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Table of Contents

Distillation of Entrepreneurship Learning Experience through Reflective Learning Log among Entrepreneurship Students

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Abstract

This Scholarship of Teaching & Learning (SoTL) research is part of the larger study to analyze written reflections through learning log among the third and final year students undertaking BPME 3073 Entrepreneurship module in UUM.

The data collection techniques is researcher-directed textual data through reflective learning log; taken from 140 students from 3 classes. A thematic approach was utilized to present the reflections of the students and all data was recorded in a verbatim format.

Findings show that most students have never written a reflective log or essay in the formative assessment. As a consequence, they had difficulty in writing the reflection when being requested to do so. A total 75 (approximately 55%) of the reflective logs were identified as level 1 (from 1% to 5%) in which reflections was simply written in a descriptive manner, resulted in a balance of 61 learning logs being utilized for further analysis. The students' reflections on their Entrepreneurship's experience systematically categorize into four different themes comprised of (1) The nature of Entrepreneurship module, (2) Entrepreneurial characteristics, (3) Opportunity recognition, and (4) Creativity & innovation.

The results of this research has strongly suggested the need to urgently develop among the students the skills in writing reflectively as they go through the process of higher education which is useful in molding their future professional and entrepreneurial behavior as when they entered the job market which requires a critical reasoning ability.

Keywords: Critical Thinking, Critical Reflection, Action Research, Reflective Learning Log, Entrepreneurship, Thematic Analysis

Introduction

Entrepreneurship has always been conceptualized as a process of discovering an opportunity, sourcing and manipulate resources, planning, and execution intelligence. An entrepreneur knows all the parts and knows how to match and fit all those resources together. The above narration signifies that a process is quite predictable, but in reality, the nature of entrepreneurial activities (to undertake) is not predictable at all. Greene (2014) proposed a portfolio of four complementary techniques for teaching entrepreneurship as a method, not as a process. They are (1) Businesses start-up, (2) Reality-grounded simulations and gamification, (3) Design-oriented learning and (4) Reflective practice.

Each method requires learners to extend beyond the process-based paradigm of knowing; analyzing, and talking, instead positioning the learners to create, apply, and act (Greene, 2014). In this Scholarship of Teaching and Learning, the researcher adopts the reflective practice as a method for teaching entrepreneurship and the toolkit used is reflective learning log. Given its importance, reflective skills has now being recognized as an important proficiency among the professionals and being treated as a good source for critical thinking development, enhancing self-monitoring as well as leading to one having developed good reasoning skills. Furthermore, reflective exercise has also become a vital component for most professional degree programs namely nursing, teaching as well as many business capstone courses that require final year students to recap and reflect before the end of their university's tenure (Chalk & Hardbattle, 2007).

Reflection is a significant process by which knowledge is derived from experience. When reflecting, one considers an experience that has happened and tries to understand or explain it, which often leads to insight and deep learning—or ideas to test on new experiences. Reflection is particularly important for puzzling experiences, operating under conditions of high ambiguity, and problem-solving. As a result, it should not be a surprise that reflection is a pivotal component of entrepreneurship education and also a way of practicing entrepreneurship.

In this study, the researcher aspire the students in BPME 3073 Entrepreneurship to develop a strong sense of awareness and appreciation of reflecting by looking at what they are doing/learning now in Entrepreneurship module. This type of reflection is often referred to as "reflection-in-action" (Schon, 1987). Students who lack of this reflection-in-action are likely to make mistake of repeating the same dysfunctional behavior/attitude/decision in their future career/entrepreneurial endeavor, therefore impede their advancement in their respective fields. Students who possess this appreciation of reflection demonstrate it through reflective writing. Reflective writing is a metacognitive, "thinking about your thinking" process (Martinez, 2006). As a metacognitive process, the student is able to appreciate the deeper, underlying issues (Martinez, 2006), rather than accepting a superficial interpretation of the problem, which may present in a professional/entrepreneurial context (Mair, 2011).

This research was carried out among the undergraduate students of the third and final year, majoring in entrepreneur and business administration in University Utara Malaysia. As to assess the appreciation of reflection-in-action among our students of Entrepreneurship, the students were requested to hand in 2 reflective learning logs which contain their reflection that will be used as part of the coursework assessment for the entrepreneurship module. Yinger and Clark (1981) believe that reflection results written down are more powerful than reporting them orally. This form of writing a reflective journal has definitely being regarded as new to the students given that the norm in the coursework assessment of this module usually being quiz, mid-semester test, business plan and final exam.

This research was carried out with the 2 main aims as to:
1. Investigate whether students at the tertiary level who are undergoing an entrepreneurship module is able to engage in a critical reflection in the process of learning and,
2. Analyze the emerging themes on entrepreneurship from those students who are able to achieve Level 2, 3 & 4 of Hatton & Smith (1995) framework of critical reflection.

Significance of the Study

In this SoTL study, the researcher adopts the reflective practice as a method for teaching entrepreneurship and the data collection techniques is researcher-directed textual data through reflective learning log. Given its importance, reflective skills has now being recognized as an important proficiency among the professionals and being treated as a good source for critical thinking development, enhancing self-monitoring as well as leading to one having developed good reasoning skills. Furthermore, reflective exercise has also become a vital component for most professional degree programs namely nursing, teaching as well as many business capstone courses that require final year students to recap and reflect before the end of their university's tenure (Chalk & Hardbattle, 2007). However, actually putting vague thoughts or feelings into a format that other people read is not a process that some people enjoy or find easy (Harvey & Knight, 1996) and such skills can be especially difficult to develop for Malaysia's students which traditionally have adopted instructivist learning techniques.

Critical Reflective Learning

It is not easy to write our thinking process in a form of reflection but should it should be practiced in learning, it helps to encapsulate learning in much more meaningful manner. The use of reflection journals can assist to document thinking process which in turns helps teacher to draw conclusion on the learning progress of the students. The entire process of writing per se may have somehow encouraged students to reflect on what they have been taught in class and thus facilitate learning further. According to Cowan (1998, p. 16), a student is said to be doing reflection when…"*she notes that there is something different about the case that she is considering, in comparison with the examples she has encountered in class; and when she also identifies what the difference is, and what she should do about it.*"

Dewey (1933) suggested that reflective allow one to be engaging in deep thinking in order to get an in-depth meaning of something, converting uncertainty into understanding which leads to action. This is in accordance to what Moon (1999) in which reflection entail mental activity that occurs in relation to the processing of complex ideas which are commonly found in the process of learning. Thus, so as to

realize the benefits of reflection, students should be required to reflect and to write a reflective log or journal so that they can easily see the importance of the learning activities that have been carried out. As a result, reflection journal will reveal the thinking since the entire process of writing is actually a display of thinking (Luidens, 1997). Furthermore, idea clarifications and modifications happen due to the need to present knowledge in different form during the reflection writing process. As such it is expected that during this process, the learner will be able to develop new understanding and view the information in a different perspective (Yinger & Clark, 1981)

Methodology

The research methodology used in this study was classroom-based educational action research (Angelo, 1991; Elliott, 1991). Part of effective teaching is the ability to reflect on what is happening in the classroom, and to identify any differences in what was planned and what actually occurred. By conducting "systematic, intentional inquiry" within his/her own classroom, the instructor builds a better understanding of his/her own practice (Cochran-Smith & Lytle, 1993, p. 7).

At the beginning of the academic session of 2015/2016, all students taking the BPME 3073 Entrepreneurship module in University Utara Malaysia had been introduced to the concept of reflection writing through the reflective learning log (Moon, 1999) that will be assessed as part of their coursework. The idea of including the reflective learning log as part of the coursework mark contribution is to entice students to participate in the exercise given that naturally students tend to behave strategically when come to their class participations. Such behavior commonly leads to the occurrence of a phenomenon known as "Strategic Students" (Kneale, 1997). In this phenomenon, students would normally resist to participate in learning beyond formal assessment requirements; point to the necessity to link assessment and learning together. Moreover, excluding the reflective learning log from formal assessment can send a negative signal to the students about the significance of reflection within the module. Nevertheless, on the hindsight, it is important to note that it can be quite impossible to know as to how the effect would take place on the comments of the students given the allocation of marks associating to the learning log.

In this qualitative research, data was collected using the reflective learning log from 140 students of three classes in which these students were requested to carry out written reflections which are assessed for final grades (contributing a maximum of 10% of the total coursework marks). However, students have also been informed that they will only be rewarded a maximum of 5% should they write their reflection in a very descriptive or reporting manner. As such, the researcher considered those students who were able to obtain a score of more than 5% for the reflective log exercise, would be considered as those who were able to achieve the learning outcome of the formative assessment (see Appendix 2).

Hence, in this study, students were required to keep a record of the lessons that they have learned for duration of 10 weeks and then write a reflection on the particular issues of the entrepreneurship taught in each lesson based on the syllabus. At the end of the study, 4 students failed to hand in the learning log resulted in only 136 learning logs were used for further analysis.

Ethical guidelines were strictly adhered to which included getting their consent and keeping their identity hidden so that they could express themselves freely (Marshall & Rossman, 1999). Finally, to protect the students' privacy, we use pseudonyms in the place of real names to report our findings.

Critical Reflection Framework

Given that the learning log is a graded assessment, the benefits of doing reflection in the academia and at work, as well as the various types of reflective writing techniques had been informed to the students. For the purpose of grading, the author adopts the reflection framework as suggested by Hatton and Smith (1995) for the purpose of grading and subjectivity reduction. The framework contained four levels of reflections (Hatton & Smith, 1995) (which was made know to the students) as depicted below:

(1) Descriptive writing (contains no evidence of reflection) –Level 1

(2) Descriptive reflection (a description of events with reflection from one perspective) –Level 2

(3) Dialogic reflection (some "stepping back" from events and recognition of alternative viewpoints) – Level 3

(4) Critical reflection (awareness that the same actions and events are viewed in a different way by different individuals) – Level 4

In executing the study, the researcher gave an assurance to the students that their grades will not be penalized when they provide constructive criticism on the Entrepreneurship module or on the taught concepts or even on the style of the lecture. In the same light, the students were also being reminded that their grades will not be affected positively should it contain purely praises for the said module. The students were told that evaluation will solely be based on the quality of reflection shown based on the Hatton and Smith's (1995) framework.

A very basic scaffolding framework was provided for the reflective task which gave students three prompts which they could structure their reflection around; what have you learnt from the module so far? What are the topics in this module that give you many insights on becoming an entrepreneur? How will you be able to use the knowledge from this module in your professional career? The prompts were aimed at leading the students away from writing a descriptive reflection ordered by the topics taught on the module. Only 12 students utilized the framework, the majority completed a free style reflection. The fact that so few students used the framework may mean they found it difficult to use because it was designed to discourage descriptive answers and promote reflective thinking. The students may also have felt that they did not need guidance to help them structure their reflection or even that the mark given (10%) for the reflection did not warrant spending too much time writing it.

Analyses and Discussions

Based on the mark sheets for reflective learning log (see Appendix 2), the following Table 1 tabulates the frequency of score percentage for graded reflective learning log.

Table 1

Frequency of Score Percentage for Graded Reflective Learning Log & Four Level Reflections

Score Percentage	Frequency
1% - 5%	75 (Level 1)
6%	35 (Level 2)
7%	17 (Level 3)
8%	7 (Level 4)
9%	2 (Level 4)
10%	0

All of the reflections in the findings section were taken from the students that have achieved the score of 6 percentage points to 9 percentage points from the total score of 10 percentage points based on Appendix 2. A total 75 (approximately 55%) of the reflective logs were identified as level 1 (from 1% to 5%) in which reflections was simply written in a descriptive manner in absence of reflections on the weekly lessons. Consequently these learning logs were removed from analysis; resulted in a balance of 61 learning logs being utilized for further analysis. Given that the numbers of learning logs (75 logs altogether) that has been discarded for further analysis were large (approximately 55%), it may provide a significant indicator that that the task of doing reflection can be challenging due to the lack of ability in reflective thinking or it could also be an indication that the students were simply not interested in pursuing the assessment completely.

Notwithstanding the importance of reflective exercise to undergraduate students, the author found out that most of the 140 students had taken subject ranging from 18 subjects to 30 subjects (refer to the Appendix 1), yet this is the first time they were required in this Entrepreneurship module to write reflective learning log in their formative assessment. Many of the samples did not achieve the learning outcome of the reflective learning log objectives (see Appendix 2).

All of the 140 students in this module had taken more than 18 subjects prior to this module. Some of the students had at the time of this study being carried out had even registered/taken 30 subjects prior to this Entrepreneurship module (see Appendix 1) and yet it was the first time they were being asked to write reflective learning log in their formative assessment. Absence of such experience had led to the students not being able to do reflection effectively which in turns having many of them merely able to engage in Level 1 of writing that is descriptive writing while others only able to reach the Level 2 of writing known as the descriptive reflection which normally look at events from a single point of view.

A thematic approach was utilized to present the reflections of the 61 reflective learning logs (in anonymity) and all data was recorded in a verbatim format. In analyzing the data, we used open coding (based on constant comparative methods) (Strauss & Corbin, 1998) to identify themes to represent repeated ideas that emerged across the reflections about their experiences in Entrepreneurship module. We assigned labels to the reflective learning logs, as a means to identify patterns in the students' reflection and discussion. We engaged in peer examination to ensure that our analysis was reliable and that our own biases and predispositions would not affect our interpretation of the data (Gray, 2004).

Discussions

The students' reflections on their Entrepreneurship's experience could be grouped into four different reflection organizing themes comprised of:

1. The nature of Entrepreneurship module,
2. Entrepreneurial characteristics,
3. Opportunity recognition, and
4. Creativity & innovation.

Each of these themes is described by student reflections that are found to be fulfilling the criteria of reflective learning log (all of these reflections were taken from the students that has achieved the score of 6% points to 9% points from the total score of 10% points). Last but not least, the final sub-section of the results highlights the descriptive nature of reflective learning log (of those which do not fulfill the reflective log criteria as according to the Level 1 of the

Hatton and Smith's (1995) framework with the score percentage point was from 1% - 5%). This research analyses the students' reflections to ascertain their views on the topics that the module covered and their reflective ability. A reflective learning log normally contains a record of one's experiences, thoughts, feelings and reflections (Miller, Tomlinson & Jones, 1994).

