	69	88.46
Perceived enjoyment														
penj_1	3.14	0.09	2	2.56	12	15.38	37	47.44	27	34.62	14	17.95	64	82.05
penj_2	3.27	0.08	0	0.00	10	12.82	37	47.44	31	39.74	10	12.82	68	87.18
penj_3	3.17	0.08	0	0.00	12	15.38	41	52.56	25	32.05	12	15.38	66	84.62
Satisfaction														
sati_1	3.28	0.08	0	0.00	11	14.10	34	43.59	33	42.31	11	14.10	67	85.90
sati_2	3.28	0.07	1	1.28	4	5.13	45	57.69	28	35.90	5	6.41	73	93.59
sati_3	3.28	0.08	1	1.28	7	8.97	39	50.00	31	39.74	8	10.26	70	89.74
sati_4	3.31	0.07	0	0.00	7	8.97	40	51.28	31	39.74	7	8.97	71	91.03
Learning impact														
piml_1	3.33	0.07	0	0.00	7	8.97	38	48.72	33	42.31	7	8.97	71	91.03
piml_2	3.35	0.07	1	1.28	4	5.13	40	51.28	33	42.31	5	6.41	73	93.59
piml_3	3.31	0.08	1	1.28	7	8.97	37	47.44	33	42.31	8	10.26	70	89.74
piml_4	3.26	0.07	1	1.28	6	7.69	43	55.13	28	35.90	7	8.97	71	91.03
Instructor role														
teac_1	3.59	0.07	1	1.28	1	1.28	27	34.62	49	62.82	2	2.56	76	97.44
teac_2	3.58	0.07	1	1.28	1	1.28	28	35.90	48	61.54	2	2.56	76	97.44
teac_3	3.60	0.07	1	1.28	2	2.56	24	30.77	51	65.38	3	3.85	75	96.15

Note: 1=completely disagree, 2= Disagree a little, 3=Agree a little, 4=completely agree

Discussion on Open-ended Question

Thirty people out of 78 took the time to respond to the open-ended question. Most students described online collaborative learning as valuable and making their work easier. The available tools and platforms allow them to work together even if they are not in the same location. Student A says, "I've learned that there are many ways to collaborate with others even if it is not face-to-face as well as increase my experiences using the tools". Student B also echoes the same opinion "I think the online collaborative tools very helpful for me to enhance my understanding and work in the group".

Meanwhile, student C compares the advantages of online tools to the traditional method. He claims, "It helped me get all the necessary information or material related to the course more widen than the traditional method will do". "It allows us to work together attractively, and we can easily share knowledge and input between each other," says Student D.

The online tools are helpful to monitor the group work progress. Student E describes that online collaborative tools help him to sync his works with everyone else. Everyone in teams can see what other people wrote in real-time, making the group work more efficiently. Student F claims that the tools helped gain cooperativeness and closeness among the team as they can monitor their progress and the group progress throughout the learning process. He adds, *"This means that we can know if our team members are stuck on their part, and it can help to encourage each other to help in completing the tasks"*.

The flexibility of online collaborative learning was also a point of agreement among the responders. *"I saved time and energy because I can hold discussions anywhere and at any time"* remarked Student G. *"We could do it anytime when everyone is free"* Student H said. Student I conveyed the attitude of tolerance in scheduling discussion time because of the flexibility provided by online learning, as he points out: *"During online, to ensure all teammates engage conversation, we will consider the time that all teammates are free."*

According to some responses, online collaboration learning increases communication. Student J claims that communication with the other members of the group is more effortless.

"It develops communication skills with each other and able to address the problem together via the internet since we can look for the information together at the same time" Student K said of the benefits of communication in online learning. Furthermore, Student L discussed how collaborative technologies can help with communication challenges during online learning *"Because we can do the activities at the same time, I believe it has boosted overall productivity and efficiency. Personally, I like Microsoft 365 docs/Google docs because we can change them online without having to submit and receive them. During ongoing discussions, I find collaborative tools to be the most effective. Members of the team can make changes right away. Everyone has quick access to the data and can make changes. It accelerates the task's completion."*

Collaborative tools appear to be a "silent two-way communication mechanism" during a presentation. As a result, it gives individuals the opportunity to express themselves. Students may be hesitant to speak up and prefer to type instead. Specific tools provide an anonymous option, which has proven to be highly beneficial to introverted students in channeling their voice. Other respondents agree that collaborative activities in class have other good effects. Student L mentions that *"collaboration is a model of how to work with others in real-world settings"*, which is an intriguing point.

Additionally, other exciting responses are as follows:

- *"Online collaboration helps me to understand and focus better during the class as there are lots of references shared by the lecturer"*.
- *"The inclusion of collaborative activities in an online course leads to positive student performance outcomes."*
- *"Collaborative group interactions facilitate active learning, shared knowledge, and promote social interaction and a supportive eLearning community"*.
- *"It helps me more on my studying and make my studies not bored. Also, it really helps me to understand the subject more"*.
- *"I can learn CSP course effectively because I can actually remember what we have discussed in the class."*
- *"Online class is awesome but very tiring due to other commitment that has to face in home."*

Conclusion

This study assesses students' perceived satisfaction with collaborative learning through online platforms during the unexpected Control Movement Order (MCO) period. Based on the 78 responses from students who experienced online collaborative learning during the previous semester, the results, in general, suggest that most students view online collaborative learning

as enjoyable but impactful. However, while most students enjoy working collaboratively in a virtual setting, a small number of students do not enjoy collaborative learning for various reasons. For instance, some students don't think it was easy to work collaboratively and remotely with members of their group. The reason might be because students abruptly needed to switch to online mode due to the threat of Covid-19, without having a chance to meet friends face-to-face.

The positive feedback suggests that online collaborative learning is well accepted and could be used by instructors to enhance the teaching and learning. Higher learning institutions should develop a policy to encourage the implementation of Collaborative learning, either online or face-to-face, as it could develop higher-level thinking, improve oral communication, promote self-management, and enhance leadership skills. The department should encourage instructors to implement collaborative learning by providing adequate training and tools. The outcomes of this will be better student-faculty interaction and an increase in student retention, self-esteem, and responsibility.

Because this study has limitations, the findings should be interpreted with caution. First, the survey was only conducted for one course taught by one lecturer. As a result, the reported satisfaction with online collaborative learning during the pandemic was limited to the course students and may not be applicable to other courses taught by other lecturers at the same or different schools. Second, the analysis is limited to descriptive analysis and can be expanded to demonstrate antecedent variables.

References

- An, H., Kim, S., & Kim, B. (2008). Teacher Perspectives on Online Collaborative Learning: Factors Perceived as Facilitating and Impeding Successful Online Group Work. *Contemporary Issues in Technology and Teacher Education*, 8(1), 65-83. Retrieved from <https://www.citejournal.org/wp-content/uploads/2016/04/v8i1general1.pdf>
- Bonk, C.J, Wisner, R.A.& Lee. J.Y (2003). Moderating Learner-Centered E-Learning: Problems and Solutions, Benefits and Implication. In Roberts, T.S. *Online Collaborative Learning: Theory and Practice*, 54-85. IGI Global. DOI: 10.4018/978-1-59140-174-2.ch003. Retrieved from <https://www.igi-global.com/chapter/moderating-learner-centered-learning/27717>
- Gabriel, M. (2004). Learning Together: Exploring Group Interactions Online. *Journal of Distance Education*, 19(1), 54-72. Retrieved from <https://files.eric.ed.gov/fulltext/EJ807839.pdf>
- Gokhale, A. (1995). Collaborative Learning Enhances Critical Thinking. *Journal of Technology Education*, 7, 1-2. Retrieved from <http://scholar.lib.vt.edu/ejournals/JTE/jte-v7n1/gokhale.jte-v7n1.html>
- Harasim, L. (2012). *Learning Theory and Online Technologies*. Routledge.
- Harasim, L. (2017). *Learning Theory and Online Technologies* (2nd ed.). Routledge. <https://doi.org/10.4324/9781315716831>
- Hernández-Sellés, N. Muñoz-Carril P.C, González-Sanmamedc, M (2019). Computer-supported Collaborative Learning: An analysis of the Relationship between Interaction, Emotional Support and Online Collaborative Tools. *Computers & Education*, 138, 1–12. DOI: 10.1016/j.compedu.2019.04.012. Retrieved from <https://www.sciencedirect.com/science/article/abs/pii/S0360131519301009>
- Jegade, O. J. (2002). Facilitating and Sustaining Interest through an On-line Distance Peer-tutoring System in a Cooperative Learning Environment. *Virtual University Gazette*, 35- 45.
- Lane, S., Hoang, J.G. Leighton, J.P., & Rissanen, A. (2021). Engagement and Satisfaction:

- Mixed-Method Analysis of Blended Learning in the Sciences. *Canadian Journal of Science, Mathematics and Technology Education*, 21, 100–122. Retrieved from <https://link.springer.com/article/10.1007/s42330-021-00139-5>
- Larmer, J., Mergendoller, J. & Boss, S. (2015). *Setting the Standard for Project Based Learning: A Proven Approach to Rigorous Classroom Instruction*. Buck Institute for Education.
- McInnerney, J. M., & Roberts, T. S. (2004). Online Learning: Social Interaction and the Creation of a Sense of Community. *Educational Technology & Society*, 7 (3), 73-81.
- Munoz Carril, P. C., Gonzalez, Sanmamed, M., & Hernandez ' Sell'es, N. (2013). Pedagogical Roles and Competencies of University Teachers Practicing in the eLearning Environment. *International Review of Research in Open and Distance Learning*, 14(3), 462–487. <https://doi.org/10.19173/irrodl.v14i3.1477>
- Robinson, H.A., Kilgore, W. & Warren, S. J. (2017). Care, Communication, Learner Support: Designing Meaningful Online Collaborative Learning. *Online Learning*, 21(4), 29-51. doi:10.24059/olj.v21i4.1240.
- Ruhleder, K., & Michael, T. (2000). Reflective Collaborative Learning on the Web: Drawing on the Master Class, *First Monday*, 5(5). Retrieved from http://www.firstmonday.org/issues/issue5_5/ruhleder/
- Schulz, B. (2003). Collaborative Learning in an Online Environment: Will it Work for Teacher Training?. In C. Crawford, N. Davis, J. Price, R. Weber & D. Willis (Eds.), *Proceedings of SITE 2003--Society for Information Technology & Teacher Education International Conference* (pp. 503-504). Albuquerque, New Mexico, USA: Association for the Advancement of Computing in Education (AACE). Retrieved from <https://www.learntechlib.org/primary/p/17947/>.
- Smith, B.L., & MacGregor, J. T. (1992) *What is Collaborative Learning?" Collaborative Learning: A Sourcebook for Higher Education*. Eds.
- Smith, K. A. (1995). Cooperative learning: Effective Teamwork for Engineering Classrooms. *Proceedings Frontiers in Education 1995 25th Annual Conference*. Engineering Education for the 21st Century. Retrieved from <https://ieeexplore.ieee.org/document/483059>.
- Smith, B.L. & MacGregor, J.T., (1992) *This is an abbreviation of Smith and MacGregor's article, "What Is Collaborative Learning?" in *Collaborative Learning: A Sourcebook for Higher Education*, by Anne Goodsell, Michelle Maher, Vincent Tinto, Barbara Leigh Smith and Jean MacGregor. It was published In 1992 by the National Center on Postsecondary Teaching, Learning, and Assessment at Pennsylvania State University. Retrieved from <https://www.evergreen.edu/sites/default/files/facultydevelopment/docs/WhatIsCollaborativeLearning.pdf>
- So, H. J. & Brush, T.A (2008). Student Perceptions of Collaborative Learning, Social Presence and Satisfaction in a Blended Learning Environment: Relationships and Critical Factors. *Computers & Education*, 5:318–336. DOI: <https://doi.org/10.1016/j.compedu.2007.05.009>
- Yew, E.H.J., Chng, E. & Schmidt, H.G. (2011). Is Learning in Problem-based Learning Cumulative? *Advances in Health Sciences Education*, 16, 449–464; doi: 10.1007/s10459-010-9267-y. Retrieved from <https://link.springer.com/article/10.1007/s10459-010-9267-y>

From Zero to Hero: Embedding Paragogy in Assisting Non-Major Students in Achieving the CLOs

Muhammad Noor Abdul Aziz*^a, Fathiyyah Abu Bakar^b

^aSchool of Education, Universiti Utara Malaysia

^bTunku Puteri Intan Safinaz School of Accountancy, Universiti Utara Malaysia

*Corresponding Author: matno@uum.edu.my

Abstract

Since it is the times of crisis, teaching and learning activities are carried out via online mode synchronously and asynchronously. It is a great challenge on both educators and learners to be engaged while sitting in front of a device for a period. This engagement issue is also further affected with classroom activities and support from peers. Non-major students from moral education program at School of Education voiced out their concerns in grasping the content knowledge due to factors namely less exposure to the subject matter and difficulty in understanding the concepts which further rattle their cages in completing the assignment and achieving the Course Learning Outcomes (CLOs). As such, this paper delves into the practice of learning assistance by embedding paragogy to help the non-major students to achieve the CLOs. This case study garnered data from classroom participant observation by the course instructor and supported it with the interviews and reflection entries in Padlet from 25 course participants. The study was carried out for a semester in the academic calendar. The major theme that emerged from the analysis was Learning Assistance with sub themes like Motivational support, Prompt assistance, Strengthened friendship and Continuous Feedback supporting the major theme. Subsequently, there are a few possibilities such as including students' feedback on how paragogy can be manifested in designing instruction for future lessons. The key is that instructors must prepare student-centred learning which embeds pair and group interactions to further assist learning by involving students' opinion and feedback in the design of the tasks.

Keywords: Paragogy, Learning assistance, Engagement, Online learning

Introduction

Paragogy has been lauded as one of the new teaching strategies adopted in teaching and learning in the higher education (Z. Zhang & Bayley, 2019). Educators believe that students learn better when they are given the opportunity to communicate, collaborate and cooperate with the peers. With the struck of the deadly pandemic of Covid-19 in the year 2020, the whole world has come to a halt and that never spares the education realm. We have been hit very severely that the teaching and learning activities have gone on remote mode (Carter et al., 2020). It is more than ever learning activities need the support from peers to enhance the process and to assist learners in achieving the course learning outcomes. The use of paragogy has received much support and acknowledgement from educators around the globe (Gok, 2012; Panadero et al., 2016 ;S. Zhang et al., 2016; Seery et al., 2021). There are also noticeable studies involving peer assessment that have gained trust and interest at international context (Bohemia & Davison, 2012; Karami & Rezaei, 2015; Scott, 2017).

In our context in Malaysia, plenty of research in paragogy focuses on social competencies (Lim et al., 2020), motivation (Misiran et al., 2016) and improving academic performance (Zher et al., 2016). Research on peer learning in the area of immediate assistance by peers and strengthened friendship is still scarce. In addition to that, literature has suggested

that research in paragogy needs to be conducted for a longer duration of at least for a semester (Razak & See, 2010) to garner more data to support and enrich the body of knowledge in Malaysian context. It is understood that students in the university take major and minor courses as part of the program structure. They may not have any prior input on courses that they take for minor (Psaltou-Joycey & Kantaridou, 2011). Learning might be difficult for them as grasping content knowledge for minor papers is also equivalent to learning their major papers. As such, this study aims to explore the practice of learning assistance by embedding paragogy to help the non-major students to achieve the course learning outcomes (CLOs).

Literature Review

In guiding this study and to enhance the understanding of paragogy, an exhaustive amount of literature was explored. To start with, paragogy is the 21st century teaching and learning method that is adopted to assist learning which is in tandem with the idea that students learn best with their peers around them. Paragogy or peer learning is defined as a form of education in which students collaborate with one another to achieve educational objectives (O'Donnell & King, 1999). Collaboration is the defining key in paragogy whereby the avenue provided by instructors imperatively allow the learners to collaborate and cooperate in achieving the CLOs.

There are 5 fundamental principles in paragogy as being depicted by Corneli and Danoff (2011) in Figure 1 which become the basis in this current study. We realise that we are not only instructors or learners in paragogy, but that we are also co-creators of the learning environment in the context. The second principle discusses that students are in attempts to "learn how to learn" as well as efforts to "learn how to assist others' learning efforts. Next, learners must face and make meaning of diversity as part of the learning process, rather than just seeking confirmation of what they already know. Clearly, differences provide difficulties, but they are worth addressing. It is also acknowledged by Fukuda et al. (2020) that peer learning offers learners with feedback on areas where they need to improve. The fourth principle indicates that learning does not proceed in a linear fashion but in the paragogical concept of peer learning, participation in co-creating the learning environment becomes an essential "strand." Finally, there will be nothing to achieve if there are no defined objectives. Learning is mainly a passive game if we don't think critically about our objectives. A technique of "deliberate practise" is advocated by paragogy.

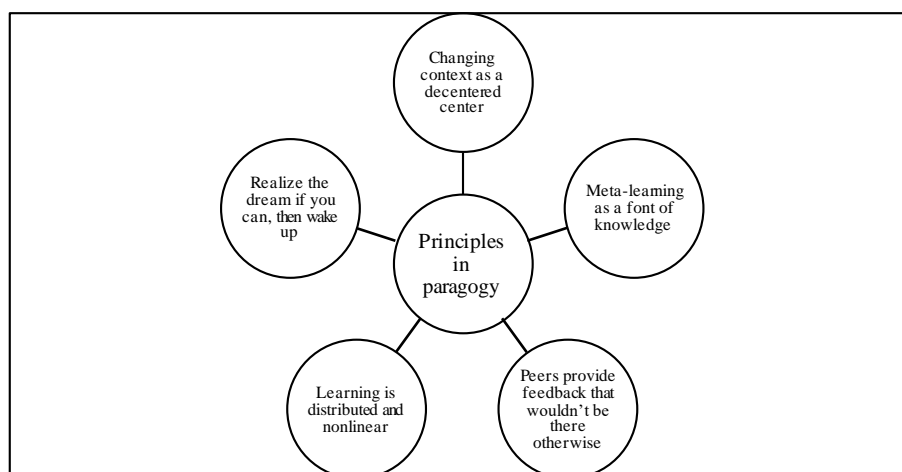


Figure 1. Principles in paragogy

These principles are closely observed in this current study whereby all the elements mentioned are included. In addition to these principles, since the study was carried out on remote learning mode, digital platforms such as WebEx and also social media like Whatsapp group have assisted the students in experiencing peer support in the aim to accomplish the CLOs.

Previous studies in the area of paralogy discussed the increase self-efficacy in students when peers help them in answering queries that they might not have enquired during the lecture (Gok, 2012). According to Gok, the factorial analysis revealed a significant difference in self-efficacy between the treatment and control groups ($F=4.37$, $p=0.041$; Table 7). In the light of feedback by peers, Tseng and Tsai (2010) revealed that students with stronger intrinsic drive were more confident in evaluating peers' work, receiving peer feedback, and responding to peer feedback ($r=0.47$, 0.52 , 0.60 , respectively, $p<0.01$). It is also evident in a more recent study by Lee and Rofe (2016) that many of the participants were actively engaging in the forum conversations and taking notes from their peers, suggesting that they were learning. This is a proponent factor for paralogy to take place in teaching and learning in the classroom.

Knight and Brame (2018) believe that paralogy includes explicit chances for students to clarify their thinking and engage in arguments, as well as methods that assist students in integrating new material with previous knowledge and revising their mental models. This is empirically supported in the research conducted by Lucas (2011) that paralogy develops a sense of community in which everyone is acquainted with one another and has a voice. Even though their scores had no influence on their marks, several students stated that they attended class regularly to avoid losing any participation points. Other students said that paralogy helped them improve their time management and test-taking skills. The findings derived from this current study also suggest similar input on paralogy in the notion to enrich the body of knowledge on paralogy.

Methodology

The researchers adopted a qualitative method to delve further into students' experiences with their peers. The design of this study was holistic single case as advocated by Yin (2014). It was single case because the researchers looked at how paralogy was applied in this course since it was enrolled by a large number of non-major students from moral education program at School of Education who were enrolled in Semester 4.

The students in the course were from a mixed background from gender, ethnicities, religions and ages. They were purposively selected for this study because in this course there was a good ratio of major and minor student to be studied qualitatively. Table 1 shows the description of the students.

Table 1

Description of the students

Ages	20-22 years of age
Nationality	All Malaysians
Gender	8 Men, 17 Females
Race/Ethnicities	Malays, Chinese, Indians, Dusuns, Ibans, Bajaus
Academic Background	15 of them are matric leavers, 10 of them are STPM holders

The instructor of this course was a PhD holder with a vast experience of teaching and training teachers. He had taught various courses and a practitioner of student-centered learning. He was in the advisory board for the project-based learning in one of the state education departments in the northern states in Malaysia.

The 14 weeks of lessons were observed by one of the researchers as participant observer. Throughout the period, the researcher critically looked for patterns in assistance offered by peers in the class to their friends who are not majors. The researchers used an adapted observation sheet from Suhaimi et al. (2021) to inform the researchers on the criteria of paralogy that were used by the major students.

Upon completing the semester, the researchers semi-structurally interviewed 25 students in five groups in which two groups of major students consisted of ten members and 3 groups of non-major students totalling up to fifteen. They were interviewed with a protocol adapted from Zhang and Bayley (2019) whose context was the same with this convergent case study involving undergraduates. The protocol was adapted and given to three experts in the area of educational psychology for reviewing and improvement. The experts inter rater reliability value was 0.83 which showed high reliability of the protocol used in this study. It was also further piloted with another a group of undergraduates from the School of Computing to seek for clarity in comprehension.

All the data collected were shared with the instructor and another expert in online learning for validation purposes and to avoid interpreters' bias. Data collected from the series of observation, reflection entries and interviews were also used to establish trustworthiness besides using Atlas ti.version 9 to ease and document their analysis systematically. The researchers knew that the data reached its point of inductive thematic saturation (Saunders et al., 2018) when they saw the codes were repetitive. Braun and Clarke (2019) suggested that rigorous coding and categorizing must be carried out before themes were generated. Initially, 7 themes were generated, but after the expert raters' agreement and comments, they were congregated into 4 meaningful themes: Motivational support, Prompt assistance, Strengthened friendship and Continuous Feedback. The Cronbach's Alpha reliability value for the themes after the raters assessed them was 0.87. The presence of a high total Alpha demonstrated exceptional internal consistency (Mohajan, 2017).

Findings

Major theme: Practices of Learning Assistance

First of all, the students and their instructor felt that there was **motivational support** evidence when the major students offered assistance to the minor groups. The excerpts below provided clearer evidence of motivational support:

“He never let me down. He always cherishes my friends and I when we say the quiz practice was very difficult. He will always share his study notes.”
(Interview S3)

“I always text them in the Whatsapp group. They will reply with quotes. That makes me happy and reassured that I can complete the course.” (Interview S12)

“During online class, I see that the major students always use emoji that shows happy and excited to support their friends when the minor students give responses” (Interview with Instructor)

“The mentor (major students) praise me and show thumbs up.” (Reflection - Padlet entry- Week 4)

The motivational support given to the non-major students by their peers elevated their spirit during online to continue striving for their best in the course. This in return made the non-major student persist in their studies and work all the way along to submit the assignments and tasks successfully to the course instructor.

Next, the non-major students also repeatedly mentioned that their mentors provided **immediate assistance** whenever they were huddled with understanding the content of the course.

“The mentors told me that in their Whatsapp group was active even up to midnight. They will be answering some questions and sometimes they pose questions for the mentees” (Interview with Instructor)

“I don’t have to wait long for their answers. They answer fast. They are very intelligent.” (Interview S1)

“The chatbox during WebEx is always buzzing with more examples and Q&A by the students.” (Observation 12)

“One day, I texted him because I didn’t attend class. He immediately called me and explained what was learned in class that day.” (Interview S23)

“They share notes and videos from youtube fast here. They are quick” (Reflection - Padlet entry Week 9)

Here, it is axiomatic that immediate assistance brought positive vibes in the process to achieve the course learning outcomes.

Moreover, the findings showed that several signs like becoming closer, best buddy and good friends may **strengthen friendship** between the major and non-major students.

“The class was in jovial mood since they have gotten close together even though they were from different programs.” (Observation 8)

“I am addressed as ‘my friend’ every time we communicate in the Whatsapp group” (Interview S10)

“I could see that the mentors or the major students becoming very close with their mentees who are the non-majors. They even participated in an innovation competition together” (Interview with Instructor)

“They care about me. I have two mentors who keep on checking on me to see if I am ok with the assignments. Dr also asks if I have problem.” (Interview S18)

The relationship among the students in the course became strengthened due to the student-centred activities and assistance that were being carried out during the classes and also after class via social media platforms. It provided students with great possibilities for personal development and progress.

The last practice of learning assistance that has been observed was **continuous feedback** by the peers to the non-major students.

“My friend can give me very good comment on the assignment draft when I showed my assignment in the Whatsapp Group” (Interview S6)

“Some students sent me their assignments with the written feedback from their peers written on their assignment. That was awesome and yes, their assignment was good!” (Interview with Instructor)

“I discuss the assignment with my friend. If she does not understand I will explain. She will write my comments when we discuss.” (Interview S11)

“In class, the mentors give feedback to their mentees during the breakout session about the class task before submitting to the instructor” (Observation 4)

Discussion

One of the components in student centred learning is peer involvement in activities and assessment. It is paramount in this study as it adopts the involvement of peers in many aspects in the course right from the class activities to the assessment component. Besides having piquant activities that engage students in learning, creating a platform for assistance with peer learning is imperative for more collaboration to take place. The participants in the study clearly described that motivational support was one of the fundamental components that aids the non-major students in grasping the content of the course. Even though the instructor provides as much support as possible, it is their peers support that matters most and boosts their confidence in sailing smoothly for a semester in completing the course (Zhang & Bayley, 2019). In addition to that, Gok (2012) shared his study findings that cooperative learning environment can help students learn more deeply while also increasing their interest and enthusiasm. It is also evident from this current study the participants felt that their major mentors were able to uplift their motivation in learning the course and eventually achieving the CLOs.

Furthermore, learning during pandemic is a situation that has never been imagined previously. Support and motivation are vital because what the students are going through at the comfort or grief of their homes is incomprehensible if it is not known to the knowledge of the instructor. Peers were able to reduce mental stress and anxiety since the pandemic brought a lot of problems in the lives of the students (Ng et al., 2021). Relating this to the current study, the participants also expressed that their peers were able to lessen their anxiety level and make them calm and poised in completing the tasks and understanding the course by giving words of motivation and supportive emojis and posters via the WebEx sessions and also in the Whatsapp group.

The participants unanimously shared their gratitude towards their mentors in the course who selflessly answered all their queries at any time of their convenience. The prompt

assistance given was helpful in continuing their assignments and class task. This is also evident in Sun et al. (2020) who shared that their findings support the idea that high levels of perceived accessible peer support can help individuals cope with psychological difficulties during tough times by increasing their emotional well-being. If the students receive immediate assistance, their interest in the course will increase as being mentioned by the participants in this study. Apart from that, sharing of resources and learning materials by the mentors enlightened the participants more on the knowledge acquisition of the course and enabled them in progressing in achieving the CLOs. Maloney et al. (2013) shared that the success of digital resource repositories sharing depends on the development of a trusting community. This was dominant in the current study participants' worries that their work is of poor quality have been alleviated by allowing unlimited editing of uploaded resources.

The participants in this study had not met in previous courses before they enrolled in this course. This was the first time they met their mentors here but the findings showed that their relationship has grown positively, and friendships were enhanced. This is because they were given a platform in this course by the instructor to work collaboratively and cooperatively since the minor students were not well verse in the course as compared to the major students. Seery et al., (2021) indicated that in their study, peer mentors not only built and deepened ties with their peers, but they also developed relationships as they worked together toward a common objective. Students had the opportunity to work collaboratively and continue that connection throughout the semester. The student-centred activities and support that were carried out during the courses and also after class via social media platforms improved the relationships among the students in the course. It offered pupils with several opportunities for personal growth and development.

The best finding from this study was the emergence of continuous feedback by peers. This was an interesting finding which highlights one of the successful approaches for improving academic performance. The participants in this study agreed that their marks for the assignments were good because they were checked by their peers who persistently provided constructive feedback to amend and improve their work prior to submission. Peer feedback is especially useful because students may ask each other questions that they might not be able to ask their instructor and explain things to each other in their own language (Swaran Singh et al., 2017). This correlates with the findings from this study where the instructors agreed that the written feedback from peers which were sent along with the assignment was of good quality and reflective. Here, the benefits of peer feedback were not only reaped by the participants but also their mentor friends.

Conclusion

This paper outlines the opportunities some insights in how the instructor adopts the elements of paralogy in the course that was being taught. The literature on paralogy has definitely explored many areas of interest but unfortunately, there is still room for more literature in Malaysian context that need to be highlighted in reference and relevance to peer support in assisting students who are not majors in a course. Since the use of paralogy is being amplified in Malaysian classrooms with the student-centred approach, more research in this area will shed light to the best practices that can be made into a guidebook for future references. This study has discussed from the perspectives of those who are being assisted by their peers in the objective to achieve the CLOs in the course which is one of the requirements in the continual quality improvement effort in the university.

Acknowledgement

The authors extend their appreciation and utmost gratitude to all the participants in this research project. The authors also thank University Teaching and Learning Centre (UUM) and Inspirational Academician Program (IAP) 2021 for funding the fees for the presentation of this paper in the 6th Inspirational Scholar Symposium.

References

- Bohemia, E., & Davison, G. (2012). Authentic learning: The gift project. *Design and Technology Education*, 17, 49–61. <http://search.proquest.com/docview/1347461725?accountid=14522>
- Carter, R. A., Rice, M., Yang, S., & Jackson, H. A. (2020). Self-regulated learning in online learning environments: strategies for remote learning. *Information and Learning Science*, 121(5–6), 311–319. <https://doi.org/10.1108/ILS-04-2020-0114>
- Corneli, J., & Danoff, C. J. (2011). Paragogy. *Proceedings of the 6th Open Knowledge Conference, Berlin, Germany*, 1–10.
- Fukuda, S. T., Lander, B. W., & Pope, C. J. (2020). Formative assessment for learning how to learn: Exploring university student learning experiences. *RELC Journal*. <https://doi.org/10.1177/0033688220925927>
- Gok, T. (2012). The effects of peer instruction on student's conceptual learning and motivation. *Asia-Pacific Forum on Science Learning and Teaching*, 13(1), 1–17.
- Karami, A., & Rezaei, A. (2015). An Overview of Peer-Assessment: The Benefits and Importance. *Journal for the Study of English Linguistics*, 3(1), 93. <https://doi.org/10.5296/jsel.v3i1.7889>
- Knight, J. K., & Brame, C. J. (2018). Peer instruction. *CBE Life Sciences Education*, 17(2), 1–4. <https://doi.org/10.1187/cbe.18-02-0025>
- Lee, Y., & Rofo, J. S. (2016). Paragogy and flipped assessment: Experience of designing and running a MOOC on research methods. *Open Learning*, 31(2), 116–129. <https://doi.org/10.1080/02680513.2016.1188690>
- Lim, C. L., Jalil, H. A., Ma'rof, A. M., & Saad, W. Z. (2020). Self-regulated learning as a mediator in the relationship between peer learning and online learning satisfaction: A study of a private university in Malaysia. *Malaysian Journal of Learning and Instruction*, 17(1), 51–75. <https://doi.org/10.32890/mjli2020.17.1.3>
- Lucas, A. (2011). Using peer instruction and i-clickers to enhance student participation. *Teaching Mathematics with Classroom Voting with and Without Clickers*, 21–28. <https://doi.org/10.1017/CBO9781614443018.005>
- Maloney, S., Moss, A., Keating, J., Kotsanas, G., & Morgan, P. (2013). Sharing teaching and learning resources: Perceptions of a university's faculty members. *Medical Education*, 47(8), 811–819. <https://doi.org/10.1111/medu.12225>
- Misiran, M., Yusof, Z. M., Mahmuddin, M., Lee, Y. C., Hasan, N. A., & Noor, N. M. (2016). Factors influencing students motivation to Learning in University Utara Malaysia (UUM): A Structural Equation Modeling approach. *Math Stat*, 2(3), 16.
- Mohajan, H. K. (2017). Two criteria for good measurements in research: Validity and reliability. *Annals of Spiru Haret University. Economic Series*, 17(4), 59–82. <https://doi.org/10.26458/1746>
- Ng, I. K., Zhang, V. R., Tseng, F. S., Tay, D. S., Lee, S. S., & Lau, T. C. (2021). Learning during the Pandemic: Perspectives of Medical Students in Singapore. *Annals of the Academy of Medicine, Singapore*, 50(8), 638–642.
- O'Donnell, A. M., & King, A. (1999). *Cognitive perspectives on peer learning*. Lawrence

Erlbaum.

- Panadero, E., Jonsson, A., & Strijbos, J.-W. (2016). Scaffolding self-regulated learning through self-assessment and peer assessment: Guidelines for classroom implementation. In *Assessment in Education: Principles, Policy & Practice* (pp. 311–326). <https://doi.org/10.1080/0969594x.2017.1401526>
- Razak, R. A., & See, Y. C. (2010). Improving academic achievement and motivation through online peer learning. *Procedia - Social and Behavioral Sciences*, 9, 358–362. <https://doi.org/10.1016/j.sbspro.2010.12.164>
- Scott, G. W. (2017). Active engagement with assessment and feedback can improve group-work outcomes and boost student confidence. *Higher Education Pedagogies*, 2(1), 1–13. <https://doi.org/10.1080/23752696.2017.1307692>
- Seery, C., Andres, A., Moore-Cherry, N., & O’Sullivan, S. (2021). Students as Partners in Peer Mentoring: Expectations, Experiences and Emotions. *Innovative Higher Education*, 0123456789. <https://doi.org/10.1007/s10755-021-09556-8>
- Suhaimi, N. A., Tajudin, M., Adnan, M., Puteh, M., Pendidikan, U., Idris, S., & Malim, T. (2021). Ke arah kurikulum tersedia masa hadapan melalui pengajaran berasaskan pendekatan paragogi. *Jurnal Pendidikan Bitara UPSI*, 14(41–50).
- Sun, Y., Lin, S. Y., & Chung, K. K. H. (2020). University students’ perceived peer support and experienced depressive symptoms during the COVID-19 pandemic: The mediating role of emotional well-being. *International Journal of Environmental Research and Public Health*, 17(24), 1–13. <https://doi.org/10.3390/ijerph17249308>
- Swaran Singh, C. K., Lebar, O., Kepol, N., Rahman, R. A., & Mukhtar, K. A. M. (2017). An observation of classroom assessment practices among lecturers in selected Malaysian higher learning institutions. *Malaysian Journal of Learning and Instruction*, 14(1), 23–61. <https://doi.org/10.32890/mjli2017.14.1.2>
- Tseng, S. C., & Tsai, C. C. (2010). Taiwan college students’ self-efficacy and motivation of learning in online peer assessment environments. *Internet and Higher Education*, 13(3), 164–169. <https://doi.org/10.1016/j.iheduc.2010.01.001>
- Yin, R. K. (2014). *Case study research design and methods* (5th ed.). SAGE Publications.
- Zhang, Z., & Bayley, J. G. (2019). Peer learning for university students’ learning enrichment: Perspectives of undergraduate students. *Journal of Peer Learning*, 12, 61–74.
- Zher, N. H., Maznah, R., Hussein, R., & Saat, R. M. (2016). Enhancing feedback via peer learning in large classrooms. *Malaysian Online Journal of Educational Technology*, 4(1), 1–16.

Personal Reflections: The Myth vs. Truth of Scholarship of Teaching and Learning

Arifatul Husna Mohd Ariff
Tunku Puteri Intan Safinaz School of Accountancy
College of Business, Universiti Utara Malaysia
Corresponding Author: arifatul@uum.edu.my

Abstract

The objective of this paper is to reflect about what Scholarship of Teaching and Learning (SoTL) is and how to conduct a proper SoTL research. The reflection is made based on author's own experience when attending the SoTL Training of Trainer Workshop under the Inspirational Academician Programme (IAP) in July and August 2021 at Universiti Utara Malaysia. Based on the reflections, it is found that SoTL is a broad concept of scholarship that every academician must profess in the academic world. It goes beyond effective teaching and sound research. It also requires an innovative teaching that contributes to the body of knowledge of teaching and learning and to the scholar community of practice. A proper SoTL research is doable and necessary to ensure a good impact to the theory and practice in teaching and learning. The paper can help resolve some confusion among scholars with regards to SoTL, conceptually and practically.

Keywords: Reflection, SoTL, scholars, innovation

Introduction

"It is the states of the heart, the place of our intentions that holds us accountable".
(Imam al-Ghazali)

I first heard of scholarship of teaching and learning (SoTL) when I came back from my PhD study and start resume my responsibility as a lecturer at my university in year 2016. At that time, I was looking for an opportunity to embark into a research project. Then, there was an announcement about a SoTL research grant offered by the University Teaching and Learning Centre (UTLC) at my university. I was fascinated by the idea of embarking into research in teaching and learning, since I am always looking forward to improve my own teaching technique. So, I decided to apply for the SoTL research grant. This marks my first step in the SoTL journey. However, I am a bit confused about the concept and philosophy behind the SoTL research. All I know at that time was SoTL is different from academic research in the sense that it is limited to solve a problem in teaching and learning.