Entrepreneurship Module

This theme looks at whether students were able to do reflection which is related to the Entrepreneurship module as itself. This study found there were 45 samples contained reflections that were related specifically to the nature of Entrepreneurship from a total of 61 reflection logs. In addition, there were 30 students who found the Entrepreneurship module interesting even though some of the students (6 students) felt the module is not benefitting them at all given the opinions that the module contains topics that does not relates to one being an entrepreneur. Some people say - entrepreneurship cannot be taught in the classroom setting. Below were the excerpts from our students whose names had been disguised:

Wan Ting: *In my own opinion, entrepreneurship is a subject that not needs study in university. It is because, entrepreneurship is the person who dislike study and lazy to work and my friend tell me that, nowadays, if u got degree, your salary also no enough to cover your life. So, she decide to stop hers study and go to find hers own goal. That time, I can't understand. Why she wants to stop hers study? If she wants to venture, she also can start after she graduate. So, I dislike this subject and it also no useful for me [sic].*

Wan Ting was questioning the legitimacy of this module as she found this module was not useful for her. From her anecdotal example presented above, she opined that to be an entrepreneur, she does not need to study Entrepreneurship as a subject because many successful entrepreneurs never set foot in the ivory tower, they just do it (*she quote the budding entrepreneur dislike study*). She even goes to the great length to argue that a degree was not sufficient to guarantee a successful life thereafter.

Samantha: *I felt this subject "Entrepreneurship" was an unnecessary subject for me. From my last experienced, I felt bored and I'm taking this subject because I'm just*

wants to finish up my syllabus! For my perspectives, I think we totally don't have to take this course. For me, to become a successful entrepreneur is not just study all these theories only. Even though we have memories and study all the theories, but it is still not guarantee us to become a successful entrepreneur. Instead for those entrepreneurs, even though they are not taking this subject but they will also become a successful entrepreneur. I don't think so this subject can cultivate the entrepreneur, maybe can but I think is just a few only! I hope also can become a successful entrepreneur in one day! [Sic].

As like Wan Ting, Samantha, also poured her heart out on this subject in the negative way (*unnecessary subject for me*). Samantha wants to be a successful entrepreneur but she did not think study the module per se with all the Entrepreneurship's concepts and theories will transform her to become one (*it is still not guarantee us to become a successful entrepreneur*). Like Wan Ting, Samantha also questioned the legitimacy of this module as they felt bored, wasting their time and to the very core, they just to complete their credit hours of this module to obtain a degree.

But what expressed above by Wan Ting and Samantha did not reflect the current trend in the world of business and academic. In recent years, we have seen an extraordinary proliferation of entrepreneurship and small business courses and programs in colleges and universities worldwide (Solomon, 2006). From its origins until today, entrepreneurship research and teaching has met many important milestones. It appears that such rocketing interest in entrepreneurship has shaped not only scholarly writing, but also initiated a "revolution" in entrepreneurship education at academic institutions. This "revolution" has also sparked an interesting scholarly discourse between Kuratko (2004, 2005) and Katz (2006, 2008) about the maturity and legitimacy of entrepreneurship as not only a field of study but also a field relevant to higher education.

In other words, the adoption of programs (i.e. entrepreneurship) makes the higher education institutions like UUM relevant and it signals that UUM graduates have the preparation they need to succeed in a competitive environment. This goes as far as hiring employees based on the legitimacy they provide to the institution (UUM) rather than their (graduates) actual capabilities. This should augur well for UUM graduates

like Samantha and Wan Ting as it was compulsory for all BBA undergraduates to take this module.

As with Entrepreneurship's theories as highlighted by Samantha, Fiet (2001) specifically addresses this issue when he observes the large number of adjuncts that teach entrepreneurship:

> *Students must learn theory in order to understand the future consequences of their entrepreneurial decisions. Thus, it seems improbable that adjuncts can effectively teach the course. Teaching theory is rarely the strength of adjuncts (Fiet, 2001, pl. 9).*

Adi: *My first impression on this class is that it is actually quite interesting as I am uninterested on this class at first as I thought that this class will be a very hard one and involve a lot of reading. Indeed it does involved a lot of reading but it is interesting that I sometimes imagine myself in the situation or topic that I read. For example, franchising is a very famous topic related to entrepreneurship. So, it makes me imagine that someday I will have my own franchise and how I will manage it. As a Malay myself, of course I would really like to be just like these successful entrepreneurs below and I would really want to see myself to be as good as them in the future [sic].*

Kee Keat: *Based on the knowledge that I had learned in the class, I have a clearer understanding about what is entrepreneurship and it change many of my misconception about entrepreneurship. It really inspires me. However, becoming an entrepreneur is not an easy task because they have to face many problems and make the best choice of every decision. It needs a good planning before we start our business [sic].*

Despite an initial lukewarm interest in the module, a change in Adi's behavior and the comments from Kee Keat can be seen among the students when they started to view how the module content can be useful for them. Most of the reflection of the students has similar comments as the one depicted by Adi in which, the expression of relishing certain topics of the entrepreneurship module are prevalent and how the module as a whole had changed their worldview of entrepreneurship forever. This module also

stimulates Adi's imagination as he envisions himself as a successful franchise entrepreneur in the future. He went on to search list of successful Malay entrepreneurs so that Adi can emulate and be good as them. As for Kee Keat, he managed to correct its misinterpretations on the concepts of entrepreneur and aspire to become one. He also has high awareness that to start a business is no easy feat can be done with good planning (*It needs a good planning before we start our business*).

Entrepreneurial Characteristics

All 61 logs contained reflections that related to the entrepreneurial characteristics. 35 students made specific reflections that learning entrepreneurial characteristics had demonstrated the importance of "taking calculated risk, ideation, control of our own future", something they had not done previously or that the *"module has made me rethink my personal beliefs and has made me consider to become entrepreneur"*. Many students made specific reflections about their intention to use whatever they had learnt on the module to help them venture into their small businesses and achieve their "dream". In a nutshell, this topic uncovers what make a successful entrepreneur like Tony Fernandez and Richard Branson "thick".

Hafiz: *From the lesson of this week, I could understand that entrepreneur is a person who is taking a calculated risk. This is meant that entrepreneur is not a gambler who is just trying luck without any effort. To become an entrepreneur, firstly we have to identify the opportunity that we see and use the opportunity wisely to enhance our life and also the community's life. As example, Tony Fernandez who is the owner of Air Asia starts his business by making a loan to government. His idea is brilliant [sic].*

The above account by Hafiz highlighted many intrinsic value of an entrepreneur, namely: calculated risk, opportunity identification, community's life enhancement, and ideation. There is clear evidence of dialogic reflection by citing Tony Fernandez from Air Asia. Hafiz is making an association between all the good values espoused by an entrepreneur and connects it with his icon, Air Asia's Boss. Hafiz further draws the inspiration on how young people like him can learn so much from Tony as a successful entrepreneur.

Saidatul: *I found out that even women also have a big potential to become a successful entrepreneur. The entrepreneur not only belongs to man. This video proves that women also have the entrepreneur characteristics that the men had. The women also have the strong passion and interest to become an entrepreneur and this passion doesn't less than men had. In my opinion, everyone also can become a successful entrepreneur no matter the gender, age, and nation. It is only depends on the person themselves that they really want to be [sic].*

Saidatul reflects emotionally for the above account. As a woman, Saidatul strongly opined that successful entrepreneur does not belong to man only; woman as shown in the video during the class can also become successful. In her frame of mind, woman equal with man in the endeavor of entrepreneurship. Clearly, in this account, self-questioning is evident (an 'internal dialogue' is set up at times) in Saidatul and she is deliberating between different views of her own mindset on woman entrepreneur (before and after watching the video on Ugandan woman entrepreneurs in making straw bag). This account shows quite deep reflection, and it does incorporate a recognition that the frame of reference with which an event is viewed can change according to the emotional state in which it is written, the acquisition of new information (through the video), the review of ideas and the effect of time passing.

Kamariah: *But the most interesting thing in this first chapter is that it makes me think more whether I should be an entrepreneur or not, and if I want to be an entrepreneur why? As I think all over again, I think that being an entrepreneur might be a good thing for me because I really want to have a full control of my own life, and give something to my family especially my parents, and lives like how I have dream before. But then when think about the challenges to be an entrepreneur nowadays, it kind of breaking me apart as I picture myself in a very difficult situation if I become an entrepreneur. Just thinking about the competition that I will faced makes me wondering how tough the life it is for those successful entrepreneur when they first started [sic].*

Like Saidatul, Kamariah is self-questioning herself (*whether I should be an entrepreneur or not?*). Kamariah is deliberating between different views of her own behavior (different views of her own and others). She delves into the question "Why I

want to become entrepreneur"?   She start to envision the benefits of become one successful entrepreneur, but also worry about the huge challenges that is going to be encountering before becoming one.   Kamariah says "*But then when think about the challenges to be an entrepreneur nowadays, it kind of breaking me apart as I picture myself in a very difficult situation*".   This shows Kamariah is learning new skills in contemplating and decision making. In addition, it unveils the feelings of insecurity when she visualizes the difficult road ahead of a budding entrepreneur.

Tina: *There are a few characteristics of an entrepreneur. Dare to take risk, hardworking, creative and innovative, open-minded, energetic, self-confident, and optimistic are some of the characteristics of the entrepreneur. Some of the people believe that entrepreneurs are born not create. However, it is not true. Most of the entrepreneurs are force to be an entrepreneur because of their condition. Sometimes, when people migrate to the other place, they will start a new business too because they have nothing at the new place. Beside, entrepreneur nowadays are born through knowledge. There are myths that say that "entrepreneur is those who do not do well in their academic." However, I do not agree with it [sic].*

Tina critically analyzed and opined that: "*Some people believe that entrepreneurs are born not create. However, it is not true.*" She recognizes how prior experience, thoughts (own and other's) interact with the production of her own behavior. She gave her own opinion and explains critically that: "*Most of the entrepreneurs are forced to be an entrepreneur because of their condition.*" She goes on to explain all the rationale of why entrepreneur is not born, but due to their predicaments. She also cited that immigrants tend to become entrepreneur in the host country because their lack of origin endowment.   Again, self-questioning is evident in her reflection; deliberating between different views of her own behavior (different views of her own and others).   She further says that: "*entrepreneur nowadays are born through knowledge*" and use this statement to debunk the myths that says: "*entrepreneur is those who do not do well in their academic.*"

Tina succinctly supported her argument with: "*entrepreneurship has become a core subject for every university's students*," such as in Malaysia context, therefore, all Malaysian entrepreneurs are well educated in the future. This is a logical argument.

There is clear evidence of dialogic reflection in the final writing of Tina. Ironically, Tina reflection on the last thought of well-educated entrepreneur stand in total contrast with the reflection of Wan Ting, which says: "E*ntrepreneur is the person who dislikes study.*"

Opportunity recognition

As with entrepreneurial characteristics, all 61 logs contained reflections that related to the theme of opportunity recognition. Opportunity recognition is the essence of entrepreneurship as entrepreneur is all about spotting and acting on opportunity. According to the definition that researches consider opportunity to be laying at the heart of the entrepreneurial process, an entrepreneur is an individual who is able to identify, evaluate and exploit opportunities (Shane, 2003; Venkataraman, 1997).

Akhmal: *How we define opportunities? What if, when opportunities come, and we don't know anything about it? After the class I try to search on the internet about the definition of opportunity. Then only I realize that, there's no any clear definition about. Let's say in one situation, there's very less people selling fried banana at the area, then a person start a fried banana business without realizing these factors. Does it mean that the person didn't recognize the chance and grab it? In my understanding, I don't think the person grab the opportunity although he done a great job. To me, opportunity recognition more towards the person keep thinking about what kind of food has not been selling at his area, then he figure out that it's fried banana! [sic].*

Reflection by Akhmal depicts the student engaging in asking self-critical question about what is "opportunity". That made him/her thinks very hard on this magic word and then; synchronizes the meaning of "opportunity" to his/her own cognitive map.

Self-questioning is evident: "*What if, when opportunities come, and we don't know anything about it?*" This critical question posed by Akhmal demonstrated there are sense of 'mulling about', discourse with self and an exploration of the role of self in entrepreneurship module. Akhmal try curiously to find the meaning of "opportunity". Even though Akhmal can't find one to his satisfaction, but he try to make sense of the term with a good example. The example given showed Akhmal try hard to find closure on the term "opportunity"

Qistina: *When talking about opportunity, here is a company that using opportunity wisely - Khan Academy. When I visit his website www.khanacademy.com there are thousands of education resources which provide variety of subject such Mathematic, History, Healthcare, Medicine, and a lot more. When I heard that Khan Academy is a nonprofit organization, I truly curious about how he makes his money and get the financial resources. Then after make a research actually his revenue come from donation from Bill Gates and Google and also from advertising. Finally, I found out that Khan Academy becoming a powerful brand name in education it is because "they delivered value to people" [sic].*

Qistina reflection signifies descriptive reflective. There is basically description of events on Khan Academy, but shows some evidence of deeper consideration in relatively descriptive language (e.g. *I truly curious about how Khan Academy makes his money and gets the financial resources).* Qistina linked her writing to the global organization like Khan Academy and she did a lot of research in order to complete her reflection. This is out of curiosity on Khan Academy. This is one of the benefits of reflective learning log as students reflect and engage actively in certain topics/themes, they tend to search and research extensively in order to close their "knowledge gap".

Nurahimah: *I once worked at a supermarket that sells goods worth RM2. I found many buyers purchase goods in our store because the price is cheaper than other stores. In uncertain economic conditions, high prices can temp customers to switch to a store that can offer low prices for them. This shows that the entrepreneur can use creative pricing strategy in uncertain economic condition as an opportunity to sell their product.*

In the above account, Nurahimah try to connect her working experience in supermarket and the entrepreneurial concepts of creative pricing, opportunity and economic conditions. Nurahimah use her keen sense of observation to deduce the concepts of "opportunity" by making a connection between low price strategy and uncertain economic situation. Her reflection signifies opportunity never fall from the thin air but rather through skillful orchestration between strategy and environment.

Kee Keat: *Opportunity is very important for an entrepreneur because opportunity is rather than just idea. If an entrepreneur has a good idea, but he or she do not has the chance to present or show to the other which mean that his or her idea will not be known by the public and hard to success. They always need to observe and understand the trend of the business. In addition, they will not miss the opportunity which will change the future of the business. Beside, entrepreneur must be sensitive to the surrounding. A little change of the environment may lead to a huge change of the business especially the technology. Therefore, every entrepreneur must put effort in finding the opportunity and sensitive to the surrounding to ensure that their business can be success.*

Kee Keat reflective writing is a metacognitive, "thinking about your thinking" process (Martinez, 2006) through "*Opportunity is very important for an entrepreneur because opportunity is rather than just idea. If an entrepreneur has a good idea, but he or she does not have the chance to present or show to the other which mean that his or her idea will not be known by the public and hard to success*" and "*A little change of the environment may lead to a huge change of the business especially the technology*".

The above account require Kee Keat to use analytical skills (i.e. higher order thinking skills), to differentiate between idea and opportunity rather than merely create a narrative. As a metacognitive process, Kee Keat is able to appreciate the deeper, underlying issues of entrepreneurship (Martinez, 2006), rather than accepting a superficial interpretation of the problem, which may present in an entrepreneurial context such as technological advancement (Mair, 2011).

Creativity & Innovation

Only 45 reflections contained comments that related to the topic creativity and innovation. Many reflections cite that there are vast differences between creativity and innovation. Shane (2003) emphasizes an entrepreneur's creative role in innovation, with the observation that many founding teams use various forms of brainstorming to increase the number of new ideas, and thus enhance creativity as an important foundation for innovation. For many business students and the budding entrepreneur, innovation becomes the focal point of the reflections.

Wen Hui: *Entrepreneurs need to create new ideas in business to produce new products not yet available in the market and that cannot be imitated by competitors. For example, Cirque de Soleil, which uses `Blue Ocean Strategy ', in a business where no entrepreneurs who are able to provide competition in the business. Cirque de Soleil has been doing business unique circus where it has employees who have high expertise and exceptional in doing interesting acrobatic actions. This business received overwhelming response from customers because it is different from the normal circus [sic].*

Wen Hui quote world class circus like Cirque du Soleil, which uses `Blue Ocean Strategy ' come to the fore of his/her reflection. She was able to connect creativity and innovation with Cirque du Soleil. Blue Ocean Strategy require entrepreneur to create new ideas to produce new products not yet available in the market and cannot be imitated by the competitors. The uses of this unique example demonstrated the depth of propositional knowledge and the ability of Wen Hui to connect innovation and business bottom-line.

Zuliana: *Today lecturer let us watch a video about woman entrepreneurs in Uganda. From this video I can see it is a very poor country. Yet, people did not give up their life; they are doing hard work for success, especially for woman entrepreneurs. A woman entrepreneur collects used straw from rubbish site, recycle the used straw and transform product like into lady handbag, shoes, and woman accessories. From here I see the woman entrepreneurs are very creative. When the machine used to flatten the straw breakdown, she even used her own teeth and knife to flatten the straw [sic].*

Zuliana is touched by the heart-wrenching video showcased true-grit creative woman entrepreneurs in a poverty stricken country called Uganda. Through this video, Zuliana narrates what she observed from the hard lives of woman entrepreneur in Uganda. The description is succinct – just sufficient to raise the issues. Extraneous information is not added. It is not a story. The focus is on the attempt to reflect on the event and to learn from it. There is more of a sense of Zuliana standing back from the event in the video; in order to reflect better on her actions and in order to be more effectively critical.

Descriptive Writing (non-existence of reflection)

In this SoTL, there were 75 samples of reflective learning logs that scored 5% and below 5% point (see Appendix 2). All of them achieved Level 1 (non-existence of reflection) in the reflective framework proposed by Hatton & Smith (1995). Descriptive writing is a description of events or literature reports. There is no discussion beyond description. The writing is considered not to show evidence of reflection. The followings are some of the accounts:

Asmida: Franchise is a semi-independent business that individual pays the fees and royalty for the trademark that will be used to sell the product and their service. This business is easier compare to the individual that want to open their own business. For example like Mc Donald which has franchise for all over the whole that many franchisees pay the fees to run their business [sic].

This account written by Asmida is descriptive and it contains little reflection. The account describes what is franchise, its characteristics and some of the benefits – but all in the context of an account of the event. Generally one point is made at a time and ideas are not linked. It was wordy, tended to be meaningless and lacked sophisticated vocabulary. Overall, the writing was particularly colloquial in style.

Tina: An entrepreneur is someone who organizes, manages, and assumes the risks of a business or enterprise. An entrepreneur is an agent of change. Also, an entrepreneur who is makes a profit. The profit-and-loss system of capitalism helps to quickly sort through the many new resource combinations entrepreneurs discover [sic].

The above definition written by Tina was well versed but the entrepreneurial concepts are taken on without questioning them or considering them in depth. It is very descriptive. It could be a reasonably written account of an event that could serve as a basis on which reflection might start on an entrepreneur's risk taking behavior and efficient resource allocation through the profit-and-loss system, though it hardly signals any material for reflection – other than the last few words stated "*positive side of business failure*".

Hafiz: *During the week, I study the new chapter about related to business networking. In my opinion, in this kind of business network should be established and it is important to keep the business continue business gaining strength and develop. There are several types of networking. In the class as well, lecturer explains the strategy to build a network that is, build, consolidation and retention. My comment about this thing is my very interest to know more about this topic [sic].*

The account is written only from one point of view – that of Hafiz. Its narration is both surface and superficial without any substance content for critical reflection in the context of business networking. The idea is not relevant or focused, such as "*My comment about this thing is my very interest to know more about this topic*". There were also significant problems with grammar, characterized by multiple errors in the original transcript of the Hafiz. Apparently, lack of editing in the process of preparing this reflective learning log.

Ahmad: *Lecturer continue new chapter that getting funding or financing. In this chapter lecturer explains why most new ventures need financing or funding. In addition there is also help to find alternative financial sources such as personal fund, equity capital, debt financing and creative sources. Lecturers are also explains about bootstrapping, other word is thrifty and there are 9 example of bootstrapping methods [sic].*

Instead of using first party address, Ahmad tends to use third party address such as lecturer in writing his reflection. Critical reflection very much focused on the individual discourse with self and an exploration of the role of self in events and actions. The above narration is very much descriptive in nature and hardly contains any significant materials for reflection. The writing reflects a mere regurgitation of learning materials from the textbooks and the lecturer's power point slides. There was a lack of sophistication in the writing.

The reflection by the above four sampled students in this study indicated the reflective learning log were descriptive in nature. The writings from the reflection learning log were a mere regurgitation from the power point slides and text books given in lectures throughout the 14 week class. They were written in reporting style, all in the context

of an account of the event and more like registering everything happen in those particular week. The reflective learning log failed to address things like thoughts, feelings, how well (or bad) it went, what the students had learnt, what he/she will do differently next time (Miller, Tomlinson, & Jones, 1994). Based on the frequency of score for graded reflective learning log, 75 students merely self-reported the contents of the lectures throughout the semester that have no reflection at all (some of their reflection were highlighted in the reflections of student 16-20). Another 35 students produce the works that contain descriptive reflection from one perspective. Only 26 students were able to reflect critically at level four (Hatton & Smith, 1995) in certain themes in entrepreneurship module.

Conclusion

This SoTL study highlighted that reflective writing was an unfamiliar genre to many business students and needed to be explicitly taught in the respective subject. The results of this study has strongly suggested an urgent need for the development of reflective writing skills among the students during their higher education studies so as to assist in the professional and entrepreneurial behavior development as they entered the job market. The weightage given to this graded assessment was 10% and it is considered substantial in grade. While the result of the study may not provide strong evidence on the ability of the students in reflective writing, it will be strange should inability exist as the outcome of attitudinal problem of willingly forgo a set of marks by not writing reflectively in which may warrant further investigation.

Based on the result of the 61 students who had demonstrated an ability in reflective writing, it is suggested that perhaps the university should consider offering coursework that contain a component of reflective writing as part of the assessment. As such, if this is implemented, students of such ability like the one in this sample group, would have been benefitted from such assessment which look at reflective ability (Greene, 2014) and which they were allowed to form a broader perspective in relation to the module undertaken. This in turns will foster the growth of reflective ability which is recognized as a learned behavior (Gustafson & Bennett, 1999).

The researcher found that more than half of the students were only able to reach Level 1 of reflection as suggested by Hatton and Smith (1995), the idea of giving additional specific guidelines will lead the students to certain stereotypes of writing reflective learning log (Stamper, 1996) and that may prove counterproductive. As such Holland (2013) suggested that it is only necessary for reflective writing skills being developed with the reflective thinking skills so as to assist in the ability of the students to write a good reflection.

Results which shows the mark sheets for reflective learning log (see Appendix 2) indicates that most of the students need to be given greater opportunities for reflective writing skills development throughout their tertiary learning. This study suggested the importance of having a blend of reflective writing exercise in most of the subjects at the undergraduate degree so as to facilitate not only dispersing knowledge on their module professional aspects but also create of pools of reflective practitioners in the future.

As for the limitation of the study, it is important to not to underestimate the challenges 'of introducing a grade assessment that most of them are not familiar with in their university academic journey. Student need guidance, assurance and confidence writing something that require personal opinion, own thinking, sensitive and personal nature of narration. For most students as found out in this study, self-confessional writing is hard to come by (they dare not attempt it in the first place), only a handful appreciating the writing start with "I", "me" as first person.

By maintaining a learning log for the past 14 weeks in this Entrepreneurship module, students can record and comment their every week entrepreneurship lessons in a profound manner. They can self-track their perspectives in their first class in this module and monitor their evolved entrepreneurship knowledge and perspectives as the lecture progress until the end of the semester. In the process, they immerse in self-discovery in the world of entrepreneurship and self-tracking personal growth and cognitive development. Reflective learning log enable students to clearly identify their own thinking in entrepreneurship, the risks involved, the myths of become an entrepreneur, opportunity and execution intelligence – a method that promote deep learning as depicted in the student's comments on the findings section in this study.

Research has identified that reflection can help people to change. Although most of the students registering for this module are young undergraduate, and have limited experience to draw from to reflect upon certain issues (this is the findings from this study). But despite these barriers, reflective learning log make entrepreneurship learning congruent with the suggestion to teach entrepreneurship as a method rather than as a process. Reflective learning log provides students with a profound insight into their own world of academic and; hopefully in future, their professional growth as reflection become a habit for our student.

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Appendices

Appendix 1

Records on the Total Subjects Taken and Total Subjects with Reflective Learning Log (N=140 students)

Matric No.	Total Subjects Taken (Subject with reflective learning log)	Matric No.	Total Subjects Taken (Subject with reflective learning log)	Matric No.	Total Subjects Taken (Subject with reflective learning log)	Matric No.	Total Subjects Taken (Subject with reflective learning log)
219792	30(1)	227437	17(1)	225447	17(1)	227810	20(1)
219868	25(2)	227440	21(1)	225513	18(1)	227976	19(1)
220372	28(2)	227576	21(2)	225628	18(1)	228031	20(1)
220488	30(2)	227584	21(1)	225707	17(1)	228050	18(1)
220540	29(1)	227875	19(1)	225740	17(1)	228068	18(1)
221390	29(1)	228011	19(1)	225837	19(1)	228346	19(1)
221573	29(2)	228018	19(2)	225949	19(1)	228348	19(1)
221577	29(1)	228064	17(1)	225955	18(1)	228492	16(1)
221632	29(1)	228382	19(1)	225986	19(1)	228504	17(1)
221812	28(1)	228405	19(2)	226036	18(1)	229131	19(1)
221822	29(1)	228416	18(1)	226058	17(1)	229135	18(1)
221862	29(1)	228563	14(1)	226100	18(1)	216678	33(1)

222068	30(1)	228592	15(1)	226211	18(1)	222146	30(1)
222071	29(1)	229128	19(1)	226309	18(1)	223193	29(1)
222083	29(1)	230227	12(1)	226633	18(1)	223206	31(1)
222302	33(1)	230276	12(1)	226689	18(1)	223214	30(1)
222342	28(1)	219701	30(1)	226857	18(1)	223244	29(1)
224135	23(1)	220781	30(1)	227145	18(1)	223305	29(1)
225622	18(1)	220807	29(1)	227160	18(1)	225727	29(1)
225976	18(1)	221298	28(1)	227167	17(1)	225776	18(1)
226101	21(1)	221318	28(1)	227272	17(1)	225781	18(1)
226168	19(1)	221447	30(1)	227315	19(1)	226106	18(1)
226245	18(1)	222041	29(1)	227492	19(1)	226176	18(1)
226281	18(1)	222093	29(1)	227599	17(1)	226184	18(1)
226296	18(1)	223304	18(1)	227606	18(1)	226297	18(1)
226566	18(1)	225280	18(1)	227649	18(1)	226321	18(1)
226958	17(1)	225329	17(1)	227663	18(1)	226323	17(1)
227379	18(1)	225378	17(1)	227685	18(1)	226328	20(1)
226426	18(1)	226591	18(1)	226704	18(1)	227525	18(1)
226430	18(1)	226608	18(1)	226718	18(1)	227569	19(1)
226438	18(1)	226616	18(1)	226764	18(1)	227868	18(1)
226456	17(1)	226688	18(1)	227075	18(1)	227901	18(1)
227919	19(1)	228301	18(1)	227390	18(1)	229129	18(1)
227982	18(1)	228303	18(1)	227445	17(1)	230183	12(1)
227983	18(1)	228340	18(1)	228273	19(1)	228350	18(1)

Appendix 2

Mark Sheets for Reflective Learning Log (10%) (N=136)

Matric No.	Reflective Learning Log (10%)	Matric No.	Reflective Learning Log (10%)	Matric No.	Reflective Learning Log (10%)	Matric No.	Reflective Learning Log (10%)	Matric No.	Reflective Learning Log (10%)
219792	6	227437	5	225447	5	227810	6	226426	5
219868	6	227440	5	225513	5	227976	6	226430	5
220372	6	227576	8	225628	5	228031	6	226438	5
220488	6	227584	6	225707	5	228050	5	226456	5
220540	5	227875	5	225740	5	228068	5	226591	5
221390	-	228011	6	225837	4	228346	4	226608	6
221573	6	228018	5	225949	5	228348	4	226616	5
221577	-	228064	5	225955	5	228492	5	226688	7
221632	-	228382	5	225986	4	228504	5	226704	5
221812	6	228405	5	226036	4	229131	5	226718	5
221822	6	228416	7	226058	5	229135	6	226764	-
221862	7	228563	5	226100	5	216678	1	227075	5
222068	6	228592	5	226211	6	222146	5	227390	5
222071	5	229128	6	226309	5	223193	7	227445	5
222083	6	230227	5	226633	6	223206	5	227525	6
222302	5	230276	8	226689	4	223214	5	227569	6
222342	6	219701	5	226857	6	223244	7	227868	5
224135	5	220781	6	227145	8	223305	6	227901	5
225622	3	220807	5	227160	4	225727	7	227919	6
225976	5	221298	5	227167	5	225776	6	227982	5
226101	5	221318	7	227272	8	225781	5	227983	6
226168	8	221447	6	227315	4	226106	7	228273	7
226245	7	222041	5	227492	5	226176	7	228301	6
226281	7	222093	6	227599	7	226184	5	228303	9
226296	6	223304	6	227606	6	226297	5	228340	9
226566	6	225280	5	227649	5	226321	7	228350	5
226958	6	225329	7	227663	5	226323	5	229129	5
227379	8	225378	8	227685	5	226328	7	230183	7

Befriending VB using Mobile App: Effects on Novice Learners' Programming Comprehension and Perceived Motivation

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Abstract

This paper discusses the effects of a mobile learning application, VBLearn, developed by utilizing the elements of multimedia, to improve the novice students' Visual Basic (VB) programming concepts. Among the aspects that were examined were the effect of VBLearn on novice learners' VB programming comprehension and their perceived motivation towards the instructional material. This study was carried out in an experimental design method with the participation of 30 undergraduates who are novice learners. The data analysis indicates that the VBLearn mobile application, which has been used in the VB programming classroom, has significantly increased the understanding of the students' programming comprehension and their perceived motivation of the mobile application is higher than traditional classroom teaching. This study is an attempt to adduce a scope for implementing multimedia approach in the VB programming learning environment in a motivating way for novice learners.