Recently, I have attended the Inspirational Academic Programme - Module 6: SoTL Train of Trainers' workshop to extend my journey in SoTL. During the workshop, there are many new lessons that I have learnt. Among them is correcting my misconception about SoTL research and identifying the practical approach of research design for SoTL project. Therefore, the objective of this paper is to reflect about what SoTL is and how to conduct a proper and good quality SoTL research. This reflection may be useful in correcting the misconception about SoTL among many of us and help us to redefining our journey in SoTL.

The Myth about SoTL

My first perception about SoTL research is that it is an empirical research type which aims to prove the effectiveness of a particular teaching method. Therefore, it involves a process of

implementing a particular teaching technique to solve a specific teaching and learning problem. It also try to prove that the particular method is effective and thus, solve the problem in teaching and learning. That's it. Well, is it true?

Moreover, I am not the only one who thinks like this. Several colleagues of mine also think the same way. Based on the initial feedback received from the participants of the SoTL training workshop, most of us think that SoTL is just about doing the changes and improvement in teaching and learning inside the classroom. According to Kern et al. (2015), confusion does exist with regards to SoTL role and contribution in academia world, especially how it is different from other traditional discipline-based concepts of research.

Revealing the Truth about SoTL

According to Boyer (1990), SoTL refers to academic work that covers teaching, discovery, application and integration of knowledge. It involves a systematic study (i.e. discovery) of teaching which aims to improve teaching and learning process (i.e. teaching). It is not only about finding the best way to teach and transmit the knowledge, but also it is about sharing the discovery with other scholar community members (i.e. application) and extending the knowledge to other disciplines (i.e. integration).

SoTL is different from scholarly teaching, because scholarly teaching is limited to reflecting and assessing the effectiveness of pedagogy within the classroom, but SoTL goes beyond it (Shulman, 2000). It requires the work to be shared with the colleagues and made public to the scholar community, allowing it to be reviewed, criticized, replicated and extended by other scholars. SoTL is also different from educational research because SoTL can be conducted in multidiscipline of knowledge, and not just in educational field. SoTL research is also different in terms of its methodology because it usually requires reflective approach to critically evaluate our own teaching practice.

Methodology

This paper uses a reflection method to achieve the research objective. I choose to reflect on my experience when attending the SoTL Training of Trainer Workshop (known as SoTL ToT workshop) under the Inspirational Academician Programme (IAP) in July and August 2021 organized by the UTLC. I also do reflections based on the SoTL training workshop (known as SoTL workshop) that I conducted in August 2021 as part of the task in the SoTL ToT workshop. I use the Gibb's Reflective Cycle to reflect on those experience. The Gibb's Reflective Cycle involves description of the event, feeling before, during and after the event, evaluation of the good and bad experience, analysis about the event, conclusion that can be derived from the event, and action plan in the future (Gibbs, 1998). The reflections are presented and discussed in the findings and discussion section below.

Findings and Discussion

Description

I have attended the SoTL Training of Trainer Workshop (SoTL ToT workshop) under the Inspirational Academician Programme (IAP) in July and August 2021 offered by UTLC. The objective of the workshop is to train and produce experts in SoTL research. The workshop was conducted in two series for four days through online platform. The workshop was facilitated by two Master Trainers and participated by 16 academic staff from different schools at Universiti Utara Malaysia.

During the workshop, the participants were reinforced about the characteristics and process of SoTL research, including the discussion about the dual role of lecturer-researcher, possible SoTL intervention, opportunities for publication and networking, preparation for

SoTL training, and development of a e-teaching portfolio. Among the activities conducted during the SoTL ToT workshop are interactive dialogue, group discussions, and individual presentations. One of the most important tasks given to the participants is organizing our own training workshop about SoTL.

Feelings

At first, I feel anxious about the SoTL ToT workshop. I asked myself: Am I ready to be an expert in SoTL? I am aware that I have not much knowledge and experience in SoTL research. I have only little and shallow knowledge about SoTL and conducted only one SoTL research project in the past few years. But then I want to grow to be a scholar, a good teacher as well as a good researcher. Hence, this is a golden opportunity that I shall not miss. Therefore, I agreed to join the workshop.

At the beginning session of the SoTL ToT workshop, I feel thrilled because of the highly engaging activities between the participants and the Master Trainers. It made me worried if I missed any session because I might be lost in the discussion. Then, when the Master Trainers ask us to organize our own SoTL workshop, I feel anxious because I never had any experience organizing my own workshop. However, I am thankful because I have a good cooperation with my colleagues and the school management in organizing the workshop. Towards the end, I feel satisfied and more confident to organize the SoTL workshop.

Evaluation

The activity planned during the SoTL ToT workshop are very engaging and appealing. The Master Trainers are very experienced in SoTL research and able to explain the expectation about SoTL research clearly. The Master Trainers also encouraged the participants to speak up and express our opinion about SoTL. We are free to express our feelings and experience in dealing with SoTL research. Some of the participants are very open-minded and wise in expressing their idea and this has inspired me to be a good teacher and researcher. Indirectly, the whole discussion during the SoTL ToT workshop has induced me to reflect upon myself whether I really understand the philosophy behind SoTL research, why SoTL is important in academia, and how to embark in SoTL research to capitalize the benefits from it. This is a very eye-opening activity for me which I appreciate so much from the SoTL ToT workshop.

With regards to the task given to the participants, I believe there is a reason behind it. For example, when we are required to organize our own workshop to introduce about SoTL to other colleagues, I believe the purpose is for us to build our confidence and for us to dig about SoTL much deeper. At first, I was a bit reluctant and not confident to conduct such workshop due to lack of confidence since SoTL is not my subject matter. However, I have to challenge myself to come out of my comfort zone. I must equip myself with the knowledge and skills about SoTL before I disseminate the knowledge to others. Therefore, I started my quest by searching literature and materials about SoTL from the websites and databases. I spent almost a week to read articles and sources from prominent SoTL proponents such as Voelker, Felten, Vanderbilt, etc. and visit websites of several learning centers such as the Carnegie Foundation, Centre for Engaged Learning, and Vanderbilt University Centre for Teaching. For me, the lesson that I most appreciate in this task is the ability to double my effort to strengthen the understanding about SoTL. With this effort, I believe I am able to connect the dots about SoTL.

Another evaluation that I can make from this task is that I am able to help my colleagues to better understand what SoTL is. At the beginning of the SoTL workshop, I asked them what they understand about SoTL. Most of them gave responses that SoTL is about conducting a research to improve the teaching and learning by introducing a new intervention in teaching and learning. They also thought that the research should only be limited to that classes and group of students only, and they never share their intervention with other colleagues. So, from

their responses, I can see that they also have similar perception like me at the beginning. Thus, it makes me easier to explain to them the misconception about SoTL because I used to be in the same shoes. I also managed to explain the practical way to conduct SoTL research by fitting into the normal research process but with SoTL criteria. Based on the feedback from the participants, most of them feel that they had better understanding about SoTL after attending my workshop. This is very satisfying and a valuable experience for me.

Analysis and conclusion

Based on the discussion activities during the SoTL ToT workshop and the task of organizing our own SoTL workshop, I have learnt a lot of lessons. Among them is I am able to correct my misunderstanding about SoTL. SoTL is not just about conducting a research to solve the problem in teaching and learning. SoTL activity does not stop when we find the results from the intervention introduced in the classroom, but we must continuously view our teaching from the critical perspectives. It is difficult to criticize ourselves, but we must be honest and true to ourselves. We shall always aim for what is the best to our students in their learning. That is why reflective practice approach very important when conducting a SoTL research.

SoTL goes beyond teaching and research. The intervention introduced to solve the teaching and learning problem can be regarded as an innovation. Innovation is important to improve the quality of education (Serdyukov, 2017). The findings from the research shall be presented and shared among the scholar community so that the benefits and innovation developed from the SoTL research can be disseminated and benefited beyond the classroom and across multidiscipline. That is why every SoTL research grant are required to be presented at a scholar community of practice conference (such as the Inspirational Scholarship Symposium) and are expected to be published in a good journal. This is not just for the sake of fulfilling the Key Performance Index (KPI), but to disseminate the findings from the study and to be open for critics from the scholar community. From the sharing sessions, the findings from the research are expected to become as part of knowledge base of teaching and learning and can be applied and integrated in any disciplines (Kern et al., 2015). Thus, from my view, SoTL is a synthesis of four activities: teaching, research, innovation and sharing, which involves with bringing in the critical view lens into what happen in the classroom and share it with community of practice. This is illustrated in Figure 1.

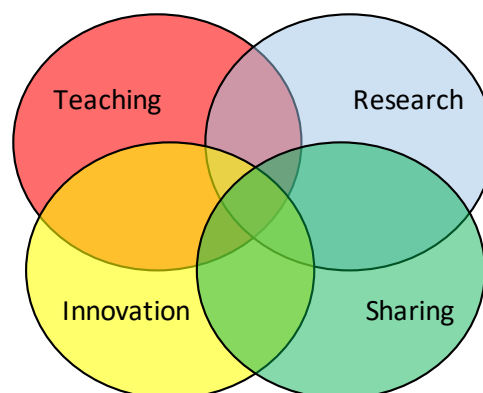


Figure 1. SoTL diagram (from the author's perspective)

Finally, I also learnt about the proper approach to conduct SoTL research. According to Felten (2013), a good SoTL research must possess the following characteristics: (1) Begins with own inquiry in students' learning, (2) the research is grounded both scholar and local context, (3) using a sound social science-based research methodology, (4) engage with students when collecting data, and (5) the research findings should be shared with the scholar

community for use or critics.

Practically, SoTL research is an action research that was conducted to solve a problem in teaching and learning by introducing intervention in the classroom via reflective practices. It involves planning, acting, observing, reflecting and further planning. SoTL research begins by identifying the problem from our own inquiry of teaching (such as why students are lack in critical thinking, why students did not participate in group works, etc.). Then, we will search for a suitable intervention to be introduced in our classroom. Usually, we will search from the recent literature of the possible intervention. The source of information could sometimes come from other disciplines. Once we have identified the suitable intervention, we will make and execute the plan to implement the intervention and to collect the evidence as results from the intervention. The evidence or data can be collected from reflection journals or assessment grades from both the lecturer-cum-researcher and the students. We can use different reflection types such as Gibb's reflective cycle, Kolb's experiential learning, De Bono's deliberate thinking or Brookfield's critical lens to make the reflections. Based on the reflection journals, the results from the intervention can be concluded whether it is effective or not, and to what extend it is effective, and what are the rooms for further improvement. This could be the basis for future plan in improving the teaching method. The SoTL research process is illustrated in Figure 2.

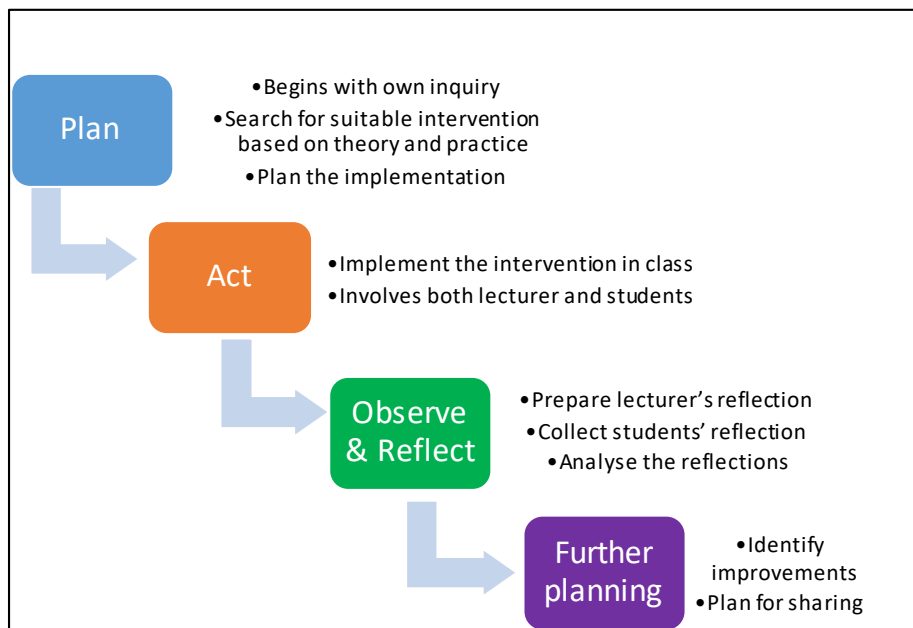


Figure 2. SoTL research process

Conclusion

Now, I know my earlier perception of SoTL is not accurate and incomplete. I realize that SoTL is not about finding the ultimate best way to teach, but rather it is a continuous process of improving ourselves and our own teaching in class. SoTL is about viewing our teaching method from a critical perspective and always challenge ourselves to be a better teacher. SoTL is also about extending the findings and innovation in the classroom to other people in the scholar community of practice and to the body of knowledge. The SoTL ToT workshop and the tasks given have opened up my eyes about the proper path in SoTL, the prospect in SoTL, and enhance the inner spirit of SoTL.

Action Plan

In the future, I will conduct more SoTL research to contribute to the body of knowledge in

teaching and learning. I plan to use different reflection techniques in the coming SoTL research. I would like to gain more experience and skills in conducting SoTL research.

I also plan to conduct more SoTL training. I would like to increase the awareness about SoTL research among my colleagues and other academicians. In the near future, I plan to help my colleagues by conducting a more advance workshop about SoTL and prepare a consultation session on how to prepare SoTL research proposal for those who plan to apply for SoTL research grant. I intend to engage with any SoTL movement at my university, national or perhaps international level.

Conclusion

As a conclusion, SoTL is a long journey in academic career. As an academic, we shall gradually improve ourselves and become profess in teaching, research, and service to professional community and general community. This could be done by embarking into a SoTL research, be willing to share the findings, and be open for critics for the advancement of knowledge in teaching and learning. May the quest for searching the soul of teaching take us closer to The Creator.

References

- Boyer, E. (1990). *Scholarship reconsidered: Priorities of the professoriate*. Princeton, NJ: Carnegie Foundation for the Advancement of Teaching.
- Felten, P. (2013). Principles of good practice in SoTL. *Teaching & Learning Inquiry*, 1(1), 121-125.
- Gibbs, G. (1998). *Learning by Doing: A guide to Teaching and Learning Methods*. Oxford Polytechnic: Oxford.
- Kern, B., Mettetal, G., Dixon, M.D., and Morgan, R. (2015). The role of SoTL in the academy: Upon the 25th anniversary of Boyer's *Scholarship Reconsidered*. *Journal of the Scholarship for Teaching and Learning*, 15(3), 1-14.
- Serdyukov, P. (2017). Innovation in education: what works, what doesn't, and what to do about it?. *Journal of Research in Innovative Teaching & Learning*, 1 (1), 4-33.
- Shulman, L. (2000). From Minsk to Pinsk: Why a scholarship of teaching and learning? *The Journal of the Scholarship of Teaching and Learning*, 1(1), 48-53.

COVID-19 and SoTL: Turning Disruption into Opportunity in Teaching Cases

Siti Seri Delima Abdul Malak^{*a}, Arifatul Husna Mohd Ariff^b, Noor Afza Amran^c
^{a, b, c} Tunku Puteri Intan Safinaz School of Accountancy (TISSA-UUM), Universiti Utara
Malaysia, Malaysia

*Corresponding Author: seridelima@uum.edu.my

Abstract

COVID-19 had impacted, disrupted and forced changes in the education systems globally. This paper was a reflective piece on how the pandemic affected a Scholarship of Teaching and Learning (SoTL) idea as it entered its second cycle. The SoTL action research was conducted on a capstone accounting course. The aim of the SoTL idea was to constructively align the course as a capstone course. The usual student-centred approach of brainstorming and presentation had become repetitive and did not demonstrate the depth of the understanding of the cases. The first cycle of the action research, attempted to do so by introducing an open poster exhibition day. However, the pandemic hit as the SoTL research was to be iterated in its second cycle. Consequently, the pandemic had turned the original idea into something greater and more authentic in achieving the course learning outcomes of this capstone course.

Keywords: SoTL, pandemic, authentic assessment, constructive alignment, action research

Introduction

COVID-19 disrupted and changed our education landscape in many ways. Learning seemed to stop for a moment, and to be revived with transition into remote learning. The remoteness became a catalyst to push for a 'complete' full embrace of the digital world into a classroom. It also represented golden opportunities for educators for adaptive and innovative scholarship of teaching and learning (SoTL) ideas. Kreber and Cranton (2000) viewed SoTL as "ongoing learning about teaching and the demonstration of such knowledge." In the time of pandemic, 'ongoing' education was literally disrupted, and when it resumed, it presented a challenge and opportunity to re-iterate a SoTL idea under a remote classroom environment.

This paper was a reflective piece on how the pandemic affected a SoTL intervention as it entered into its second cycle. The SoTL intervention was conducted on an accounting course that centred into real teaching cases. Firstly, it narrated the start of the SoTL intervention and its first cycle. This happened a semester before the pandemic. Subsequently, it investigated the impact of the pandemic on the second cycle that forced changes to the original SoTL idea and its iteration. The disruption in the second cycle turned into golden opportunity to further address the constructive alignment of the course.

Background of the Course

Integrated case study (ICS) is a capstone course for accountancy programs that integrates knowledge from financial accounting & reporting, management accounting, taxation, audit, finance, management and business, information technology and other social sciences courses. Instead of specific topics or chapters, the syllabus contains seven unique cases that changes every semester to expose students to real business scenarios and cases. It was introduced as part of the changes in the curriculum review for the accounting programme in Malaysia in 2010.

This course is designed to enable learners to integrate knowledge from the various related disciplines. It is also to enhance their technical core competencies, cognitive, leadership and teamwork skills in an unstructured business environment. The idea a capstone course was share by Boyer Commission (1998) that proposed that all undergraduate programs should "Culminate with a capstone experience. The final semester(s) should focus on a major project and utilize to the fullest the research and communication skills learned in the previous semesters (p. 27)."

ICS is usually taken by advanced undergraduate students in semester 6 or 7 at Tunku Puteri Intan Safinaz School of Accountancy (TISSA-UUM). There are six course learning outcomes (CLOs) for the course (Table 1). The course learning outcomes are reflective of the design of the ICS as a capstone course. Correspondingly, the cognitive domains are C3 and above.

Table 1
Course Learning Outcomes

No	Course Learning Outcome	Domains
1	Interpret various accounting and business-related issues in an organizational context.	C5
2	Make independent research.	C3, P7
3	Develop alternative solutions to issues, devise action plans, and resolve implementation issues.	C6
4	Demonstrate ideas, views and recommendations effectively both verbally and in writing.	C4
5	Demonstrate ethical awareness ethical considerations as part of the decision-making process.	C3, A5
6	Demonstrate leadership and teamwork in issues development and resolution.	C3

The course is based on student-centred learning method, facilitated by lecturers as case instructors. Each student is assigned to groups, whereby everyone is expected to discuss key questions and exchange views among group members via team meeting before each case is discussed in class. The primary and conventional method of teaching and learning is on group presentations and group brainstorming.

The development of the SoTL idea

I was literally thrown into this course when a colleague was caught sick. I had to replace the class in Week 4 of teaching and decided to follow the flow of the teaching plan. Group presentations and brainstorming took central role during the teaching and learning activities. Subsequently, students also then submitted written case reports. At the end of the semester, all of the CLOs were assessed and achieved by the students.

Reflection on action

A study on the initial implementation of ICS in another public institution in Malaysia, contended that it was a course that required iteration from continuous action learning and reflections for it to be successful (Aman, Maelah and Md Auzair, 2012). During all the many group presentations and brainstorming, I was literally 'thinking on my feet' or as Schon (1987) would academically state as reflection on action. In these moments, I was reflecting that all these activities were not adequately capturing the essence of a capstone course. During the

presentations, some of the groups were only presenting at surface levels, lack of engagements with audience, lack of focus and retention among audience. The presentations became mere repetitive tasks. The students just want to get the presentations done and over with and submitted their reports. The case reports were also confounded with group dynamics issues, for example: free riding, dominant leaders, and passive group members and compartmentalised of tasks. Overall, I felt that things should change in terms of the overall teaching and learning activities, approaches and subsequently, the assessment. Had the course learning outcomes been really explored and assessed?

Reflection in action

After the semester ended, I had to the opportunity to do more reflection. I was also entrusted to teach this course again in the coming semester, so my 'reflection in action' began earnestly. Schon (1983) defined reflection in action when that teacher reflected prior to another lesson, and after lessons had concluded, on what happened then. According to Merriam-Webster dictionary, capstone is defined as "the high point – the crowning." I reflected on what could be done better to really showcase this course as a crowning course for the accounting program. There appeared to be a need to do a constructive re-alignment of the course. Biggs (2003) contended that constructive alignment should begin with through relevant learning activities. My immediate concerns thus, firstly were that on the repetitiveness of the group presentations that did not seem to adequately develop and demonstrate the course learning outcomes. Secondly, on improving my own pedagogy skills as a case instructor. Finally, on introducing technology into the teaching and learning activities.

The Development of the SoTL Intervention

Cycle One – Pre-Pandemic

Action research was chosen as the methodology for this SoTL idea. An action research is defined as, "The process through which teachers collaborate in evaluating their practice jointly; raise awareness of their personal theory; articulate a shared conception of values; try out new strategies to render the values expressed in their practice more consistent with educational values they espouse; record their work in a form which is readily available to and understandable by other teachers; and thus develop a shared theory of teaching by research practice (Elliot, 1991)."

So where should the reconstruction occur? I decided to heed Healey's (2014) advice that, "Capstone projects are a keyway of integrating research into undergraduate programs, but it is time to rethink their role and give students more choice in how they conduct them and how their work is assessed and disseminated." The presentations needed to be improvised to do this. I decided that it should be started with a small step of focusing on a final case as a final showcase for the students. It would not be in the usual form of group oral presentation.

The brief included preparation of a poster, an open exhibition and a planned activity for visitors. Their visitors also included peers from ICS classes that were not taught by me. Students would be stationed on their poster's exhibit on a rotational basis. Their tasks were to explain on their assigned case and conduct activities with their visitors. It did not include submission of a written report. The objective of the open exhibition day was for students to demonstrate and showcase their understanding of the issues surrounding the final case.

Over the teaching weeks prior to the open exhibition day, I exposed students to various interactions methods, traditional approaches such as role plays, jigsaws and integration of tools 2.0. The students were now required to conduct at least one interactive activity for their peers during their usual class presentations. This was to prepare the students for their own engagements during the open exhibition day at the final week of the course. Figure 1 illustrated

the first cycle of my SoTL intervention.

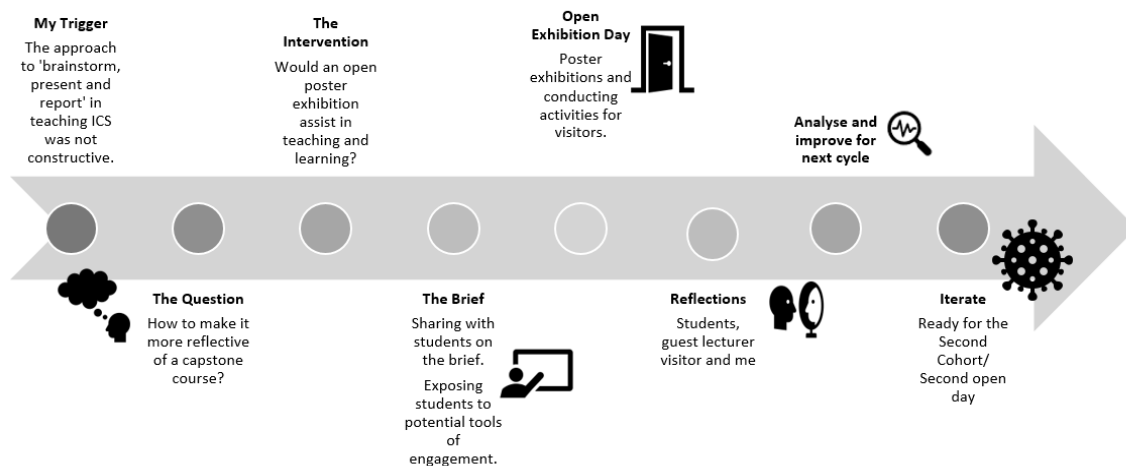


Figure 1. The First Cycle of the Action Research

The open exhibition day was held on Week 12 of teaching. The visitors also included students from other classes that were not taught by me and their lecturer. Students were stationed at their posters by rotations. They explained to the visitors about the case and conducted activities. The activities range from online games, traditional poison bottle game and crossword puzzles. Posters also embedded QR codes to bring visitors to additional resources and links. The students mingled around and interacted with all the different exhibits. Appendix 1 was a collection of the reflections by the students that related to the open exhibition day.

Reflections from Cycle One

Insights from students. The reflections from Cycle One by the students showed that they had appreciated the shift from traditional presentation and written reports to the poster presentation and open exhibition format. For instance, from Student One, *“anyhow I am still glad that especially on the IMDB case where we use the poster as the replacement for report is definitely reducing our burden and stimulating learning culture”* and from Student Two, *“The experience of doing poster exhibition is very good and i can increase my communication skills when i try to explain anything that the students asked related to IMDB case.”* This specific reflection by Student 3, *“the class become lively compared to having a common class as usual. So, for me, this creative teaching way should maintain and provide it to our juniors after this,”* showed an insight that student noticed the changes from the usual mode of students’ presentations. Overall, the reflections from the students showed that they had appreciated the poster and open exhibition format. They were also very positive to the build ups towards the event day through the inclusion of more interactive teaching and learning environment.

My reflection on action. During the build ups to the open exhibition day, I had the chance to interject more interactive methods in teaching the cases. I had to really plan ahead my teaching and learning activities to suit each case. So, it was satisfying to see students became more engaged to the teaching and learning activities. On the open exhibition day, I was surprised to see the diversity in the activities that the students planned. There was a mixture of traditional and physical interactive activities and online games. The posters were diverse also, with some embedding elements of technology into them. The students were deeply engaged with the visitors that came to their stations. They were able to explain the case in depth and answered questions posed to them. The activities were also conducted effectively by the students and attempted meaningfully by the students. A colleague who was a lecturer for another two ICS

classes also attended. She also seemed engrossed and thrilled to be part of and observed the interactions and engagements. I was left very happy and inspired by the end of the open poster exhibition day. I felt that now this was a showcase of a capstone course.

My reflection in action. As a post-mortem, I looked back on my earlier reflections on what were my concerns that triggered me to embark into this SoTL intervention.

- Repetitiveness of group presentations – it no longer felt that way as the group presentations were presented in formats (jigsaw, mind map collaborations, role plays, slides). The open poster exhibition had also allowed for students to authentically demonstrate their case understandings and shared with their peers the depth of their understandings.

- Pedagogy skills – I was happier here to embark the role as a case facilitator rather than lecturer. I was inspired to see that my students also took the roles as facilitators during the open poster exhibition. I did believe that they emulated how I had been the facilitator to them and so now it was their turns. Although I did have to further improve on addressing the dynamics and diversity among my students.

- Integration of technology – The integration of tools 2.0 in the overall teaching and learning activities had also improved the teaching of the course.

Overall, I felt that the open poster exhibition, allowed for the constructive alignment to happen especially in showcasing ICS as a capstone paper. For the next cycle, perhaps more weight could be allocated to the open poster exhibition. In this first cycle, only 10% was assigned to the poster case. This was to commensurate the efforts that students had put into the showcase. On a hindsight, I did not properly plan for the collection of the reflections specific to the showcase. The students pointedly reflected upon this on our overall reflection for the course. The next cycle should include proper collection of reflections and suggestions from the students. In addition, the invitations for the open poster exhibition could be expanded to include students from other semesters and other lecturers. A proper evaluation by visitors could also be planned. These improvements would have been transposed into the next cycle.

Cycle Two – The Pandemic

Alas the second cycle was ready to kick in. We were in our fourth week of lesson. I had briefed my class on the open poster exhibition that would be the highlight of the course. Students were intrigued to be a part of an unusual group presentation. Then, COVID-19 hit us hard. Classes were cancelled and we went into a total lockdown. Classes were put on a hiatus for 3 weeks before it commenced remotely. I was taken aback. I had to also rethink and reimagine how the open poster exhibition would be. One of the flexibilities that was accorded under the emergency remote learning was on the nature of assessments. Lecturers were given the choices to explore on alternative assessments in lieu of final and summative examination. One of my planned improvements was to give more weight to the open poster exhibition. This was a golden opportunity to truly showcase the open poster exhibition and its spirit.

My major concerns were on the ability and challenges to transform the experience of Cycle One into an online and remote environment. I decided to explore on online student portfolio. A student portfolio is described by Birgin and Adnan (2007) as “a systematic and purposeful collection of the evidence which reflect the success, performance, and efforts of the students in one or more areas over a period of time.” Most importantly a student portfolio can also be made accessible should an online medium be chosen to be visited by their peers. This appeared to capture the spirit of the open day exhibition in Cycle One.

Consequently, the open day exhibition was transformed to an online student portfolio. Students had to share a descriptive video of the case, deliver a lesson on the case, design and conduct asynchronous activities for their peers. The chosen online medium was Padlet. The link to the Padlet had to be shared to their classes. The weight of this student portfolio was now

30% and to replace the original final examination. In addition, all the classes enrolled in ICS would partake in this format of assessment. In Cycle One, only my class was a part of the SoTL intervention.

From a physical open exhibition, visitors would now visit and interact with the cases virtually. Hill, Kneale, Nicholson, Waddington and Ray (2011) contended that capstone projects should be reimagined to be relevant to students and employers, especially in aligning to the 21st century demands, academically and working world. So, to be able to reimagine and transform the open exhibition into a virtual world seemed to be relevant to this demand.

Figure 2 visualised Cycle Two that was conducted during the pandemic. Cycle Two mirrored the interventions done in Cycle One especially the teaching and learning activities that were conducted as a build up to the final case. Except now everything occurred virtually. Students were also asked to do reflections specific to the online student portfolio. Additional question was asked also on their thoughts on replacing the final examination with a unique formative assessment. Appendix 2 provided a collection of the reflections by the students.

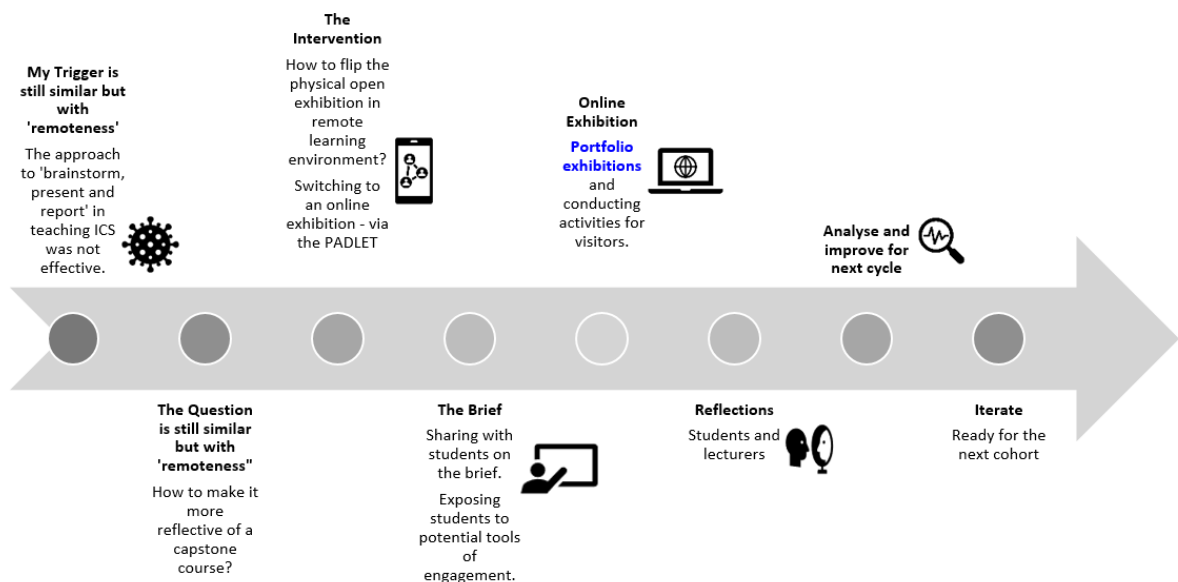


Figure 2. The Second Cycle of the Action Research

Reflections from Cycle Two

Reflections in the Cycle Two was done more formally via collection of reflections through online application, Teammates and their written reports.

Insights from Students. Interestingly, the reflections from students in Cycle Two, mirrored what was said in Cycle One. In that a significant number of the reflections were on the development of their soft skills and the level of active learning. However, the context was different in that now this cohort had experienced the SoTL intervention with more weight and in lieu of a final examination. In fact, when surveyed, 44 students out of 62 students (70.97%) that were enrolled in this course for Cycle Two preferred the student portfolio, not a final examination. In addition, their reflections on the attainment of digital skills and the usage of technology were reflective of the opportunities offered by the pandemic. That was to be a catalyst in embracing more sophisticated tools 2.0.

Student one reflected that, *“Student portfolio is more tiring to do but i think we have more control on whether we get a good grade compared to final exams. Honestly more courses should do this instead of final exam because final exams are more on rote learning rather than application”*. Student Two picked on the uniqueness of the online medium, *“I prefer the student portfolio as for the uniqueness of the assessment. Requires us to explore many us eful platforms*

that can be used instead of traditional class. The preparation for the portfolio does not require a lot of time actually if we really manage the time properly. The medium is already there, and we only need to include all the resources required.”

In addition, student also reflect on the length of time given to complete the tasks. For example, Student Three, *“I would like to suggest additional time for students to complete the portfolio with a good quality performance. Besides, it will be great the student portfolio can be implemented to student's coursework as it gives advantage for student in gaining new skills and knowledge as well as improve their attitude and behaviour in preparing the student portfolio.”*

Finally, it was inspiring to get insight that captured the satisfaction of students to be a teacher of their own, like this student, *“It gives me fun time and satisfaction since all my classmates attempt and review my sharing in the Padlet platforms. It was very recommendable for next semester since it will give new exposures to the students instead of preparing a report.”*

My reflection in action. When the semester was stopped at Week 4, I was in a quandary. My plan for Cycle Two had be disrupted abruptly. How shall we proceed with the open exhibition? After these quandaries had been resolved through transforming it to an online platform, I was now worried that the students could not cope with the remote learning environment and assigned tasks. When the brief was vetted for quality control purpose, the reviewers called me in on whether the expectations are too high. I prevailed by saying that this was a capstone course, and the CLOs should be attained authentically. Yet, I knew that I had to also make sure that the build ups to the virtual showcase was emulated by me. So, I did that by using the Padlet as a platform and integrating various tools 2.0 in my teaching and learning activities. A mock student portfolio was also set up so that students to help manage expectations. I was happy and excited to see students progressively developed their virtual open portfolio. I also see their developments between tasks. In addition, I was impressed by the variations of the online activities that the students had develop and attempted asynchronously by their peers.

My reflection on action. Although a cycle disrupted, the circumstances and flexibility offered by the pandemic, allowed for Cycle two to incorporate improvements from Cycle One. The weight of the assessment was now heavier and on par to a final examination. There were specific reflections done by the students. However, visits by other students and lecturers did not happen. These would entail the external visitors to navigate a lot of students' portfolios. Correspondingly, on a hindsight, asking all the peers to attend another individual student's activity at their Padlet could be exhaustive. In the next cycle, another approach should be considered, especially on the development and attempt of the activities by the peers. Overall, I was satisfied with the iteration that was done in Cycle Two. The pandemic had turned the original idea in Cycle One into something greater and more authentic in assessing the CLOs of this capstone course in this cycle.

Conclusion

“The value of a college education is not the learning of many facts, but the training of the mind to think ”

This quote by Albert Einstein was found in a reflection by a student on his thoughts on the online student portfolio. He further contended that, *“Unlike other courses, the basis of learning concept is mostly by memorizing all the facts and formula etc. but this course has made me to think critically and applying the knowledge into a real situation. I personally believe that it is the best approach of learning because in that way students can get better understanding how every piece of concept work together and apply knowledge to different situations in every*

case.”

This reflection aptly summarized what the SoTL intervention aims to achieve by introducing an authentic assessment that could be part of the constructive alignment of this capstone course. The findings from the reflections by the students in Cycle One and Cycle Two revealed that the students were affected positively by the action research. The disruption from the pandemic, had been a catalyst in pushing for the original SoTL idea to grow into an authentic learning experience for a capstone course. Further iteration that incorporates improvements into the following cycle could potentially turned this SoTL intervention into an effective method in teaching cases.

References

- Aman, A., Maelah, R., & Auzair, S. M. (2012). Implementation of Integrated Case Studies Course for Accounting Students. *Procedia-Social and Behavioral Sciences*, 59, 9-17.
- Biggs, J. (2003). Aligning teaching for constructing learning. *Higher Education Academy*, 1(4).
- Birgin, O., & Adnan, B. (2007). The use of portfolio to assess student's performance. *Journal of Turkish science education*, 4(2), 75-90.
- Elliott, J. (1991), *Action Research for Educational Change*, Open University Press, Milton Keynes.
- Healey, M. (2014). Integrating Undergraduate Research into the Curriculum: International Perspectives on Capstone and Final-year Projects. *Council on Undergraduate Research Quarterly*, 34(4), 26+.
<https://link.gale.com/apps/doc/A377777160/AONE?u=anon~c9c72dd1&sid=googleScholar&xid=f81c7139>
- Kreber, C., & Cranton, P. A. (2000). Exploring the scholarship of teaching. *The Journal of Higher Education*, 71(4), 476–495.

Appendix 1

CYCLE ONE: REFLECTIONS BY STUDENTS

<p>Overall, the class activities are fun which are very helpful in learning a new thing. The conducive environment for learning could better assist students on willing to learn more. It is perhaps too many cases to undergo for this course, as providing a perfect report requires time to do research, it may be cutting down a case for the total number of cases that we have. anyhow I am still glad that especially on the IMDB case where we use the poster as the replacement for report is definitely reducing our burden and stimulating learning culture. Thank you, Dr.,</p>
<p>Have more interesting and fun activities regarding the case. do not always make student stress in the 3 hours ics class. and i like this class because madam provide a fun activity and the student will not get boring. always prefer student to be more creative in presentation by providing games or quiz. and not just formal presentation and of course the student will get boring and think that ics subject is not interesting.</p>
<p>in this class involves working in groups. at first it did not give me confidence to make a presentation and work in a new group. In this group there are members who are very clever and have very high confidence that it makes me less confident in this group. but I am wrong they are very helpful to me and make me more confident and always inspire me to be more confident and believe that I can also do to advance myself. This class also taught me to share knowledge with each other is very important to advance and increase knowledge. I will miss this class and this very lecturer is very creative in delivering a case and is very good at hearing our problems and ideas.</p>
<p>I would like to say that the class was very fun and interactive. We were able to share our thoughts and the class was very interesting. Many activities which were conducted gave a chance for us to speak up and get boldness to present. In short, the class was very enjoyable but perhaps need like feedback of our assignment to know whether we did it correct or not.</p>
<p>So far, my experience in ICS is very good. I able to learn many new things in every class with my team members. We communicate well with each and other and we solved many problems in our group together as one. I also had an experience of getting to know my group mates in deep during the IMDB project. We spend almost a day in finishing the project and from this I get to know each and other more deeply.</p>
<p>throughout this subject, I also learn how to brainstorm my idea to my teammates, use popplet, prezi and create poster. The most important is an able to improve my soft skill especially my communication skills through various discussions with my teammates.</p>
<p>I gained knowledge and experience when doing the cases. My teammates also give full participation in every report we are doing, I especially love doing poster for IMDB case. The experience of doing poster exhibition is very good and i can increase my communication skills when i try to explain anything that the students asked related to IMDB case.</p>
<p>A fun class where I gain knowledge through activities such as games, poster presentations and role plays. As for the improvement, maybe Dr can discuss with the students on whether we are doing it right or not.</p>
<p>Honestly, I learn many things in ICS. I get to increase my general knowledge regarding the issues surrounding. Plus, I am happy to have class with my lecturer since she comes out with many creative ways in providing us the lessons. So, the class become lively compared to having a common class as usual. So, for me, this creative teaching ways should maintain and provide it to our juniors after this.</p>
<p>The class is conducted well and very interesting in all the times. For example, poster presentation and video presentation for the case study rather than written report that we usually did. Hence, it will not make us feel so bored for this course. Besides, I able to focus and understand what had been taught by the lecturer during the class time. In all, I am happy to be a part of this class.</p>

APPENDIX 2

CYCLE TWO REFLECTIONS BY STUDENTS

<p>It is quite challenging because understanding the case alone needs a lot of time. And the due date coincides with other assignments from different subjects. So, I need to do the portfolio from time to time in between completing other assignments. However, making descriptive video and peer activity is quite easy and fun but for the lesson, I am quite confused about the frameworks thus took a long time to complete.</p>
<p>It was actually quite okay as we have to be doing these for our normal class activity. It is just quite rushing as we have many assessments to complete during the same period which was challenging.</p>
<p>My feeling preparing the student portfolio was both tiring and satisfying. I had a hard time preparing the student portfolio as it was time consuming especially doing answering all the peer activities as i did not have enough time due to other pending assignments and had to stay up to finish up the student portfolio. However, once i have completed all the requirements of the student portfolio i felt very satisfied as i felt all my hardwork had put to good use. My lecturer also made it easier for me to keep track on my completion of the task by</p>

<p>providing deadlines for all the tasks and preparing a google document with a list of other peers 'student portfolio for easier access.</p>
<p>it's quite fun because i can prepare my own Padlet and can see the progress of the friends who answered the quiz that has been provided. but a little challenging to provide video through Powtoon in creative ways. It takes time to complete the video even though the video was short. Overall, i really enjoy completing the activities in the padlet.</p>
<p>It was a good experience dealing with various virtual platform to learn and to teach others. Whilst preparing the content, i hope that other students can understand better on the cases given and participate to learn instead of just fulfilling the requirements.</p>
<p>It's a great experience act as a lecturer to construct all the relative materials such as the descriptive video, lesson and peer activity all by we in order to teach other friends and make them understand. Before we are teaching others, we as the lecturer now need to study really deep first then only, we are confident in what we are teaching. Besides, during this process i also learned many new things such as the website to create an animation video, unique website that can used to prepare the peer activity and ya it is a really great experience.</p>
<p>It is my first time to explore all these kinds of online tools to deliver my presentation and message. It is useful for my future career.</p>
<p>Boosting up my confidence to speak up front of the camera</p>
<p>I am feeling happy that i was able to complete all the task given to me on time. I was able to gain the exposure of how I should play the role as a lecturer on presenting the case assigned to me to my friends. I was able to learn on fully utilize the Padlet as well as other online platform available but i had faced some internet connection problem especially when creating and uploading the videos.</p>
<p>I'm okay. I love to decorate my own Padlet! Hehe and also, I receive my case which is easy to understand. Alhamdulillah. Everything is alright</p>
<p>at the first stage it is hard to manage time to finish the task since there also lot of assignment for other subjects too, but from time to time i try to have better in managing time.</p>
<p>Initially i feel scared after lecturer explained completely about the student portfolio. However, I gained a lot of knowledge from starting to the ending of the assessment. It would help me to experience the way the lecturer prepares educational materials for the students. I understood that it was a not easy task to prepare the educational materials for the students. It really needed high level of understanding and thinking in order to prepare descriptive videos, lesson or theory videos and peer activity.</p>
<p>Student portfolio was interesting and i think it is a nice idea to replace with final examination, i believe that i had done my best to complete the student portfolio even though there are many assignments pressure from other subjects</p>
<p>During this assessment, I improve my skills in editing and being creative. I also learned so many kinds of apps to edit my video even I have limited gadget to use. I already try my best to explain and to make my friends understand my case.</p>
<p>Excited. Because this is first time, I do activity like this. I can explore new thing in doing this activity.</p>
<p>Eventhough there are a lot to do but I have learned many things likes to do the powtoon video by my own and kahoot game. Besides, i gained new knowledges from other students padlet where they create the video using various alternatives.</p>
<p>First, I thought that how I'm going to prepare this individual portfolio because there are alot of pending assignments for other subjects and also internet connection issues. With proper time management, I completed my individual portfolio sucessfully. After I completed the assignment, I felt that it 's not that hard if we have better understanding about this assignment.</p>
<p>It was fun. To do new things although the deadline was near to each other and since it was a hectic week with so many assessments and assignments, I had to burn the midnight oil. However, it would be a good experience to remember!</p>
<p>I am very excited to explore such activity even though I have many assignments. If I have more time, I think I will be able to make more intereting.</p>
<p>Getting my student portfolio done is kinda better sweet experience for me. But it was not due to the student portfolio itself. There are a lot of challenges that I faced to finish the portfolio, mainly because my laptop broke down even until now. However, I was having fun finishing my portfolio. But still, I know my portfolio was not good enough compared to others but i've done my best to finish it despite of the laptop problem. So sad...but at the same time I feel touched and happy to get a very supportive and understanding lecturer <3</p>
<p>By creating a padlet, I manage to express by creativity. For all videos, I tried to make perfect but still cannot. I love to play in other friends padlet</p>

Fun & excited to explore the everythings which could improve my IT skills

i have learned so many things, i have manage to undertand more about case 5 in Tabung Haji, and i need to develop my strategies to overcome the challange to regain the public confidence. I also know to use the padlet and how i want to make the video more attractive. I have problem l when i make my peer activity because at first i plan to do in kahoot however i have accounted some problem to share the link in padlet so i make decision to change from kahoot to googleform. so, alhamdulillah i have successfully manage to finish my student portfolio. i have learn to manage my time.

I believe that student portfolio gives a lot of advantages for all student that learn this subject in this semester as student portfolio new for them in which they can develop their skills and knowledge. Before this I never know that we can use padlet for our lesson in class where actually padlet can be used to prepared timeline schedule, map and others. From student portfolio, I can improve my editing skills in graphics and video which I can also implement my ideas and creativity towards descriptive and lesson video. I also experience in teaching where I prepare a game for another member that need to joint.

I think using Padlet is very conviniece and more organized. In preparing the descriptive video and lesson video, this is my first time using Biteable and it it very easy to make a video using the Biteable. I encountered some problem when make peer activity using Kahoot because of some problems regarding the setting. However, I manage to solve the problem with the help of my friend.

im having fun preparing portfolio as i did monitor the game results it gives me some feeling that people always have kind heart

At first, I feel a little bit scared as I dont really know on how to edit video and using the apps. But I made it, I watch several videos on how to make a powtoon video, also I change my peer activity from kahoot to google docs as I dont really understand on how to monitor the activity and result. At the end, I made it and feel proud of myself for being able to complete the task and indirectly being more confident as I need to upload the video to my Youtube before shared at padlet. The journey on completing the task for this subject is very interesting and I am really happy that all of us have succesfully done this semester.

I like it because i can use my creativity in editing. I also can explore many other activities online such as quizz and many more.

It is a new for me to do those things and it give me the exposure how to prepare the content for sharing to others.

I feel ok when preparing the Padlet as my peer activity just easier to create. I just have problem in recording the video but still can overcome it.

Students' Online Learning Readiness of Company Secretarial Practice (CSP) Course

Dzarfan Abdul Kadir^{*a}, Mohamad Naimi Mohamad Nor^b, Zuani Ishak^c, Sazali Saad^c
^{abcd}Tunku Puteri Intan Safinaz School of Accountancy (TISSA),
Universiti Utara Malaysia, Sintok, Malaysia
^{*}Corresponding Author: dzarfan@uum.edu.my

Abstract

The Covid-19 pandemic has had an influence on education, particularly higher education and lessons must now be held online. Even though online teaching and learning in Malaysia has begun in March 2020, not all students are ready for it since it occurred unexpectedly. This study investigates the readiness of 162 Company Secretarial Practices course students in Universiti Utara Malaysia using descriptive analysis. This study examines student readiness for online learning across four dimensions: motivation for learning, self-directed learning, computer and internet self-efficacy, and ability to control distraction. A five-point-Likert scale was applied to collect data. Based on the output provided by Google Form, the data was then quantitatively analysed. The results revealed that majority of students were motivated and ready for online learning in term of device and internet usage. They were also found to be self-directed learners who could focus despite numerous distractions while having an online class. Finally, this study recommends that lecturers to conduct on online learning readiness assessment among their students. This survey is expected to assist the lecturers identify and guide those who are demotivated, low self-directed learning, low self-efficacy in using computer and internet, and easily distracted when taking an online class.

Keywords: Students' Readiness, Online Class, Motivation, Self-Directed Learning, Self-Efficacy

Introduction

The Covid-19 pandemic has impacted all aspects of life in Malaysia, particularly after movement control order (MCO) was imposed. It restricts the amount of face-to-face interaction between people. To counteract the spread of the Covid-19 virus, people from all sectors including the education are expected to work from home. In March 2021, Ministry of Higher Education ordered all higher learning institutions to conduct their teaching and learning processes online. A sudden transition from face-to-face learning to online learning due to MCO does not allow students time to adjust. Many students, particularly in rural areas, have difficulty accessing the internet when pursuing online studies. It was reported that in Sabah, a student had to stay in tree to get internet connection (<https://www.thestar.com.my/news/nation/2020/06/17/Sabah-girl-stays-in-tree-to-get-internet-connection>). Thus, this study tries to discover the level of online learning readiness among students in Company Secretarial Practice (CSP) course due to the teaching method of this course which emphasizes more on practical and not entirely theoretical.

From psychological aspect, face-to-face learning allows for human psychological interactions during the learning process, but online learning does not (Lalima & Dangwal, 2017). According to Hurst, Wallace, & Nixon (2013), physical interaction in the classroom also would assist students in expanding their knowledge of learning. During this MCO, students have to physically and psychologically acclimate to online learning during these shifts. Without a doubt, there are numerous benefits of online learning. It teaches students to be more

independent in their learning and allows for time and location flexibility as long as they have access to the internet (Luo et al., 2018; Stone, 2018).

Student-Centered and Online Learning

During the MCO, online classes have largely directed students to be self-directed learners. This is consistent with Malaysian Qualifications Framework (MQF)'s recommendation that learning methods shift from teacher-centered to student-centered. Started from 2007, Malaysian Qualifications Agency (MQA) took a gradual approach in transforming the Malaysian higher education system from teacher-centered to learner-centered outcomes.

Online learning trains students to be independent in their learning and provides them with well-structured learning tools and materials to help them understand the content (Damayanti, Fauzi, & Inayati, 2018). As a result, students' readiness to participate in an online learning class is critical to the success of online learning. According to Gay (2018), students' readiness may determine their academic outcomes differently. Students' motivation and satisfaction on online learning are affected by their readiness toward online learning, self-efficacy, computer and internet access self-efficacy, online communication, self-directed learning, learner control, and motivation towards online learning (Hung et al., 2010; Yilmaz, 2017).

PBL is one of a student-centered technique to learning in which students learn about a subject by collaborating in groups to solve a problem. It is a novel teaching approach as it employs problems to stimulate students in learning. It gives students a share of the responsibility for their own learning. (Abdul Manaf, Ishak and Wan Hussin, 2011). It is extensively used in many schools and institutions across the world.

The CSP is one of the courses in the Universiti Utara Malaysia (UUM) that employed PBL approach in classroom teaching since 2007. It is one of the required courses and generally it is taken by final year students in pursuing their accounting degree at the UUM. PBL approach requires students to actively participate and work in groups.

During online classes, PBL approach is still maintained where students have to solve three big PBL cases in a group over the semester. Half of their total final marks is assessed from these three PBLs. Implementing PBL during online learning is more challenging to both learners and lecturers than during face-to-face class. In order to complete the PBLs students need to extensively discuss and search relevant information. PBLs have a wide range of output for every PBL. It includes completing a company's incorporation form and documentation, giving a mock meeting presentation, and producing a report. They also need to do reflection and peer assessment at the end of each PBL.

Methodology

Data collection and analysis

The study was designed as a descriptive study by conducting online survey. The study population was 167 CSP students under the accounting programs offered by Tunku Puteri Intan Safinaz School of Accountancy (TISSA), UUM in semester A202. The questionnaire was adapted from Allam et al. (2020) and was given via Google Form to the CSP students in the beginning of the semester. The five-point Likert scale was employed for the scoring. The scales consist of "Strongly Disagree", "Disagree", "Neutral", "Agree", and "Strongly Agree" (Ary et al., 2018). Of the total number of questionnaires distributed, 162 questionnaires could be used for data analysis purposes.

This descriptive study employed an online survey to gather four dimensions of online learning readiness which comprises of students' motivation for online learning, the use of device/computer and internet self-efficacy, self-directed learning, and ability to control

distractions. Students also being asked to reflect their experience in the previous semester and share their expectation for upcoming semester pertaining to remote learning.

Findings and discussion

For the first dimension on motivation, the result in Figure 1 showed that most of the students are highly motivated to learn for the best academic achievement and performance. There are more than 90% of students are highly motivated even though classes are remotely conducted for that semester. However, two students are found to be extremely demotivated to study. While 14 of the students are in the middle score of the Likert scale. The lecturers need to motivate and focus on these unmotivated students especially on students with very low motivation to study.

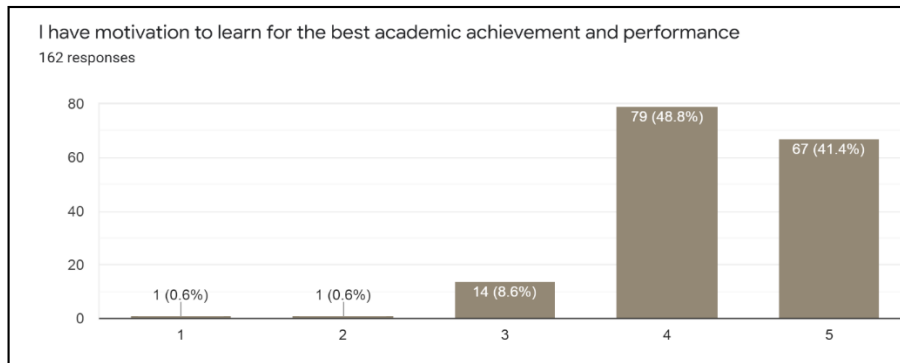


Figure 1. Students’ motivation to study online.

Second dimension measures students’ self-efficacy in using computer and internet for online learning. Few statements were posted to measure students’ readiness in using computer device and accessing internet access. These include statement about their confidence in managing software for online learning, and confidence in using the internet for gathering information.

Figure 2 shows that more than 90% of students are very confidence in their abilities to use computer for online learning with 34% and 57% of them scoring the highest agreement of 5 and 4 respectively. This is not unexpected given the prevalence of computer users, and students have been exposed to computer users since the beginning of their accounting program. This survey also found that many students have more than one device (i.e., laptop and smart phone) indicating that they are prepared to attend an online class if one of their devices fails. The laptop was discovered to be the most popular device among students, with 159 out of 162 students using it for online learning. While 113 students represent almost 70% of them using smart phone for online class.

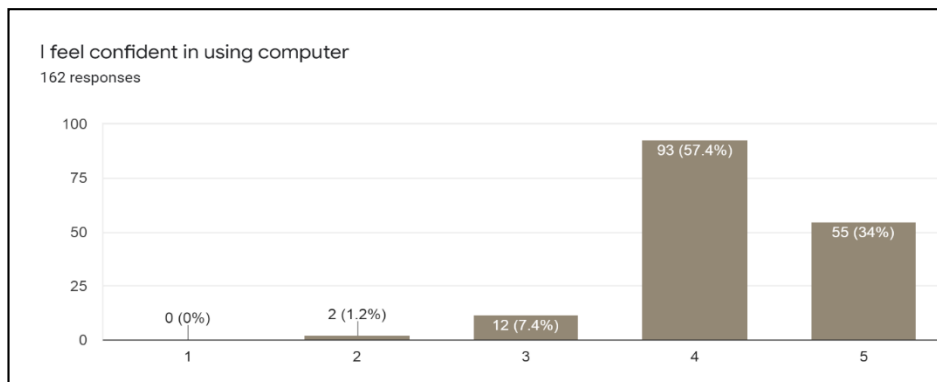


Figure 2. Students’ confident in using computer for online learning.

In related to the computer usage, students also do not face problems in using certain applications or software for online learning. Figure 3 reveals that very few students are found lacking confidence in using the software with only 3 students (score 1 and 2 of the Likert scale) strongly disagreed with the statement of software applications being used for online learning.

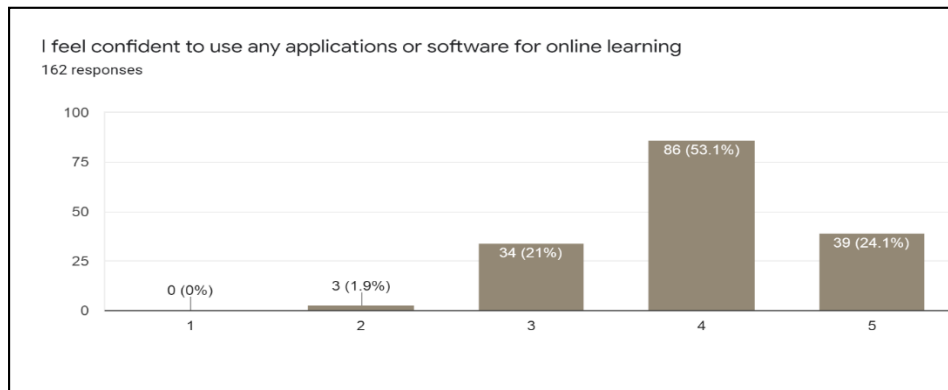


Figure 3. Students' confident to use any software applications for online learning.

The same may be said about using the internet such as Google and Yahoo to gather information for online learning. Students are found do not face major problems in using the internet with 87% of them scoring the strongest agreement of 4 and 5 as shown in Figure 4. This may be related to students' high confidence in using the computer as was discussed earlier. Similarly, the results obtained show good abilities of students to search, download and upload document using internet. If students accomplish this job, they will be able to acquire knowledge fast, store it safely, and share it with their peers. It is found that 89% of them scoring the strongest agreement of 4 and 5 for the statement 'I feel confident to search, download and upload document using internet'.

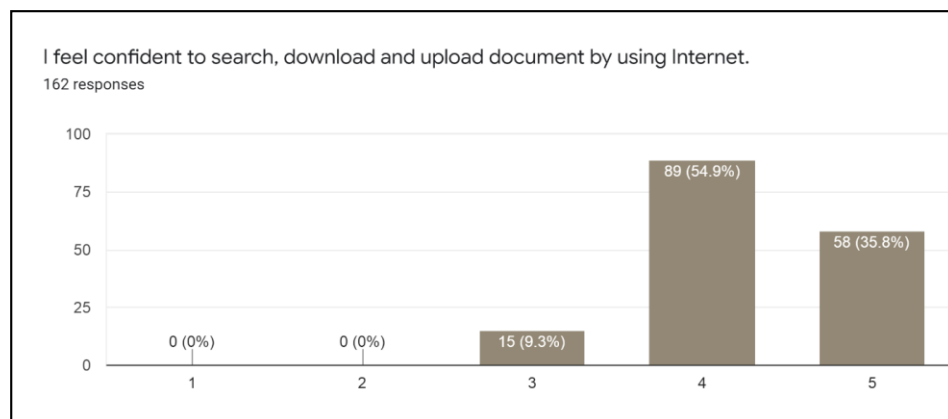


Figure 4. Students' confident to search, download and upload document using internet.

In terms of financial capability, 89% students can afford the internet bill. On the other side, 10% of students are unable to pay for internet access, and 1% cannot afford it at all. Even though the percentage of unable students is small, this might have an impact on the online learning process. Lecturers or the university should find methods to help students who fall into this category. The lecturers need to be proactive by making phone calls to monitor the progress of students. Besides, providing on-campus accommodation with high-speed internet access, the university may give financial aid through collaborating with telecommunication providers.

The third dimension of this survey is about students' self-directed learning. The statements included in the survey are about their time, setting learning goals and seeking help

when facing the learning problems. When it comes to time management, most students are reported to be capable of doing so as shown in Figure 5. With relation to their ability to manage time, 13 percent and 60 percent of students scored greater agreement of 5 and 4 respectively. While 24% of them scored 3 and only less than 2% admit to being unable to manage their time well.

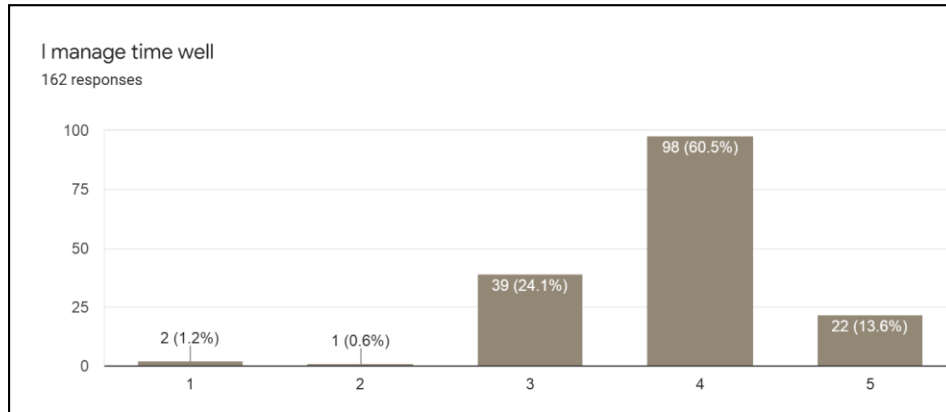


Figure 5. Students' ability to manage their time.

With regards to set up students' learning goals, 133 students or around 82% were strongly agreed that they do set learning goals as been observed in Figure 6. While 17% of them have moderate view about their learning goal.

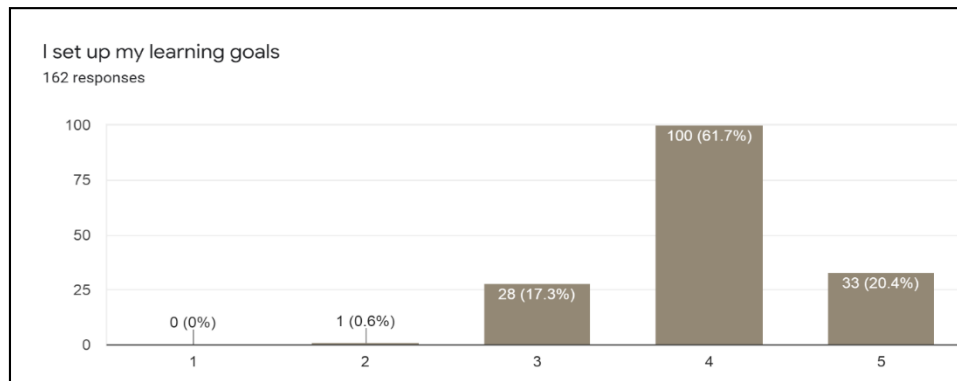


Figure 6. Students set up their learning goals.

This study also found that most students will seek help if they encounter problems in learning. Consistent result with students' learning goals setup, Figure 7 shows that 132 students or around 81% of them were strongly agreed that they will seek assistance when facing learning problems. This indicates that students have the initiative and commitment to follow the learning process even if it is done online.

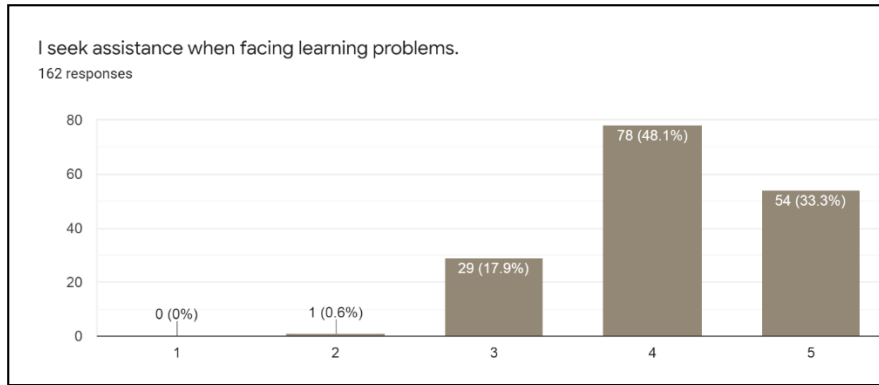


Figure 7. Students' willingness to seek assistance when facing learning problems.

The last dimension assesses students' ability to control distractions while engaging in online learning at home. It represented by two measurements which are their control ability of learning progress and their ability to stay focus on online learning.

The majority of students are comfortable in their surroundings, with just approximately 5 students believing their setting is not conducive to online learning. It is important for the lecturer to understand the position or situation of the students in setting the tasks that need to be carried out and sent so that the quality of the assignments is maintained. Further, Figure 8 shows that almost 80% of students strongly confident they can complete assignments even if there is distraction at home such as television and kids when trying to complete them.

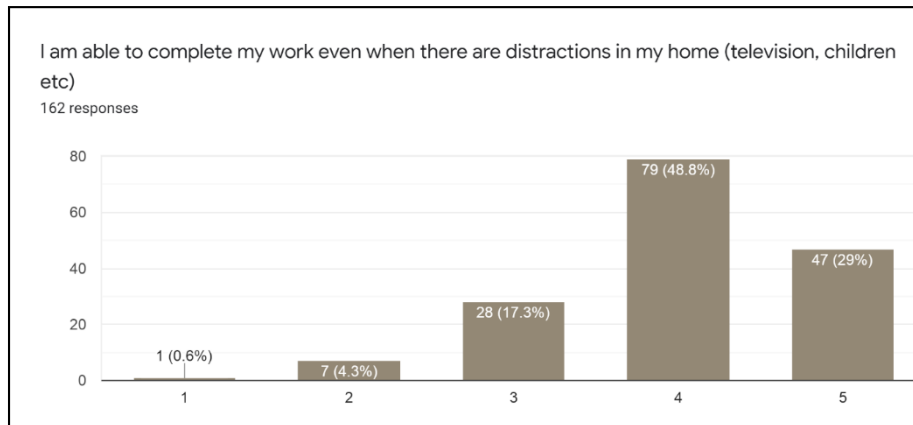


Figure 8. Students' ability to complete assignment even there are distractions at home.

A similar subject of questions about distractions is being asked about online distractions. As shown in Figure 9, it was found that students do not face major problems in completing assignments if there are online distractions such as email, online chatting and online shopping. Comparatively, students are easily distracted with kids and television program than online chatting and online shopping. Also, technical difficulties do not prevent students from following the learning materials provided in the form of online learning.

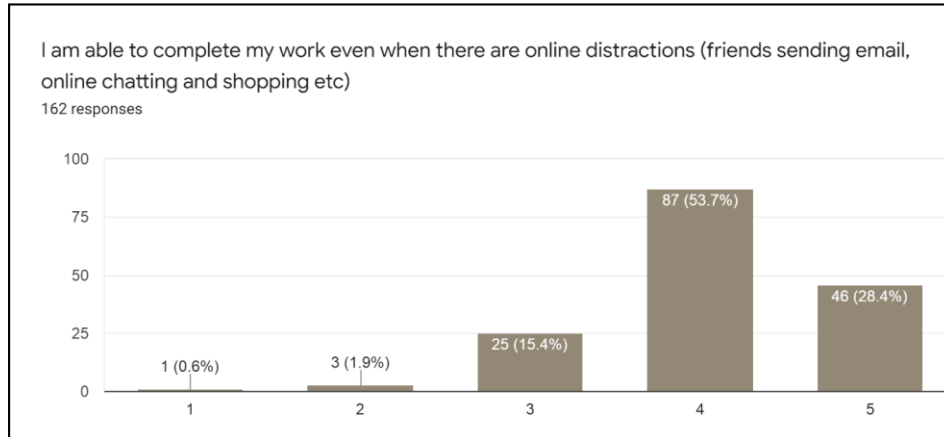


Figure 9. Students' ability to complete assignment even there are online distractions.

Finally, this part examines the students' online learning experiences from the previous semester. In the first question, students express how much they appreciate learning online. There were four degrees of expression offered in response to the question, ranging from the highest level of appreciation ('Yes, absolutely') to the lowest level of appreciation ('No, not at all'), as well as an open response option. Following that, students were also invited in an open question to reflect on their previous semester's experience with remote learning and to express their expectations for the upcoming semester.

For the highest degree of appreciation, it was revealed that 37 students answered with a resounding 'Yes, absolutely'. This indicates that 22.8% of them found to be really enjoyed online learning. In their reflections, students linked their joyful experience to few factors. For example, student #50 associated it with her ability to manage time properly, while student #85 expressed gratitude to her family and friends for their support and motivation in her early struggles with online learning. Student #141 viewed that she enjoyed remote learning and finished her assignment with the lecturer's guidance despite facing few challenges such as bad internet connection. Interestingly student #11, who was in China at that time, felt happy and benefitted from online learning. He perceived that students' motivation and awareness towards study contribute to their success when study online. Many students in this category expected lecturers to record class meetings, and they are hesitant to provide presentations online owing to inadequate internet connectivity. They also expected the lecturers to notify students about the upcoming test or assessment earlier.

The survey then discovered that the majority of 90 respondents ranked their appreciation as 'Yes, but I would like to change a few things' for the second level of appreciation. Besides the appreciations and expectations been discussed in the highest level of appreciation, there were students who felt mentally exhausted and unmotivated to continue with online learning in the future after they undergone two semesters of online study. Further, student #7 wished she could enjoy online classes as much as she did face-to-face classes. Many students of this category expected few other things to change during online learning in the upcoming semester. Many of them for example hoped that they are able to remain focus during online classes. Apart from distractions caused by computer and internet problems, they

expected the lecturers to be creative in delivering online classes and to allow for a break in middle of a long class lecture to ensure students maintained their concentration.

On the other hand, 33 students are found did not appreciate online learning and evaluated it as '*No, there are quite a few challenges*'. Among other challenges faced by the students were the difficulties in finding friends or helps while facing problems with assignments. When completing online studying at home, some students are found to be easily distracted. While poor internet connections became the most prevalent issue for this group, it was expected that lecturers would accept it when it came to submitting assignments and posting assessment answers. They also pledged to work harder and better manage their time in the following semester.

Finally, two students were adamantly opposed to remote learning, with one saying, '*No, not at all.*' In her reflection, student #149 stated that she had an internet difficulty in the previous semester, which resulted in her unsatisfactory remote learning. Another student, #145, stated in her open response as '*strongly no and I would prefer face to face class*'. Further, in her reflection, she stated that online learning is not benefit her which resulted in her poor performance in the previous semester.

Conclusion

This study examined the level of students online learning readiness for CSP course according the four proportions which are motivation for online learning, computer/internet self-efficacy, self-directed learning, learner control, self-efficacy of the computer and internet use, and their ability to control distractions. In general, most CSP students were highly motivated, and they were ready for online learning. However, the lecturers need to pay attention on those who are demotivated to study online especially when the course is applying PBL. Lecturers also need to be more creative in the class such as employing software and platforms to increase students' engagement and make the class more interactive. They also should be more tolerant of the problems that students encounter during online classes. Furthermore, this study also found that most students were equipped with computer and smart phone to ease them facing online learning. Most of them also found afford to pay for internet charge. It is also found that most of the students were self-directed learner, having good time management, having learning goals and having courage to get assistance when facing problems. With this positive capacity, students are expected to be able to implement PBL in their online learning for this course. Future studies can examine student's performance through remote teaching methods and its impact on students' quality of life.

References

- Abdul Manaf, N. A., Ishak, Z. and Wan Hussin, W. N. (2011). Application of Problem Based Learning (PBL) in a Course on Financial Accounting Principles Malaysian Journal of Learning and Instruction, 8, 21-47
- Allam, S. N. S., Hassan, M. S., Mohideen, R. S., Ramlan, A. F., & Kamal, R. M. (2020). Online Distance Learning Readiness During Covid-19 Outbreak Among Undergraduate Students. International Journal of Academic Research in Business and Social Sciences, 10(5), 642-657.
- Ary, D., Jacobs, L. C., Irvine, C. K. S., & Walker, D. (2018). *Introduction to research in education*. Cengage Learning.
- Damayanti, D., Fauzi, A., & Inayati, A. M. (2018). Learning materials: The "nucleus" of language teaching. *Journal of English Education*, 3(1), 1-8.
- Gay, G. H. (2018). Fixing the 'ready' in e-learning readiness. *Trends in e-learning*, 65-83.

- Hung, M. L., Chou, C., Chen, C. H., & Own, Z. Y. (2010). Learner readiness for online learning: Scale development and student perceptions. *Computers & Education*, 55(3), 1080-1090.
- Hurst, B., Wallace, R. R., & Nixon, S. B. (2013). The impact of social interaction on student learning. *Reading Horizons*.
- Luo, Y., Pan, R., Choi, J. H., & Strobel, J. (2018). Effects of chronotypes on students' choice, participation, and performance in online learning. *Journal of Educational Computing Research*, 55(8), 1069-1087.
- Lalima, D., & Dangwal, K. L. (2017). Blended learning: An innovative approach. *Universal Journal of Educational Research*, 5(1), 129-136.
- Sabah girl stays in tree to get Internet connection. *The Star*. <https://www.thestar.com.my/news/nation/2020/06/17/Sabah-girl-stays-in-tree-to-get-internet-connection>.
- Stone, N. J. (2018, September). Environmental design, personality, and online learning. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (Vol. 62, No. 1, pp. 1171-1175). Sage CA: Los Angeles, CA: SAGE Publications.
- Yilmaz, R. (2017). Exploring the role of e-learning readiness on student satisfaction and motivation in flipped classroom. *Computers in Human Behavior*, 70, 251-260.