Keywords: mobile application, Visual Basic, novice learners, programming comprehension, perceived motivation

Introduction

Self-learning of programming language is difficult for novice students who are beginners, as it is an intricate task which is perceived as hard and rigid. They differ in their ability to understand the programming concepts which are very abstract and difficult to visualize. Usually, novices have different background knowledge before entering an introductory computer programming course, meaning that a class may contain students with a wide range of proficiency level.

It is claimed that by extending the prudent use of the multimedia in instructional technology that could serve as a useful learning supplement to promote learning and

improve students' motivation, attitudes and interest (Annamalai, 2016). To investigate this, a multimedia courseware called Visual Basic Learning Application (VBLearn) was designed and developed to be implemented in the undergraduate Visual Basic (VB) programming classroom. It is an attempt to introduce a fun, engaging and motivating multimedia tutorial mobile application to aid the learning process of VB programming language. The findings of the VBLearn intervention in a fundamental VB programming classroom is discussed in this paper. Among the aspects that were examined were the effect of VBLearn on novice learners' VB programming comprehension and their perceived motivation towards the instructional material.

VB Programming is a core subject for undergraduate students who are taking BSc. (Multimedia) program in a public university in Malaysia. This course is an important course to engineer competent students who can produce innovative multimedia applications through programming language and authoring tool. The VB programming is a part of the syllabus content of the programming course, which was thought for 4 weeks. Currently, for this course, the students attend one and a half hour lectures followed by one and a half hours practical class with computers later in the week.

Issues of Learning VB Programming

Learning to program is intensely meticulous for novice undergraduates who do not have any background in computer programming (Lee and Koo, 2011). During a preliminary analysis in the researcher's VB programming classroom, the students perceived programming as rigid and hard. Although, each week, the students undertake computer-based exercises, in lectures and practical classes, complemented discussion and online reading materials uploaded by the lecturer in the online learning portal, students find the course frustrating and demotivating. As a result, the students performed poorly on the subject. A need analysis was done with the students, indicated that students were struggling with using the VB programming concepts, structures and program execution which are very abstract and difficult to visualize. This affects their efficiency in learning the new languages, and represented a serious impediment to their achievement of the learning goals of the course. An analysis of the questions asked to students revealed areas of misunderstanding that students were encountering at the beginning of the course that appeared to carry forward for the

remainder of the course. This was one of the root causes of students' failing to achieve the learning goals. As such, learning constraints that include time and pace are barriers also confine them from going any further in developing their practical skills in the subject and these accelerate their lack of engagement, motivation and interest.

As beginners, the students believe that learning programming is cumbersome (Saeeda Naz et al., 2014). Therefore, a guided tutorial strategy should persuade them to deem otherwise. Although self-directed learning using notes and textbooks was previously implemented in the course, they would not actively participate or reflect their comprehension meaningfully as there is no approach that tackles students' interest. A study done previously indicated that the native digital students are drawn to visual media and creative task (Saeeda Naz et al., 2014). Therefore, the integration of multimedia as a reflection tool in learning is crucial in order to maintain students' motivation and engagement in the programming class.

Solution

To improve the students' VB programming skill and engage them into the learning process, this study proposes an approach to incorporate multimedia as a tutorial and motivation tool in the programming subject. The motivation of this study originates from the advantages of multimedia reviewed in past literatures. There are increasing volumes of multimedia application that are utilized in higher education for teaching programming (Saeeda Naz et al., 2014).

Multimedia applications are being used in the classrooms to compliment lectures on specific topics, enabling students to learn at their own pace rather than the pace of the course. This is to provide the students with a step-by-step tutorial of program execution in the programming language as a mean to enhance their understanding of programming structures and concepts.

In this study, the effectiveness of a multimedia tutorial mobile application named VBLearn is being implemented in a VB programming classroom as a supplementary aid for the students to learn VB. The content of VBLearn is delivered using the redundancy of multimedia elements in tutorial mode emphasizes on the programming language concepts. It is a self-help tool for the students to learn on their own will, pace and time. According to Keller (2008), to improve confidence and motivate students in learning a particular lesson, they should be given the control over the

lesson and the time required to complete lessons. The students should also be given full control and capacity to self-navigate throughout the lesson. The accessibility provided to them to navigate throughout the instructional material on their own will, and learn in their own time, is expected to provide them the confidence and keep them motivated throughout the lesson (Keller, 2008).

VBLearn provides a multi-genre tutorial space that engages and draws students into a different interaction with programming. It also appeals to multiple intelligences as it provides embedded mixture of visual (text) and audio (sound, music or voice) modalities that enables students to learn through their preferred modality. Students are able to learn programming while creating and integrating 'schema' to understand better and freely at their own will. They may repeat the content as many times as they want for them to understand each step of programming better. The combinations of multimedia elements in VBLearn offer students a welcome change from routine lectures in the classroom and also arouse their interest in learning various types of modalities. The redundancy of multimedia (text, narration and graphics) in VBLearn also works together in improving the learning process. Figure 1 illustrates the content of VBLearn mobile application.
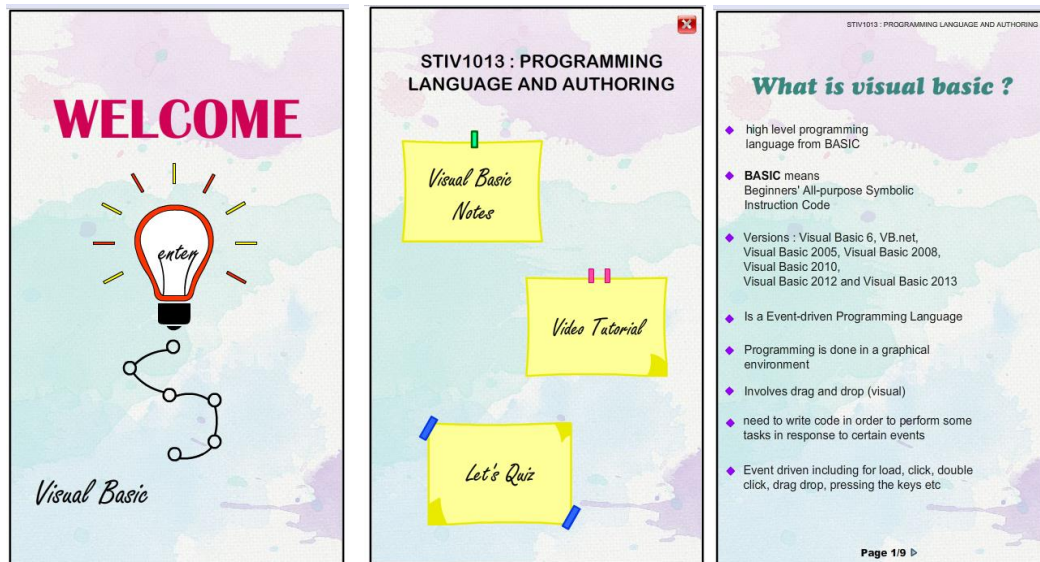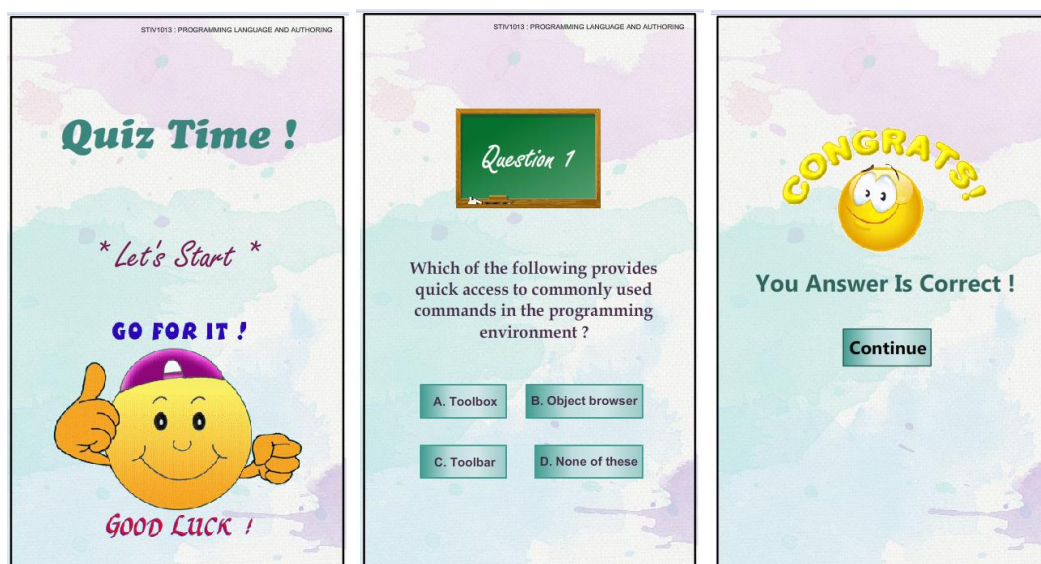
Figure 1. Content of VBLearn Mobile Application

This multimedia tutorial mobile application encompasses 4 chapters with distinctive scenarios that cover the fundamentals of VB programming such as variables, data type, arithmetic operators, comparison operators, operator precedence, selection structures and decision structures. Every scenario is preceded with its learning objectives. This mobile application is built with explanation, assessments and feedbacks. VBLearn was developed using Macromedia Flash with ActionScript 3.0. The lesson content for VBLearn was developed based on the syllabus provided by the faculty.

Literature Review

Programming is an important part of computer science. The effects of programming are widely experienced throughout society in a multitude of social, work-related, and leisure software applications (Wright, Rich & Leatham, 2012). Due to the importance and the broad influence of programming, the efficient and effective teaching of the subject is worthy of study and improvement. One of the most challenging aspects of this subject is to help students learn the concepts of computer programming (Sengupta, 2009). Programming concepts are the broad ideas of programming. These include: i) the use of variables to store and retrieve data, ii) input

to place data into the computer, iii) processing to organize data and make calculations, iv) output report information, and v) stored procedures to organize tasks (Sengupta, 2009). The task involves many complexities, including skill development, different learning styles, helping students transition from a problem statement to algorithmic logic, developing programming code from that logic, debugging and resolving the program code to produce a working program that meets the problem requirements (Sengupta, 2009). This learning process is even more challenging when students are novice and being introduced to a new programming language and development interface (Keller, 1999). Under these circumstances, learning time is often at a premium and any approach that can assist a student obtain a quick start in learning the basics of the new language and its interface give the student an advantage and help avoid initial student confusion that can hamper achieving student learning goals (Sengupta, 2009). However, the methods used to teach programming to students still relies on outdated teaching methods (Sengupta, 2009). While the technology and the tools have changed, most are still introduced to programming by reading texts, listening to lectures and writing programs. Research findings indicate that programming students obtain their knowledge and skills from learning activities that are primarily outside the classroom, which led the educators to surmise that new approaches such as multimedia that are more promising for achieving learning goals in programming (Jono et al., 2016).

The research literature has demonstrated many of the advantages of using multimedia based instructional material. In particular, results from a research indicated that students experienced improved comprehension, understanding, and retention of content when they learn using multimedia (Sankey, Birch & Gardiner, 2011). This research is formulated to pursue those goals by examining the detailed usage of multimedia to address specific course problems in teaching computer programming, especially to provide their programming students a quick start path to learning and applying new programming languages in their coursework.

Multimedia have been defined in various ways. It is defined multimedia as presentation of materials using both words and pictures (Mayer, 2009). Multimedia can also be defined as an integration of multiple media elements (text, audio, video, graphics and animation) into one whole that brings more benefits for the end user than any one of the media elements can provide individually (Reddi, 2003). It is referred to as powerful, integrative educational technology that has great potentials as a

pedagogical tool (Hung, Huang & Yu, 2011). Multimedia is used to support essential teaching objectives, so as to clarify and illustrate complex subjects, adapt to individual learning styles, improve retention and aid recall (Annamalai, 2016). It is also justified that individuals learn, retain, and transfer information better by using multimedia (Mayer, 2009).

Multimedia technology allows instructors to use multiple modes and representations to construct new understanding and conceptual change of enhancing students' knowledge (Chansilp & Oliver, 2003). This is because by using multimedia in learning, it allows the students to use their own learning styles and modalities (Annamalai, 2016). Researchers have also deduced that multimedia in learning help the students to have better retention (Saeeda Naz et al., 2014), better attention (Sengupta, 2009), better understanding (Chansilp & Oliver, 2003), and inference capabilities (Mayer, 2009). It was also revealed that multimedia provide more opportunities for the students to work at their own pace and in the learning style that they prefer (Annamalai, 2016). This will correspondingly increase their learning engagement (Hung, Huang & Yu, 2011).