The Use of the Think-Aloud Strategy in Enhancing Critical Reading Skills among Undergraduate Students

Aizan Yaacob^{*a}, Paramjit Kaur^b, NoorAishah Zolqarnain^c

^{abc} School of Education, Universiti Utara Malaysia

*Corresponding Author: aizan904@uum.edu.my

Abstract

While critical thinking is greatly emphasized by the Ministry of Education, many university students lack the ability to read and think critically. Critical reading skill is essential for tertiary level students as employers seek graduates that are well-versed in their fields as well as exhibit critical thinking skills that are essential in any job. This study attempts to explore the use of think aloud strategy to enhance critical reading skills among 11 undergraduate students who were taking an English proficiency course at one university in the northern region of Malaysia. Students were trained to use think aloud strategy by their instructor for one semester. A case study design using multiple methods of interview, observation and document analysis were adopted. Data were collected and analysed thematically. The findings indicate that students used limited strategy when reading an English text prior to the training and it was found that after receiving training on think aloud strategy they used some critical thinking skills such as Interpretation, Analysis, Inference, Evaluation and Self-Regulation. Critical reading helps readers to not only understand the text better but also help them to remember what has been read and apply it in future.

Keywords: critical thinking, think aloud strategy, ELT, undergraduate

Introduction

Reading is a process which enables readers to retrieve information from such sources as mentioned above, to construct meaning from them and possibly to have their perceptions and worldviews changed. Hence, reading is not merely a process of reading words from texts, but it is a process that requires interpretation of meaning. It is a cognitive process that demands an interaction between the reader and the text. Thus, reading is regarded as an essential skill that plays a significant role in an individual's life, especially for students at higher education institutions. Cultivating and enhancing reading habits as well as positive attitudes to reading academic as well as non-academic materials are essential in any language learning program or course.

Reading habits of young people have become the concern of educators, researchers and policy makers all over the world. Studies in Malaysia reported that Malaysian students read very little (Kaur & Thivagarajah, 1999; Ngu Mee Seng and Zaidah Zainal, 2017; Thang and Azarina, 2008). In Nigeria, Ifedili (2009) found that there is a high decline rate in the reading culture among students in tertiary institutions in Nigeria, 60% of students read prescribed textbooks only during examination period; browsing and watching television have taken most of students' time for reading and very few students (21%) buy novels to read for knowledge and pleasure. Apart from investigating and understanding reading habits and attitudes, it is also essential to examine and develop critical reading skills. Critical readings skills at tertiary level are essential as students need to actively question the texts and information they come across. In critical reading the reader needs to apply certain higher order thinking skills, models, questions, and theories that will lead to enhanced clarity and comprehension. Readers need to look at deeper structures of the text than merely skimming the text. Critical reading skill is

essential for tertiary level students as employers seek graduates that are well-versed in their fields as well as exhibit critical thinking skills that are essential in any job. Critical thinking skills are emphasized in the 21st century as these skills are essential given the amount of information that needs to be digested and processed. Thus developing critical reading in the university is essential in producing graduates that will be marketable in current times. This study examines how the think aloud approach can develop critical reading skills among a group of university students.

Problem Statement

Many university students lack the ability to read and think critically. In Malaysia, the problem is quite prevalent as many employers often lament about graduates that lack skills that are required for the workplace that now heavily depends on soft skills and specialized knowledge. The Malaysia Education Blueprint 2015-2025 states that ‘employers report that graduates lack critical thinking, communication skills and the language proficiency, especially in English which are essential for success in the 21st century (p.11). Among the issues highlighted is that students may have read numerous books and texts yet they lack the ability to respond critically to these texts. This is what Wilson (1999) emphasized as a problem of becoming passive consumers of information. In addition, many researchers have also supported the claims made in the Malaysia Education Blueprint, citing examples of Malaysian university students not being prepared to interact with reading materials or able to respond critically to their required readings (Koo, 2011; Nambiar, 2007; Thang and Azarina, 2008). Ngu Mee Seng and Zaidah Zainal (2017; 129) also reported that “students were not equipped with sufficient critical reading skills that will enable them to perform well in university”. Moreover, Casner-Lotto and Barrington (2006) indicate that employers ranked reading skills as a top requirement when hiring graduate students; nevertheless, this skill is, unfortunately still lacking among new hires. Thus, this study is timely as it explores a method to enhance critical reading skills among undergraduates. It is hoped that the think aloud method will enhance critical reading skills among the group of undergraduates.

Research Questions

This study attempts to answer the following research question:

- i) How does think aloud strategy help to enhance critical reading skills among undergraduate students ?

Literature Review

Theoretical Framework

This study adopts the core critical thinking skills and subskills framework that was introduced by the American Philosophical Association (1990). These skills and subskills were developed based on feedback from 46 experts from many different scholarly disciplines in the humanities, sciences, social sciences, and education in a study carried out in 1990. Thus, this study adopts this framework in analysing the quantitative and qualitative data, in terms of identifying the critical thinking skills based on the subskills. The framework is shown below.

Table 1
 Framework for Analysing Critical Thinking Skills

Core Critical Thinking Skills		
SKILL	Experts' Consensus Description	Subskill
Interpretation	“To comprehend and express the meaning or significance of a wide variety of experiences, situations, data, events, judgments, conventions, beliefs, rules, procedures, or criteria”	Categorize Decode significance Clarify meaning
Analysis	“To identify the intended and actual inferential relationships among statements, questions, concepts, descriptions, or other forms of representation intended to express belief, judgment, experiences, reasons, information, or opinions”	Examine ideas Identify arguments Identify reasons and claims
Inference	“To identify and secure elements needed to draw reasonable conclusions; to form conjectures and hypotheses; to consider relevant information and to reduce the consequences flowing from data, statements, principles, evidence, judgments, beliefs, opinions, concepts, descriptions, questions, or other forms of representation”	Query evidence Conjecture alternatives Draw logically valid or justified conclusions
Evaluation	“To assess the credibility of statements or other representations that are accounts or descriptions of a person’s perception, experience, situation, judgment, belief, or opinion; and to assess the logical strength of the actual or intended inferential relationships among statements, descriptions, questions, or other forms of representation”	Assess credibility of claims Assess quality of arguments that were made using inductive or deductive reasoning
Explanation	“To state and to justify that reasoning in terms of the evidential, conceptual, methodological, criteriological, and contextual considerations upon which one’s results were based; and to present one’s reasoning in the form of cogent arguments”	State results Justify procedures Present arguments
Self-Regulation	“Self-consciously to monitor one’s cognitive activities, the elements used in those activities, and the results educed, particularly by applying skills in analysis, and evaluation to one’s own inferential judgments with a view toward questioning, confirming, validating, or correcting either one’s reasoning or one’s results”	Self-monitor Self-correct

Source: APA Report: Expert Consensus Statement on Critical Thinking (1990)

As indicated in Table 1 above, the core thinking skills that were deemed to be crucial to encompass critical thinking included interpretation, analysis, inference, evaluation, explanation and self regulation. For each of the critical skills several subskills were identified.

Methodology

Research Design

This study adopted a qualitative case study approach. It was conducted to have a better understanding of the existing problems in critical reading among the undergraduate students. Yin (2014, p.23) defines a case study as “an empirical inquiry that investigates a contemporary phenomenon within its real context; when boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used.” Creswell (2008, p. 476) on the other hand, defined it as “an indepth exploration of a bounded system; activity, event, process or individuals which is based on extensive data collection.” Therefore, qualitative case study was the most suitable and appropriate approach to be used in this study as it provides an in-depth description and analysis on the problem under study.

Participants

11 undergraduate students were selected to participate in the intervention using critical reading strategy. The selection of the participants was based on purposive sampling. There were 9 female and 2 male students, from various degree programmes namely: Bachelor of Finance, Logistics and Transportation, Human Resource Management, *Muamalat* Administration, and International Business Management. These students were taking English Proficiency Course as one of the university core courses. It is designed for students who obtained Band 3 for MUET or have passed 2 pre-requisite courses before taking this course. Students in this class were mainly in their first year, second semester. Some are in the second year. Table 2 below illustrates the participants’ profiles.

Table 2
Participants’ Profiles

<u>No</u>	<u>Pseudonyms</u>	<u>Gender</u>	<u>Age</u>	<u>Programme</u>
<u>1</u>	<u>Izzati</u>	F	21	Bachelor of Finance
<u>2</u>	<u>Dhia</u>	F	21	Bachelor of Finance
<u>3</u>	<u>Liyana</u>	F	21	Bachelor of Finance
<u>4</u>	<u>Hafsah</u>	F	22	Bachelor of Logistics and Transportation
<u>5</u>	<u>Sazlinda</u>	F	20	Bachelor of Finance
<u>6</u>	<u>Ng</u>	M	22	Bachelor of Human Resource Management
<u>7</u>	<u>Hazim</u>	M	22	Bachelor of Finance
<u>8</u>	<u>Nabilah</u>	F	21	Bachelor in Muamalat Administration
<u>9</u>	<u>Jia</u>	F	21	Bachelor in International Business Management
<u>10</u>	<u>Nawal</u>	F	21	Bachelor of Human Resource Management (Hons.)
<u>11</u>	<u>Shu</u>	F	21	Bachelor of Human Resource Management (Hons.)

Data Collection Methods and Instruments

Think aloud protocol and interview were used to gather data in this study.

Think aloud protocol to boost critical reading

Think aloud protocol was used as a method of data collection. It was used to gather data on the actual reading strategies practiced by the undergraduates in the research. Thinking aloud is a method in which the participants speak aloud any words in their mind as they complete the task. During the think a loud session, the participants were given a text to read silently, but they have to utter whatever came into their minds, vocalizing and verbalizing their thoughts while reading the text. The selection of the text was based on the course requirement and the themes stipulated. In the context of this study, the participants read two texts based on 'Stereotyping' and 'Korean culture'. They recorded their thinking aloud strategy while reading the texts.

Semi structured interview

Semi structured interview with the students was also conducted after the session to elicit their perspectives on the effect of think aloud strategies in enhancing their critical reading skills. Due to Covid-19 pandemic, the interview was conducted online.

Data Collection Procedures

As this study intends to investigate participants' critical reading skill development through think aloud protocol, the study was conducted based on the following the procedures over the period of one academic semester:

Phase 1: Analyzing undergraduates' existing critical reading strategies used.

Phase 2: Selecting materials for thinking aloud strategies

Phase 3: Development of the Think Aloud Strategies Activities and lesson plans

Phase 4: Conducting training / workshop for students in using the Think Aloud

Strategies

Phase 5: Evaluating the effectiveness of think aloud strategies in enhancing critical reading skills.

The students were given two articles to read: Stereotyping and the Korean Culture. They had to record their think aloud sessions. Prior to that, two training sessions on using think aloud strategies were provided by their lecturer, who is also one of the researchers in this study. In the first training, the lecturer demonstrated the use of think aloud strategy training and the second one, she conducted it with the students. The data derived from the think aloud session based on the 'Korean Culture' were transcribed for the analysis. This article is about the people in Korea who wanted to add extra inches to their height through operations to fulfill their dreams. Students were required to read aloud the article and tape record their think aloud session.

Findings

RQ: How does think aloud strategy help to enhance critical reading skills among undergraduate students

The data presented in this article are taken from one participant's recorded video during her think aloud session. She is known as Jia, a 21 year old girl, who was taking a Bachelor of International Business Management Programme. The excerpt illustrates how Jia developed her critical reading skills through the 'think aloud' strategy. What can be seen in this excerpt is that, as Jia read the article, she underlined the phrases and circled some of the difficult words. In this excerpt, Jia used all the six critical reading strategies in her reading aloud. She applied interpretation, analysis, inference, evaluation, explanation and self-regulation. The following

sections illustrate Jia's usage of the critical reading strategies during her think aloud reading. Extract 1 shows the observation data from Jia's reading aloud.

Extract 1: Observation Data (Jia)

lines	Observation Data
1	(read aloud and underline "TO ADD EXTRA INCHES TO THEIR HEIGHT") means that
2	mereka nak jadi lagi tinggi ke? (Underline "IN PURSUIT OF CELEBRITY AND
3	WEALTH") why? Apa kaitan the tall and celebrity and wealth? Oh I think it is Korea kan
4	(circle the word Korea) banyak drama Korea kan? so kalau mereka tinggi dan handsome
5	mesti mereka jadi famous kan? I don't know I think.. kita tengok lah ..underline the word
6	"shamed" maksud shamed ni malukan? (Underline the word 'TALLER' and shows an arrow
7	linking TALLER and THEIR HEIGHT) so betullah ini pasal ketinggian mereka . But why
8	the Japanese now stand taller than the Korean? (Reads again and underlines the word
9	'PRESSURE') Why? Inikan < <i>this is</i> > stress among the Koreans. Owh (underline 'TO
10	DRINK MILK', and 'PROMOTING GROWTH') to drink more milk for promoting growth
11	(talks to herself again). Oh yeah betullah mereka nak tinggi ...Why? (Underline
12	'SUPERMODEL' and BASKETBALL STARS'). Mereka nak jadi supermodel ke..(read I4
13	YEAR OLD SCHOOL GIRL) perempuan ini dia jadi international model dan dia dapat
14	12,000 POUNDS THAT SHE WON IN THE MODELLING CONTEST' so ramailah yang
15	follow dia (underline 'ATTEMPT TO FOLLOW HER FOOTSTEPS')so mereka rasa kalau
16	tinggi dapat banyak duit kot? so can kaitkan dengan kaya atas ni (show another arrow to
17	link with TALLER). 'NATURAL ADVANTAGE' perempuan ini sangat tinggi tapi sebab
18	natural so maybe dia minum banyak milk Owh go to hospital? (Highlight
19	'HOSPITAL')...(underline 'HOSPITALS THAT CLAIM TO BE ABLE TO ENHANCE
20	THEIR HEIGHT WITH REQUESTS FOR LEG-LENGTHENING OPERATIONS') ada
21	operation macam ni ke? Yeah merekasejak lahir mereka jadi pendek so mereka nak buat
22	operation ni . But why? Actually shock...(reading again) I think this paragraph talks about
23	how this operation is done... macamana operation tu dilakukan mereka masukkan itu besi
24	(underlines STEEL ROD)yeah mereka forced kaki mereka menjadi lebih panjang
25	(underline FORCING THE LEG TO GROW LONGER). Lelaki ini dia berjaya menjadi
26	lebih tinggi 6.5 inches (reads again) owh a British girl dia berjaya tinggi 5 inches dan dia
27	berjaya menjadi air stewardess. (Underline the word 'AIR STEWARDESS') what is this? I
28	think it is pesawat kapalterbang tu sebab nak jadi itu pesawat perlu tinggikan? Ho
29	yo..salesman?... ada kasut yg ada magnet so boleh jadi lagi tinggi ke? Owh dia ada natural
30	growth hormone..so ayat ni masuk .. dia ada satu kasut dan tapak kasut dia ada natural
31	growth... sangat pro <professional> ada kasut macam gini ..(reads again). Owh perempuan
32	ni ada buat operation.. bukan saja dia nak panjangkan kaki dia..tapi dia buat lain
33	operation (underline 'BREASTS' AND REDUCE THIGHS, NOSES, EYE LIDS') owh
34	banyak duit tu ..ANICE BODY IS THE PASSPORT THROUGH THE DOOR LEADING
35	TO OUR DREAM LIFE" (Reads and highlights). I rasa ayat ni yang dia nak sampaikan
36	adalah satu body yang sempurna adalah kunci untuk kita capai matlamat . The dream
37	life. I agree with her but... memang lah klau kita ada nice body and muka yang cantik so
	kita akan lebih yakin untuk teruskan hidup kita dan capai matlamat kita impian kita .
	Tapi maybe the nice body.. kita boleh dptkan nice body bukan dari itu operation means that
	kita tak payah dapatkan nice body melalui physical operation. Kita boleh melalui
	kesihatan. Kesihatan ... like this girl dia buat banyak operations to get the nice body..spend
	much money..so kalua mereka yg kurang mampu nk dptkan nice body..ada keburukan
	dia kan tapi I agree with her that the nice body is the passport to our dream....

Transcription conventions:

Bold- Bahasa Malaysia (L1)

Normal- English (L2)

() - non verbal communication

ALL CAPS – Reading from the English text

... – pause

The findings indicated that Jia adopted critical reading skills such as interpretation, analysis, inference, evaluation and self regulation when using think aloud strategy. The following examples illustrate her usage of all these skills.

Interpretation

Interpretation means to comprehend and to express the meaning of a variety of experiences, situations, data judgments, rules and other forms of data. In this context, Jia used interpretation strategy when she read aloud whereby she translated the English words and phrases in the text into Bahasa Malaysia to understand the meaning of what was read. She was also found underlining the words and highlighting the phrases to help her comprehend the text.

In lines 1-2, Jia read the text aloud and underlined the phrase, “TO ADD EXTRA INCHES TO THEIR HEIGHT” (reading from the text). Then, she interpreted the meaning of the text to herself, “means that **mereka nak jadi lagi tinggi ke?**” <means that do they want to grow taller?> (lines 1-2). What can be seen here is that, Jia translated the phrase from English into Malay to understand the meaning of the text. In addition, she also underlined the word “SHAMED” and explained the meaning, “**maksud shamed ni malukan?**” <the meaning of shamed is shy right?> (line 5). Interestingly, the translation process involved English and Bahasa Malaysia (L3), instead of Chinese or Mandarin, and Bahasa Malaysia was used to help her interpret and understand the text better.

In another example, Jia read and highlighted the important sentence in the text. “A NICE BODY IS THE PASSPORT THROUGH THE DOOR LEADING TO OUR DREAM LIFE” (lines 29-30). Then she interpreted the meaning, “**I rasa ayat ni yang dia nak sampaikan adalah satu body yang sempurna adalah kunci untuk kita capai matlamat**” <I think in this sentence what the author intended to explain is that a perfect body is the key for us to achieve our goal> (lines 30-32). Through reading aloud strategy, Jia, not only read the text, but she also explained the gist of the article and provided her own interpretation and understanding of the text. Undoubtedly, the process helped her to understand the text better. The think-aloud strategy conducted in the mother tongue (L1) or other language in which students are more comfortable with, is found to be an effective instructional tool because it helps activating their cognitive and thought processes faster.

Analysis

Jia was also found to analyze her own reading. Analysis means identifying the intended and actual inferential relationships among statements, questions, concepts with an intention to express beliefs, experience, judgments and opinions. During the analysis process, the readers ask questions, examine ideas, identify arguments and reasons. This can be seen in lines 2-3, lines 6-7, lines 9-10, lines 17-18 and line 19. She asked a lot of questions during the reading aloud session. In lines 2-3, she underlined “IN PURSUIT OF CELEBRITY AND WEALTH” and asked “why? **Apa kaitan** <what’s the connection between> the tall and celebrity and wealth? (lines 2-3). The reading aloud strategy allowed her to ask questions and to analyze connections between the main ideas, at the same time, to understand the inferential relationships between the words found in the text such as tall, celebrity and wealth.

In another example, she kept asking questions during her reading which can be seen in lines 6-7, “But why the Japanese now stand taller than the Korean? (lines 6-7) and “Why? **Mereka nak jadi supermodel ke** <do they want to become supermodels> (lines 9-10) as she underlined the words ‘SUPERMODEL’ and BASKETBALL STARS’ (line 10). As she read further she managed to make connection between “tall, celebrity and wealth”, when she said, “so **mereka rasa kalau tinggi dapat banyak duit kot?** (lines 13) <so perhaps they feel that if they are tall, they will get lots of money> so can **kaitkan dengan kaya atas ni** (line 14) <so can relate with wealth earlier>. In addition, she made the connection or the relationship by drawing an arrow

connecting the text read with the word 'taller'.

In the following paragraph, Jia read the text, 'HOSPITALS THAT CLAIM TO BE ABLE TO ENHANCE THEIR HEIGHT WITH REQUESTS FOR LEG-LENGTHENING OPERATIONS' (lines 16-17) and she asked question again, "**ada operation macam ni ke?** < *do we have operation like this?*> (lines 17-18) and again she asked, "But why?" (line 19). What was evident from this cognitive process is that she asked plenty of questions, examined ideas and searched for reasons to answer her earlier questions. She was able to use her metacognitive strategy whereby she was aware of her thought processes and she organized them well to make sense of the reading. Later in the same episode, she managed to find answers to her questions. "**Yeah mereka sejak lahir mereka jadi pendek so mereka nak buat operation ni.** < *yeah, they were born short so they wanted to do this operation*> (line 18). In addition, she also managed to reason out why the decision was made and how the operation was conducted. She explained, "I think this paragraph talks about how this operation is done...**macamana operation tu dilakukan mereka masukkan itu besi** < *how the operation was done by inserting the steel rod into the leg*> (underlines STEEL ROD) **yeah mereka forced kaki mereka menjadi lebih panjang** < *yeah they forced their legs to become longer*> (lines 19-22) as she underlined FORCING THE LEG TO GROW LONGER) (lines 19-22). This reading aloud strategy improved her reading particularly in understanding why the operation was required and how it was conducted. She affirmed her speculation when she said in line, "so **betullah ini pasal ketinggian mereka** < *so it's true...this is about their height*>.

In sum, through analysis and asking critical questions, Jia was able not only to find the relationships among the statements in the text, but also to identify the reasons as to why the statements were made.

Inference

Jia also used inference during her think aloud session. Inference means query evidence, conjecture alternatives, and draw logical conclusions from the information given in any reading text. The following examples show how Jia used inference in her reading aloud. In the first example, Jia read about a 14 year old Korean girl who received 12,000 pounds from the modelling contest she entered, and later she became a successful international model.

read I4 YEAR OLD SCHOOL GIRL **perempuan ini dia jadi international model dan dia dapat** < *this girl became an international model and she received* > 12,000 POUNDS THAT SHE WON IN THE MODELLING CONTEST' so **ramailah yang follow dia** < *so many followed her footsteps* > She underlined a sentence, 'ATTEMPT TO FOLLOW HER FOOTSTEPS' so **mereka rasa kalau tinggi dapat banyak duit kot?** < *so they feel that perhaps if they are tall they will have lots of money*> so can **kaitkan dengan kaya atas ni** < *so can relate to the word rich at the top* > She showed another arrow to link with the word "TALLER". She mentioned that this girl has a natural advantage for being born tall, 'NATURAL ADVANTAGE' **perempuan ini sangat tinggi tapi sebab** < *this girl is so tall but* > natural so maybe **dia minum banyak** milk < *she drinks lots of milk*> (lines 12-15) referring to the earlier paragraphs which talks about drinking milk can promote growth. "Owh (underline 'TO DRINK MILK', and 'PROMOTING GROWTH') to drink more milk for promoting growth... Oh yeah **betullah mereka nak tinggi** (lines 8-9) < *it's true they want to be tall*>.

In this extract, Jia drew logically valid or justified conclusions by saying, "so **mereka rasa kalau tinggi dapat banyak duit kot?** < *so they feel that perhaps if they are tall they will have lots of money*> so can **kaitkan dengan kaya atas ni** < *so can relate to the word rich at the top* > She showed another arrow to link with the word "TALLER". She made the connections between 'tall' and 'wealth' or 'rich'.

In another example, Jia did not know the word ‘stewardess’ so, she underlined it and inferred it with airline or ‘pesawat’. In lines 23-25, she relates the word ‘stewardess’ with “**berjaya menjadi** air stewardess” < *successful to become an air stewardess*>. She also asked question, “what is this? I think it is **pesawat kapalterbang tu sebab nak jadi itu pesawat perlu tinggikan?** < *I think it’s airplane because to become (air stewardess) need to be tall*>.

Evaluation

Another critical thinking skill found in her reading aloud session was the use of evaluation. Evaluation involves assessing credibility of claims and quality of arguments that were made using inductive and deductive reasoning. In the following examples, Jia used evaluation by assessing all the arguments and examples given in the text. She also provided her own perspectives about operations for having a perfect body.

In this example, Jia read and highlighted the sentence, “A NICE BODY IS THE PASSPORT THROUGH THE DOOR LEADING TO OUR DREAM LIFE” (lines 29-30). She later explained by translating into Bahasa Malaysia the meaning of the sentence. “**I rasa ayat ni yang dia nak sampaikan adalah satu body yang sempurna adalah kunci untuk kita capai matlamat**< *I think that the intended message in this sentence is that a perfect body is the key to achieve our goal*>. She did not only provide meaning to the sentences, but she also provided her own perspective on the topic.

The dream life. I agree with her but...**memang lah kalau kita ada nice body and muka yang cantik so kita akan lebih yakin untuk teruskan hidup kita dan capai matlamat kita impian kita** <*it’s true if we have a nice body and a pretty face we can become more confident to live and achieve our goals*>. **Tapi** <*but*> maybe the nice body...**kita boleh dapatkan** <*we can get a* > nice body **bukan dari itu** operation means that **kita tak payah dapatkan** nice body **melalui** physical operation < *not from operation means that we do not need to have nice body through operations* > . **Kita boleh melalui kesihatan** < *we can get through healthy living*>...**Kesihatan** <*health*>... like this girl **dia buat banyak** <*she performed many*> operations to get the nice body..spend much money..so **kalau mereka yg kurang mampu nak dapatkan** nice body..**ada keburukan dia kan tapi** < *so if those who can’t afford it wanted to have nice body...there are disadvantages but..*>I agree with her that the nice body is the passport to our dream.... (lines 32-38)

In this example, Jia explained and evaluated the argument by indicating that even though a perfect body and beautiful face would make us more confident, and it becomes the passport to our dreams in life, but it should not be achieved through operations. It should be obtained through healthy living. The fact that she questioned the relevance of cosmetic surgery or operations to achieve a goal in life, makes her become a more critical reader. She managed to evaluate and weigh the advantages and disadvantages of undergoing cosmetic surgery.

Self - regulation

Jia was also found to use self - regulation technique in her think aloud session. In the extract below, she made an inference to the Korean people particularly in the Korean movies, actors and actresses who are tall and handsome are mostly famous and successful. She said,

Oh I think it is Korea **kan** (circle the word Korea) **banyak drama Korea kan?** so **kalau mereka tinggi dan handsome mesti mereka jadi famouskan?** I don’t know I think...**kita tengok lah..**(lines 3-5)

Later, when she said, “I don’t know I think...**kita tengok lah**”< *we just wait and see* > (lines 4-5), she self-monitored her own reading and understanding of the text and at the same time,

trying to look for other clues or arguments in the text to support her conclusion.

An interview was also conducted with the students after the think aloud session to elicit their perspectives on the effect of think aloud strategies in enhancing their critical reading skills. In the interview, Jia explained that, when she talked and described what she read using think aloud, she could understand the text better.

In fact, we can read through talk with ourselves or think aloud. This can help us to understand the meaning of the article better (Jia, Interview)

Positive Reading Attitude

Jia also mentioned that she developed positive reading attitude where she became more interested in her reading and managed to finish reading the article patiently. Jia mentioned that the project helped the students who do not like reading to develop interest in reading and encourage them to finish reading the text.

This is a project that worth participating in. This project will make students who don't like reading change their mind and realize the advantage and develop an interest in reading. I also think that this is a positive teaching material that can be used to encourage the students. It may feel a little boring at first, but after that, I can find that this reading strategy allows me to read the entire article patiently. (Jia, Interview)

Many of the students reported that reading in English is boring. Jia mentioned that she could easily get bored because she could not understand the text and some of the difficult words. Jia mentioned that she was resistant to reading English text because her English was not good, and she did not do well in the reading test because she could not understand many words.

This project helped me in the reading strategy. Before this, I am very resistant to reading. This is because my English is not good, I am unable to understand many words and sentences. When I am doing the reading test, I also received a bad grade. But, after this project, I found that reading is actually not a boring thing.(Jia, Interview)

In summary, critical reading is a more active way of reading. It is a deeper and more complex engagement with a text. Critical reading is a process of analyzing, interpreting and, sometimes, evaluating. When we read critically, we use our critical thinking skills to question both the text and our own reading of it. Ask questions, read actively, respond to your own questions and record key concepts, are some of the elements of critical thinking.

Discussion and Conclusion

Critical thinking holds a significant role in second or foreign language learning particularly in higher education (Atkinson, 1997; Asgharheidary & Tahriri, 2015; Fahim & Masouleh, 2012). Reading critically helps readers to comprehend the meaning of the text, prevents readers from deception and it can guarantee education and employability success. The students in this study engaged in critical reading where they were actively and critically engaging with the content that they read. They used library search, highlighted key ideas, wrote short comments, underlined and highlighted important points. These are all the elements of critical reading techniques. The students were more involved, both in their efforts and understanding, in the reading task rather than mere skimming the text to answer the questions and discover the answer.

The think-aloud strategy broadens the students' perspectives which could be applied in other fields. Some participants indicated that because they were actively engaged with deciding the under-lying messages of the texts, it expanded their perspectives to newer and more critical ideas. The students also said as they needed to understand the information better,

they were did some background research to understand the ideas in the texts. Thus this made the students active searchers of information, a skill that would be important when they started working. The students also indicated that the think-aloud strategy learned could be applied in other fields in life as well as their other subjects. Some of them also stated that they learned not to simply believe the information read. They had to make judgement as to what is right or wrong. They could make their own argument about the text they read. In other words, making judgment and interpretations of the ideas, arguments, and claims of others presented in the text, will make them more critical readers. Lestari asserts that critical reading helps readers 'to understand the message of the text, and the arrangement of the text' (2015, 521). Critical reading helps readers to not only understand the text better but also help them to remember what has been read and apply it in future. This ability is very useful for university students since they need to do a large amount of reading for their courses and apply what they have read in their assignments.

Critical reading is a form of critical thinking which is seen as a means of processing raw material involving comprehension beyond understanding the simple message of the text. Critical reading may include components of critical thinking such as analyzing, evaluating, drawing inferences, problem solving, monitoring understanding, drawing upon one's knowledge of the language, previous reading and experiences. Critical thinking holds a significant role in second or foreign language learning particularly in higher education (Atkinson, 1997; Asgharheidary & Tahriri, 2015; Fahim & Masouleh, 2012). Reading critically helps readers to comprehend the meaning of the text, prevents readers from deception and it can guarantee education and employability success.

In conclusion, there are far less studies in Malaysia compared to other countries that utilize the think-aloud strategy to enhance reading comprehension especially at the tertiary level. Past studies have shown that the think-aloud strategy can be used as an effective instructional tool in teaching English to ESL learners. For this reason, this study attempts to fill in the gap of less information about think-aloud strategy implementation in Malaysia by using Universiti Utara Malaysia undergraduate students to examine their critical reading comprehension using the think-aloud strategy. In order to read critically, students should be equipped with appropriate reading skills and strategies. These strategies should be taught, learned and cultivated in order to create and develop critical readers. Past studies have indicated positive effects of critical reading strategies and reading comprehension (Talebi & Talebi, 2015; Fadhillah, 2017; Yu, 2015). As such, there is a need to train undergraduate students with critical reading strategies to make them better readers.

Acknowledgement

We would like to acknowledge Universiti Utara Malaysia which has provided the funding of this research project under the APIQ Special Grant (S/O Code: 14323).

References

- Atkinson, D. (1997). A Critical Approach to Critical Thinking in TESOL. *TESOL Quarterly*, 1(31), 71-94
- Asgharheidary, F. Tahriri, A. (2015). A Survey of EFL Teachers' Attitudes towards Critical Thinking Instruction. *Journal of Language Teaching and Research*, 6 (2), 388-396.
- Casner-Lotto, J. and Barrington, L. (2006). Are they really ready to work? Employers' perspectives on the basic knowledge and applied skills of new entrants to the 21st century workforce. New York: The Conference Board.
- Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five*

- approaches. (2nd Edition). Thousand Oaks, CA: Sage.
- Facione, P.A. (2013). Critical Thinking. What it is and why it counts. Insight Assessment. 1-28. Retrieved from https://www.nyack.edu/files/CT_What_Why_2013.pdf
- Fadhillah, A.M. (2017). Embedding critical thinking through critical reading: Teaching narrative text in junior high school. *Journal of English and Education*, 5(2), 92-102. Retrieved from <file:///C:/Users/Downloads/9938-20994-1-PB.pdf>.
- Fahim, M. and Mehrshad, A (2012). Critical Thinking and Iranian EFL Context. *Journal of Language Teaching and Research*, 3 (4), 793-800.
- Ifedili, C. J. A. (2009). An assessment of reading culture among students in Nigerian tertiary institutions. A challenge to educational managers. *Reading Improvement*, 46 (1). Retrieved from <https://www.freepatentsonline.com/article/Reading-Improvement/218120730>.
- Kaur, S. & Thivagarajah, R. (1999). The English reading habits of ELLS students in University Science Malaysia. Paper presented at the Sixth International Literacy and Education Research Network Conference on Learning. Bayview Beach Resort, Penang, Malaysia, 27-30 September 1999.
- Koo, Y. L. (2011). Sustaining Critical literacy in Higher Education: Ambivalence, challenges and tensions. In Ambigapathy Pandian, Shaik Abdul Malik Mohamada Ismail and Toh, C.H. (Eds). *Forging Unity amidst diversity: From classroom and beyond*. (pp 104-112). Penang: School of Languages Literacies and Translation, USM
- Lestari, Z. (2015). The Teaching of Critical Reading in an EFL Classroom. *International Journal of Social Sciences*, 1(1), 519-530. Retrieved from <http://grdspublishing.org/PEOPLE/people.html>.
- Malaysia Education Blueprint 2015-2025 (Higher Education), Ministry of Education Malaysia.
- Muhamad, A. J. (2006). Critical Reading Strategies in English as a Second Language: A Case Study of Malaysian Undergraduates. A dissertation partial fulfilment of the requirements for the Degree of Doctor of Philosophy, Universiti Islam Antarabangsa, Malaysia.
- Nambiar, R. M.K. (2007). Enhancing academic literacy among tertiary learners: A Malaysian Experience. *3L Journal of Language Teaching, Linguistics and Literature*, 13, 77-94. Retrieved from <https://ejournal.ukm.my/31/articles/view/1030/942>
- Ngu Mee Seng and Zainal, Z. (2017). Critical Reading Skills at Tertiary Level. *LSP International Journal*, 4 (1), 117-130
- Talebi, M. And Talebi, M. (2015). The effects of teaching critical reading strategies on making Advanced Iranian EFL Learners the critical readers. *Cumhuriyet*.
- Thang, S.M. and Azarina, A. (2008). Investigating readiness for autonomy: A comparison of Malaysian ESL undergraduates of three public universities. *Reflections on English Language Teaching*, 6, (1), 1-18.
- Wilson, K. (1999). Note taking in academic process of non-native speaker students: is it important as a process or a product, *26 (2)*, 166-179.
- Yin, R. K. (2014). *Case study research and applications: Design and methods* (5th ed.). Thousand Oaks, CA: Sage Publications.
- Yu, J. (2015). Analysis of critical reading strategies and its effect on college English reading. *Theory and Practice in language studies*, 5 (1), 134-138. <http://dx.doi.org/10.17507/tpls.0501.18>

Enhancing Student Performance through Targeted Support

Fadhilah Mat Yamin^{*a}, Wan Hussain Wan Ishak^b

^aSchool of Technology Management and Logistics, Universiti Utara Malaysia,
Sintok, Kedah, Malaysia

^aInstitute for Management & Business Research (IMBRe), Universiti Utara Malaysia,
Sintok, Kedah, Malaysia

^bSchool of Computing, Universiti Utara Malaysia,
Sintok, Kedah, Malaysia

*Corresponding Author: fmy@uum.edu.my

Abstract

Covid-19 has force many changes in life including teaching and learning (T&L). Prior to covid-19, blended learning has been practice in T&L with the support of information and communication technology (ICT). However, in order to reduce the spread of covid and to sustain education, T&L approach has been changed to 100% online. This approach necessitated a rapid shift in present practise of T&L and the use of technology. As a result, many students struggle to adjust to the changes and fall behind. This is because, during online T&L, some students face a variety of obstacles that make it difficult for them to focus on the learning session. A targeted support approach was employed in this study to help students comprehend and improve their knowledge and understanding. This strategy is carried out through a special session or workshop that focuses on a topic which requires in-depth discussion. In this study, the topic that has been identified is related to research methodology. Thus, four workshops has been organized including literature review, qualitative data analysis 1, qualitative data analysis 2, and quantitative data analysis. Each workshosp is handled by a knowledgable and experienced instructor. Students' reflection shows that the approach has improved their knowledge and given them more confidence in applying what they've learned in their research work. Furthermore, the analysis of the supervisor's evaluation reveals that the students' performance has improved when compared to the previous semester.

Keywords: Teaching and learning, Blended Learning, Online learning, Targeted support learning

Introduction

Since the declaration of Covid-19 as a significant treat for the country, teaching and learning (T&L) has shifted from face-to-face to online T&L. There is no doubt that many instructors have used online T&L or e-learning as part of a blended learning approach (Yamin & Ishak, 2017), but having 100% online T&L is a great challenge for all educators (Dhawan, 2020).

Many people are resistant to the adjustments, but they must embrace them in order to lower the disease's risk. Since then, T&L practises have required a significant deal of work and refinement. Instructors for example, must redeveloped the course content, reconfigure delivery and consultation methods, establish new evaluation methods, and improve their software and hardware capabilities. As demonstrated by Özüdoğru (2021) and Izhar et al (2021), instructors are having various problems during pandemic which include class preparation, communication, and technical issues such includes hardware and internet connectivity.

Students, on the other hand, must prepare for their classes by ensuring that their software and hardware are adequate for the online session as well as having good internet

connectivity (Mahyob, 2020). Above all, both the instructor and the student must psychologically prepare for the upcoming adjustments. Some students have fallen behind in their studies as a result of the failure to prepare and adapt to the changes, while T&L continues to fall short of the course objectives.

A study by Mahyob (2020) demonstrated that even if students are eventually able to overcome technological obstacles during the pandemic, their learning performance is still impacted. During normal face-to-face T&L, students can be closely monitored. Students who are encountering difficulties in their learning can be contacted for a face-to-face meeting to identify their issues. As a result, students can receive appropriate assistance and support. However, because students were not attending regular face-to-face sessions, many tasks that required face-to-face interaction, such as individual or group consultation and monitoring, were not possible.

In this paper, an approach called targeted support is proposed to assist students overcome their problem in online T&L. In this study, the T&L is handled completely online through lecture and discussion. However, the topics that required further discussion will be identified for special discussion session.

Background of the study

This research was carried out on a group of students enrolled in the BJTP3093 Final Year Project at the School of Technology Management and Logistics (STML). Students in this course are required to conduct a study independently under the supervision of a lecturer. At the end of the study, students are required to write a comprehensive report on their research.

The course instructor will also keep track of all students' progress. The course instructor will convene a group meeting on a regular basis to discuss progress and provide assistance at each level of the research process (Figure 1). During the meeting, the instructor notices that several students are having trouble understanding certain topics that they were supposed to have learned in previous related courses.

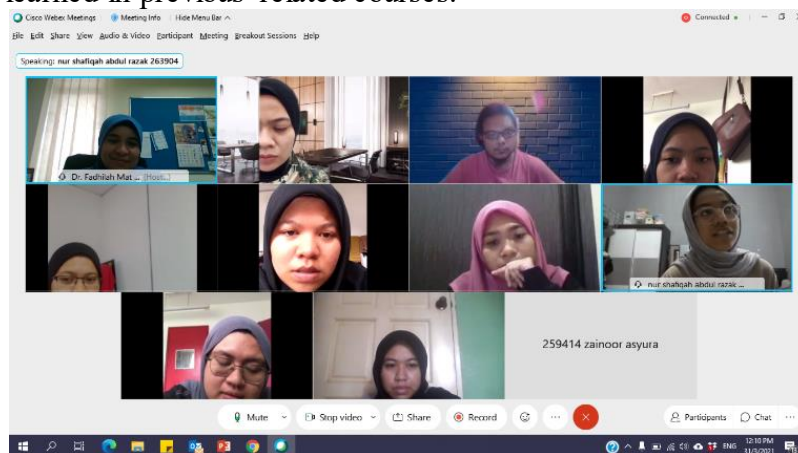


Figure 1. First Group Meeting

One of the topics is research methodology. According to the students, during research methodology class, they have no problem in understanding the concepts. However, they become stuck when it comes to applying what they have learnt in the final year project. The following are some of the students' grievances:

Student 1: "I don't know if my project is on the right track or not"

Student 2: "I'm still stuck, I'm worried I won't be able to finish my project"

Student 3: "I am still confused with my project research method"

Due to that problems, many students are not progressing well. The supervisors did their utmost to help the students, but the students' progress was still below expectations. If this issue is not quickly resolved, it will have a significant influence on student performance and grades. This is because research methodology is related to problem solving and data analysis. Failure to relate the problem to the appropriate method will have a significant impact on the research direction and data collection. Furthermore, the data analysis cannot be conducted properly. Consequently, students will not be able to write a proper report. Course evaluation for the final project is shown in Table 1.

Table 1
Course Evaluation

Components	Marks (%)
1) Final report	50%
2) Problem solving	10%
3) Consultation	10%
4) Class activity	20%
5) Proposal	10%

Method

In accordance to the students' problems, the instructor must take the appropriate approach to ensure that the students can relate and apply what they've learned to the project. Since students are having problem on certain topics only, covering all topics will not be an effective solution. Therefore to overcome this issue, the targeted support approach is applied.

The goal of the targeted support approach is to concentrate T&L on the specific topic where students are having difficulties. Students will be given extensive support and guidance so that they may learn and apply their knowledge appropriately. This approach has been recommended to be applied as an intervention for the low-performing students by Johns Hopkins Institute for Education Policy (2017). Furthermore, a study by Austin et al (2013) has shown that providing targeted support to students might help them enhance their academic performance.

In this study, the targeted support approach is applied as following:

- 1) topics which student having difficulties are identified
- 2) a special session is planned and organized
- 3) at the end of the course, students were asked to write a reflection on their learning experience
- 4) supervisors were asked to evaluate the overall performance of their students.

The literature review and data analysis were highlighted as two major topics that require extra guidance during the first class meeting. Data analysis is one of the important components of the research methodology. These topics were further subdivided into four workshops or special sessions. All workshops were handled by an expert with extensive knowledge and expertise in the field. All of the sessions were held on an online platform. The sessions are:

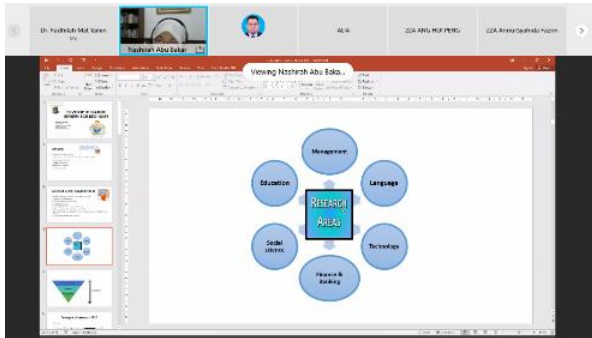
- 1) Literature review for beginner
- 2) Qualitative data analysis 1
- 3) Qualitative data analysis 2
- 4) Quantitative data analysis

Implementation

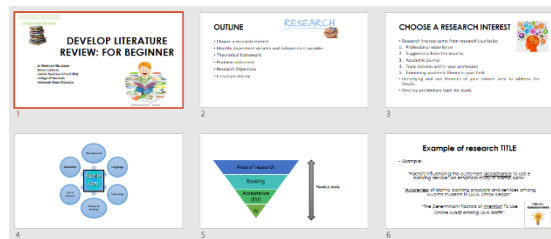
The first workshop, "Literature Review for Beginners," was held in the second week of class (Figure 2). Following the workshop, the instructor led a discussion session by re-linking or remapping notes, references, and previous class lessons. The following are students' feedback after the workshop:

Student 1: *"When I attended the workshop, it was easy for me to understand, because I had heard the terms of the class with FMY"*

Students 2: *"I like to attend workshops like this to improve my knowledge"*



(a) Discussion Session



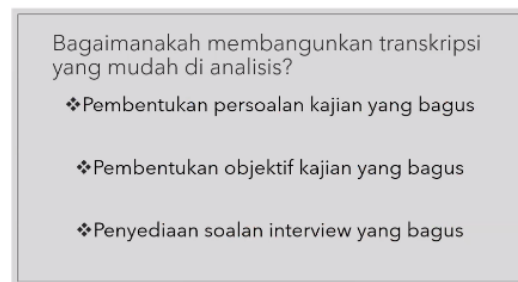
(b) Example of slides

Figure 2. Workshop on literature review for beginner

Two workshops on qualitative data analysis were held in order to provide students with a more in-depth understanding (Figure 3 and Figure 4). This is due to the demand from the students and difficulty of applying qualitative data analysis approach in their research.

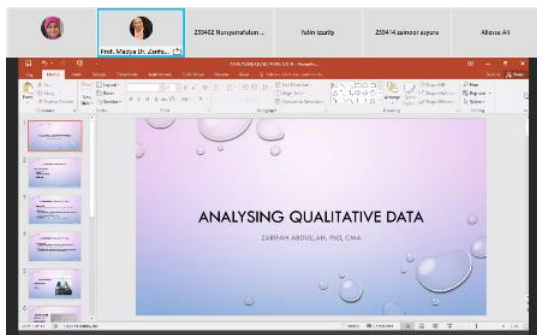


(a) Discussion Session

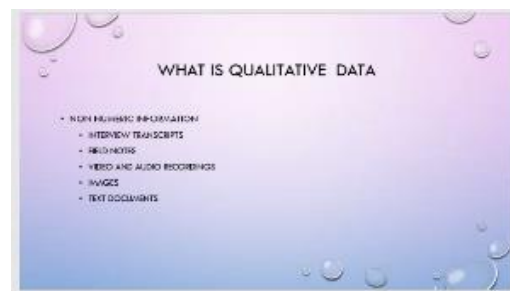


(b) Example of slide

Figure 3. Workshop on qualitative data analysis 1



(a) Discussion Session



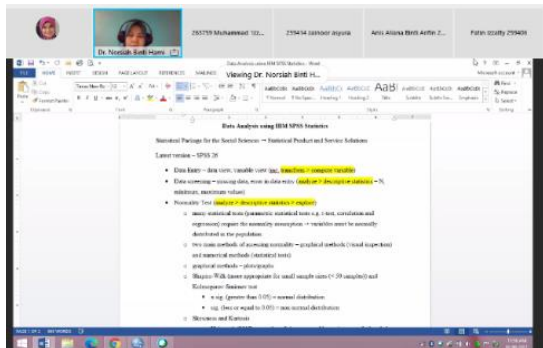
(b) Example of slide

Figure 4. Workshop on qualitative data analysis 2

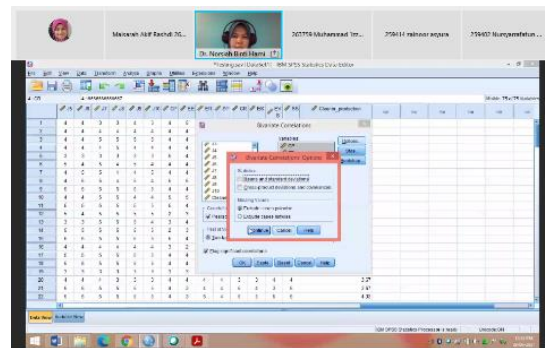
Workshops on quantitative data analysis were organized after that. The focus is on students who study using a quantitative method. The following are students feedback after the workshop;

Student 1: *"I want to ask for a slide from the facilitator, Dr... because I want to follow step by step shown"*

Student 2: *"I feel clearer after attending this workshop"*



(a) Discussion Session



(b) Hands on Session

Figure 5. Workshop on quantitative data analysis

Students Reflection and Findings

After going through 14 weeks of learning session, students were asked to write a reflection on their learning experience. The following are some of the reflections written by the students:

Student 1: *"...we often refer back to what we have been taught by lecturer Dr. Fadilah Binti Mat Yamin. We refer back to our notes while in class as a guide for information. Besides that, we also surf the internet to find out more about data analysis and how to handle it. Not only that, we also ask our friends..."*

Student 2: *"...first time using SPSS. But, finally I can complete the task..."*

Student 3: *"Selepas mendapat penerangan dari Dr. Fadilah dan workshop baru kami faham sedikit kehendak analisis projek yang dicampur dengan maklumat tambahan dari rakan-rakan yang lain"*

Student 4: *"...aktiviti atau latihan diselesaikan secara bersama-sama. Kami tidak segan silu bertanya kepada rakan-rakan mahupun Dr FMY..."*

Student 5: *"...Mulanya kami kurang faham apa itu teknik kuantitatif dan kualitatif. Namun, kami belajar daripada youtube serta sesi Q & A workshop yang telah diadakan..."*

Student 6: *"...getting better understanding in this subject when you give a few brainstorming related to our project..."*

Student 7: *"We gain new knowledge from this course. For me, this course help me a lot for my future career..."*

Student 8: *"...I faced some difficulties ... but I take it positively as new knowledge and new experience..."*

Student 9: *"... we found this project is hard to accomplish as we need to have a good skill in research method, SPSS and need to think outside the box ...finally we have gained some skill in handling our FYP and can see the importance of FYP project in daily life."*

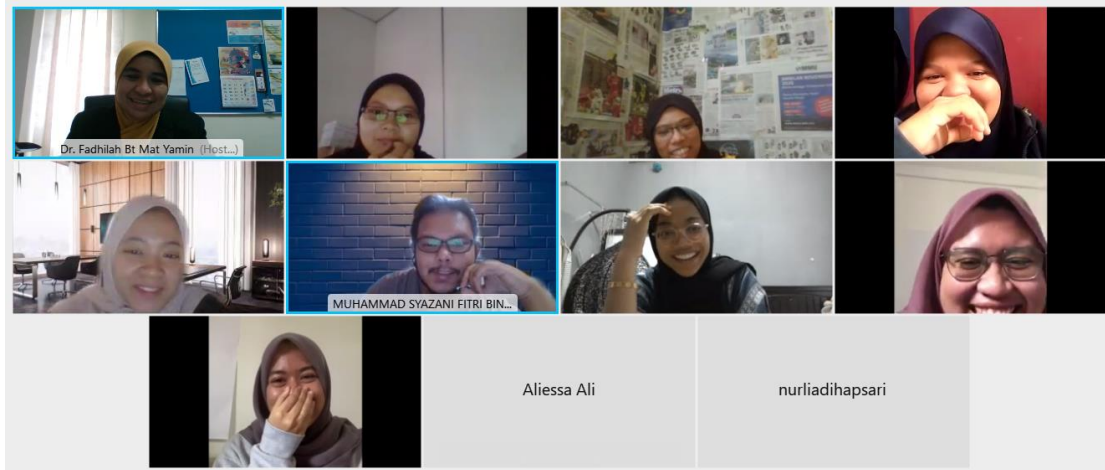


Figure 6. Students Faces after the session

Along with the reflection, the supervisor's assessment of the students' problem-solving abilities is examined. Students were evaluated in terms of their abilities to perform problem identification, analysis, application, synthesis & evaluation, and decision making as part of the supervisor evaluation components (Figure 7). The students' scores were compared to the scores of students from the previous semester.

Table 2 compares the current semester's A202 students' achievement to the previous semester's A201 students' achievement. As shown in Table 2, 75 percent of semester A202 students had a score of 15-20, while 25 percent received a score of 10-14. When compared to the students' achievement in semester A201, the percentage shows an improvement. Most crucially, in semester A202, no student received a score of less than 10 compared to 5% of students in semester A201. As a result, it can be conclude that the targeted support approach improves students' performance.

Table 2

A comparison of problem-solving score from semesters A201 and A202

Score	A201	A202
15-20	72%	75%
10-14	23%	25%
<10	5%	0%

<p>Problem identification *</p> <ol style="list-style-type: none">1: Able to partially explain a problem with maximum assistance2: Able to explain a problem with minimum assistance3: Independently able to explain a problem clearly without assistance4: Able to provide explanation of problem very clearly and accurately
<p>Analysis *</p> <ol style="list-style-type: none">1: Finds difficulty in organizing and analysing gathered information or data and finds difficulty in explaining ...2: Able to organise and analyse gathered information or data, but does not clearly describe the factors that ...3: Able to organise and analyse gathered information or data, clearly describe the some factors that contrib...4: Able to organise and analyse gathered information or data, clearly describe the factors that contribute to ...
<p>Application *</p> <ol style="list-style-type: none">1: Limited ability to apply new idea or knowledge2: Able to apply new idea or knowledge to a given problem with assistance from lecturer or student3: Able to apply new idea or knowledge to a given problem independently4: Able to apply new idea or knowledge to a given problem and able to propose alternative applications
<p>Synthesis & Evaluation *</p> <ol style="list-style-type: none">1: Has difficulty in gathering, synthesising and evaluating information2: Able to gather relevant information, synthesise and evaluate the information and offers simple, unsupport...3: Able to gather and thinks about information, synthesise, able to offer responsible interpretations; provide...4: Able to gather and evaluates information, chooses a clear interpretation, and provides sufficient evidence...
<p>Decision making *</p> <ol style="list-style-type: none">1: Able to make decisions based on comparison and contrast between information, ideas and available solu...2: Able to make decisions based on comparison and contrast between information, ideas and available solu...3: Able to make good decisions based on comparison and contrast between information, ideas and availabl...4: Able to make excellent decisions based on comparison and contrast between information, identify proble...

Figure 7. Problem Solving Rubric

Conclusions

A targeted support approach has been proved to improve students' ability to follow and comprehend a course. This is because the workshop allows students to connect with the facilitator and dig deeper into the topic. Moreover, a student-centered method, from the

lecturer's perspective, necessitates substantial preparation, particularly in terms of knowledge, skills, and creativity. To ensure that the students can actively participate in the workshop, students should, for example, prepare and comprehend their project well.

The targeted support approach will be implemented with a new group of students next semester. The experience gains from implementing this approach in semester A202 will be utilized to enhance its implementation in a new semester. New topics that is related to student technical skills such as preparing, organizing and formatting the documents can be considered as many students still struggle to prepare well-formatted documents for their studies.

Other approaches, such as an experimental approach, can also be used to compare the impact of the new teaching methodology to the traditional method. Furthermore, the study should be expanded to include different student groups in order to have a greater grasp of the range of abilities and knowledge among students.

Acknowledgement

The authors wish to thank the Universiti Teaching and Learning Center (UTLC), Universiti Utara Malaysia for funding this study under IAP SOTL Module.

References

- Austin, A., Amorim, R.C., & Griffin, A. (2013) Targeted tutorials and the use of ASSIST to support student learning. *Proceedings of the 8th International Education, Learning, Styles, Individual differences Network (ELSIN)*. Retrieved from https://www.researchgate.net/publication/255993066_Targeted_tutorials_and_the_use_of_ASSIST_to_support_student_learning
- Dhawan, S. (2020) Online Learning: A Panacea in the Time of COVID-19 Crisis, *Journal of Educational Technology Systems*, 49(1), pp. 5-22
- Izhar, N. A., Na, Y. M. A., & Na, K. S. (2021). Teaching in the Time of Covid-19: The Challenges Faced By Teachers in Initiating Online Class Sessions. *International Journal of Academic Research in Business and Social Sciences*, 11(2), 1294-1306.
- Johns Hopkins Institute for Education Policy (2017). School Interventions That Work: Targeted Support for Low-Performing Students. Retrieved from <https://all4ed.org/wp-content/uploads/2017/07/SchoolInterventions.pdf> on 29 Sept 2021
- Mahyoob, M. (2020). Challenges of e-Learning during the COVID-19 Pandemic Experienced by EFL Learners. *Arab World English Journal*, 11 (4) 351-362. DOI: <https://dx.doi.org/10.24093/awej/vol11no4.23>
- Özüdoğru, G. (2021) Problems faced in distance education during Covid-19 Pandemic. *Participatory Educational Research*, 8(4), pp. 321-333. DOI: <https://doi.org/10.17275/per.21.92.8.4>
- Yamin, F.M., & Ishak, W.H.W. (2017) Does the Blended Learning and Student Centered Learning Method Increase Student's Performance? *Proceedings of the 1st Inspirational Scholar Symposium (ISS 2016)*, pp. 8-17.

Problem-Based Learning vs Problem Solving: Case of Law Students

Harlida Abdul Wahab*^{a,b}, Ani Munirah Mohamad^{a,c}

^aSchool of Law, Universiti Utara Malaysia, Sintok, Kedah, Malaysia

^bLegal and Justice Research Centre (LJRC), Universiti Utara Malaysia.

^cCentre for Testing, Measurement and Appraisal (CeTMA), Universiti Utara Malaysia, Sintok, Kedah, Malaysia

*Corresponding Author: harlida@uum.edu.my

Abstract

Problem-based learning (PBL) is a pedagogical approach that has been adopted since decades. In PBL, students are expected to learn through educational experience when the problems are associated with the real-world context thus promoting the concept of student learning or focusing on student-centred learning. Being considered as a deep approach in learning, PBL has been broadened to variety of fields including law. Despite this, in law programmes, problem solving or specifically, legal problem-solving is commonplace. It is therefore quite challenging to claim PBL as an innovative approach to the customary practice of problem solving that has become part of the “traditional” approach as far as legal studies is concerned. It is an essential skill for the study and practice of law. This paper therefore identifies the characteristics/features of PBL and compare them with the problem-solving approach that has then been part of the legal study approach in the law programme at School of Law. To illustrate both approaches, students at School of Law of one higher learning institution in Malaysia were exposed to PBL and legal problem-solving approach. Data sources in the form of reflective notes by the lecturer and the students were analysed using the computer-aided qualitative analysis software - ATLAS.ti version 9. The study found few comparison points between PBL and problem-solving approach when conducted among law students, particularly in terms of type of questions used, the duration of the task, the steps taken to solve the problems, and the end-product of both learning approaches. It became apparent that while PBL is seen to be a systematic approach that throbbing the students’ thinking and thoughts thus stimulate their experiential learning process through which they develop their understanding and knowledge, problem solving is also claimed to be such kind of approach that anticipates students’ learning and engagement. Hopefully this paper could be a catalyst for future research on the areas of legal studies and learning strategies for law students.

Keywords: Problem-Based Learning, Problem Solving, Teaching and Learning, Law Program, Students’ Engagement, Legal Studies

Introduction

Problem-based learning (PBL) is a significantly growing approach and practice that became popular in the 21st century and is even highly recommended and encouraged at - universities. Many studies found the approach as an effective way of learning which develops self-directed learning habits where the process impacts positively the students’ learning. As a result, PBL has been widely adopted in diverse fields such as management, accounting, and law although it originally started in the clinical field. In educational contexts, PBL has been associated with advancing critical thinking and problem-solving. Almulla (2020) found that the PBL technique improves student engagement. Not only students would gain benefits, teachers also can reap the profits of PBL. According to Carpenter et al. (2007), the concept of PBL encourages collaboration of two or more teachers when they do the planning, implementing, and evaluating

a course. This would further assist inexperienced teachers with valuable learning experiences thus favours individuals' professional and personal development (Tsybulsky & Muchnik-Rozanov, 2019). Working together in team allows teachers to share expertise, skills and knowledge thus enrich their understanding as well.

While PBL is seen as an approach that stimulates students' critical thinking and thoughts through which they develop their understanding and knowledge, legal problem solving is an essential skill for the study and practice of law. This problem-solving approach is also part of the method that anticipates law students' learning and understanding. Legal problem-solving approach here refers to the method of all law schools where students are provided with scenarios of cases that requires them to find and resolve the problem by offering or suggesting the solution. The solution is the answer/s to the problem. These two approaches look identical particularly when they involve "problem-solving" approach. It is therefore a challenging task to introduce the concept and approach of PBL if the objectives of provoking thought for cognitive learning and problem-solving has been part of the traditional approach, as far as law studies is concerned. Without clearly indicating the features of PBL that make it special and become a real-world experience method in teaching and learning, the technique could be a failure, or the result would not achieve the legal education objective as has been anticipated by both teachers and students. The focus of this paper is thus about the characteristics, features and concept of PBL that make it unique, different, and valuable learning experience to students.

This paper aims to identify the characteristics/features of PBL and compare them with the problem-solving approach that has then been part of the legal study approach in the law programme at School of Law. Here, PBL is an approach that expects students' critical thinking and thoughts through which they develop their understanding and knowledge, while problem-solving approach is also part of the method that anticipates for students' cognitive learning, understanding and engagement. Accordingly, these two approaches are almost identical in the aspect of "problem-solving" approach, but the issue remains as to why PBL has taken lead and becomes prevalent. Therefore, this study aims to address the research question of: How is PBL different from problem-solving learning strategy among law students?

Literature Review

Many factors can influence students' understanding and achievement in learning. Classroom environment, peers, teachers, and methods of delivery are among the factors that determine the quality of learning. Students' engagement, interactive learning, active participation also are parts of the quality in teaching and learning through which students are not only expected to acquire knowledge, but to actively explore, sharpen skills, and increase the ability in their critical thinking thus able to solve problem and make decisions on their own. Problem-based learning as one of the effective an approach in teaching and learning has been implemented in various disciplines. It promotes critical thinking and problem solving in authentic learning situations (Yew & Goh, 2016). A systematic review study by Zakaria, Maat and Khalid (2019) revealed that PBL as a method of teaching and learning has been used in various levels of education with Mathematics is the most widely used. Even 95 percent of the users believed the positive impact of PBL suggesting it to be used as an alternative method.

The proponents of PBL believe and claim the method as useful in problem solving (Barrows et al., 1980), focuses on factual issues (Allen et al, 2011), functions as students-centred learning, thus encourages self-directed learning. The problems used must be real, authentic, challenging, complex and unexpected (Zakaria, Maat and Khalid, 2019). It is the role of the teachers to provide relevant and real problem thus transfer the task to the students to explore and find the solution. Tamim and Grant (2011) perceives PBL as increasing the students' commitment when it involves teamwork activities, communication skills and even

sense of responsibility with the group members. Overall, there was evidence that PBL method has significant relation with collaborative learning, disciplinary subject learning, iterative learning, and authentic learning, thus bring about student engagement (Almulla, 2020). Rather than memorising the information and procedures, deep learning forms part of PBL in science education when it advances the ability of gaining knowledge for solving problem (Miller & Krajcik, 2019). This essentially supports the notion that PBL is advantageous for learning purpose.

Legal Studies and Problem Solving

Problems includes case studies, case files, current matters, fact patterns, simulations, or briefs, the factual material law students work with when they simulate what lawyers do (Nathansan, 1998). Teachers use problems as simulation thus Nathansan refers the approach as problem-centered curriculum where students as active learners work on problems or simulate problem solving, while teachers are facilitators and guide students in the process of learning by doing. Legal problem-solving has been a familiar approach in legal studies and becomes usable in most law courses. Problems challenge students to work through the subjects themselves thus make them more responsible to their own education (Ogden, 1984). In clinic, if students are made to involve with legal clinic, students would gain and apply the law to real problems. In other words, legal problem-solving that requires critical thinking, constructive and innovative learning have been part of tradition in legal studies.

Problem-based learning and Legal Studies

The data in a study by Powell, Parker and Kilcoyne (2017) suggests that the PBL method is effective for learning legal concepts. Applying the PBL method in taxation law course, Shalini (2021) had a comparative analysis with the traditional method which shows that PBL has their benefits in improving problem-solving skill, retention of knowledge, better decision-making ability, as well as development of lifelong-learning ability. Martin (1995) has developed a computer-based education module to introduce law students on the use of PBL to legal problem solving and its potential to their professional practice. This has found to be an added value and effective in teaching the skill of legal problem solving.

Having understood the key concepts informing this study, being PBL and problem-solving in legal studies, the following section deliberates on the methodology undertaken in answering the research question of the study.

Methodology

The study aimed at highlighting the characteristics/features of PBL and compare them with the problem-solving approach that has then been part of the legal study approach in the law programme at School of Law. For this purpose, both learning strategies of PBL and problem-solving approach were applied on a group of law students at School of Law at one higher learning institution in Malaysia. The purpose of implementing these two strategies was to gather information from the lecturer and the students as to their experiences in undergoing PBL and problem-solving approach.

PBL Implementation

A group of six law students at master's postgraduate level taking the course "Contract Law" were included in the study. A problem was assigned by the lecturer, in which the students deliberated on the problem, including to identify the real problem, planning steps to solve the problem, brainstorming key aspects of the problem and drafting the problem solution. Finally, the students presented their works to mark the solution of the problem. The duration of the PBL

implementation is two weeks. A summary of the process is presented in the following Figure 1.

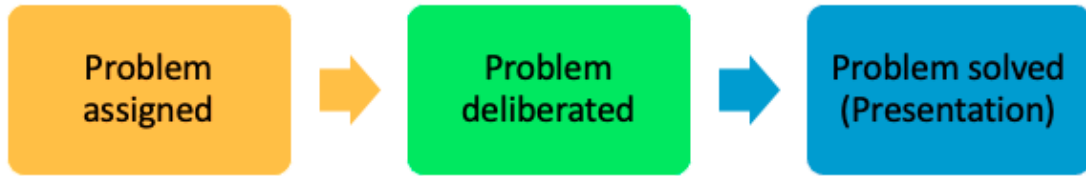


Figure 1. Stages of PBL Implementation

Problem-Solving Implementation

A group of 20 law undergraduate students taking the course “Legal Skills” participated in the study. First, a problem was assigned to the students. Second, the problem was approached by the students using the IRAC method, in which the issue involved in the problem was identified, the law/rule is mentioned, the law/rule is applied to the problem, and finally the conclusion was made. The third step is the presentation of the conclusion of the problem by the students. The duration of the problem-solving implementation is one hour. A summary of the process is presented in the following Figure 2.

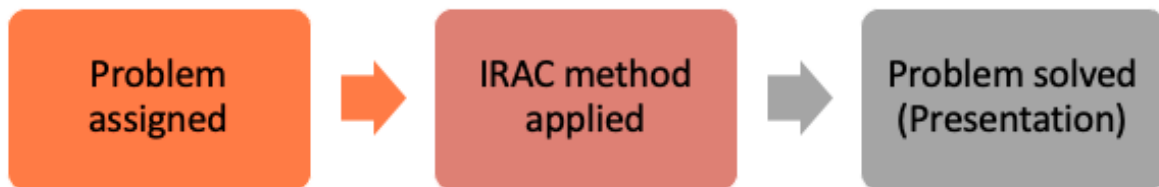


Figure 2. Stages of Problem-Solving Implementation

Data sources for the analysis

At the end of the PBL and problem-solving implementations, both lecturers and students reflected on their experiences and learning outcomes. The purpose of selecting reflections as the data sources for the study is to understand the experiences of the implementors of PBL and problem-solving, being the lecturer and students. The reflections were then added to the computer aided-qualitative data analysis software ATLAS.ti for the purpose of analysis and reporting of the findings. ATLAS.ti was chosen as it is appropriate for the purpose of the study (Mohamad, 2014; Mohamad, et. al, 2020). The interface of the ATLAS.ti analysis project is produced in the following Figure 3.

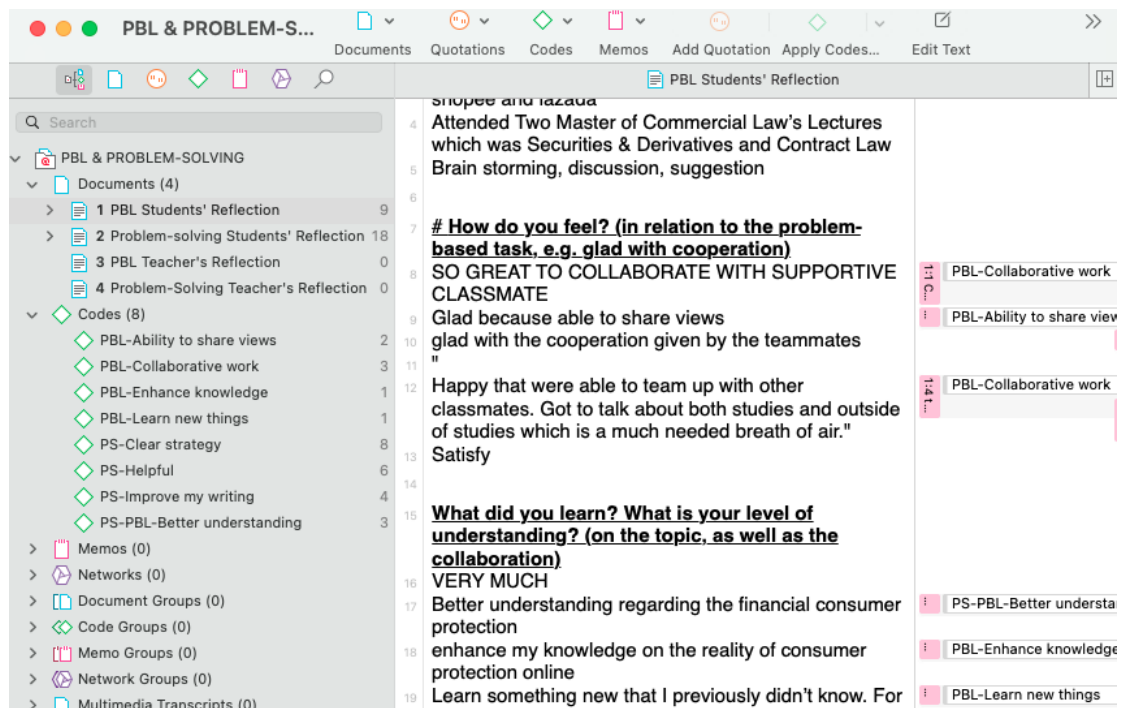


Figure 3. Interface of the analysis project in ATLAS.ti

Findings

The following findings were generated from the data to deliberate on the comparison points between PBL learning strategy and problem-solving among law students. Essentially, the comparison points are within the contexts of type of question used, duration of exercise, members' involvement, steps taken to solve the problems and end-product of both learning strategies.

Type of Question Used

The problem question used for PBL revolved around consumer protection law in protecting the rights of online users. The question set was in the form of trigger scenarios of memo from the director of Consumer Association and directed towards its legal officer. The memo included concerns by the director over the increasing cases of online scams and fraud cases involving consumers, hence the legal officer was to draft a blueprint for the better prevention of online scams and fraud cases. Accordingly, the aim of the PBL was to produce a blueprint containing strategies for online consumer protection. Meanwhile, for problem-solving, students were exposed to a legal problem concerning invitation to treat within the context of contract law, with focus on offer and acceptance. A scenario was given for the students to solve.

What could be seen in both learning strategies of PBL and problem-solving approach was that the problem was introduced to the students to solve. However, the type of question is different. While the problem-solving question relate directly to legal issue and law-related, the question for PBL is not necessarily involving legal issue. The scope of PBL type of question is therefore wider than problem-solving question, in which the latter could fall within the ambit of the earlier.

Duration of Exercise

For PBL, the students were given two weeks to collaborate and solve the problem. This was rightly so as the topics for online contracts and consumer transaction span for two weeks in the course structure. Accordingly, the PBL question given to the students commensurate with the

intended effort and learning objectives expected of the students. On the other hand, for problem-solving, the question was given to the entire class with the expectation the problem could be solved in the shortest time possible. In the present study, the implementation of the problem-solving took approximately 10 to 15 minutes.

Accordingly, it could be concluded that the duration for PBL exercise is usually much longer than problem-solving approach applied for law students.

Members' Involvement

In the present study, PBL projects required the involvement of group members, given the need for collaboration in completing the projects and for the students to empower each other. The works predominantly depended on the students themselves, in which they worked towards the completion of the projects from start to finish. Meanwhile, for problem-solving task, the students worked on the problems individually following a pre-determined set of guidelines using the IRAC method. Henceforth, it was found that problem-solving could be attempted by law students either individually or in groups, whereas PBL tasks was more appropriate to be assigned to groups of students. This would allow for potential collaboration and empowerment of each other in completing the projects which have been assigned to them.

Steps Taken to Solve the Problems

Students attempting the PBL assigned by the lecturer would very much depend on the nature and requirements of the problem itself. For instance, in the present case, the students would need to identify the problem, prior to deliberation of the possible solutions to the problems of consumer protection involving e-commerce transactions. The problem would only be solved when the students managed to introduce the required draft blueprint for the protection of the consumers.

On the other hand, for the problem-solving question, the students followed a pre-determined guideline in solving the problem, i.e., the IRAC method. The method consists of four stages of the problem-solving, firstly, I=Issue, for the identification of issue, secondly, R=Rule, for the deliberation of the relevant rule, law or policy on the issue, thirdly, A=Apply, for the application of the rule, law or policy on the facts of the case, and fourthly and finally, C=Conclusion, for the conclusion of the problem, in which students were expected to present the solution to the problem.

End-Product

The end product of PBL was very much dependent on the requirements of the problem, for instance to carry out a certain task, to organise an event, to draft an agreement or blueprint, or any other deliverables expected by the lecturer. In the present case, the end-product was the draft blueprint for the protection of consumers of online contracts. Along the same vein, for the problem-solving task, the end-product would be the decision or conclusion of the legal issues or problems. For instance, if the main issue in the problem question was: *Whether the actions by A considered as invitation to treat or proposal pursuant to Contracts Act 1950*, henceforth, the conclusion would be either: (i) Actions by A is considered as invitation to treat, or (ii) Actions by A is considered as proposal.

Accordingly, what could be gathered from this is that the nature of the end-product of PBL and problem-solving task is distinct from each other. While problem-solving questions must always involve deliberation of the legal problem after applying the law to the issues, the PBL presents the end-product in much diverse ways depending on the nature of the PBL questions.

A summary of the findings as discussed above is produced in Table 1 below.