Studies done by many scholars stated that the use of multimedia approach was a successful complement to conventional programming teaching (Chansilp & Oliver, 2003; Keller, 1999; Patil & Sawant, 2010; Saeeda Naz et al., 2014; Tan, Ting & Ling, 2009). Their findings clearly demonstrated the advantages of using multimedia among student to provide them a step-to step representation of the programming topics to develop their understanding of the difficult programming concepts. The multimedia approach evidently enhances the learning process of the programming languages (Chansilp & Oliver, 2003; Keller, 1999; Patil & Sawant, 2010; Saeeda Naz et al., 2014; Tan, Ting & Ling, 2009).

Chansilp and Oliver (2003) explored the outcomes from the use of Dynamic Interactive Visualisation Tool in Teaching C (DIVTIC) that was designed to use multimedia and visual imagery to provide learners with a step-by-step representation of program execution in the C Language to enhance their understanding of programming structures and concepts. Their study found that the use of DIVTIC was a successful complement to conventional teaching and it has a significant effect on improving the low achieving students' understanding of difficult programming concepts.

Another interactive multimedia courseware which is used to learn C programming, developed by Dorairaj, Sundram and Shamini (2008), also provided evidence to be an effective learning platform for beginners who wish to gain and improve their knowledge in the subject matter. This courseware utilizes cognitive learning approach where the mechanism of listening, watching, touching, reading, experiencing and processing and then remembering the information were carefully inflated. The authors stated that the courseware indeed acted an alternative way of learning C programming besides lectures and textbook learning.

Multimedia can accommodate different learning style whereby some students learn better through association, others by experimentation; some are more visually oriented and others are more auditory (Shuman, 1998). This approach is able to create a student-centered learning where students are encouraged of being independence; study at their own pace and at their own place. Similarly, Jono et al., (2016) developed a new multimedia courseware entitled "Introduction to Computer Programming C++". This courseware was asserted as an effective teaching aid to entice students in the subject programming. The authors obtained a very positive and encouraging feedback from the students as they found the multimedia-mediated learning environment as enjoyable and motivating. They were also able to demonstrate their learning and skills of the subject area.

Educators have been using multimedia approach to improve teaching and learning of programming languages in various environments and streams. Distance learning area thus cannot be avoided, as it provides nowadays, computer courses also. Multimedia has been used as purposeful, structured and engaging teaching/tutoring system and student-support system. Considering these parameters, Patil and Sawant (2010) have developed and evaluated a multimedia package as a study material, which fulfills all the above features. The outcome of the multimedia approach indicated that it is effective and efficient than conventional material, to make clear of the programming concepts. The programming language concepts are highly logical (such as iterative structures, switches etc.) and hence it is difficult for the students to understand by conventional study material (Patil & Sawant, 2010). It is more dynamic and flexible as well as fulfills the self-managed, just-in-time nature of learning. This

enables learners to expand their learning as needed throughout the duration of the course within his or her parameters.

There are many attempts to search for alternatives in teaching programming subjects. A reason for this is due to the fact that the compulsory subject in the field of Information Technology has been a challenge and they are tough subjects to learn (Tan, Ting & Ling, 2009). On top of that, lacking the understanding in concepts has reduced students' interests to pursue further exploration and self-experimentation of the particular programming language. Due to this reason, Tan, Ting and Ling (2009) developed a multimedia game to create richer and interesting programming language learning. They affirmed that students prefer to learn programming using multimedia approaches such as games whereas learning via lecturing would only decrease their interest level.

Researcher's claims that multimedia approach help students form a deeper understanding of the learning material (Bayne & Land, 2000). The multimedia approach is self-paced, flexible and empowering (Backer, 2004), thus, this gives more access to more learners with different modality. By using the multimedia, the students' experiences can be enhanced and they can get a richer, more complex view of the learning content.

Research Questions

This research attempts to answer the following research questions:-
  i. Is there a significant difference in the students' VB programming comprehension between students who used VBLearn and students who did not use VBLearn?
  ii. Is there a significant difference in students' perceived motivation of learning VB programming between students who used VBLearn and students who did not use VBLearn?

Methodology

The research was carried out in an experimental design method with the participation of 30 undergraduates who was conveniently chosen from a programming classroom in

a public University in Malaysia. They are homogenous in terms of their average academic achievements, whereby they were novice learners who have no or very little programming background. Among the aspects that were examined were the students' VB programming comprehension and their perceived motivation of the VBLearn mobile application to learn VB programming. The findings were analyzed using parametric statistical techniques.

The students were randomly separated into two groups with 15 students; one group is assigned VBLearn as their supplementary learning aid, and the other group is the control group who uses traditional learning method. There were two research instruments used for this study:

i.   Four VB programming comprehension test (one for each chapter) (written and hands-on) to measure the students' programming comprehension. The test assessed the students': (1) general concept, (2) orientation, and (3) programs execution. The duration answer question for each comprehension test is 30 minutes. The students were given pretests prior to the intervention and post-tests after the intervention. The scores are obtained to measure the students' programming comprehension.

ii. Instructional Material Motivational Scale (IMMS) developed by Keller (1993): to assess the motivational quality of VBLearn based on the principles of ARCS: Attention, Relevance, Confidence and Satisfaction. It comprised thirty-six (36) Likert-type statements that are based on opinion and attitude.

Findings

The data analyses of this research were carried out through parametric statistical techniques. Among the aspects that were examined were the students' VB programming comprehension and their perceived motivation of VBLearn.

The students experienced the VBLearn mobile application and answered four programming comprehension test (one for each chapter) (written and hands-on). The students were given pretests prior to the intervention and post-tests after the intervention. The scores are obtained to measure the students' programming comprehension. From the analysis, the mean of the post-test comprehension scores for VBLearn are relatively higher ($\bar{x}$ post$_1$ = 76.60; $\bar{x}$ post$_2$ = 82.53; $\bar{x}$ post$_3$ = 78.86;

$\overline{x}$ post$_4$ = 81.06), is than pretest ($\overline{x}$ pre$_1$ = 59.86; $\overline{x}$ pre$_2$ = 62.26; $\overline{x}$ pre$_3$ = 58.13; $\overline{x}$ pre$_4$ = 57.06). The statistical analysis of the programming comprehension scores is depicted in Table 1.

Table 1

ANOVA Analysis for Programming Comprehension Scores

	Mode	N	Mean	Mean Difference	Std. Deviation	F	Sig.
Pre1	VBPro	15	27.200	1.933	11.815	.222	.642
	Control	15	25.266		10.653		
Pre2	VBPro	15	27.466	1.400	13.135	.125	.726
	Control	15	26.066		7.914		
Pre3	VBPro	15	24.266	-7.533	12.786	2.853	.102
	Control	15	31.800		11.614		
Pre4	VBPro	15	26.866	-5.933	9.753	2.558	.121
	Control	15	32.800		10.550		
Post1	VBPro	15	76.600	16.733	14.797	13.851	.001
	Control	15	59.866		9.179		
Post2	VBPro	15	82.533	20.267	11.752	14.232	.001
	Control	15	62.266		17.169		
Post3	VBPro	15	78.866	20.733	11.531	19.895	.000
	Control	15	58.133		13.824		
Post4	VBPro	15	81.066	24.000	8.581	17.752	.000
	Control	15	57.066		20.324		

Table 1 also describes whether the students' VB programming scores are significantly different. The magnitudes of the differences in the mean scores of the comprehension post-tests between the VBLearn group and control group are at the range of 13.8-19.9. The significant value of the post-test comprehension tests scores between the VBLearn and control group are 0.00 and 0.01, which is less than 0.05,

therefore indicating that there is a significant difference in programming comprehension scores between the two groups. Hence, this means that students obtained higher programming comprehension after using VBLearn.

Statistical analyses were also conducted to measure the students' perceived motivation toward VBLearn mobile application using Keller's Instructional Material Motivational Scale (1993). This survey questionnaire had 36 items with response scale ranges. This means that the minimum score on the 36-item survey is 36 and the maximum score is 180. The minimums and maximums for each subscale vary because they do not all have the same number of items. However, for this study, an alternate scoring method was used to find the average mean score for each subscale and the total scale instead of using sums. This converts the totals into a score ranging from 1 to 5 (1= strongly disagree, 2= disagree, 3= neutral, 4= agree and 5= strongly agree) and makes it easier to compare performance on each of the subscales. The descriptive statistical analysis results of the students' perceived motivation scores are presented in Table 2.

Table 2

ANOVA analysis of Students' Perceived Motivation

	Mode	N	Mean	Std. Deviation	Mean Difference	F	Sig.
Attention	VBPro	15	4.4556	.10850	0.871	24.684	0.000
	Control	15	3.5839	.64195			
Relevance	VBPro	15	4.4519	.18047	0.745	8.599	0.000
	Control	15	3.7064	.55710			
Confidence	VBPro	15	4.4741	.28934	0.814	14.532	0.000
	Control	15	3.6596	.50498			
Satisfaction	VBPro	15	4.4889	.35894	1.284	6.280	0.000
	Control	15	3.2044	.72661			
IMMS	VBPro	15	4.4676	.17024	0.929	3.652	0.000
	Control	15	3.5386	.24559			

The statistical analysis findings for students' perceived motivation showed that the VBLearn is regarded as motivating. The total mean score for their perceived motivation score of VBLearn is 4.467 ($X_{\text{IMMS(VBLearn)}} = 4.467 > X_{\text{IMMS(Control)}} = 3.538$), which is more than the control group indicating that the students perceived the VBLearn as motivating. For each of the individual subscales; attention, relevance, confidence and satisfaction, the findings showed that the mean scores are more than four ($X_{\text{Attention}} = 4.455$, $X_{\text{Relevance}} = 4.451$, $X_{\text{Confidence}} = 4.474$, $X_{\text{Satisfaction}} = 4.488$). The significant value of the perceived motivation scores between the VBLearn and control group is 0.000, which is less than 0.05, therefore indicating that there is a significant difference in the students' perceived motivation scores between the two groups, indicating that the novice undergraduate students opined VBLearn as engaging, motivating and usable in their programming language environment. Overall, the findings showed that VBLearn is a motivating instructional aide to learn VB programming language learning.

Discussion

Novice students who learn programming for the first time often have problems to understand the abstract concepts of VB programming and applying the concepts into designing and developing applicaton would be frustrating and demotivating. The ultimate goal of this research is to bring a multimedia approach into the curriculum of basic VB programming to help the novice students who had difficulties with learning VB programming. The findings of this research claim that the use of VBLearn, a multimedia tutorial mobile application are able to improve novice students' VB programming skills and also the students perceived the instructional material as a motivating aid that motivated them to learn VB programming. This strongly implies that using multimedia approach such as VBLearn to facilitate and learn VB programming can bring benefits for the novice students, who have no background of the particular programming language. It helped them to conceptualize and apply the abstract concepts of the VB programming in a problem-solving or project-based context. When the students are able to understand the abstract concepts, they will comprehend the programming language better and will be motivated to learn and use the programming language. This is because the multimedia approach ensures the same chances for the students with different dominant senses to obtain more information, deeper comprehension, and better perception. In addition, it is also helping the

facilitator or lecturer to teach the abstract concepts of VB programming which were difficult to explain verbally.

Conclusion

In this study, a multimedia tutorial mobile application named VBLearn was designed and developed with contents related the students' learning outcome in the VB programming course. The content which was delivered using the redundancy of multimedia elements that was executed using the tutorial method emphasizes on teaching VB programming to novice students. Literature claims that students who are provided with tutorial and examples through multimedia produced better results as compared to those students who only experienced traditional instructional methods. In this case, VBLearn evidently enhances the learning process of the VB programming language of the novice undergraduate learners. The mobile application acts as an alternative way to learn VB programming besides lectures and textbooks. It is a self-help tool for the students to learn on their own will, pace and time. It enables the novice students to learn at their own pace and allows them to understand the learning content better. The accessibility provided to the students to navigate throughout the instructional material on their own will, and learn in their own time, provided them the confidence and keep them motivated throughout the lesson.

VBLearn provided a multi-genre multimedia tutorial space that engages and draws students into a different interaction with programming. It also appeals to the redundancy of visual (text) and audio (sound, music or voice) modalities that enables students to learn through their preferred modality. Students were able to learn VB programming by creating and integrating 'schema' to understand better according to their preference and freely at their own will. They may repeat the content as many times as they want for them to understand each step of programming better. The combinations of multimedia elements in VBLearn offered the students a welcome change from routine lectures in the classroom and also arouse their interest in learning various types of modalities. By using such multimedia approach, the novice students' comprehension and interest in the VB Programming language is cultivated efficiently. At the same time, it also nurtures enthusiasm and motivation to further learn the VB programming language among the novice students who has no or little background in VB programming. However, there are spaces to constantly improve the VB mobile

application and implement new features as requested by instructors and/or students to further enhance its effectiveness to help the novice learners to learn VB better.

Acknowledgment

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Business Strategy Game (BSG) – Innovative Teaching Method For Business Education

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Abstract

In today's education system develop students with high level of competencies and capabilities are very challenging task for every instructor. Graduates are anticipated to possess a wide-ranging of competencies such as critical thinking, problem solving and cognitive skills to enter the job market. The world economic trend is changing swiftly creating more necessities towards the students to develop the ability to be expert, flexible and adaptable. That requires a revolution of teaching practices and learning techniques. Business strategy game (BSG) serves as a realistic representation of the actual practices in a virtual setting, and use it to cultivate managerial skills mainly in decision making. This paper explored the educational benefits of the game based approach in teaching and learning strategic management at School of Business Management, Universiti Utara Malaysia (UUM). Approximately, 21 strategic management students participated in this research. Overall, the respondents provided a positive response about the benefit of the game based approach in teaching and learning process. In a nutshell, this study increases the understanding about the educational benefits of using BSG in teaching and learning strategic management for UUM undergraduates.

Keywords: Business Strategy Game, Game Based Approach, Strategic Management

Introduction

In today's education system, developing students with high level of competencies and capabilities are very challenging task for every educator. Students are anticipated to possess a broad range of skills; critical thinking, problem solving and cognitive skills to manage efficiently in their future workplace. The global

economy is changing rapidly, which demanding ever more skills, flexibility and adaptability among the students. Nonetheless, the conventional approaches and techniques used in teaching business and management skills are insufficient to handle the difficulty of modern organizations and unpredictable market dynamics (Baker and O'Neil, 2002, Lehtinen, 2002, Machuca, 2000). In order to survive in these unpredictable marketplace, students' need an innovative teaching method for business education. Business games permit management students' to experience the competitive dynamics, common tendencies, business encounters, interdependencies, and productivity drivers that are distinctive to an industry, and consequently, the business games are beneficial technique in the development of future human capital.

Research Question and Objective

This study explored the educational benefits of simulation game approach for teaching and learning strategic management offered by School of Business Management at Universiti Utara Malaysia (UUM). Approximately, 21 strategic management students participated in this research. The aim of this research is to present the findings on what are the educational benefits using a simulation game in teaching and learning strategic management for undergraduates at UUM. By answering this question, the researchers able to justify the simulation game as an innovative teaching method for business educators to teach a strategic management course.

Literature Review

Business Strategy Game (BSG)

Business Strategy Game (BSG) is a comprehensive online exercise game where the students run a footwear company in one-on-one rivalry against companies run by other classmates. Just as in the real-world, companies strive in a global market, selling footwears in four geographic regions; Europe-Africa, North America, Asia-Pacific, and Latin America. All features of the BSG are equivalent to the operative of the real-world footwear market, therefore permitting the students to think realistically and sensibly in determining what to do and acquire valuable practice in making a different business choices under situations that mirror real-world competitive conditions.

Business Strategy Game as Innovative Teaching Method

Business simulation games combine the advantages of other methods, especially those focusing on student participation and decision making. That is why they are considered as one of the most comprehensive methodologies that best grows the pedagogical skills of the users (Domingo, 2004). Students will learn to manage a business from the strategic management perspective, thus enlightening their ability for negotiation as they will have to execute operations with other businesses and be able to formulate and implement competitive strategies. Hence, business games can be considered as a completed form of the case method to conduct a practical class.

Currently, the strategic management, teaching method is being criticised for being excessively emphasised on theoretical understanding rather than crafting strategic thinking, creativity and innovative skills (Abdullah, Hanafiah & Hashim, 2013). Current hyper-competitive business environment requires highly talented human capitals to drive the business to achieve success. Apart from theoretical understanding, every strategic management student should possess additional skills, namely strategic thinking, decision making skills, communication skills, and multidisciplinary knowledge.

Therefore, strategic management scholars suggested that simulation based approach is one of the best methods to teach strategic management effectively, where the student have opportunities to expose the real business world.

Methodology

Data sources and collection

This research used quantitative research designs to understand the benefits of simulation based approach in teaching and learning strategic management. The students were divided into 5 groups consisting of 4 to 5 students in each group. Students required to respond to a questionnaire at the end of the course. The reason of the questionnaire is to assess the educational benefits of the students towards a BSG approach in teaching and learning Strategic Management. Since, this is a classroom research, the research used census as the method to study the population. So, the

instructor selected 21 strategic management students who registered for the instructor's class for semester A162, 2016/2017 session.

Instrumentation

The instrumentation for this research adapted from Abdullah et al. (2013) and Adobor and Daneshfar (2006). The survey is divided into 2 parts, namely (1) demographic profiles and (2) understand the educational benefits of simulation game. This research used 5 point likert scale from strongly disagree/ highly ineffective to strongly agree/ highly effective. The frequency analysis of this study is created on the percentage of the agreed statements.

Findings

The majority of respondents were female (90.48%). 85.71% respondents were from semester 6. About 52.38% of the respondents were Malays and 33.33% were Chinese. 47.62% of respondents were from Bachelor of Accounting (Hons), 19.05% were Bachelor of Muamalat (Hons) and 14.29% were Bachelor of Business Administration (Hons). Table 1 clearly illustrated the demographic profiles.

Table 1

Demographic Profile

Gender	Frequency	Percentage (%)
Male	2	9.52
Female	19	90.48
Total	21	100
Semester		
9	1	4.76
8	0	0
7	1	4.76
6	18	85.71
5	1	4.76
Total	21	100

Ethnicity		
Malay	11	52.38
Chinese	7	33.33
Indian	2	9.52
Somalia (International)	1	4.76
Total	21	100

Program		
B.Acct. (Hons)	10	47.62
B.Sc. AgriBus. Mgmt. (Hons)	1	4.76
BBA (Hons)	3	14.29
BBA (Log.&Tpt.) (Hons)	1	4.76
BHRM (Hons)	2	9.52
BMA (Hons)	4	19.05
Total	21	100

Educational benefits

The majority of the students provided positive response on the benefits of the business game in teaching and learning strategic management. The highest scores are acquiring new knowledge about business and management (100%) and the exercise added a lot of realism to the strategic management course (100%). Besides these two, students' also claimed that the simulation game is integrating the learning from functional areas (accounting, finance, strategy and marketing) (95.22%), increase ability to identify problems (85.72%), increase ability to solve practical problem (85.72%) and increase ability to communicate clearly and effectively with peers (85.72%).

Furthermore, students' also stated that this simulation game increases competency for planning business operations (81%) and motivate people who work with them (81%). The lowest score goes to increase ability to implement your decisions (28.56%), increase confidence in work independently (28.56%), add to ability to provide meaningful feedback to group members (28.56%), experiment with new behaviour (28.56%) and gain top management perspective on the operation of an

organization (28.56%). Table 2 shows the evidence that students' felt about the benefits of simulation game in teaching and learning strategic management.

Table 2

Education benefits

No	Items	Agreed statement	Ranking
1	Acquire new knowledge about business and management	100%	1
2	Integrate learning from functional areas (accounting, finance, strategy, marketing etc.)	95.22%	2
3	Increase ability to identify problems	85.72%	3
4	Add to understanding of how to seek and use information for problem solving.	38.10%	5
5	Learn how to seek and use information for problem solving	38.10%	5
6	Increase ability to solve practical problems	85.72%	3
7	Increase competence for planning business operations	81.00%	4
8	Increase ability to implement your decisions	28.56%	8
9	Increase confidence in work independently	28.56%	8
10	Become more aware of own feelings and beliefs	38.09%	6
11	Become more aware of the feelings and beliefs of others	38.09%	6
12	Add to ability to provide meaningful feedback to group members	28.56%	8
13	Motivate people who work with you	81.00%	4
14	Learn to help people resolve conflicts	38.10%	5
15	Increase ability to communicate clearly and effectively with peers	85.72%	3
16	Increase effectiveness as a participant in group problem solving	33.33%	7

17	Experiment with new behavior	28.56%	8
18	Learn new behavior	33.33%	7
19	Gain top management perspective on the operation of an organization	28.56%	8
20	Learn something important about yourself as a manager	81.00%	4
21	The exercise added a lot of realism to the strategic management course	100.00%	1

Discussion

This paper presented an empirical test on the educational benefits of using a simulation game in teaching and learning strategic management. This paper shows that using simulation game in teaching and learning helps to acquire new knowledge about business and management. The students' felt that, this simulation game really gives realism to the strategic management course. Furthermore, this simulation game integrating learning from functional areas which is really necessary when learning strategic management. The ability of identifying a problem, solving practical problem and communicate clearly with peers is very significant skills in strategic management because strategic management is entirely about decision making. Thus, this simulation game explains about the application of strategic management concept and helps to translate this concept to practice.

Implications on Teaching & Learning

BSG is a hands-on learning exercise that pulls together the lessons of previous courses, combines knowledge about running a company. Students get some beneficial knowledge and practice in measuring business risk, investigating industry and competitive situations, making decisions from a company's extensive outlook, think cleverly about a company's market position and developing strategies and reviewing them in light of shifting environments, and applying what they have learned in

business courses. Essentially, BSG is firming up the preparation for a career in business and management areas.

In addition, the BSG makes the students' more competitive and have a lot of fun. Utilising game based approach in teaching and learning strategic management course will create numerous benefits than the traditional teaching methods. This experimental learning approach will develop the cognitive perspective and essential motivational mechanism. The possible advancement in business simulations is enormous, and it will really enhance the students' participation.

Kendall and Harrington (2003) suggested that game based approach should not be looked as an alternate but, game based approach is should be considered as a main pedagogy that will efficiently enrich the knowledge. Without doubt, the application of the game based approach will strengthen strategic management, teaching and learning as well as produce highly skilled managers to the job market.

Conclusion

This paper suggested that game based approach is one of the best methods to teach strategic management effectively, where the students' have opportunities to expose the real business world. The usage of information technology is vital in planning new methods of teaching (Aranda, 2007). Previously, lecturers tend to use face to face lectures and exam based evaluation. But, these methods brought some undesirable benefits among students, where they tend to perceive that general decision framework is applicable for any industry and situation. In a nutshell, this study increases the understanding about the educational benefits of using a simulation game (BSG) in teaching and learning strategic management for UUM undergraduates.

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The Framework-based Teaching Approach in Accounting School: The case of TISSA-UUM

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Abstract

Framework-based Teaching (FBT) is a teaching approach that uses the Conceptual Framework of Financial Reporting (The Framework) as a basis for understanding the accounting treatment and reporting process of an entity's economic event. This approach requires students to exercise critical thinking in discussing the application of the concepts outlined in The Framework. Therefore, the purpose of this study is to examine how FBT approach is implemented in financial accounting course in Tunku Puteri Intan Safinaz School of Accountancy, Universiti Utara Malaysia (TISSA-UUM). This study was conducted on students undertaking the Financial Accounting and Reporting 1 course in semester 1, session 2016/2017. Reflection by the lecturers on their experience using FBT approach with students in class are reported and analyzed using the Gibbs reflective cycle. The results indicate that the FBT approach requires the lecturers to use lots of questioning activity in class. The study also found that the FBT approach has provide a pathway for students to think critically. The implication of this study is the practicability of FBT approach in teaching financial accounting course at university level.

Keywords: Accounting education, framework-based teaching, reflection analysis

Introduction

The financial accounting practices are still revolving due to the dynamic changes in the business model. A complex business activity requires accountants to use their judgement in resolving accounting issues. As a result, the accounting standards used in practices, i.e. the International Financial Reporting Standards (IFRSs) and the Malaysian Financial Reporting Standards (MFRSs), are changing from time to time. However, the Conceptual Framework of Financial Reporting (The Framework), which

underlies the development of all IFRSs and MFRSs, remains constant and relevant as a basic rule and guideline. Therefore, to produce accounting graduates who are ready for the dynamic changes in accounting environment, the students are expected to be able to think critically and use their professional judgement in applying the accounting concept to solve accounting issues. This could be achieved if the students have a strong understanding in The Framework as the underlying concept of any IFRSs.

In the current practice at tertiary education level, at least in Tunku Puteri Intan Safinaz School of Accountancy UUM (TISSA-UUM), lecturers teach the accounting concept and treatment by introducing students to specific accounting standards (i.e. the IFRSs and MFRSs) which is applicable to a particular topic in the class. For example, the Malaysian Financial Reporting Standard 138 (MFRS 138) Intangible Assets is used as a main reference to teach the financial accounting and reporting on intangible assets by companies. In the accounting standards, it has specified the definition, characteristics, accounting treatment and presentation of an economic event in details and specifically. In this Standard-based teaching approach, students are taught about the accounting treatment but they are not exposed to the basis of such treatment. Lecturer rarely relates the accounting rules for a particular topic back to its basic principles, which is The Framework. As a result, students are not able to think critically and become rigid in solving accounting issues. This condition is getting worse especially when the accounting standards that they learnt during university times change in the future due to changes in business model.

It is expected that by discussing the Framework as an underlying concept of any accounting standards, students are able to enhance their ability to apply their judgement in solving any accounting issues in the future. They are able to understand the basis of all accounting rules stated in the accounting standards. The approach of using The Framework as basis in teaching financial accounting is known as The Framework-based teaching (FBT) (Wells, 2011). Recently, the international accounting regulation body, i.e. International Accounting Standard Board (IASB) and Financial Accounting Standards Board (FASB), encourage lecturers to use the FBT approach in teaching accounting subjects in the universities. Applying the FBT approach encourages students to think critically on the issues they face. In Malaysia,

the importance of problem solving and critical thinking skills among graduates are highly emphasized as documented in the Malaysia Higher Education Blueprint 2015-2025 (Higher Education) (Ministry of Education Malaysia, 2013). The FBT approach teaching has been introduced to accounting faculty in several universities in Malaysia, including Universiti Utara Malaysia, since 2015. However, the current level of implementation of the FBT approach is unknown, and the effect from this approach towards improving the critical thinking skill among students is still unveil.

In TISSA-UUM, the FBT approach was first implemented in the Financial Accounting 1 course in year 2015. The curriculum of the course has been improved to incorporate the essence of FBT approach in class by introducing The Framework as one of the learning objective. However, The Framework is not integrated throughout all topics in the course, but it is a standalone topic introduced at the beginning of the semester. Furthermore, there is no specific guideline on the best practice of the implementation of FBT approach. Therefore, this study aims to examine the implementation of the FBT approach in financial accounting courses in TISSA-UUM. Thus, this study is conducted aiming to answer the following questions: How framework-based teaching is implemented in the accounting class?

The next subsections will present the literature review and research methodology of the study, followed by the findings and discussions. The implication of the study is stated in the conclusion.

Methodology

This study is a qualitative study, using a Scholarship of Teaching and Learning (SOTL) approach. SOTL is a research approach which is oriented on scholar thought and action in discussing issues of teaching and learning at higher education (Boyer, 1990). The goal of a SOTL research is to improve teaching practices and enhance students learning. This is achieved by critically evaluate own teaching practices and share their insights with other lecturers.

This sample for the study was 157 students who sat for Financial Accounting and Reporting 1 course in Semester 1, session 2016/2017 at TISSA-UUM. The course

is chosen because it is an introductory level of financial accounting paper offered, and the students are newly intake students. The students were divided into three different groups and assigned under three different lecturers. The FBT approach was implemented in three consecutive weeks of teaching. The three lecturers, identified as Lecturer A, B and C, were included in the study as the persons who implement the FBT approach in the teaching and learning process. The lecturers were involved in the preparation of the teaching materials, delivery of FBT approach, designing the assessment, and assessing students' learning process.