Table 1
Differences between PBL and Problem-Solving Approaches

Dimension	PBL	Problem-Solving
Type of Question	Not necessarily involving legal issue	Involving direct-legal issue to be concluded
Duration	Usually takes 2 weeks or more to allow for problem-solving implementation	Can be as limited as few minutes, depending on the difficulty of the legal issues
Member's involvement	Usually done in groups of students, to allow for collaboration and students' empowerment	Not necessarily done in groups, can be individual work
Steps taken to solve the problems	Depends very much on the problem type and intended end-product	Usually using traditional legal approach, such as IRAC method
End product	Depends on the problem type, e.g. blueprint, report, strategy	Conclusion of the legal issue(s) after applying the legal rules/principles

At the end of the implementation of PBL and problem-solving approaches on the law students, the students reflected on their key takeaways from the learning experiences. The students agreed that PBL learning strategy provided them with the ability to share views with one another, given that the problem required them to work collaboratively. Additionally, they gained better understanding of the lessons, ability to learn new things, enhanced their knowledge in the area of consumer protection in online contractual issues. A summary of the key takeaways of PBL by the students is produced in Figure 4 below.

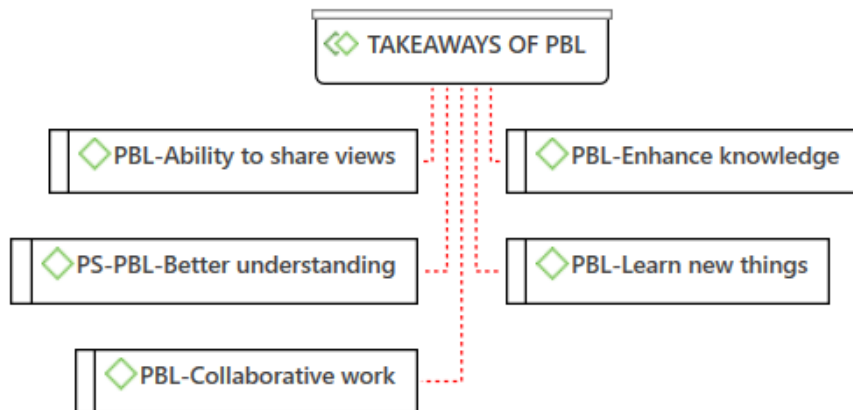


Figure 4. Key takeaways of PBL by the students

As for problem-solving learning strategy, the students reflecting great takeaways, too, such as the strategy allowed them to gain better understanding on the subject matter, and that the IRAC method provided them with clear strategy for solving the problems and was helpful in improving their writeups. A summary of the key takeaways by the students is produced in Figure 5 below.

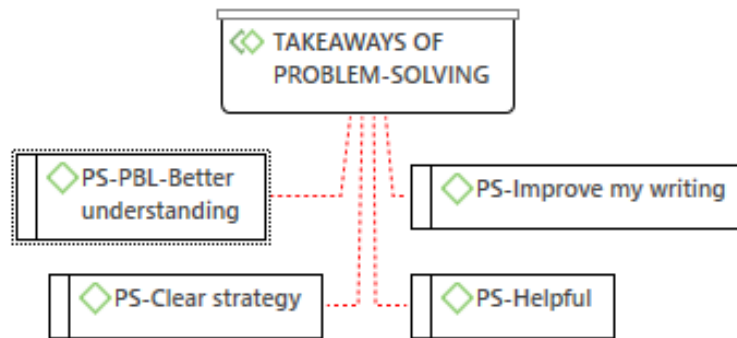


Figure 5. Key takeaways of problem-solving approach by the students

Conclusion

Although the implementation of PBL is fairly new in legal studies, it is gaining popularity and has brought significant impacts on the law students who engaged in this self-centred learning strategy. A lot of benefits of PBL which are reported in the literature, and further concurred in the reflections by the students in the present study. Nevertheless, the traditional problem-solving approach is seen as more prevalent among law lecturers and accepted by law students due to the requirements of the legal practice and problem-solving skills as one of the legal skills expected to be possessed by a legal practitioner. This is biggest motivation that sparked the interest of the researchers to carry out the present study.

The study aimed at highlighting the differences between the PBL and problem-solving learning approaches. It was found that there are a number of distinctive features between PBL and problem-solving, in terms of type of questions used, the duration of the task, the steps taken to solve the problems, and the end-product of both learning approaches. Nonetheless, both learning approaches was found to be useful and helpful for the students to achieve the intended learning outcomes, in a meaningful way.

Future research should be directed towards larger scale of the study sample, in order to further support the self-directed learning by the students, hence enriching their learning experiences. Hopefully, the findings of this study would become a catalyst for future research in the areas of PBL, problem-solving, and legal studies in particular.

References

- Allen, D. E., Donham, R. S., & Bernhardt, S. A. (2011). Problem-based learning. *New directions for teaching and learning*, 2011(128), 21-29.
- Almulla, M. A. (2020). The Effectiveness of the Project-Based Learning (PBL) Approach as a Way to Engage Students in Learning. *Sage Open*, 10(3), 2158244020938702.
- Barrows, H. S., & Tamblyn, R. M. (1980). *Problem-based learning: An approach to medical education* (Vol. 1). Springer Publishing Company.
- Carpenter, T., Durtschi, C., & Gaynor, L. (2007). Problem-based learning to teach fraud detection: the acquisition and retention of knowledge. *NBER working paper*, (11936), 13-20.
- Martin, F. (1995). The integration of legal skills into the curriculum of the undergraduate law degree: the Queensland university of technology perspective. *Journal of professional legal education*, 13(1), 45-62.
- Miller, E. C., & Krajcik, J. S. (2019). Promoting deep learning through project-based learning: a design problem. *Disciplinary and Interdisciplinary Science Education Research*, 1(1), 1-10.

- Mohamad, A. M. (2014). Using ATLAS. ti 7 for Researching the Socio-Legal Implications of ICT Adoption in the Justice System of the High Courts of Malaysia. *https://doi.org/10.14279/depositonce-4848*.
- Mohamad, A. M., Salleh, A. S. M., Nor, M. Z. M., & Yusuff, Y. M. I. (2020, November). Impacts of Augmented Reality in Legal Studies: Students' Reflections. In *2020 Seventh International Conference on Information Technology Trends (ITT)* (pp. 151-155). IEEE.
- Nathanson, S. (1997). Designing problems to teach legal problem solving. *Cal. WL Rev.*, *34*, 325.
- Ogden, G. L. (1984). The problem method in legal education. *J. Legal Education*, *34*, 654.
- Powell, J., Parker, C., & Kilcoyne, M. (2017). Cyber business law and project-based learning. *International Journal for Innovation Education and Research*, *5*(11), 62-73.
- Shalini, S. (2021). A Study on the Effectiveness of Problem-based Learning in Legal Education in India. *Asian Journal of Legal Education*, *8*(1), 95-109.
- Tamim, S., & Grant, M. M. (2011). How teachers use project-based learning in the classroom. In *The Annual Convention of the Association for Educational communications and Technology Sponsored by the Research and Theory Division Jacksonville, FL*.
- Tsybulsky, D., & Muchnik-Rozanov, Y. (2019). The development of student-teachers' professional identity while team-teaching science classes using a project-based learning approach: A multi-level analysis. *Teaching and Teacher Education*, *79*, 48-59.
- Yew, E. H., & Goh, K. (2016). Problem-based learning: An overview of its process and impact on learning. *Health Professions Education*, *2*(2), 75-79.
- Zakaria, M. I., Maat, S. M., & Khalid, F. (2019). A Systematic Review of Problem Based Learning in Education. *Creative Education*, *10*(12), 2671.

Cultural Differences in Visual Sketching for Entrepreneur Education

Idyawati Hussein

School of Computing, Universiti Utara Malaysia,
06100 Sintok, Kedah, Malaysia

Corresponding Author: idyawati@uum.edu.my

Abstract

Visual neuron dominated 75% of human brain and the power of images and visual thinking can be useful in any verticals especially in business setting. Since the beginning of 2020, the pandemic has transformed the education institutions from traditional face – to – face into online teaching and learning. There has been lack of study in how visual thinking can be used in online teaching and learning especially in a multicultural country like Malaysia. This research aims to explore how visual and design thinking approach is combined in curating the existing Digital Entrepreneurship education. The result shows that there are no significant differences between Chinese, Indian, Malay and indigenous ethnic students in visual sketching.

Keywords: IJLLCE, multi-cultural communication, visual thinking, design thinking

Introduction

Teaching and learning need a high degree of visual techniques to stimulate collaboration between the learner and teacher. Visual thinking empowers people to unleash their creativity and boost innovations especially in business setting.

This research describes an entrepreneurial education that allows students to practice a series of divergent and convergent thinking applying visual thinking and able to invent a feasible, viable and desirable business ideas. Students are exposed to a participatory design activities and reflective assessment.

At the end of the course, a GIG Hackathon is held involving industry people so that the students can pitch their final project and demonstrate their understanding of entrepreneurial ecosystem to the industry players.

The aim of the final project at the end of the course is to provide experience to students to interact and practice pitching to potential investors. Entrepreneurial teaching approach applying data-driven, customized, active, process-based, project centric, collaborative, experiential and multidisciplinary.

Learning – by – creating – value is a process based and experiential where students have to go through an actual entrepreneurial learning process.

Related Works

Visual thinking is inspired by the back-of-the-napkin (Dan, 2009) idea which has become a business productivity tools aims at supporting creative process underlying innovation. Cote et al. (2020) explores the preservation of such hand-sketched notes, remove napkin backgrounds in order to extract hand-sketched notes. This research will be very useful to the community specially to keep the ideas written of other surfaces than paper.

However, there have been limited research addressing the relation between visual sketching and culture. Education through Art by Herbert Read in 1943 suggests that there are four different types of mental activity associates with four types of personality when drawing (Chaplin, 1994). First is its links to objectivity, universal laws, mathematics, nature and beauty

This work has been criticized and drawing and sketching was faded during the era.

In the 14th century, the terms “drawing” and sketching” have been used interchangeably in the literature of history and art. After two centuries, the term sketching is used to refer to “the outline or prominent features of” a preliminary or preparatory drawing to develop further for the first time.

Sketching is “the real heart of visual communication and essential getting ideas across”, according to John Heskett (Hoffman, 2020). Although, 70% of people rather choose to say “I am not visual” (Dan, 2009), 95% of information are processed visually by their brain. With the massive information available to date, visual thinking is an essential skills to be learnt.

Methodology

In this research, a participatory design approach is conducted which is part of Human Computer Interaction (HCI) methods. In this approach, students are asked to reflect on their experience of each stages and phases of their learning journey.

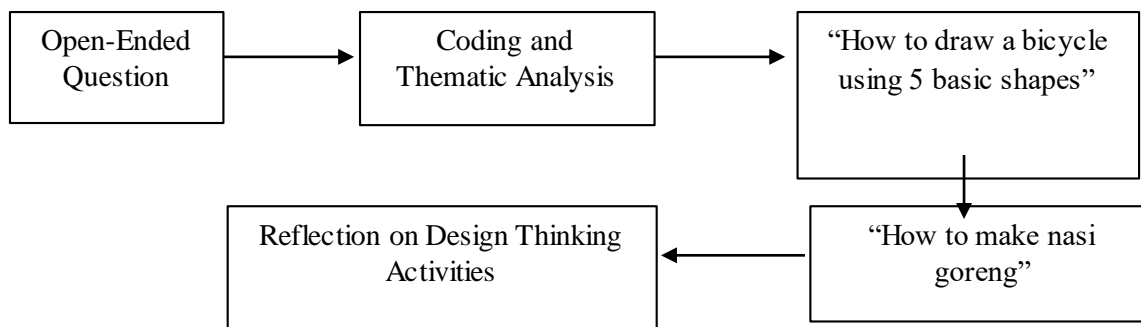


Figure 1. Research design for Digital Entrepreneurship

In Figure 1, open-ended question is used to identify existing problem. The question is “What are your frustrations when dealing with current online learning environment?”. Students are required to write down on sticky notes in MIRO platform. Then, coding and thematic analysis is performed on the listed frustrations.

In the first hands-on, students are asked to sketch a bicycle on a piece of A4 blank paper using five (5) basic shapes. The purpose of this exercise is to motivate the students that they can draw almost anything using basic shapes.

Next hands-on will be sketching a scenario of “How to make nasi goreng” or how to make fried rice. In this exercise, a local task is given so that every student can relate it to their every day life. Here, the concept of user-centred is introduced where ‘figure’ stick and context are added at the end of the exercise.

In final stage, students are exposed to design thinking and required to apply their business model canvas knowledge to test their business ideas. Students need to start creating Personas and user scenarios using visual sketching. Solutions are lo-fi or hi-fi prototyping and will be pitched to industry judges.

UUM Hackathon Business Pitching session allows students to pitch their business ideas to industry players and Centre of Excellence for Entrepreneurship (CEDI) at the university level. This gives students the opportunity to test and grow their business ideas.

Results

A total of fifty (N=50) students attended the class. 40% of the students are female (20 out of 50) and 60% are male (30 out of 50). Based on the coding and thematic analysis, the main

problem of existing online learning especially during the pandemic can be concluded as follows:

1. 84% of students claimed that online learning is ineffective due to massive assignments given to them as compared to face-to-face learning.
2. 80% students registered to this course are not interested to learn about entrepreneurship. Students registered into this course because it is 100% coursework and no exam.

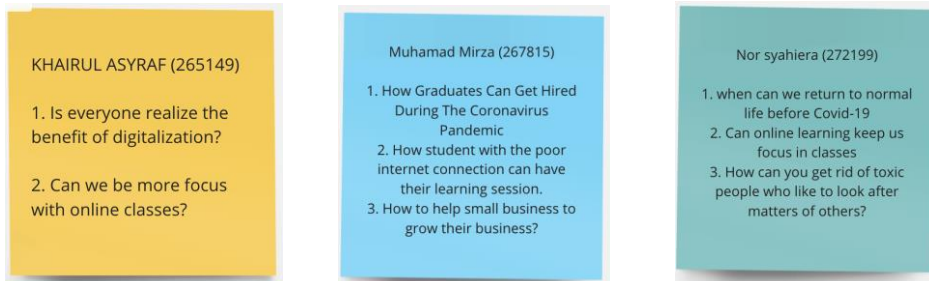


Figure 2. Students’ problem in related to pandemic online learning

In Figure 2, students revealed their feelings on the virtual sticky notes in MIRO platform. Each point is coded and grouped into the same categories. A theme is then created based on the pattern data.

The next activity is to sketch a bicycle based on five (5) basic shapes:

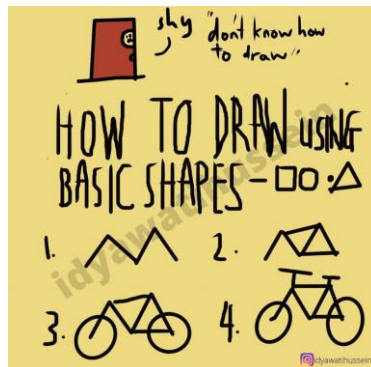
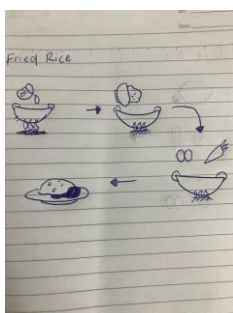


Figure 3. Students’ feedback was very positive on the first activity

The main purpose of this activity is to motivate students so that they can sketch anything based on just shapes. The next activity related to a process that they can relate in daily life.



Chinese Student

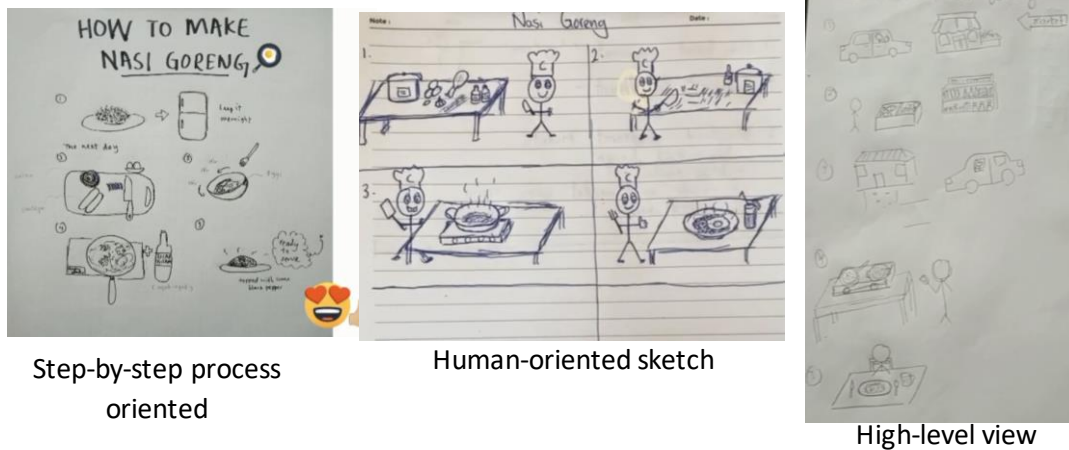


Indian Student



Malay Student

Students' sketching are compared based on races. The pattern of sketching is identical. However, what makes the sketches different amongst students are the following:



Step-by-step process oriented

Human-oriented sketch

High-level view

Figure 4. Different level of views

In figure 4, the difference between visual sketching is related to the students' views. When asked, why they sketched in such a way is because what they sketch is based on their own experience.

NO	COMMENT
1	Saya akan mengalakkan pelajar lain mengambil subjek ini dengan lecturer Dr Idaya ini, mengajar cara menjadi usahawan dan mengajar nilai murni dalam kehidupan. Perlukan lecturer seperti ini lebih ramal
2	Very recommended in this class because gain many experiences because in this class shows that the real world of entrepreneurship and the lecturer are very supportive and caring into their students.
3	the lecturer is one of the best lecturer i have ever have, she is really enthusiastic when it comes to teaching, she is uses many platform to make learning fun for us.
4	Good lecturer
5	THIS SEMESTER GIVE A LOT OF EXPERIENCE IN ONLINE CLASSES. THIS COURSE IS VERY EFFECTIVE.
6	Walaupun mengalami masalah dari segi capaian internet, penyarah berusaha sebaik mungkin untuk beri tunjuk ajar kepada anak didiknya.Terbaik
7	Kursus ini memberikan pengalaman dan impak positif kepada saya dimana pengalaman dan ilmu yang diberikan mampu diguna pakai di masa hadapan dan mengubah perspektif seseorang.
8	terbaik
9	I learned some new knowledge about entrepreneurship, and this course was helpful for me. Developing the 'Opportunity' made me believe that i had all that one should know before starting up.
10	saya suka kelas ini... penyarah sangat sporting dan banyak membantu para pelajar dan banyak ilmu baru yang saya perolehi dari kelas ini.
11	I just wanted to let you know I really enjoyed your class.
12	Good and preferable

12	Good and preferable
13	Kelas yang sangat menarik.saya suka dengan pendekatan yang dibawa oleh Dr. yang membuka minda, menjelaskan pemikiran dan hati sebelum masuk isi kandungan kursus ini. Berbeza dengan kelas Keusahawanan yang menjadi teras universiti. Kelas tersebut terlalu fokus kepada nilai pemasaran dan jualan. Dan pelajar tergesa-gesa menyiapkannya tanpa mempunyai tujuan yang jelas (big why) kenapa dia perlu menjadi usahawan ini melainkan hanya untuk menyelesaikan kursus itu sahaja. Walaupun asasnya di ajar lalu seorang usahawan harus menyelesaikan masalah, tetapi dengan konsep yang rigid dan terlalu membaku, gagal membuka hati pelajar yang bukan semuanya lah untuk menjadi usahawan. Menetapkan hati (heart setting) pelajar terhadap sesuatu perkara itu menjadikan pelajar jatuh cinta terus kepada ilmu yang diberikan. Dr juga banyak memperkenalkan website (tools) menarik sebagai medium pengajaran. Gig Hackathon sepatutnya dijadikan sebuah acara wajib bagi kursus ini agar kreativiti pelajar dapat dinilai dan budaya hackathon dapat di pupuk didalam komuniti UUM. Terima kasih dr diatas ilmu yang diberikan, doakan kami.
14	Dr idya is a good lecturer, she will help their student and find alternative if their student face a problem with internet connection. She also a good in deliver this subject because she has background from industry. She also introduce us in real world situation when we work. On final presentation she invite a lot of big people such as CEDI and MDEC to hear about our business pitching and get real comment from industry people. In conclusion, she was the best lecturer for this subject and this semester for me
15	The lecturer is very responsible, and online teaching can give us more time to do exercises.
16	Good
17	nice lecturer
18	Thank you for your madam. I love your class, you are a loving and kind person :)
19	Pelbagai ilmu yang saya pelajari dalam kursus ini yang boleh dijadikan panduan hidup seperti menonton drama Start Up. Menceritakan tentang sekumpulan kawan yang berusaha ingin memulakan perniagaan dan membuka syarikat atas usaha mereka.
20	Thank you Dr ??
21	very sweet, calm and helpful lecturer
22	Saya mempunyai masalah internet kadang kala sahaja. Secara keseluruhannya, saya memahami apa yang telah diajar oleh tenaga pengajar dengan jelas.
23	- Pengajar sangat profesional dalam memberi ilmu. - Mampu berunding jika pelajar mengalami masalah seperti masalah dari segi mengakses internet dan bencana banjir. - Pengajar sangat berilmu dalam bidang IT. - Pengajar gemar melakukan kelas dengan pihak luar yg profesional dan berilmu.
24	Susana pembelajaran Yang menarik
25	The professor is super nice. The lectures are very interesting and serious.
26	Good
27	Semuanya baik

Figure 5. Students' qualitative assessment

In figure 5, 86% or forty-three (43) out of fifty (50) students participated in the qualitative reflective assessment. Based on the feedback, student who came to this class thought Entrepreneurship class is to sell IT product. This perspective allows the lecturer to prepare what materials to teach to the next semester.

Conclusion

Students claimed the learning journey is impactful. They shared the excitement for what's coming in every classes. Each session brings different values to students. The "less is more" approach seems to make students feel relief. They mentioned the class is fun and were happy attending the online session.

Communication among peers are monitored through Slack and the improvement can be seen from how they resolve issues and conflicts in the group. Ongoing conversations are improving in terms of politeness.

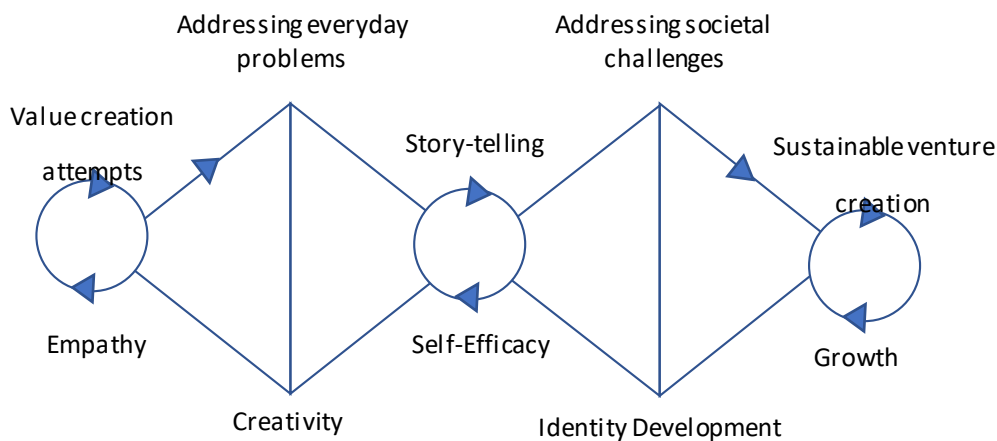


Figure 6. Design Thinking Framework for Entrepreneurship Education

In figure 6, Design Thinking framework is proposed which is based on the enhanced UX/UI and sketching activities. In this framework, students are exposed to UX sketching, personas designing, system thinking and crazy8s trainings.

During the first stage, students get to take action by addressing everyday problems based on their everyday problems. This activity spurred creativity, engagement and self-efficacy but also uncertainty and ambiguity which can be a negative experience especially when the questions is very broad.

In the second stage, students tell their peer about what they have learned through the process. Then everyone will start creating Personas based on any pattern found. In the third stage, the embedded approach becomes more skill-based and underpinning entrepreneurship theory which is made explicit allowing students to reflect on the theoretical base of the acting entrepreneurially.

During online, both lecturer and students uses online platforms such as MIRO for the collaborative tool, Slack and Telegram for communication and discussion platform, Padlet for submission of picture-based tasks and flipgrid for a video-based task.

Students are participated in the end-to-end journey of creative problem-solving approach based on Design Thinking, enhanced with system thinking, visual doing and user experience design.

During the first sessions, few targeted students seems to be very shy but after few sessions,

they are able to share their thought process without feeling shy or scared. After a while, shy students have more courage to open up their video camera and shared their views openly. The learning-by-creating-value slogan help speed up their behaviour changes.

The combination of visual and Design Thinking approach has led to a significant change to the student's empathy level. It is also found that there is no significant differences in visual sketching between Chinese, Malay and Indian students. However, this finding should be validated with more cohorts and extensive analysis.

References

- Chaplin, E. (1994) *Sociology and Visual Representation*, Routledge, New York, pp. 45 – 47.
- Cote, M. and Albu, A. B. (2020) Towards Preserving the Ephemeral: Texture-Based Background Modelling for Capturing Back – of – the – Napkin Notes, *Proceeding IEEE, WACV*
- Dan, R. (2009) *Back of the Napkin: Solving Problems and Selling Ideas with Pictures*, Marshall Cavendish International Asia Pte Ltd,
- Hoffman, A. R., (2020) *Sketching as Design Thinking*, Routledge, New York
- Lamm, Eva-Lotta, (2017) *Notes from Yoga Teacher Training: Sketchnotes* by Eva-Lotta Lamm, CreateSpace Independent Publishing Platform
- Ware, C. (2008) *Visual Thinking for Design*, Morgan Kaufman Publishers, Burlington, USA

Problem-based Learning Strategy in Contract Law: Students Empowering Students

Ani Munirah Mohamad^{*a}, Harlida Abdul Wahab^b,

^aSchool of Law and Centre for Testing, Measurement and Appraisal (CeTMA), Universiti Utara Malaysia, Sintok, Kedah, Malaysia

^bSchool of Law and Legal and Justice Research Centre (LJRC), Universiti Utara Malaysia, Sintok, Kedah, Malaysia

*Corresponding Author: animunirah@uum.edu.my

Abstract

Problem-based learning (PBL) is an educational strategy that has been widely employed for generations. PBL encourages students to learn through academic experience when challenges are connected to the real world, supporting the development of student performance or emphasizing on student-centred learning. PBL has been expanded to a range of learning areas, including law and legal studies, given its potential as a thorough and interactive approach to learning. In light of this understanding, this paper provides an account of the PBL learning strategy for the teaching and learning of contract law, involving postgraduate students from one higher learning institution in Malaysia. Tracing the implementation of the PBL strategy for the purpose of this study, three stages are deliberated: planning, implementation and reflection. Learning artifacts include instructions to the students, entry document, and live document through Google Sheets. At the post implementation stage of the PBL strategy, reflective notes by the lecturer and the students were analysed using the computer-aided qualitative analysis software - ATLAS.ti version 9. The study found great features of PBL in facilitating students' self-empowerment, particularly that PBL learning strategy provided the students with the ability to share views with one another, given that the problem required them to work collaboratively. Additionally, they gained better understanding of the lessons, ability to learn new things, enhanced their knowledge in the area of consumer protection in online contractual issues. It is a great hope that this paper could shed light onto future research on the potential of implementing PBL in legal studies.

Keywords: Problem-Based Learning, Teaching and Learning, Law Program, Students' Empowerment, Legal Studies

Introduction

Firstly started in the clinical field, problem-based learning (PBL) has been widely adopted in diverse fields including legal studies. In the context of legal education development, although the approach and practice of PBL in legal education has actuated decades ago, it become popular in the 21st century and greatly recommended at the university. There are many positive impacts of PBL on students' learning such as it provides effective way of learning, develops students' self-directed learning habits, promotes critical thinking and problem-solving in authentic learning situations (Yew & Goh, 2016) as well as improves student engagement (Almulla, 2020). Also, both students and teachers would gain benefits and reap the profits of utilising PBL. For instance, working in team allows teachers to share expertise, skills and knowledge thus enrich their understanding. Furthermore, the PBL concept encourages collaboration of teachers in the planning, implementing, and evaluating a course (Carpenter, Crawford & Walden, 2007). It also will assist inexperienced teachers with learning experiences thus favours individuals' professional and personal development (Tsybulsky & Muchnik-

Rozanov, 2019).

Barrows, the one who involved in the early stages of the development of PBL, defines the concept in terms of specific attributes of being student-centred, taking place in small groups, teacher acting as a facilitator, and being organised around problems (Barrows, 1984). In a medical-related study, PBL aims to develop students' skills at clinical reasoning and self-evaluation and study. The approach emphasizes applied knowledge and aspires to help students learn how to learn where it involves problem analysis rather than problem solving. The goal is not to 'solve' the problem but to recognise what student need to understand to appreciate the implications of the 'problem' involves. In the legal context, the 'client' is replacing the 'patient' (Grimes, 2015). A systematic review study by Zakaria, Maat and Khalid (2019) reveal that PBL as an alternative method in teaching and learning has been used in various levels of education with the most widely used is Mathematics, where 95 percent of the users agreed its positive impact.

PBL approach is useful in problem solving (Barrows, Tamblyn, & Barrows, 1980), focuses on factual issues (Allen, Donham & Bernhardt, 2011), functions as students-centred learning, and thus encourages self-directed learning. Emphasizing on student-centered learning, PBL approach stimulates students' critical thinking and thoughts through which they develop their understanding and knowledge. PBL encourages students to learn through academic experience when challenges are connected to the real world, supporting the development of student performance. Since PBL has been expanded to a range of learning areas, including law and legal studies, its potential as a thorough and interactive approach to learning is examined. In light of this understanding, this paper provides an account of the PBL learning strategy for the teaching and learning of contract law, involving postgraduate students from one higher learning institution in Malaysia. Tracing the implementation of the PBL strategy for the purpose of this study, three stages are deliberated: planning, implementation and reflection.

Conceptualising PBL in Legal Studies

Many factors can influence students' understanding, performance and achievement in learning. Students' engagement, interactive learning, active participation are parts of the quality in teaching and learning through which students can acquire knowledge, actively explore, sharpen skills, and increase the ability in critical thinking to solve problem and make decisions on their own. For that reason, PBL as one of the effective approach in teaching and learning has been implemented in many disciplines including legal studies. Flagg (2002) has used PBL in the Constitutional Law II subject and allowed students to work on each problem at their own pace and follow avenues of inquiry determined by their own thought processes. He reveals, among others, that PBL consists of small-group, active learning processes that render the group to work highly desirable, facilitate creative thinking and provide built-in feedback. This section provides an account of the key themes engaged in this study, being PBL, legal studies and PBL in legal studies.

Problem-Based Learning

One of the primary aims of PBL is to develop active learning amongst students thus promoting the responsibility for learning to the student (York Law School, n.d). Graff and Kolmos (2003) have listed down several major principles in PBL method, namely: (a) Problem is the main element; (b) Student-centred learning; and (c) Teachers play roles to create problems that are linked to the pupils' real life. On top of that, they identify PBL characteristics as curriculum structure, the learning process and the assessment. It is the learning process where self-directed study groups discuss, analyse cases, present works among them, decide on the tasks, organise

works and supplement each other, thus empowering among themselves.

Additionally, PBL method has significant relation with collaborative learning, disciplinary subject learning, iterative learning, and authentic learning, thus bring about student engagement (Almulla, 2020). In PBL, the problems used must be real, authentic, challenging, complex and unexpected (Zakaria, Maat and Khalid, 2019). It is therefore the role of the teachers to provide relevant and real problem thus transfer the task to the students to explore and find the solution. Grant (2011) perceives PBL as a method that helps increasing the students' commitment when it involves teamwork activities, communication skills and even sense of responsibility with the group members. Rather than memorising the information and procedures, deep learning forms part of PBL in science education when it advances the ability of gaining knowledge for solving problem (Miller & Krajcik, 2019). Furthermore, it is a common experience that students are more motivated and work much harder with the PBL model than with traditional teaching methods and they also spend a great deal of time on the work (Graaff & Kolmos, 2003).

Problem-based Learning in Legal Studies

The traditional approach of legal studies is problem-solving that requires critical thinking, constructive and innovative learning. Whereas problem-based as part of the learning process allows for full and free inquiry and decision making on the part of students who work in small groups. The simulation begins by providing context and preliminary information about the problem, where students direct their own learning, explore the problem in much the same way as they would with an actual problem. All parts of problem solving and lawyering can be included in these simulations, from gathering information and interpreting it to thinking through how to handle the problem to reaching and implementing a decision (Kurtz, Wylie & Gold, 1990). Hence, Clark (2019) observes some potentials of the PBL in the legal studies: (1) Students are more involved in the subject and their studies, individually and collectively, having taken more responsibility for their own learning and development; (2) PBL is really engaging when students are very enthusiastic about their learning; (3) the team-working skills and extensive experience of working in different.

PBL aims to create a holistic approach to legal education, wherein future lawyers would know the law and have experience in how they can apply the law to solve client needs (Clark, 2019). Powell, Parker and Kilcoyne (2017) suggests that PBL method is effective for learning legal concepts. Once the process is completed, students should satisfy with their legal knowledge, and to apply it to future situations. Along the way, PBL generates vital legal research skills, an ability to work with others and fantastic opportunities to develop interpersonal and legal skills (Clark, 2019). Applying the PBL method in taxation law course and comparing it with the traditional method, Shalini (2021) finds PBL's benefits in improving problem-solving skill, retention of knowledge, better decision-making ability, as well as development of lifelong-learning ability. In teaching and learning, law students are taught through life-like simulations of the legal problems that lawyers are tasked with solving. Clark (2019) suggests a structure of the followings:

- (a) The group will be presented with a legal problem, for example, in the form of a client's email or similar;
- (b) Utilising a legal, solution-based approach to analyse the problem and identify key parties, interests and facts;
- (c) Brainstorming the legal questions that need answering;
- (d) Researching the answers to a self-generated 'learning outcomes'; and
- (e) Presenting feedback and completing solution to the problem.

Research Methodology

This part elaborates on the methodology undertaken in the study, and consists of discussion on the research design, the data sources of the study, and data analysis process.

Research Design

Employing qualitative research methodology focusing on case study design, this study involves postgraduate law students of Contract Law at one higher learning institution in Malaysia. A total of seven students were involved in the study, in which a teacher assigned them a specific problem to be solved in the PBL exercise. The entire PBL exercise consisted of three stages: planning, implementation and reflection.

First stage: Planning

This stage is for the lecturer to plan the teaching lesson prior to implementation and reporting of the entire PBL lesson. The strategies for the planning of the lesson are produced in the following Figure 1.

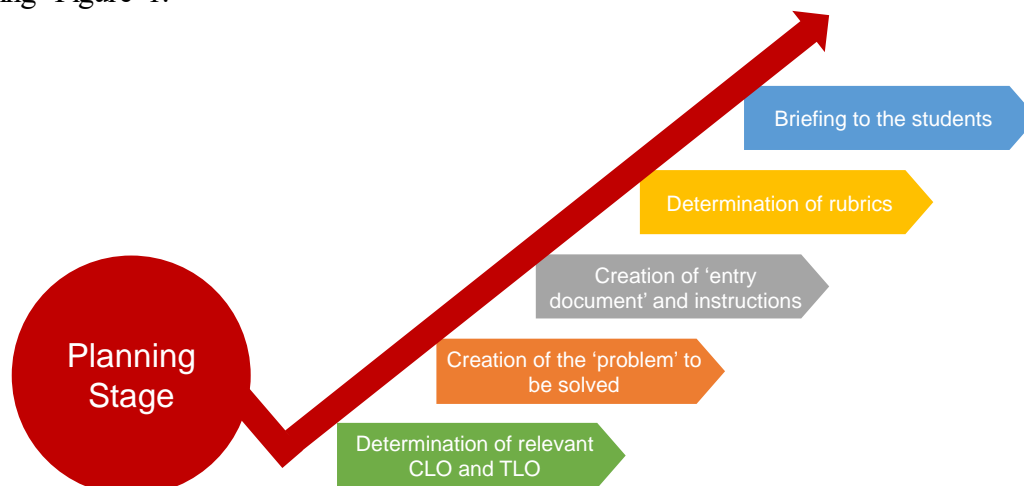


Figure 1. Planning stage by the lecturer

At this stage, the lecturer first determined the relevant course learning outcome (CLO) and the topic leaning outcome (TLO) for the PBL lesson. For this particular study, the course involved was Contract Law and the CLO was: “To analyse the legal problems involving commercial contracts and consumer protection”. Meanwhile, the TLO was: “To analyse the problems associated with e-commerce consumer protection”.

The following strategy was to create the ‘problem’ to be solved in the PBL lesson, and the consequent creation of the ‘entry document’ and instructions for the students. Accordingly, at the end of the PBL lesson, the students were expected to propose a legal blueprint for the improved protection of the e-commerce consumers.