Data were collected from the reflective journal of the three lecturers. The lecturers also act as researchers in this study. In the reflective journal, the researchers observe and reflect all the activities involve in implementing the FBT approach. It covers from the planning until implementation stage. The researchers document on how does FBT approach is implemented in the accounting class in UUM. The reflective journal was kept on weekly basis, for three consecutive weeks, by the researchers. Reflective journal engages the researchers in the notion of creating transparency in the research process (Ortlipp, 2008). In the reflective journal, the researchers use the Gibbs reflective cycle in making the observations and reflections. The Gibbs reflective cycle involve description, feelings, evaluation, analysis, conclusion and action plan (Gibbs, 1998). The researchers document on what happened during class, what they were thinking and feeling about the teaching and learning process, what was the experience whether they are good or bad, what analysis they can make from the class, what else could have been done, and what is the next action plan to improve the teaching and learning using the FBT approach.

Data from the reflective journal written by the three lecturers are analyzed using the content analysis technique. Through content analysis technique, researchers is able to understand the phenomenon (Cole, 1988), which is in this case, the lecturers experience in implementing FBT approach in teaching financial accounting course. Data from the reflective journals were identified, coded and categorized according to the common theme emerged in the study. The emerging themes were reported in the next section.

Literature Review

Framework-based teaching (FBT) approach

The main aim in in accounting practice is to assist the preparation of general purpose financial report for a profit-oriented entity. Therefore, to facilitate the consistent and logical formulation of the accounting rules and standards, the International Accounting Standards Board (IASB) published the Conceptual Framework in July 1989. This framework is superseded by the Conceptual Framework for Financial Reporting (The Framework) published in September 2010 (IFRS Foundation, 2010). The Framework identifies the objective, qualitative characteristics, elements, and recognition, measurement, and disclosure concepts of an economic event to be reported in a general purpose financial report (IFRS Foundation, 2010). Using The Framework as the underlying basis, the accounting standards (i.e. International Financial Reporting Standards (IFRSs)) are developed to be applied by the entities in assisting them in the preparation of the financial report (IFRS Foundation, 2010). The IFRSs set out the accounting rules for a specific economic event, for example IFRS 136 Property, Plant and Equipment, IFRS 139 Financial Instruments, and IFRS 119 Employee Benefits.

Framework-based teaching (FBT) approach requires students to relate the concepts in The Framework to a particular IFRSs and MFRSs being taught in class. This approach relates the accounting and reporting of the entity's economic event to the objective of the general purpose financial reports, before proceeds to the application of the specific accounting standards. This approach will provide a more robust and cohesive understanding of the requirement in the specific IFRSs (Wells, 2011). It requires students to exercise judgement and critical thinking in discussing the analysis of the concepts to be used. It is different from the Standards approach, where lecturer use the specific accounting standards to explain the accounting treatment of an economic event.

Development of critical thinking skills

To deliver conceptual-oriented topics, lecturer may use several techniques. The popular technique to teach concept in higher education is lecturing. However students

tend to be passive learners if the lecturer use this technique. According to the learning pyramid, students' retention rate is lower when students listening to lecture as compared to students learning by doing (National Teaching Laboratories, 2006). Therefore, active learning is more suitable because it makes students involve directly in the process of gaining knowledge and think about what they are doing. In accounting, students must first understand the basic concept of the reporting framework of an economic event, and then apply the concept to a specific accounting issues. This requires a development of critical thinking skills.

Critical thinking skills refer to the ability to analyze and evaluate information (Duron, Limbach & Waugh, 2006). Students with critical thinking skills are able to identify problems, formulate the problem statement clearly, gather relevant information, think beyond the issues, suggest solution based on evidence, and communicate effectively with others. According to Duron, et al (2006), there are five steps to be taken to allow student think critically: (1) determine learning objective, (2) teach through questioning, (3) practice before assess, (4) review, refine and improve, and (5) provide feedback and assessment of learning. Various strategies can be used to encourage critical thinking, and one of them is by questioning. Questioning is vital because it allows lecturer to establish what is already known and then extend the questions gradually to develop new ideas and understanding (Duron, et al., 2006). Thus, questioning technique is used to deliver FBT approach in this study.

Findings And Discussions

The implementation of FBT approach in accounting class began with the planning stage, and followed by the execution stage. Then, observation on the implementation process was carried out. Finally, the evaluation and analysis of the lecturers' experience are discussed.

Planning stage

In the planning stage, all three lecturers, i.e. Lecturer A, Lecturer B and Lecturer C, have sat down together and discuss their planning for the FBT class a week before the actual class. They decided to implement the FBT approach on three different topics. The topics are Intangible Asset, Equity and Provision. The reason for

choosing this topic is because each of them represents three different elements in the Conceptual Framework, i.e. asset, equity and liability respectively. It shows that FBT can be implemented in any topics within accounting subjects.

During the discussion, lecturers discussed on how to deliver FBT approach in class. To date, there is no specific guideline on how to implement this approach in accounting class. Therefore, they decided to deliver FBT approach by using the questioning technique. Questioning technique is a suitable method to boost students' critical thinking skills (Clasen & Bonk, 1990). The questions will guide students' understanding and will help them relate The Framework to the topic taught in the class. Five basic questions has been developed. Each questions is related to the section focused in The Framework. Table 1 shows the basic questions developed and their respective section in The Framework.

Table 1

Basic questions developed in the FBT approach

No	Basic Questions	Related section in the Framework
Q1	Why a business entity acquire/buy/own the item? What is the economic importance of those item to the entity?	
Q2	Assume you are the investors of the business entity. What information related to the above item that would be useful for you to decide about your investment in the entity?	Objective
Q3	Based on your answers in Q2, which information has qualitative characteristics as required by the Conceptual Framework? Explain your answers.	Qualitative characteristics
Q4	How should the item be reported? As an asset, liability or equity?	Elements
Q5	How should the item be measured? Is it at historical cost, current cost, realizable value or present value? Explain your answer.	Measurement

During the class, it is expected that lots of questioning and thinking activity will take place until students can make sense and logically linked The Framework to the application of accounting treatment on the topics taught in class.

It is also planned that at the end of the FBT session, lecturers will remind students to evaluate their answers and check whether the answers are right or wrong by comparing the actual accounting treatment as required by the specific accounting standard. Students should evaluate whether the requirement in the specific accounting standards is consistent with the principle mentioned in The Framework.

Execution stage

During the execution of the FBT approach in three consecutive classes, all three lecturers had used slightly different ways in handling the class, but they kept the FBT approach as essence to their teaching approach. Before they begin the class, the lecturers informed the students that FBT approach will be used. Then, five basic questions developed earlier were asked to students for discussions. When students provided their answers, more extended questions were asked. Throughout the discussion, lecturers asked the students put themselves in a shoe of an inventor and think of information that investor would want to know. At the end of the class, lecturers constantly remind the students about the importance of relating The Framework to justify every accounting treatment. Next paragraphs describe the different sequence used by the lecturers in implementing FBT approach in class.

Lecturer A begins the class by discussion with students, before proceeds with lecture. This is done by showing the slides prepared as mentioned in the planning stage. The presentation begins with the revision on The Framework, then followed by the explanation on the topic to be taught. Then, Lecturer A starts asking questions to students which require students to think and relate the topic to The Framework. Lecturer A expects voluntary answers from students. Each answers are written up on the whiteboard. Lecturer A sometimes help students to elaborate the answers. After the discussion, Lecturer A proceeds the class with lecture using Standard-based teaching. This approach are repeated for the next two consecutive classes.

Similar approach is used by Lecturer B. Lecturer B also begins the class with discussion on The Framework before proceeds with lecture on the topic for the first and second class. However, in the third class, Lecturer B has changed the sequence by starting with Standard-based lecture and ending with discussion using FBT approach.

The reason for this changes is due to the unfavorable feedback received from student in the second class. Therefore, Lecture B decided to make the changes accordingly.

On the other hand, Lecturer C had concurrently discuss on The Framework while giving lecture to students. Whenever a particular sub-topic that related to The Framework is presented during lecture, Lecturer C will immediately ask the students to relate it back to The Framework. This approach is applied for all three consecutive classes.

Observations

The following paragraphs reports the researchers' observation on lecturers' and students' words and actions during the implementation of FBT approach in three consecutive classes. The reports are divided by three different classes on three different topics, as observed by three different lecturers, i.e. Lecturer A, Lecturer B and Lecturer C.

In class number 1, the objective of the class is to learn on topic of Intangible Asset. Since this is the first class using the FBT approach, all three lecturers felt very anxious when thinking about how students will react. Based on their observations, they found that students were puzzled at beginning. As the class began, whenever lecturers ask questions asking them to think and relate the topic back to The Framework, they start to ponder and think. Some shows their 'understanding and satisfaction' look, while some others shows confusion and disappointment face. Only few students volunteered to answer the questions in the first class. The answers provided by students are varies. Some answers are right, and some are wrong. However, lecturers do not penalize them for wrong answers. Despite that, the answers are short and no elaboration. At the end, Lecturer A, B and C had to assist students in elaborating the answers provided by students.

In class number 2, the objective of the class is to learn on topic of Equity. This time, Lecturer A, B and C are more confident to deliver the class using the FBT approach. The students also looks more comfortable. When the questions were probed by lecturers asking them to relate Equity topic back to The Framework, students start to ponder and think harder. Although few still shows confusion face, more students

participate in the discussion. Lecturer A, B and C encouraged students to elaborate their answer, and the lecturers had to be more patience in waiting for answers from students. The answers provided by students are varies and beyond expectation. However, some students still find difficulties to elaborate their answers. Therefore, lecturers assist them as the last resort.

In class number 3, the objective of the class is to learn on topic Provisions. Lecturer A, B and C are more prepared to use the FBT approach this time. The students looked more prepared this time. However, some of them shows no interest with the class. When lecturers asked questions related toThe Framework, more students participate in the discussion and give variety of answers. They are also able to further elaborate their answers when asked by lecturers, even though they are not confident with their answers whether it is right or wrong. Lecturer A, B and C only gave minimal guidance this time. All lecturers had constantly encouraged the students to be think deeper and be confidence in presenting their idea and answers.

Evaluation and Analysis

The following subsections report the researchers' reflection on the experience of teaching and learning using the FBT approach. The researchers provide their evaluation and analysis based on their experience with focus on lecturer's experience and students' critical thinking ability. The reports are divided by themes emerged from the execution and observation made by all three lecturers, i.e. Lecturer A, Lecturer B and Lecturer C. The evaluation and analysis are made in progressive manners based on the experience in the classes.

All three lecturers feel anxious at beginning. This is normal feeling whenever people face new things and challenges. The lecturers are able to overcome the anxious feeling and get more confidence in the second and third class. Similarly, students also looks puzzled at beginning, but get more comfortable towards the end. Student become anxiety at beginning because they never had prior experience in high schools study. Therefore, lecturer must play a role to explain and guide students on how it is done and how benefit the new approach is (Raux, 2006)

In this FBT approach, lecturers used lots of questioning activity in class. Compared to ordinary lecture, more questions are asked to students which requires students to give impromptu answers. Besides, the answers are not available in the textbook directly. At beginning, Lecturer A, B and C are limiting themselves to the questions designed in the planning stage. However, in the second and third class, lecturers start asking extended questions to the students, based on the answers given by students. It shows that lecturers need to master the questioning skills in order to encourage students to think.

As a result from the questioning activity, student had to think a lot. The most important thing is students had to force themselves to think using their own previous knowledge, logic and experience in answering the questions. This is because the answers are not available in the lecture notes. So students had no reference in answering the questions. This gives them a chance to think spontaneously and beyond the scope of the textbook and lecture notes. Questioning is proven to have great impact on students' thinking process (Clasen and Bonk, 1990). The ability of students to think is improving progressively in each class.

Based on the observations, students are able to give variety of answers. The improvement can be seen from the first until the third class. They are able to provide answers freely without worrying whether their answers are right or wrong. Lecturer's role in encouraging students to give answer and not penalizing them for wrong answers played a significant role in encouraging the students to think critically (Raux, 2006).

With respect to the variety of answers given by students, the extent of the answer is, unfortunately, short and at surface. Students are not able to elaborate and explain their own answers. It is very difficult for them to express their own opinion and idea. They seem to know the answer, but they cannot put it in words. Little improvement can be seen throughout all three classes. Although lecturers give a lot of encouragement and sometimes forced the students, they are not able to think deeply and critically. This is probably due to little basic understanding on the topic itself and lack of experience. For example, they had no idea what an intangible asset is because they had no experience dealing with intangible asset. So, they cannot conceptualize

the topic and therefore, hard for them to relate the concept back to The Framework. Students' difficulty in elaborating the answers are also probably due to their previous education experience in high schools which is exam oriented. It is hard for them to change immediately once they enter the university (Md Yunus, et al., 2006).

From the observations, students' volunteerism, participation and confidence level are increasing over time. Although only few students volunteer in giving the answers in the first class, the numbers are growing in the next class. It shows that FBT approach does not only help to encourage students to think critically, but also help to improve students' confidence level and communication skills. These skills are important as they are highly valued by future employers (Ministry of Education Malaysia, 2013).

Conclusion

Framework-based Teaching (FBT) is a teaching approach that uses the Framework as a basis for understanding the accounting treatment and reporting process of an entity's economic event. This approach requires students to exercise critical thinking in discussing the application of the concepts outlined in The Framework. However, for the approach to be effective, a suitable technique must be implemented in teaching in class. In FBT approach, lecturer must change the orientation of the class from lecture-centered to student-centered where students become active learner. Lecturer should also varies the questioning technique and used various medium to ask questions. Students should be given more chance and time to think deeply. Lecturer should also use suitable encouragement to boost students to think. It is also recommend to use case study as a way to teach students the application of an accounting theory. Despite all, it is believed that FBT approach has provided a pathway for students to think critically. Therefore, it is recommended that the FBT approach shall be implemented at all level of financial accounting courses at university.

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Role-Playing: A Tool to Promote Class Interaction and Communication

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Abstract

Today's university students are lack of initiative to search for course-related information and seldom talk to others as they are spending much of their time on social media. This situation has eventually caused lacking of classroom interaction and communication among students. Role-playing is one type of active learning activity that enable interaction and communication between students towards a simulated scenario. When students were performing role-playing, they have the chance to express their thoughts, provide sequence of arguments and justifications. It is useful to enhance their critical thinking, teamwork and communication skills thus increase their confidence level. The purpose of this study is to assess the effectiveness of role-playing to promote class interaction and communication. Simple random sampling were used to select the classes for BPMN 2023 Organizational Behavior in Semester 1 2016/2017. All students in the class were included as participants of this study.