Additionally, the lecturer also determined the rubrics for the assessment of the PBL lessons, following by delivering briefing on the PBL to the students involved in this case. Upon completing the planning stage, the lecturer moved on to the following stage, i.e. the implementation stage.

Second stage: Implementation

The second stage is for the lecturer to implement the PBL lessons with the students, in which the students actually worked on the problem with high interactivity and self-directed learning, with minimal supervision from the lecturer. The strategies are produced in the following Figure 2.

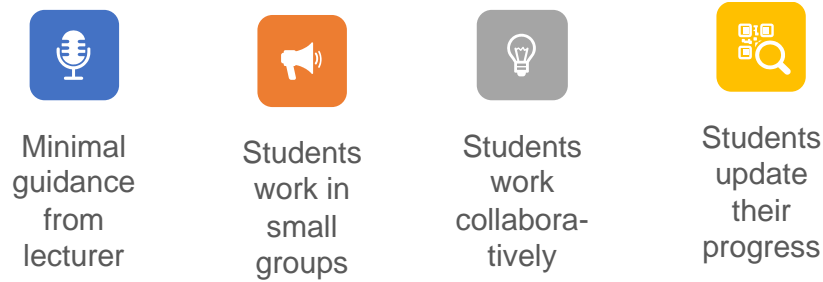


Figure 2. Implementation stage of the PBL Lesson

At this stage the lecturer rendered minimal guidance for the students because the entry documents are already self explanatory in assisting the students to complete the problems. Therefore, the students worked in small groups in solving the problems. In this situation the students are provided with potential for collaboration among themselves. At the end of the PBL lesson, the students will upgrade their progress to the lecturer.

Third stage: Reflection

The third stage is for the reflection to be provided by the students and the lecturer on the experiences in undertaking the PBL lesson. The reflective notes by the students and the lecturers were formatted according to the Gibbs' reflective cycle model. Additionally, the learning artifacts by the students were also produced in the format of live MS Word document using MS Office application.

Data Analysis

The data in the form of reflective notes by the students and the lecturer as well as the learning artifacts in the form of live MS Word document were loaded into the computer aided qualitative data analysis software, ATLAS.ti for the purpose of analysis and reporting. ATLAS.ti was chosen as it was appropriate to analyse open-ended data in the form of qualitative as in the case of this study (Mohamad, 2014). In general, six codes were developed purely inductively from the data using the open coding function. The codes were developed by the themes of the quotations mentioned by the teacher and the students in completing the PBL projects. The inductive approach of the coding process was chosen as it would give true meanings to the quotations by the participants of the study, rather to dictate the themes unto them. The final themes are deliberated in the following section. (Mohamad, et.al, 2020). The aim of the analysis was to explore the key features of PBL in contract law course. The interface of the analysis project in ATLAS.ti software is produced in Figure 3.

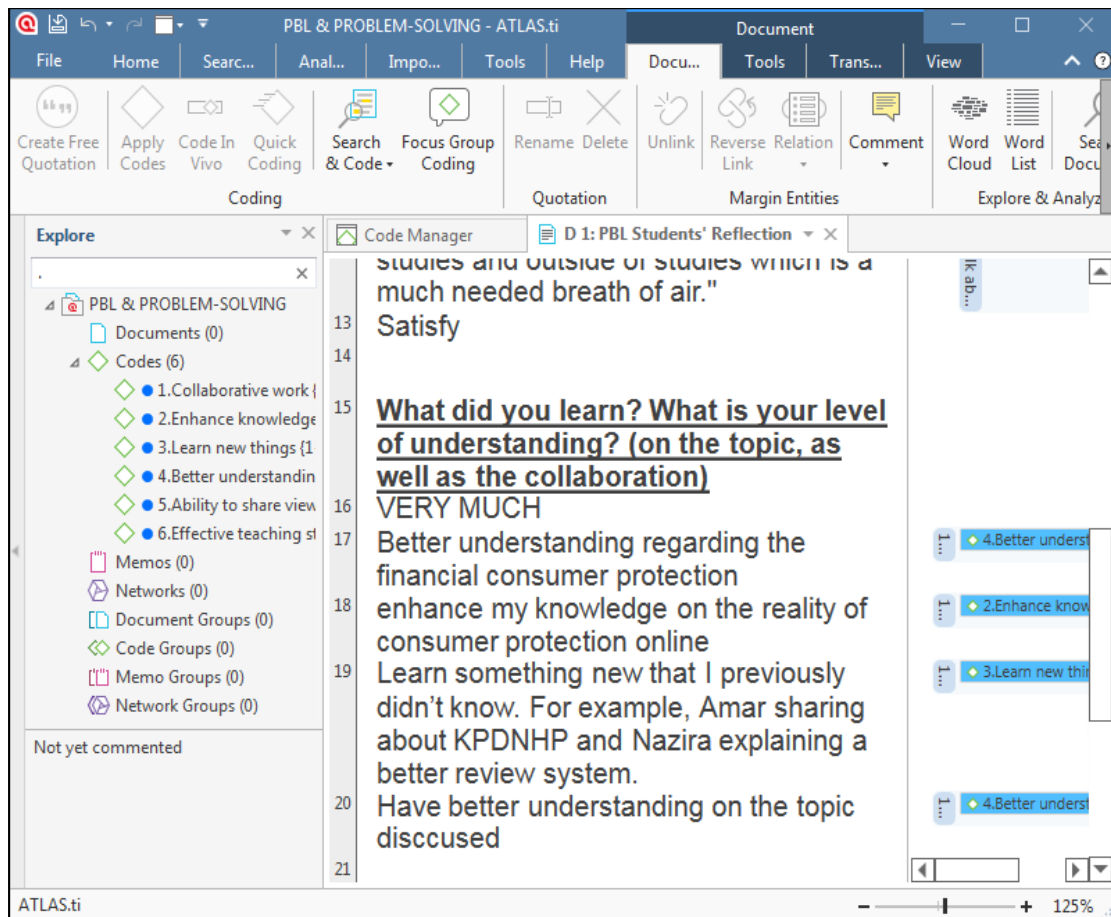


Figure 3. Interface of the analysis project in ATLAS.ti

Findings

The study found numerous key features of PBL learning strategy in contract law towards self-empowerment of the students. Such key features of PBL in contract law as produced in Figure 4 include platform for collaborative work, enhancement of knowledge, potential for learning new things, opportunity for better understanding, the ability to share views with one another, and PBL being an effective teaching strategy. Each of the key features are elaborated in the following section.

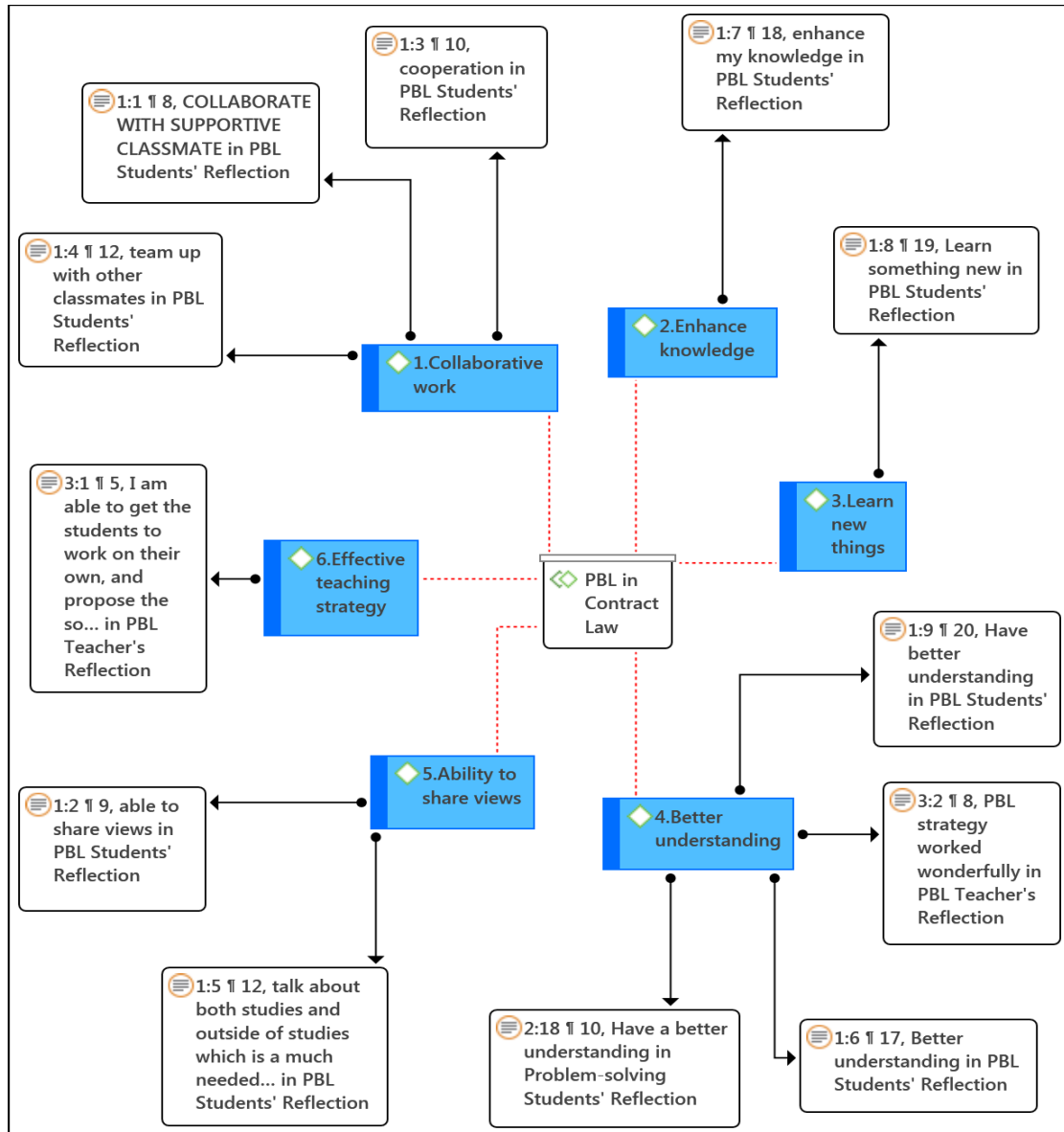


Figure 4. Findings generated from ATLAS.ti

PBL as a platform for collaborative work

PBL works as an appropriate platform for collaborative work among the students. This so happened because when two or more individuals worked together with the same aim and directions in solving the problem tasked to them, they would inherently work collaboratively. This was admitted by one of the students as follows:

"We cooperated and collaborated to solve the problem, and finally to come up with the output of the PBL task."

Enhancement of knowledge

PBL facilitates to enhance the knowledge of the students, particularly in the subject matter of the topic of discussion i.e. e-commerce contracts and consumer protection. For this purpose, one of the students mentioned that:

"I am able to enhance my knowledge on the topic."

Potential for learning new things

PBL worked great in the lecturer moving away from teacher-centred approach to student-

centred approach to give the opportunity to learn new things in an innovative way, as mentioned by one student:

“I learned something new in this PBL exercise.”

Opportunity for better understanding

PBL also provides the opportunity for better understanding of the lesson on the topic of discussion. In the past, lessons are taught by the lecturer via conventional approach, but with the PBL lesson being implemented, the students learned things on their own while trying to solve the problems tasked to them. One student mentioned:

“I gained better understanding of the topic, because I researched on my own, and brainstorm the idea with my groupmates.”

The ability to share views with one another

The study also found a great feature of PBL in contract law, i.e. the ability for the students to share view with one another. By undertaking the PBL tasks particularly to solve the problems, the students admitted to them having self-empowerment in which they shared their thoughts, views and ideas among the group members towards completing the task at hand. One of the students mentioned that:

“We shared views, about the class lessons and outside of the class lessons.”

PBL as an effective teaching strategy

In her reflection, the lecturer also claimed that PBL is an effective teaching strategy to be implemented in her law course. Most importantly, by implementing PBL, the students were able to empower themselves in achieving the CLO and TLO designated for the PBL lesson. The lecturer reflected as follows:

“I am able to get the students to work on their own, and provide solution to the problem assigned to them.”

Conclusion

The study sought to provide an account of the PBL implementation in contract law. It was found that PBL has great potential to be applied in legal studies, particularly that it enables students to empower themselves in solving the problems tasked to them. Particularly, PBL in this study was found to have served as a platform for collaborative work, enhancement of knowledge, potential for learning new things, opportunity for better understanding, the ability to share views with one another, and PBL being an effective teaching strategy. It is a great hope that this paper could shed light onto future research on the potential of implementing PBL in legal studies.

In this context, future research could be carried out to study the implementation of PBL in other law courses apart from contract law, such as constitutional law, cyber law, criminal law, torts law and many others. It is expected that similar potentials of PBL as highlighted in this study could be generalized to the other law courses, as well, subject to the proper implementation of the PBL lesson for the other law courses. Additionally, future research could also be carried out to study the implementation of PBL in law courses involving non-law students, for instance law courses offered as servicing course for non-law students.

Acknowledgment

The authors would like to extend their deepest appreciation to their mentors in PBL-Inspirational Academician Program (IAP), Associate Professor Dr. Zuaini Ishak and Professor

Dr. Nor Aziah Abd Manaf, and to University Teaching and Learning Centre (UTLC) of Universiti Utara Malaysia for financially supporting this study.

References

- Allen, D. E., Donham, R. S., & Bernhardt, S. A. (2011). Problem-based learning. *New directions for teaching and learning*, 21-29. <https://doi.org/10.1002/tl.465>
- Almulla, M. A. (2020). The effectiveness of the project-based learning (PBL) approach as a way to engage students in learning. *SAGE Open*. July-September, 1–15, DOI: 10.1177/2158244020938702
- Barrows, H.S. (1984). A specific problem-based, self-directed learning method designed to teach medical problem-solving skills, and enhance knowledge retention and recall. In H. G. Schmidt and M. L. de Volder (eds.), *Tutorials in Problem-Based Learning*, Van Gorcum, Assen, the Netherlands (1984), 16-32.
- Barrows, H. S., Tamblyn, R. M., & Barrows (1980). *Problem-Based Learning: An Approach to Medical Education*. New York: Springer Publishing Company. <https://doi.org/10.1080/00365540410018148>
- Carpenter, D. M., Crawford, L., & Walden, R. (2007). Testing the efficacy of team teaching. *Learning Environments Research*, 10(1), 53–65.
- Clark, H. (2019, Oct. 14). Problem-based learning for lawyers of tomorrow. <https://harryclarklaw.com/2019/10/14/pbl-at-york-law-school/>
- Flagg, B. J. (2002). Experimenting with problem-based learning in constitutional law. *Washington University Journal of Law and Policy*, 101-163 https://openscholarship.wustl.edu/law_journal_law_policy/vol10/iss1/6
- Graaff, E. D. & Kolmos, A. (2003). Characteristics of problem-based learning. *International Journal of Engineering Education*, 19(5), 657-662.
- Grant, M. M. (2011). Learning, beliefs, and products: students' perspectives with project-based learning. *Interdisciplinary Journal of Problem-Based Learning*, 5, 37-69. <https://doi.org/10.7771/1541-5015.1254>
- Grimes, R. (2015). Problem-based learning and legal education – a case study in integrated experiential study. *REDU Revista de Docencia Universitaria*, 13 (1), 361-375.
- Kurtz, S., Wylie, M., & Gold, N. (1990). Problem-based learning: An alternative approach to legal education. *Dalhousie Law Journal*, 13(2), 797.
- Miller, E.C. & Krajcik, J.S. (2019). Promoting deep learning through project-based learning: a design problem. *Disciplinary and Interdisciplinary Science Education Research*, 1, 7. <https://doi.org/10.1186/s43031-019-0009-6>
- Mohamad, A. M. (2014). Using ATLAS. ti 7 for Researching the Socio-Legal Implications of ICT Adoption in the Justice System of the High Courts of Malaysia. <https://doi.org/10.14279/depositonce-4848>.
- Mohamad, A. M., Salleh, A. S. M., Nor, M. Z. M., & Yusuff, Y. M. I. (2020, November). Impacts of Augmented Reality in Legal Studies: Students' Reflections. In *2020 Seventh International Conference on Information Technology Trends (ITT)* (pp. 151-155). IEEE.
- Powell, J., Parker, C., & Kilcoyne, M. (2017). Cyber business law and project-based learning.

International Journal for Innovation Education and Research, 5(11), 62–73.
<https://doi.org/10.31686/ijer.vol5.iss11.853>

Shalini, S. (2021). A Study on the effectiveness of problem-based learning in legal education in India. *Asian Journal of Legal Education*. 8 (1), 95-109.
<https://doi.org/10.1177/2322005820984418>

Tsybulsky, D., & Muchnik-Rozanov, Y. (2019). The development of student-teachers' professional identity while team-teaching science classes using a project-based learning approach: A multi-level analysis. *Teaching and Teacher Education*, 79, 48–59.

Yew, E. H. J. & Goh, K. (2016). Problem-Based Learning: An overview of its process and impact on learning. *Health Professions Education*. 2 (2), 75-79.

York Law School. (n.d.). Guide to problem-based learning.
https://www.york.ac.uk/media/law/documents/pbl_guide.pdf

Discovery of Scholarship of Teaching and Learning among Accounting Academics: A Personal Reflection

Khairina Rosli*^a, Siti Seri Delima Abdul Malak^b, Arifatul Husna Mohd Ariff^c
^{abc} Tunku Puteri Intan Safinaz School of Accountancy, University Utara Malaysia,
Sintok, Kedah, Malaysia

*Corresponding Author: khairina@uum.edu.my

Abstract

This paper presents a personal reflection on Inspirational Academician Programme (IAP) under Scholarship of Teaching and Learning (SoTL) module. As part of the IAP-SoTL session, a hands-on training program was conducted among accounting academics in a higher education institution. A group of nine participants was assigned for this small group training session. This training reflective practice follows Gibbs Reflective Cycle Model as the underpinning theory. Findings from the training feedback survey found that the participants were satisfied with the training session and they had understood better about SoTL particularly in doing reflection of their teaching and learning inquiry. They were motivated to do more teaching reflections in the future. In addition, the participants were inspired to implement SoTL by transforming their teaching inquiry into SoTL research and publication. Overall, it was a beneficial hands-on training session that can help to increase awareness on SoTL practice among accounting academicians. Thus, the reflection of the training presented in this paper contributes scholarly to the practice of SoTL in higher education institution particularly in accounting education.

Keywords: Accounting Education, Inspirational Academician Programme, Scholarship of Teaching and Learning, SoTL, Reflection

Introduction

Accounting knowledge must be taught to accounting students in order to prepare them to be skilled and professional accountants. Therefore, accounting academics play an important role as they are the person who would mould, encourage and develop the potentials of these future accountants. Accounting academics who are knowledgeable about scholarly teaching can enhance their individual teaching practice and be able to also train and influence other accounting faculty members to collectively teach and develop more skilled professional accountants. This is because, accounting academics who are unqualified or have insufficient education training might bring negative outcomes to the students (Anjum, 2019).

More scholarly teaching must be done with the aim of improving teaching and learning. Accounting academics who engage in research that is linked with scholarship of teaching and learning will come out with an improved evidence-based analysis and useful teaching techniques that can help students learn best in their lectures (Anjum, 2019). However, due to the scarcity of study in the field of accounting and finance on scholarship of teaching and learning, a thorough review is required to address the gap.

Therefore, as one of the initiative to bridge the gap, a teaching and learning training under the Inspirational Academician Programme (IAP) on Scholarship of Teaching and Learning (SoTL) module was conducted among accounting academicians from various accounting disciplines in a university. The SoTL training session aims to help increase awareness on the benefits of implementing SoTL in accounting course and help the academicians to improve their teaching and learning approach with students. The training workshop introduced the participants to the SoTL characteristics and encouraged them to

reflect on their teaching and learning approaches. At the end of the workshop, participants would be able to explain the fundamentals of SoTL, reflect upon their teaching practice and integrate teaching practice into SoTL research and publications.

Hence, the purpose of this paper is to present the participants' perceptions of the training and reflection on the IAP SoTL training conducted for the accounting academics. The remainder of this paper is organised as follows. The subsequent section presents literature review and underpinning model that support the foundation of the reflection. Next, the methodology used for conducting the training and data collection are discussed, followed by the findings of participants' feedback and instructor's personal reflection. Finally, conclusion and suggestions are then provided.

Literature Review

Scholarship of Teaching and Learning

According to Quarters (2013), SoTL concept was initially introduced by Ernest Boyer in the '90s in which teaching is seen as legitimate scholarship when teachers/ educators integrate teaching and learning with the literature, evaluation, and reflection. In addition to that, scholarship of teaching and learning is made public by sharing the teaching practice with others.

SoTL is defined as "Scholarly inquiry into student learning [that] advances the practice of teaching." (Ciccone, 2006, p.1, as cited in Voelker, 2016). It focuses on the improvements of teaching and learning based on scholarly literature review, followed by collecting and analysing learning evidence from students and finally sharing the results.

In conducting a significant SoTL research, Felten (2013) has identified five principles of good practice in SoTL namely, (1) inquiry into student learning, (2) grounded in context, (3) methodologically sound, (4) conducted in partnership with students, and (5) appropriately public. By applying the principles, SoTL researchers can develop their teaching inquiries based on the students learning and transform it into SoTL research and publications.

Continuous quality improvement (CQI) and Assurance of Learning (AoL)

At institution level, the accounting faculty practices continuous quality improvement (CQI), which is a continuously process of assessing and improving teaching and learning activities, including planning, implementation, monitoring, and enhancing practices. It is aligned with the Malaysian Quality Assurance (MQA) policy that is regulated by the Ministry of Higher Education and the Malaysian Qualification Agency National Higher Education Council to establish a quality standard for Malaysian higher education (Malaysian Qualifications Agency, 2014). The CQI ensures that the accounting faculty to be updated on a regular basis to suit changing demands and environments. Thus, the CQI is implemented for improvement purposes of the accounting courses. The faculty provides CQI report on the students' achievement whether the accounting course has achieved its target based on the course learning outcomes (CLOs). The CQI report also provides reflections on the intervention to students learning experience, so as to close the loop. The faculty members would take the recommendation of previous semester for the improvement in current and incoming semesters.

Besides CQI, the accounting faculty also practice continuous improvement through the Assurance of Learning (AoL) that are prepared and submitted as part of the accreditation of Association to Advance Collegiate Schools of Business (AACSB). The faculty can assess students' achievement in accomplishing the course learning goals, develop enhancement strategy and deliver guidance for individual learners (AACSB, 2019). Therefore, the accounting faculty in preparing the AoL report must ensure the correct rubric is used for the data collection from their students in the course. Both CQI and AoL reports that contain the

students' overall performance and reflection on the course achievement are presented and discussed in the department meeting to improve and closing the loop of accounting programme courses. It also discusses the recommendation action that can be taken by faculty members in improving the achievement of a particular learning goal and incorporate the suggested actions into teaching and learning process in the consequent semester.

Gibbs Reflective Cycle Model

The reflection in this article follows Gibbs Reflective Cycle Model (Gibbs, 1988, as cited in University of Edinburgh, 2020) as the underpinning theory that provides reflection framework of learning from experiences. The Gibbs Reflective Cycle as illustrated in Figure 1, is divided into six stages, namely,

- (1) Description of the experience,
- (2) Feelings and thoughts about the experience,
- (3) Evaluation of the good and bad about the experience,
- (4) Analysis of the situation,
- (5) Conclusion about what individuals learned and what they could have done,
- (6) Action plan on how or what the changes individuals would do in the future.

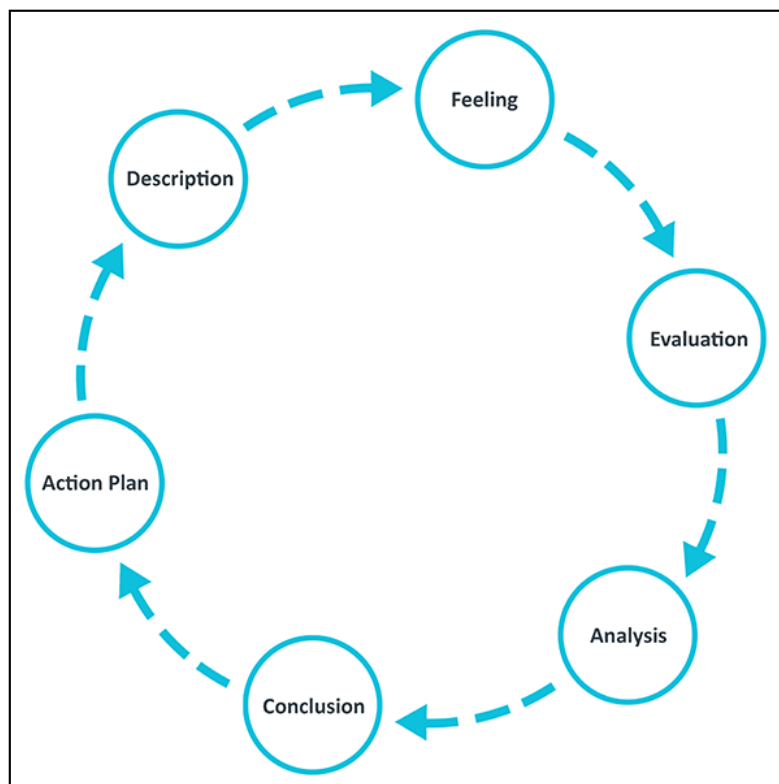


Figure 1. The Gibbs Reflective Cycle (Gibbs, 1988 as cited in University of Edinburgh, 2020)

The reflective cycle model aims at evaluating individuals' experiences and through its cycle orientation, the individuals may adapt to repeated experiences, allowing them to reflect and plan from things that have been going well or poorly.

Methodology

The half-day SoTL training workshop was conducted in three parallel sessions that was facilitated by three instructors from IAP-SoTL program. All participants who were accounting academics in the faculty were assigned into small groups with an instructor. Figure 2 below illustrates the flow of the SoTL training workshop activities. The training content incorporates the fundamental of SoTL, teaching inquiry reflection, converting teaching inquiry into SoTL project, SoTL game and feedback activities.

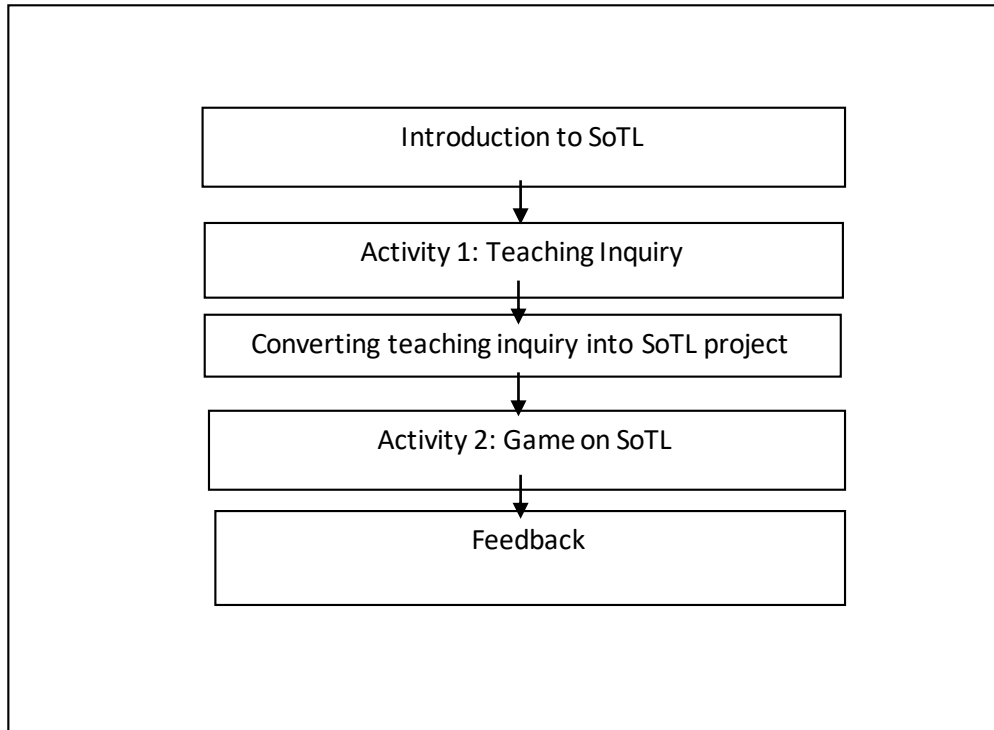


Figure 2. The flow of SoTL training

Feedback data from the participants were collected through an anonymous questionnaire survey that was administered at the end of the training session. A ten-point scale ranges from 1-4 point (unsatisfactory) to 9-10 point (excellent) was used in the questionnaire. As for the reflection of this training, it follows Gibbs' Reflection Cycle that provides the framework for the instructor in reflecting the training experience.

Results and Discussion

This training workshop introduced participants to the fundamentals of SoTL and to spread the spirit of SoTL among the faculty members. The training workshop had received 29 participants from the accounting faculty members and then they were assigned into three parallel sessions in which each session was facilitated by an instructor. A small group of nine accounting academics participated in one of the training parallel session. This paper presents the feedback by one of the groups and the personal reflection by its instructor who is the first author of this paper.

Demographic of Participants

Table 1 shows the demographic of the participants. The participants consists of nine accounting academicians from various accounting disciplines under two departments in the faculty; Department of Audit and Information Systems (44.4%) and Department of Accounting and Taxation (55.6%). Most of them were female (77.9%) and have more than five years of teaching experience (66.7%). However, none of them have conducted SoTL research before.

Table 1
Demographic of Respondents

Profile	Particulars	Frequency	%
Gender	Male	2	22.2
	Female	7	77.8
Department	Accounting and Taxation	5	55.6
	Audit and Information System	4	44.4
Teaching Experience	Less than 5 years	3	33.3
	5 years and above	6	66.7

Participants’ Feedback on SoTL Training

Overall, participants were satisfied with the training content delivery, template handouts and SoTL resources. It was evidenced in the training evaluation as they rated 8 (satisfactory) and 9-10 (excellent) for the training (refer Figure 3).

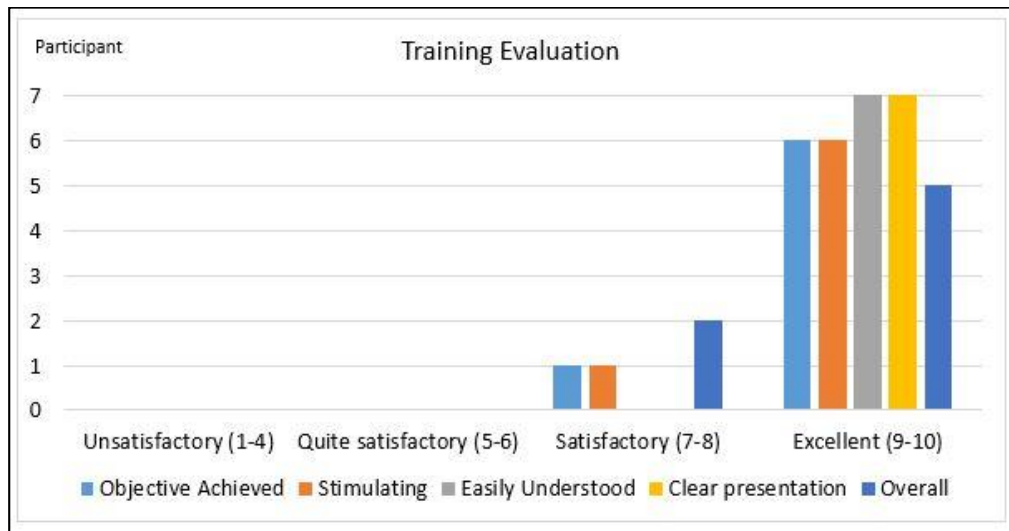


Figure 3. Participants’ Evaluation

Based on their feedback, the training had excellently achieved its objectives and stimulated them on doing SoTL. They also responded that the content of SoTL training was clearly presented and easily understood as all of them rated excellent for the survey items.

Table 2 below presents the participants’ feedback on the SoTL training and whether they would now consider implementing SoTL project in their teaching practices.

Table 2
Feedback from Participants

Participants	Feedback of this training	Would you NOW consider implementing a SoTL project into your teaching practices?
1.	New area of research can be applied in teaching	I feel confident to implement SoTL project
2.	It open my mind on SoTL. Previously I feel it does not match with my research interest. From the session, I now can relate that SoTL is actually about my own teaching method, my own class, and my own students. Just have to put extra effort to document it as research report.	Yes
3.	I'm encouraged to apply for SOTL Grant	Am considering it seriously, however due to time constraint it is yet to be realized.
4.	Wonderful Workshop	Yes, of course
5.	The templates shared is very useful. Very easy to understand the concept of SOTL	Yes
6.	Precise and concise explanation/sharing	Yes
7.	Hands on session and interactive	Yes

The feedback shows that the training had opened their awareness and thoughts about SoTL. They now understood the concept of SoTL and were motivated to conduct SoTL work. In addition, they felt encouraged to do more reflections on their teaching and learning in class in order to provide continuous improvement to students learning.

Personal Reflection on SoTL Training

This section presents the instructor (first author)'s reflection in conducting the SoTL training workshop. It is structured based on five reflection questions following Gibb's Reflective Cycle, namely: (1) Description and feelings of the experience, (2) Evaluation: what was good or bad about the experience? (3) Analysis: what sense can I make of the situation? and (4) Conclusion and action plan: what else could I have done?

Description and feelings of the experience

It all began when my colleagues and I were selected by our accounting faculty Dean to attend Inspirational Academician Programme (IAP)-Scholarship of Teaching and Learning (SoTL), a two series training program that was organized by the University Teaching Learning Centre. I was so blessed that through this IAP-SoTL program, I discovered a lot more about SoTL from great mentors and supportive 'SoTLer' friends. It was indeed a great experience for me.

As part of the IAP program completion, we conducted a SoTL training to our accounting

faculty members to spread the awareness and knowledge about SoTL. It was my first experience to be the facilitator for SoTL training. Aligned with my teaching philosophy to encourage people to enjoy discovering new knowledge and inspire them to keep on learning, I took the opportunity to share my SoTL experience and encourage them to conduct SoTL research in the future. Adding enjoyment to the training, we had a game quiz at the end of the session and winners were given prizes.

Evaluation: what was good or bad about the experience?

I was so grateful to get the cooperation, support and motivation from my two colleagues who were also the instructors of the other two parallel sessions. I discovered that SoTL team spirit was really helpful and an important factor for an academician to be successful in SoTL. Prior to the training, we planned, discussed the content and flow of the activities together so that we would achieve an organized and standardized workshop learning outcome for the accounting faculty members. The content and flow of the training were organized in presentation slides and Padlet. Among of the SoTL resource and templates includes, Voelker templates for analysing teaching problem (Voelker, 2018), Felten's Principles of Good Practice (Felten, 2013) and Six Steps for Turning Your Teaching into Scholarship (Qualters, 2013).

Moreover, the involvement and engagement from the participants made me happy. They shared their reflections on teaching inquiry and were motivated to conduct SoTL research in the future after watching video on converting teaching inquiry into SoTL research. I also take this opportunity to share my SoTL experience to encourage them to involve in SoTL and enjoy doing SoTL work, as much as I do.

However, sometimes what we plan did not turn up as expected or as practiced. I faced a few difficulties and challenges with the training as it was done online. There were technical issues as I had a problem with my laptop speaker and the internet access was low as it was raining during the session. I managed to solve the technical issue, but somehow it affected the actual duration of the training.

Analysis: what sense can I make of the situation?

I tried my best to align the SoTL theory and practice with the training objectives and the activities conducted. I used Gibb's Reflective Cycle to reflect on the training activities and I did both in and on action reflection on how I can improve in the training delivery.

What actually happened? I started my training session with a question to spark participants' thinking on teaching and learning, and research. As I was explaining the fundamental of SoTL, it was quiet and I was wondering whether they understand or focus on the presentation?

So what action did I make? I did a few activities to engage with participants, ask their opinion and to make it fun, we had a quiz game. I was so relief that as I gave activity for them to do reflection of their own teaching practice, they expressed their teaching inquiry and feelings on their teaching and learning in class.

They also participated, asked questions and gave opinion on how to integrate the teaching inquiry into SoTL research activities. They enjoyed the game and gained good understanding on SoTL from the Quizizz game created. To add the excitement, top three winners received prizes. I hope that from the teaching inquiry, participants can plan further actions to conduct SoTL research in the future.

I took the opportunity in this training to share my SoTL journey on how I started from my class teaching inquiry and then converted it into SoTL research, conference presentations, publications, copyright application and competition awards. Although I am still learning and there is a long way for me to improve in my SoTL journey, I really hope that from the sharing, I could stimulate their interest and motivate them to embark on SoTL work.

It was great that the participants shared their own teaching reflection during the training activity session. I hope that they have a better understanding about the fundamental of SoTL, can reflect upon their teaching practice more often and integrate it into SoTL research and publication.

In relation to the current practice of CQI and AoL in accounting course, it is aligned with the SoTL in accounting as both aim to improve and close the loop on teaching and learning of accounting programme courses. The CQI and AoL reports reflect the students' overall results and course achievement. It also discuss the activities that faculty members can do to improve a specific learning goal and how to implement the suggested recommendations into the teaching and learning activities that can help students achieve the learning goals. Therefore, accounting academics can be encouraged to discover SoTL through the CQI and AoL practice by supporting it further with scholarly literature review and research methodology of collecting evidence for SoTL work.

Conclusion and action plan: what else could I have done?

I learnt a lot from this workshop because it increases my understanding about SoTL. As I read and search for more information to prepare myself to train other accounting academics, I realised the importance of improving my teaching practice. It also taught me the importance of having good team work, to plan, organize and conduct a successful workshop. I am glad to have this opportunity to share about SoTL to my colleagues. I really hope it brings benefit and inspire them to keep on learning about SoTL. I was so delighted and surprised that even after the training has ended for weeks, some of them contacted me asking for the SoTL resources. This training has also opened up opportunity as my IAP-SoTL colleagues and I were invited by our faculty to conduct further training on e-portfolio. In the future, I will learn to improve, be well prepared to answer prompt questions from participants and learn more about trustworthiness of the study for reflection practice. I could also use other different approaches in conducting the training and collect more data on the participants' reflection.

Conclusion

As a conclusion, the IAP-SoTL training program has benefitted the accounting academics and increase the awareness on conducting SoTL research pertaining to their students' teaching and learning. Most of them were satisfied with the training content, presentation delivery, SoTL handouts resources and gave positive feedback about the training. It is recommended that more SoTL training be conducted to expose academics scholar with more opportunity not only in teaching and learning, but also in research, publication and consultation training in the future.

References

- AACSB (2019). AACSB International Accreditation Standard 8 (2013 Standards): Curricula Management and Assurance of Learning: An Interpretation. <https://www.aacsb.edu/-/media/aacsb/publications>
- Anjum, S. (2019). The Status of the Scholarship of teaching and Learning in the Accounting Discipline: A Case Study of Academics' Perspectives. Doctoral Thesis
- Felten, P. (2013). Principles of Good Practice in SoTL. *Teaching & Learning Inquiry: The ISSOTL Journal*. Vol. 1, No. 1, pp. 121-125
- Malaysian Qualifications Agency (2014). Guidelines to Good Practices: Monitoring, Reviewing and Continually Improving Institutional Quality. <https://www2.mqa.gov.my/qad/garispanduan/MR%20CIIQ%20BI.pdf>
- Qualters, D. M. (2013) Six Steps for Turning Your Teaching into Scholarship. Retrieved from

- <https://www.facultyfocus.com/articles/faculty-development/six-steps-for-turning-your-teaching-into-scholarship/>
- University of Edinburgh (2020). Gibbs' Reflective Cycle. Retrieved from <https://www.ed.ac.uk/reflection/reflectors-toolkit/reflecting-on-experience/gibbs-reflective-cycle>
- Voelker, D. J. (2016). What is the Scholarship of Teaching and Learning? Retrieved from <http://davidjvoelker.com/wp-content/uploads/2018/05/What-Is-SoTL.pdf>
- Voelker, D. J. (2018). Templates for Analysing Teaching Problem. Retrieved from <http://davidjvoelker.com/wp-content/uploads/2018/05/SoTL-Templates.pdf>

Strengthening Teaching and Learning beyond the New Normal

Dzulkifli Abdul Razak
International Islamic University Malaysia
Gombak, 53100 Kuala Lumpur
Malaysia
Corresponding Author: dzulrazak@gmail.com

Abstract

The coronavirus pandemic is said to have redefined almost everything. Education seems to be one of the most affected. The aspects that we have taken for granted for a long time are now being exposed for questioning. Transformative whole-person learning, for example, which is considered of less importance has been regarded otherwise under the COVID-19, given the pandemic overwhelming impact the world over. With such a shift, how can the other changes be integrated as a consequence of the shift, especially of teaching and learning being of the main transformation processes to disseminate and acquired knowledge, as well as to create pandemic-proof transformative changes for the future. In addition, the question of values, culture and traditions seems to have found their way back in bridging the many gaps in the present-day education within the local and indigenous context. Thus far they have marginalised by the so-called “modern education” ecosystem. This essay will attempt to explore some of these issues going back to as far as the mid-18th century in trying to understand how education has been “revolutionised” alongside the emerging industrial shift then. More specifically, how education has been disrupted into a “new” factory-like model distorting its altruistic aspects that focuses more on humanistic values and ideals. With the pandemic rapidly evolving over the last two years and counting, such human-centric dimensions are again deemed as central beyond the new normal. In fact, it is more of a “renewed” normal of yesterdays neglected by the then technological disruptions. Until this is well understood and appropriately restored across humanity, chances are education will gradually lose its role as an institution that is committed to the nurturing of human wellbeing, holistically and sustainability, in near future globally.

Keywords: Transformative education, values-based teaching and learning, sustainability, *falsafah Pendidikan kebangsaan, sejahtera*, pandemic-proof

Introduction

Teaching and learning is one of the fundamentals of all institutions of higher learning worldwide. In fact, it is its *raison d’etre* since immemorial leading to the expansion of the role of the institutions throughout history. Today, teaching and learning is immersed with other missions like that of research and development, consultancy as well as community engagement. This means strengthening teaching and learning must be closely connected to the three other missions towards the fulfilment of the whole-institution-transformation. And hence an impetus to going beyond the new normal.

What is the “new” normal? It depends on what is regarded as the “normal.” In the context of teaching and learning, this fundamentally includes a transformation process of knowledge involving the teachers and the learners. It is linked to the acquisition of values, culture and traditions, apart from just technical skills. In a larger dimension, it falls back to a more holistic concepts such as the UNESCO Four Pillars of Education (UNESCO, 2021) on a global level, and the *Falsafah Pendidikan Kebangsaan* (FPK) (Kementerian, n.d) on a more

national context. In this sense, the so-called “new” normal is more rightly labelled as the “renewed” normal since some of the normal practices have not been attended to for some reason. For example, the pillars of learning to be, and learning to live together have not been implemented in a significant way as compared to learning to do and learning to know. More so, when it comes to articulating the FPK as a national philosophy that is cross-cutting throughout all educational institutions, especially in understanding what education is all about as a common mission in meeting future challenges. Learning how to ‘understand, adapt to and prosper in these turbulent times has become a critical competence’ (Carneiro, 2007, p. 151).

This is where the pandemic comes into the picture since it has the tendency to (re)define what is (re)“new”(ed) as normal. And this is where the “strengthening” of teaching and learning becomes relevant in context of beyond what is “new.” In other words, teaching and learning needs to be holistic, transformative and dynamic as a leveller of society based on fairness, justice and equity, if no one is to be left behind. It is not just about methodological improvement and change but a whole person transformation. In the words of the UNESCO, learning to be a “complete person” or that of the FPK – *insan seimbang dan harmonis*. Thus far the conversation about teaching and learning is slanted to its delivery mode rather than content and context with respect to what is “new” beyond the normal as the title implies. Simply put, there is a need to adjust our thinking and strategy accordingly to meet the so-called the new normal and beyond within a newly defined context and challenges like never before.

It has been observed to be more crucial is the behavioural change associated with the frame of mind in conformity of what is perceived. Meaning, one needs to decide what the future all about is and how one chooses to react to it. The deeper meaningful changes hinges on one’s biases or the level of awareness and to the role of education that one is exposed too impacting on our entire thinking processes.

Invariably, it could involve a paradigm shift such that what is useful or successful yesterday, may not be so tomorrow. Similarly, the critical factors involved such as technology as the ultimate solution as advocated by the Fourth Industrial Revolution for example. Of late, the use of online communication for virtually everything prompted by the pandemic has also exerted an overwhelming influence. But only to find out that there are serious gaps when suddenly a student was reportedly forced to climb a tree to get an internet access in a rural school in Malaysia (Commentary, 2020). Unfortunately, she is not alone making the notion of “leave no one behind” even more challenging. Lack of access, technically or otherwise, is a clear sign of weakness or negligence that works against the move to strengthen teaching and learning, let alone beyond the new normal. Globally, the education crisis is indeed still closely associated to the lack of access, more than other known factors. What is surprisingly is that the issue is not even a “new” problem but has been left unattended for a long period of time until it is starkly exposed by the pandemic. Until then the definition of “success” seems to be lackadaisical, and needed to be revised taking the pandemic perspectives into consideration especially when a large percentage of the population is still technology-deficit. To strengthen teaching and learning, therefore, amounts to strengthening the technological capacity in a sense, though not sufficiently so, given the complexity of the technological capacity building process and the uneven development that follows surpassing the so-called “new” normal.

Industrial revolution disruptions

Access alone without the notion of success (if incorrectly defined) can be misleading. The two must come together in providing the true impact of the educational process. The fact that schools and other education institutions can be closed due to the pandemic, means that there are other ways of measuring “success” taking the reality on the ground. It is not a one-size-fits-

all formula that has been grossly applied. In fact, the number 'game' such as the Key Performance Indices (KPIs) is newly introduced when education is turned into "tradeable" or "commoditised" products to be marketed around the world. In other words, circumstances can reshape the meaning of "success" with respect to how "access" is understood. Succinctly, the successes of yesterday may not be same to that of tomorrow! In actual fact, what we consider successful yesterday, may be viewed as an "impediment" on hindsight. Take the invention of steam engine that give birth to the First Industrial Revolution in the mid-18th century. Many would recount the (economic) benefits that were derived from the technological invention, which is rightly so (Vyas, 2018), but very few speaks about the environmental damages, in terms of pollution, that lasts until today as large global problem of global warming and climate crisis (Dzulkifli, 2019). Much of what we termed as "unsustainable" development can be traced back to days of the steam engine some 300 years ago. Later on, it is worsened by the Second Industrial Revolution through the mode of mass production until very much later when awareness on "sustainable development" took a global dimension under the initiative of the United Nations.

What is more, while the benefits of such "revolution" were/are felt by a segment of the global community (especially in the West, socio-economically speaking), the overall negative impact is widespread worldwide, especially in most developing countries. This indeed still the case in the next and forthcoming Industrial Revolutions, like the Third Industrial Revolution that hinges on computerisation and the emergence of Internet which is more relevant to Teaching and Learning as a whole. As it stands today, the implementation remains uneven, where developing societies are much deprived of the optimal use of computers and the Internet as compared to the developed counterpart in the West. This implies that the next Industrial Revolution will suffer the same because it is the offshoot of the former. And all the industrial revolutions are a continuum, and it is wrong to regard each on a piecemeal basis, as the tendency is today. This is duly confirmed by the pandemic, where the rural population are largely poorly connected, if at all, due to the neglect of the Second Industrial Revolution that is spurred by the invention of electricity. A large population of the world do not even have the right devices for this purpose to pursue "on-line" education in a meaningful way. Let alone the training that is need in moving from a traditional in-person method to a virtually network environment which cannot happen overnight without affecting quality, fairness and justice.

All these points to the fact that whatever we consider "success" or "successful" during pre-pandemic period may not reflect the same post-COVID, because the latter has glossed over many things which have been taken for granted. One of the major revelations is the issue of mental health that has been there for a long time but was "not recognised" as a potential problem in the unsustainable and unbalanced world. Specifically, in education, the aspects of emotional and spiritual wellbeing are not given due emphasis in a nurturing a truly holistic and "complete" person as advocated by the *Falsafah Pendidikan Kebangsaan* and the UNESCO Pillars of Education (UNESCO, 2021). This gap must be urgently eliminated and narrowed by strengthening Teaching and Learning as one of its major outcomes so that the students and learners are more resilient with the capacity to cope with major challenges in becoming pandemic-proof. Otherwise, mental health as predicted will be the next pandemic among the younger generation with even greater incidences of depression, paranoia, anxiety as well suicides, as current trends indicated. Most students are not able cope especially when they are locked down for a prolonged period, implying that the current understanding and outcomes "successes" from Teaching and Learning is very limited, if not misleading. That implies on the role of Teaching and Learning which seems to be hankered more on the intellectual domains, and to a lesser extend physical domains, making the students more imbalance and not holistic where the emotional and spiritual aspects are virtually marginalised. The relevance of

education is also being challenged by the changing notions of the merit of formal education and emerging student characteristics that follows.

The “renewed” normal

In this context, what is called “new” normal is actually a “renewed” normal since the latter has been there for a long time, and not taken up in totality and in earnest. Meaning to say, it must be put in proper perspectives within the said national and international frameworks. The “new” challenge is how to do this using the whole-approach, and how to implement the “renewed” normal with the pandemic constraints, knowing full well that face-to-face interactions are vital in delivering some of the domains in a balanced and harmonious way. One of the ways proposed out is to adopt a “hybrid” educational approach that combines conventional and tradition approaches to the new and flexible ones. This could be a major adjustment in delivering education post-pandemic where most this could be redefined, bearing in mind the uneven and the dire need for fairer technological development. In short, the scenario has changed where values-based education has become an important component for more equitable and just solutions. Bearing in mind that in Malaysian Education Blueprints for both schools (Kementerian, 2013) and tertiary education, among the six aspirations for students are “ethics and spirituality” (Kementerian, 2013, p. 2-5) as well as “national identity.” Compared to the other aspirations, these two are not well placed or taken up in the current educational delivery. In other words, they need strengthening and adjusting.

I think we are now at a very difficult juncture to decide where we want to go, how we want to handle this with is clarity as to what success means during the post-pandemic knowing that COVID-19 will be with us for a long time to come. We have not even talked about what virus and its variants have done to our own society in the context of trying to adjust between livelihood and life is right now. Education currently is merely focusing on livelihood as the final outcome. Little regard to the meaning of life itself. In other words, our framework is more about employment and employability. If you gained employment or being employed then you are ranked high. You are deemed successful regardless of what and how you really contribute to wellbeing of yourself or the community at large. Or otherwise, as a liability. Moreover today, the issue is also (in fact more so), about how to stay alive, let alone the “quality” of life. Some may have a lot of money, but are not able to stay alive in the COVID-19 environment. Or have the false impression that “money” can buy a way out! Then, one cannot be not regarded as “successful” because at the end of the day, one will invariably succumb to the deadly virus. The wealth accumulated all along through the “education” delivered is no longer sufficient to be the ultimate measure. Even though one have the means to get the best treatment there is, it is not possible to one because it is not available (yet then, even now with in the true meaning of medical treatment). The only thing to do, is to be in the state of “being” if one knows how! That is the real purpose of education as defined by the FPK and the UNESCO Pillars of Education, especially – “learning to be,” viz.

Learning to be is to develop one’s personality and act with greater autonomy, judgement and personal responsibility. The aim is to provide individuals with the self-analytical and social skills to develop to their fullest potential. Accordingly, education must not disregard any aspect of a person’s potential, including memory, reasoning, aesthetic sense, physical capacities and communication skills. (UNESCO, 2021).

Indeed, even before the pandemic “[e]ducators have repeatedly argued that present approaches to teaching and structuring learning environments are inadequate to addressing and supporting twenty-first century learning needs (Carneiro, 2007; Delors et al., 1996;

VISIR Consortium, 2012). As societies become more knowledge-based, schools must evolve to ensure the information and skills needs of students. The key focus of twenty-first century learning is adaptation to keep pace with demand and expectations (Punie, 2007). Current thinking about twenty-first century learning emphasizes the need to radically transform the purpose of schools and expectations of what students should learn in the classroom. Approaches to measuring school success must also therefore be re-evaluated (Bull and Gilbert, 2012; Facer, 2011). Overall, the focus has shifted away from access towards equitable quality education to lifelong learning, strengthened training and skills for work and life, and improved learning outcomes at all levels of education (Anderson, 2014; UNESCO and UNICEF, 2013)” (Scot, 2015).

Scott further acknowledged that “[e]very nation has its own vision of what a twenty-first century education should look like. Most are aware of new methods that have enjoyed at least some success in their region, both in terms of pedagogy and teacher development. Trilling and Fadel (2009) assert that every nation can contribute to a global pool of expertise on how best to implement twenty-first century learning. Investment that produces successful learning innovations in one nation can have a ripple effect as other nations adopt and adapt these methods for their own use. With increased international cooperation and collaboration, each nation can participate in building a global learning network as dominant and pervasive as existing international networks in business, finance and communications. There is broad agreement that in addition to literacy and numeracy, twenty-first century learning must include transferable skills such as critical thinking, problem-solving and civic values that prepare young people for the workforce and active participation as informed citizens (Anderson, 2014). This concern is now clearly reflected among the education targets being proposed as part of the global Sustainable Development Goals being proposed for 2030.”

Sustainable Development Goals

In summary, keeping to KPIs in terms of numbers and percentages only are not as important anymore, vis-a-vis protecting and enhancing life. Livelihood will become meaningful if one have a sustainable life too as envisaged through the Sustainable Development Goals (SDGs, 2016-2030). In a volatile, uncertain, complex and ambiguous (VUCA) world, even before the pandemic, the SDGs, recognised as significant in reorienting education, is even more so as emphasised by during the pandemic. It is also applicable to all sectors especially where there are gaps and imbalances that would weaken the human chain in defence against the viral spread. There no way of predicting the outcome with a certain level of accuracy. Let alone in a VUCA world made worst by the pandemic. For example, there is now clear evidence of the inequalities between developed and developing countries with respect to vaccinations. The former has taken more than the required vaccine doses so that ten of the developed countries reportedly have some 800 million excess doses by the year’s end. Whereas the latter have been deprived of the delivery despite pledges from the developed counterparts. By the fourth quarter, only about 10 per cent of the 1.3 billion vaccine doses promised had been delivered.

With huge inequalities in vaccinations – especially between high-income countries and low-income countries – the virus has been enabled to continue replicating, mutating, infecting and killing, in particular those least protected. Despite appeals from WHO to suspend booster doses until the rest of the world is vaccinated, it has fallen to deaf ears. Indeed, WHO now expects around 200 million more infection in the year from 21 October, with total deaths expected to double from the five million to date! Its request to G20 countries to give COVAX priority has also gone largely unheeded.

In other words, the sacred “numbers” targeted as KPIs in terms of vaccinations have not been kept in spite many innocent lives are left at stake given the notion of vaccine “nationalism” and “apartheid” due to the unjust distribution and acquisition. They have made COVID-19 more widespread with the emergence of the various variants, including the Omicron of late. In similar ways, this kind of complexity are experience today in term of education, teaching and learning in particular. The KPIs are longer relevant, when the numbers affected by “apartheid” in education akin to the colonial period where millions are left behind. This further aggravated the global education crisis due to a wider lack of access globally.

According to UNICEF (World Bank, 2021), the global disruption to education caused by the COVID-19 pandemic is without parallel and the effects on learning are severe. The crisis brought education ecosystems across the world to a halt, with school closures affecting more than 1.6 billion learners. This means that the teaching and learning processes are impaired. For example, while nearly every country in the world offered remote learning opportunities for students, the quality and reach of such initiatives varied greatly and were at best partial substitutes for in-person learning. Now, some two years later, schools remain closed for millions of children and youth, and millions more are at risk of never returning to education. Reportedly, evidence of the detrimental impacts of school closures on children’s learning offer a harrowing reality: learning losses are substantial, with the most marginalised children and youth often disproportionately affected. *The State of the Global Education Crisis: A Path to Recovery* (World Bank, 2021) charts a path out of the global education crisis and towards building more effective, equitable and resilient education systems. In 2020, school closures, increased vulnerability to abuse, mental health strains and loss of access to vital services have hurt children deeply. The pandemic has exposed deep inequalities that have existed for too long, with the worst consequences on children in the poorest countries and communities and those already disadvantaged.

When recalling the “new” normal, what is it then we are referring to in the pandemic. To my mind, it is more of a “renewed” normal, namely the “old” values that has been marginalised due to several changes in the system of education beginning with the colonisation processes disguised as industrialisation revolutions. This made education as a basic human right and an important platform based on social and historical justice more acute than ever. The ensuing pandemic clearly highlighted the failures of the current “modern day” education that distort the altruistic meaning of education beginning with the First Industrial Revolution in the mid-18th century in Europe. This is a continuum that takes us today to the so-called Fourth Industrial Revolution (IR 4.0) which is fast unfolding. What is sure is not only that the industrial sectors are being revolutionised, but equally significant is the global ecosystem affecting the life of billions around the world. This has just been confirmed by the current pandemic which in a short-period of two years demonstrates how discriminative, imbalanced, racist and unjust the world has been during the pre-COVID-19 period. In other words, education as basic human rights have failed to materialise the creation of a balanced and equitable community. It is about this time two years ago, in December 2019, that humankind truly realised how fragile humanity is in the face of the “Wuhan” virus as it was known then. The cracks in the human chains were more than apparent then. They grew even wider when the vaccines were made available selectively as described above. The discrimination, racism, injustices as well as imbalanced are never more evident where countries said to display the global benchmark of what “modern day” education are not living up to expectation in the defence of humanity and human dignity.

Sejahtera way

Against this backdrop, to my mind, education is only powerful as a common platform for upliftment and progress of the society if it is strongly rooted on humanitarian values and dignity. In other words, education with a human soul for the greater well-being of humanity. This is not a “new” normal, but a “renewed” one when the relevant “values” are reinstated, meaning at once (re)strengthening teaching and learning at the same time beyond the new normal.

Only then it has the potential to influence in social reconstruction and reducing poverty, narrowing extreme inequalities and historical injustices as well nurture a balanced and holistic well-being - covering physical, mental, socio-emotional and spiritual dimensions. In Bahasa Melayu, we called it "sejahtera" (as crafted in the FPK, Dzulkifli, 2018) that is well-aligned with the UNESCO 4 Pillars of Education of the same year, and more recently resonates closely with the United Nations Sustainable Development Goals (SDGs, 2016-2030), that is two decades later. What is significant in all the three frameworks is that it goes beyond any one dimension, notably economics, inter alia industry, in particular within the context of the industrial revolutions per se. The SDGs for instance, speaks of 17 diverse and transdisciplinary goals covering five overarching dimensions of people, planet, prosperity, peace and planet (or the 5Ps). And this is completed by Education for Sustainable Development (ESD) that is focused on Transformative Education for a sustainable future of the 5Ps.

Ironically, is that while the SDGs and IR4 (Dzulkifli, 2019) were initiated in the same year (with a few months apart), the former is virtual unheard of as an educational target at all levels. So too as a national goal for the future. Only recently in the Twelfth Malaysia Plan (12MP), even then ESD is still being left out as one of the 14 game-changers listed, or the transformations envisaged in the 12MP. This speaks volume on how transformative the next education will be in the post-pandemic world, let alone teaching and learning beyond the “new” normal. The 12MP boast of its transformative nature, with a number of game-changers that represent the new and innovative ideas to shift mindsets and fundamentally change the approach to national development.

These are intended to ensure that Malaysia attains the objectives of Shared Prosperity Vision (SPV) 2030, "namely sustainable growth along with fair and equitable distribution across income groups, ethnicity, regions and supply chains". The SPV 2030 seeks to address structural domestic economic issues and global crises beginning this year, while ensuring that Malaysians achieve an enhanced standard of living by 2030. Specifically, "Game-changer 1" encapsulates key elements of 12MP needed to achieve the required reforms and transformation. However, it seems too economic-centric since the pandemic has impacted economies around the world, and negative growth has been recorded for four quarters following the deterioration of economic activities. It is said to be predicated with the aim of (a) rebuilding the economy and building back better; (b) addressing uncertainties in the global economic landscape; (c) overcoming shortcomings in development approach, governance and implementation; and, (d) providing hope and confidence in the future of the country, especially for the youth. Overall, it is categorically formulated to transform the economy.

The 12MP is also anchored on three key themes. Theme one emphasises on resetting the economy with two game-changers. Meanwhile, theme two outlines four game-changers, namely enhancing national security and unity for nation-building; revitalising the healthcare system to ensure a healthy and productive nation; transforming the approach in eradicating hardcore poverty; and, multiplying growth in less developed states, especially Sabah and Sarawak, to reduce the development gap. It continues to be economic-centric in terms of "uplifting the standard of living of the *rakyat*" by strengthening inclusivity and uplifting livelihoods, especially for the hardcore poor, B40 and vulnerable groups.

Similarly, theme three with two game-changers embraces the circular economy as well as accelerating the adoption of the Integrated Water Resources Management framework. They are expected to contribute to sustainable and resilient growth, as well as the achievement of the United Nations' 2030 Agenda for Sustainable Development Goals (SDGs).

What is noteworthy is that the word "education" has not appeared thus far, either directly (like healthcare and national security as stated above), or indirectly (as in Education for Sustainable Development as an approach of the 2030 Agenda). Even though theme three is aimed at "advancing sustainability", which ought to involve education as an equally important impetus of change as highlighted by the relevant United Nations website dedicated to this issue, headlined by "17 (Sustainable Development) Goals to Transform the World". Whether the omission is intentional or an oversight is hard to tell.

Transformative education

What is sure is that without a "transformative" education, it is hard to imagine the implementation of 12MP, with respect to meeting aspirations aligned to SDGs summarised by the 5Ps of people, planet (resources), prosperity, peace (*kesejahteraan*), and partnership (*Keluarga Malaysia*). After all, sustainability is about fair, just, equitable and inclusive distribution across all income groups, ethnicities and regions to provide a decent standard of living for all Malaysians, summed up by the 17 SDGs.

In addition, the 12MP encompasses strategies and initiatives that safeguard national renewable interest, which is vital for not just sustainable development, but also sovereignty in strengthening the Malaysian identity by inculcating noble values. This is imperative as a consequence to the pandemic experience that calls for a stronger values-based human chain globally. What is more, ethics, spirituality and national identity makes up the six student aspirations advocated by the Higher Education Blueprint (2015-2025), which will end at the same time as 12MP.

How it will fare is still uncertain since to date, these are not given the desired priority in the nurturing of future-ready (see Chapter 10 — Developing Future Talents), "holistic" and globalised citizens. That is to say, COVID-19, as an unprecedented wake-up call laying bare the deep inequalities and failures in many sectors, including "education" in the context of 2030 Agenda, must not be taken lightly. Including strengthening teaching and learning accordingly. Failure to game-change this moment of crisis by not taking enough game-changing steps towards humanising the "education" ecosystem is to miss a chance of a lifetime. In turn, it can cause more lives to be wasted, which is indeed a very high price to pay, including that of *Keluarga Malaysia*.

This is when the leadership question comes to mind. How many institutions are imparting transformative education in a holistic way? How many are focused on the Whole-Person-Transformation as per "learning to be" as mentioned above and adopted a sustainable lifestyle of being more fully human and achieving a dynamic coherence between material and non-material requirements of life. In the words of UNESCO - a Whole-Institution-Transformation, following from a Whole-Person-Transformation leading to a Whole-Community-Transformation to "live together" (as explained below) towards a Whole-Government-Transformation and beyond.

By learning to live together, it entails developing an understanding of other people and an appreciation of interdependence – carrying out joint projects and learning to manage conflicts – with respect for the values of pluralism, mutual understanding and peace. This exposes individuals to the values implicit within human rights, democratic principles,

intercultural understanding and respect, and peace in society and human relationships. It enables individuals and societies to live harmoniously. (UNESCO, 2021)

It is about lifelong (teaching and) learning that is central to the dissemination of knowledge; and cannot be focused specifically on one particular phase in a person's life or in a single place. In addition, there also a need for life-wide learning (LWL) which refers to a teaching strategy and an approach to learning and personal development that involves real contexts and authentic settings. The goal is to address different kinds of learning not covered in a traditional classroom. By including LWL with a traditional classroom, students are better equipped to attain whole person development and to develop lifelong learning skills (Wikipedia, n.d.).

Further, LWL recognises that most people, no matter what their age or circumstances, simultaneously inhabit a number of different spaces – like work or education, being a member of a family, being involved in clubs or societies, taking holidays, and looking after their own well-being mentally, physically, and spiritually. This resonates closely to that of FPK where the experiential learning enables students to achieve certain learning goals that are more difficult to attain through classroom learning alone. As to when and what to teach should be complementary and interrelated in such a way that all people can get the most out of their specific educational environment throughout their lives. Unfortunately, many education systems around the world still emphasise the acquisition of knowledge over other types of learning. As promoted by UNESCO and many others, a more holistic approach to education is needed to enable each and every person to become a lifelong learner (UNESCO, 2021).

It is worth quoting the renowned 13th century poet, scholar, philosopher and mystic - Jalal ad-Din Rumi - who said: Yesterday I was clever, so I wanted to change the world. Today I am wise, so I am changing myself. Today, this is what leadership in education needs to do – transforming the “whole person” before taking on the pandemic world! Otherwise, when will we be wise enough to do so. Remaining "clever" to merely compete with each other is no longer a “wise” thing to do. To be wise is to embrace with a soul brightened by divine light. Here Rumi said, “The wound is the place where the light enters you.” As most of us have been wounded in one way or another during the pandemic, perhaps today is the time to let the light enters collectively nurturing a wiser us learning from the pandemic lessons.

Some of the lessons that is central to strengthening the teaching and learning as well as beyond is related to who/what are we producing via the education ecosystem? Are we producing first class human being? Or are we producing second class robots with the technology “enhancing” human capacities. What will happen to being human? How do you live a life? Are we talking about less of a human person? Who are we addressing?

One thing is certain is that to be a first-class human being, lessons for life is imperative. In other words, how to manage life to be well-balanced and harmonious is crucial such that people can fully appreciate and value their lives for the potential that they hold in enabling them to become the people they want and need to become (in other words, their everyday pathway to “actualising” themselves). They are resilient and competent in coping as human persons, notably, in facing challenges like lockdowns as well loneliness as in the pandemic period. The reality today is not the same where the number of people facing depression, anxiety and suicidal tendency are on the increase. This is where teaching and learning is at its weakest, that is, we failed to educate how to be a wiser human who knows how to manage life, the most precious “possession” on earth, sustainably. This is the true purpose of education for humans, a reality that COVID-19 puts squarely in front of us. It is not about livelihood (read, employment and employability) only, but lives imbued with the right values; being human, not human capital. Otherwise the pandemic can be unforgiving as we have seen in the past two years.

Budi and adab

One of the values envisaged is “budi” (Dzulkifli, 2005) – a trilogy made up of *budi bahasa*, *budi pekerti* and *budi bicara*. It has no accurate equivalent in English or other languages. What is more the trilogy of *budi* has a deep-rooted meaning and symbolism in Malay(sian) language and culture — an intangible measure of how mature and sensitive the individual or society is. It is vaguely related to the nexus of being courteous and polite, well behaved and well mannered, and also fair-minded as well as of appropriate judgment.

The loss or absence of any of the three will amount to being uncouth or uncultured. When all three are missing, it is downright uncivilised and ill-mannered — be it in service or extending even to life itself. Unfortunately, the three *budi* receive little regard or meaning nowadays, especially in a world that is caught up in mere tangible wealth, where the end justifies the means. Worst still when it is not comprehensively addressed in the education system since more than a decade ago. This explains, at least in parts the social state of being we are in today. Indeed, the three *budi* are more than just about client or customer relations management as keenly promoted today. It is also more than just personality traits to be acquired during an intensive course or induction programmes for quick-fix.

Instead, it is culturally well-embedded in the character of humility — a “soft” dimension of power that drives and safeguards the society as a just and harmonious whole. It is a principle that advocates compromises rather than conflict, consensus rather than confrontation. In many ways, it is a values-based approach that is relevant in meeting the aspirations of the people and the nation, if not the whole world that values peace, justice and sustainability. In contrast, “things” that are ruled by raw power — forwardness, at times aggression and blatant instructions and orders — can give rise to more conflicts, confrontations, and ill-feelings. At times, it is too direct and “in-the-face,” delivered in brutal ways with the use of “naked” authority. What is implied (*tersirat*) as a way of *adab* and *budi* must therefore be properly understood. Unless they are genuinely nurtured and their interplay well-rehearsed, the heart and eye will merely serve as a window exposing the hypocrisy within. In short, it is worth remembering that it is *adab* and *budi* maketh the person expected to be the wise, a *budiman*, that is a person of *budi*. More complex still is *hati budi* — both conveying even deeper feelings, within the realm of sincerity, humility and magnanimity, usually expressing the positive. *Berhati budi* is being compassionate, sincere and magnanimous. A truly compassionate person does not only give his material wealth willingly but also his spiritual self without expecting any form of returns. Islam advocates such practice of “giving” with in a way that the left hand is not aware what the right hand gives.

In conclusion, when all is said and done, these can only be fully accomplished by strengthening of teaching and learning beyond the new normal, in the context of the “renewed” framework, as argued.

References

- Anderson, A. (2014). Southern perspectives on learning and equity in the post-2015 sustainable development agenda. The Brookings Institution (online). www.brookings.edu/blogs/education-plus-development/posts/2014/01/15-sustainable-development-agenda-anderson (Accessed 28 June 2014).
- Bull, A. and Gilbert, J. (2012). *Swimming Out of Our Depth: Leading Learning in 21st Century Schools*. Wellington, New Zealand Council for Educational Research. www.nzcer.org.nz/system/files/Swimming%20out%20of%20our%20depth%20final.pdf (Accessed 27 May 2014).

- Carneiro, R. (2007). The big picture: understanding learning and meta-learning challenges. *European Journal of Education*, 42 (2), 151-172. <http://onlinelibrary.wiley.com/enhanced/doi/10.1111/j.1465-3435.2007.00303.x/> (Accessed 10 June 2021)
- Commentary (2020). Malaysian Student Climbs a Tree to get Stable 3G Internet Connection. <https://www.malaysianwireless.com/2020/06/malaysian-student-climbs-tree-3g-internet/> (Accessed 21 November 2020)
- Delors, J., Al Mufti, I., Amagi, I., Carneiro, R., Chiung, F., Geremek, B., Gorham, W., Kornhauser, A., Manley, M., Padrón Quero, M., Savané, M-A., Singh, K., Stavenhagen, R., Won Suhr, M. and Nanzhao, Z. (1996). *Learning: The Treasure Within: Report to UNESCO of the International Commission on Education for the Twenty-First Century*. Paris, UNESCO Publishing. <http://plato.acadiau.ca/Courses/pols/conley/QUEBEC98/DELORS~1/delorse.pdf> (Accessed 18 February 2014)
- Dzulkifli Abdul Razak (2005). Promoting a civil public service. *New Sunday Times*, 30 January 2005
- Punie, Y. (2007). Learning spaces: an ICT-enabled model of future learning in the knowledge-based society. *European Journal of Education*, 42 (2), 185-199. <http://onlinelibrary.wiley.com/enhanced/doi/10.1111/j.1465-3435.2007.00302.x/> (Accessed 20 February 2014).
- Scot, C. L. (2015) The futures of learning 1: why must learning content and methods change in the 21st century? *UNESCO Education Research and Foresight Working Papers*. 13 September 2015. <https://unesdoc.unesco.org/ark:/48223/pf0000234807/PDF/234807eng.pdf.multi> (Accessed 10 June 2021)
- Trilling, B. and Fadel, C. (2009). *21st Century Skills: Learning for Life in Our Times*. San Francisco, Calif., Jossey-Bass/John Wiley & Sons, Inc. <https://yasamboyuogrenme.wikispaces.com/file/view/21st+CENTURY+SKILLS.pdf> (Accessed 20 May 2014)
- Twelfth Malaysia Plan (2021). Putrajaya: Economic Planning Unit, Prime Minister's Department. <https://rmke12.epu.gov.my/en> (Accessed 20 November 2021)
- UNESCO (2021) Understanding UNESCO's 4 Pillars of Education. <https://eduncovered.wordpress.com/2012/04/02/understanding-unescos-4-pillars-of-education/> (Accessed 21 November 2021)
- UNESCO and UNICEF (2013). *Envisioning Education in the Post-2015 Development Agenda: Executive Summary*. Paris, UNICEF and UNESCO. http://en.unesco.org/post2015/sites/post2015/files/Post-2015_en_web.pdf (Accessed 12 May 2014)
- VISIR Consortium (2012). *VISIR Vision Report: Analysing Change to Shape the Future of Learning*, pp. 1-47. www.menon.org/wpcontent/uploads/2012/05/VISIR_Vision_Report_2012.pdf (Accessed 7 April 2014).
- Vyas, K. (2018). How the First and Second Industrial Revolutions Changed Our World. interestingengineering.com/how-the-first-and-second-industrial-revolutions-changed-our-world (Accessed 21 November 2021)
- Wikipedia. (n.d). Life-wide Learning. https://en.wikipedia.org/wiki/Lifewide_learning (Accessed 21 November 2021)
- World Bank (2021). *The State of the Global Education Crisis: A Path to Recovery*. <https://www.worldbank.org/en/topic/education/publication/the-state-of-the-global-education-crisis-a-path-to-recovery> (Accessed 21 November 2021)

Contact Information



Secretariat
Inspirational Scholar Symposium 2021
University Teaching and Learning Centre (UTLC)
Universiti Utara Malaysia, 06010 UUM Sintok,
Kedah Darulaman.

Tel : 04-9284690/4707/4698
Faks: 04-928 4702

E-mail : fadhлина@uum.edu.my
hidayah@uum.edu.my
raihanah@uum.edu.my