Selected case studies were used as background simulation for the role-playing. At the end of the semester, a set of questionnaire were collected from the students on the effectiveness of the role-playing activity. Results indicated that most of the students agreed that role-playing helped them to improve their confidence, speaking skills and work collaboratively with others. It showed that role-playing is effective to engage student's involvement, thus enhance class interaction and communication. Students also reported high levels of interest on the use of role-playing in the class. Implication of this study suggest positive influences of role-playing on class interaction and communication. As conclusion, role-playing increase students interest in study, enable students to apply theoretical knowledge into practical situation and boost up student's confidence levels. In short, role-playing making learning fun.

Keywords: Confident, Communication, Interaction, Role-playing, Simulation

Introduction

The education system in Malaysia today has gradually shifted from traditional method of teacher-centered learning to student-centered learning. The shift was in line with the Malaysia Education Blueprint 2015-2025 (Higher Education) in producing holistic, entrepreneurial and balanced graduates. Universities uphold the responsibilities to produce quality graduates that are ready for industry use, as such the grading system in universities has also moved toward to new integrated cumulative grade point average (iCGPA) which displayed in a "spider web" matrix to evaluate specific skill sets of graduates to ensure fresh graduates are well-rounded with generic skills, e.g. communication, critical thinking, problem solving, teamwork, leadership and entrepreneurship skills.

Generally, students today are technology savvy where they virtually grew up with technology and heavily rely on technology to perform their tasks (Strauss & Howe, 1991). They are no longer sorely depends on the teacher to tell them what they should know, instead they are more likely to search through Google what the teacher said. However, the students in this university was found to be passive recipients in the class. Many of them were sitting quietly and showed no interest to work in a team and lack of interaction; concentrating on their phone and seldom communicate with others; very shy when presenting their work during a presentation; and not feeling comfortable to involve themselves in the classroom discussion and activities.

Also, students tend to be passively receive information from the lecturer, with the hope that the lecturer gives every single detail on the lesson. They are lack of initiative to search for course-related information, also seldom talk to others even the person who sits next to was actually their friends. They would rather spend more time on the social media website/apps or playing games. This situation has eventually caused lacking of classroom interaction and communication among students. Without interaction and communication in the class, how possible for the students to learn by doing? Hence, an interactive classroom is highly needed for the students in this university.

To facilitate a learning environment which enable students to instill love of learning and inculcate sense of responsibility in their learning, classroom activities must be carefully designed. There are several active learning approaches that can be used to enhance classroom interaction, e.g. collaborative learning, cased-based learning, problem-based learning, project-based learning, experiential learning, and etc. All these approaches convert the teacher-centered learning to student-centered learning. Student-centered learning is not only enhance student's leaning ability, but develop student's generic skills, and higher-order competencies such as critical thinking. Hence, active learning approach become more effective than traditional lecturing in view of active learning give more meaningful learning activities to students (Loveland, 2014).

Role-playing is one type of active learning activity that enable interaction and communication between students towards a simulated scenario. When students were performing role-playing, they have the chance to express their thoughts, provide sequence of arguments and justifications. It is useful to enhance their critical thinking, teamwork and communication skills thus increase their confidence level. Greenberg and Eskew (1993) recommended to use role-playing for students' to learn about attitudes and behaviors in organizational contexts, as through role-playing, students learned to be active participations, make decisions, react to given situation (Svinicki & McKeachie, 2011), more confidence, and more interactive in the class (Moore, 2005). Therefore, this study intends to assess the effectiveness of role-playing in promoting class interaction and communication.

Research Objective and Research Questions

The purpose of this study is to improve classroom interaction and communication by using role-playing approach. The aims of using role-playing as an active learning approach with the hope to transform passive students into active learners, get them involve and participate in the classroom discussion, as well as improve their generic soft skills. Since role-playing requires students to assume a character in the given situation, it could help students to responsible for their own learning.

Hence, this study examines the effectiveness of role-playing in promoting classroom interaction and communication and the study is meant to answer the following research questions:

1. Will the use of role-playing enhance classroom interaction?
2. Will the use of role playing improve classroom communication?

Literature Review

Role-playing has been originally developed as a technique to use in psychotherapy, and later has thrived as a training for pedagogy in the 1970s (Blatner, 2000). Role playing can be defined as the involvement of participations in an explicit problem situation along with the desire for resolution (Joyce, Weil, Calhoun, 2009). The participations playing specific roles or character in that situation and react spontaneously to the situation. It can be described as a range of planned learning activity where the participations take on the role of the character responding to the situation with different perspectives to meet the specific learning objectives (Mogra, 2012).

Role playing is an approach of active learning in which focused on student-centered learning. Student-centered learning is grounded by constructivist learning theories where students have to actively engage in seeking and constructing meaning from the experience and new knowledge (Semple, 2000). Constructivism learning emphasizes four component which are (1) learners construct their own understanding; (2) new learning depends on prior knowledge; (3) learning is enhanced by social interaction; and (4) authentic learning promotes meaningful learning (Kauchak & Eggen, 2007).

In constructivism perspective, learning is an active process; learners are independently search for the knowledge and contextualized process of constructing knowledge, rather than acquire it; learners are thinking and analyzing, understanding and applying but not memorizing and recall (Marlowe & Page, 2005). In role playing process, the role of a teacher is to stresses on conceptual interrelatedness, provides multiple perspectives on the content to relate student's prior knowledge to enable them to construct their own meaning and facilitates discovery by providing the necessary resources (Matthews, 1998). More specifically, students use their own

mental construction to make sense of their experiences. Each student has a different process of interpretation and construction of knowledge.

It is recognized that role playing is an effective tool to promote interaction in classroom e.g. collaborative learning, class participation, class involvement and engagement (Mogra, 2012). Besides that, role playing also contributed to the development of intrapersonal skills e.g. became self-awareness and confidence (Rosselet & Stauffer, 2013; Seaton, Angelo, Spencer & Youngboold, 2007) and interpersonal skills e.g. become a good listener, sensitive to social cues, capable to manage conflict and negotiation (Andrew & Meligrana, 2012). Nevertheless, learner's mental development e.g. creativity, critical thinking, cognitive constructive (Mottweiler & Taylor, 2014) is further enhance through role playing.

Role play is not about acting, it is a techniques of learning. Teachers often used role playing in classroom setting to facilitate student's involvement and interaction in decision making (Moore, 2005). Students become active participations and be able to make decision to solve the problem spontaneously rather than passive observers. It is believed that students make responsible on their decisions for solutions because role playing provides a forum for them to explore multiple ways of acting and responding in a given situation (Olive & Donk, 2007). The experiences gained from role play activity is the most informative and influential to develop and enhance student's skills i.e. critical thinking, problem solving, communication, teamwork, decision making and conflict management skills. It also deepen their understanding through the application of the knowledge in role play activity.

Methodology

The implementation of role-playing approach in class has been take placed on the first semester of 2016/2017. Participations of this research were undergraduate students who were undertaking BPMN 2023 Organizational Behavior. Before the role-playing activity occurred, students were explained with the rules of the game. They were told to be react and respond spontaneously, just like in the real working environment. Students were then divided into a group of five to six and each group are responsible for one case study to ensure a well-organized and smooth facilitation of role-playing session in the class.

Students were given 15 minutes to discuss on the sequence of their arguments in the group and another 15 minutes to perform the role-playing. Five case studies which related to topics of Organizational Behavior were selected. The case studies were actually released to the students one week before the implementation of role-playing and the participations are required to read and understand the cases beforehand. Role-playing scenarios in the class were actually derived from the cases and are extended story from the cases. The scenarios have been modified to fit the content of the class.

The first case is related to diversity and multicultural work environment. The case is illustrated with how organization manage diversity effectively, the relationship between personality traits and individual behavior, and the factors that influence the formation of individual attitudes and values. The scenario for role-playing is recruitment interview. Two students were need to assume the role of Human Resource Manager and Senior officer in the company and three students were need to assume the role of candidates for the recruitment interview.

The second case is related to the use of monetary rewards to increase employee's motivation. The case is illustrated with how the different types of variable-pay programs can increase employee motivation, and how motivation related to organizational performance. The scenario for role-playing is related to company meeting to decide new bonus policy. Students were given several characteristics and they have to decide either they are prefer to received bonus frequently with small raises or annually with large raises.

The third case is related the functions and process of communication. The case is illustrated with how channel richness underlies the choice of communication channel and the factors that influence effective communication in organization. The scenario for role-playing is to decide communication channel to promote the awareness of fund raising activity in the company. Students were given several characteristics and they have to decide either they are prefer to use conventional ways or social media to promote the fund raising activity.

The forth case is related to company consideration to adopt flexible working arrangement to maximize employee's happiness. The case is illustrated with major job attitudes, causes of job satisfaction, and the relationship between personality and individual attitudes. The scenario for role-playing is about the decision making to adopt flexibility working arrangement. Students were given several job roles and

characteristics and they have to decide either they accept or reject to implement flexible working arrangement.

The fifth case is related to company consideration to manage change and stress. The case is illustrated with approaches of organizational change, the effect of changes toward employee's stress. The scenario for role-playing is related to an informal meeting between company director, employees, and customers to received feedback after change. A student were need to assume the role of company director, two students act as front-line and back-end employees, and three students were assumed the role of customers. The meeting is to discuss and giving feedback the pros and cons of the changes made by the company.

All participating students were given a list of written role or characteristic in order for them to role-play accordingly. At the end of each role-pay session, a debriefing on role-play was conducted for students to discuss their feelings and receive feedback for further improvement. A set of questionnaire which consists 13 questions was distributed to students at the end of each role-pay session to access the effectiveness of using role-playing in the class. These questions were to assess the students' generic soft skills and feelings toward role-playing. Students were required to answer each statement and indicated their agreement based on 5-point interval scale, ranging from strongly disagree to strongly agree.

Findings

A total of 33 students were participate in this research. These students are formed by a diverse group which incorporate a variety of backgrounds and personalities. The background information of participants are presented in Table 1 as below:

Table 1

Background Information of Participants

Student's Background		No. of Student
Gender	Male	7

	Female	26
Races	Malay	17
	Chinese	7
	India	2
	Others	7
Nationality	Local	24
	International	7
Years of study	First year	1
	Second year	11
	Third year	8
	Fourth year	13
Entry levels	STPM	5
	CELEC	3
	Diploma	8
	Matriculation	10
	International	7
Degree programmes	Accounting	16
	Business Management	7
	Human Resource	3
	Logistics and Transportation	2
	Decision Science	5

Student's perception on the effectiveness of role-playing was collected through a set of questionnaire. Students were asked to rate their agreement on each statements and the responses were summarized in Table 2 as below.

Table 2

Students' Perception on the Effectiveness of Role-Playing

No.	Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Role-play has helped me to enhance my speaking skills.	-	1 (3.03%)	2 (6.06%)	19 (57.58%)	11 (33.33%)
2	Role-play has helped me to improve my confident.	-	-	1 (3.03%)	21 (63.64%)	11 (33.33%)
3	Role-play give me an opportunity to express my emotion freely.	-	-	9 (27.27%)	18 (54.55%)	6 (18.18%)
4	Role-play has helped me to think critically.	-	-	2 (6.06%)	18 (54.55%)	13 (39.39%)
5	I attempt to make connections on course materials that I learn in class during role-play processes.	-	-	6 (18.18%)	20 (60.61%)	7 (21.21%)
6	I have a better understanding of course materials through role-play activity.	-	-	7 (21.21%)	22 (66.67%)	4 (12.12%)
7	I have a chance to work collaboratively with other students in the role-play activity.	-	-	2 (6.06%)	22 (66.67%)	9 (27.27%)
8	I have a chance to share and exchange opinions or ideas in the	-	-	5	22	6

	role-play activity.			*(15.15%)*	*(66.67%)*	*(18.18%)*
9	I have a chance to anticipate and predict possible argument from other students and I deal with it instantly.	-	1 *(3.03%)*	7 *(21.21%)*	23 *(69.70%)*	2 *(6.06%)*
10	I express my ideas clearly when I talk in the role-play activity.	-	1 *(3.03%)*	10 *(30.3%)*	19 *(57.58%)*	3 *(9.09%)*
11	I pay attention to other student's body language when talking to them.	-	-	12 *(36.36%)*	16 *(48.49%)*	5 *(15.15%)*
12	I prefer to participate in role play activity because it is interesting.	-	-	8 *(24.24%)*	17 *(51.52%)*	8 *(24.24%)*
13	Overall, role play is interesting.	-	-	2 *(6.06%)*	16 *(48.49%)*	15 *(45.45%)*

Most of the students agreed that the use of role-playing activity strengthen their generic soft skills and they found role-playing is interesting. A total of 91% of students agreed that role-play activity enhance their speaking skills, and only 1 student (3%) disagreed. Almost all students found role-playing improve their confidence. There is about 73% of students agreed that they have the opportunity to express their emotion freely through role-playing but only 27% were undecided. Most of the students are able to think critically, make connection to course materials and have a better understanding on course materials through role-play activity.

Majority of the students (94%) felt they have a chance to work collaboratively with other students and have a chance to share and exchange opinions or ideas (85%) through role-play activity. Only one student who do not agree that he/she is having chances to anticipate and predict possible argument from other students and express his/her ideas clearly. Most of the students agreed that they paid attention to other student's body language when talking to them and prefer to participate in role-playing. Overall, 94% of the students found role-playing is interesting.

Discussion

Generally, the feedbacks from students were motivating. The findings indicated that role-playing is very effective to promote classroom interaction and communication as students reported high levels of interest on the use of role-playing in the class. The findings showed that students are well agreed that role-play gives them a chance to work collaboratively with other students, share and exchange opinions or ideas, anticipate and predict possible argument from other students and deal with it instantly.
These are the indicator that classroom interaction has been improved.

Students also highly agreed that role-play enhance their speaking skills, help them to express their emotion and ideas clearly, pay attention to other student's body language when talking to them. These are the indicators that communication process is gradually improved in the classroom. Only one student disagreed that role-play help in speaking skills, express idea clearly and anticipate possible argument from other student. It could be the student is very passive and fear to speak and give ideas during the role-play session.

The findings also indicated that role-play helped the students to build up their confidence, stimulate their critical thinking, make connections on course materials, and have better understanding of course materials through role-playing. In addition, role-play also developed student's motivation to learn and interact in an enjoyable way. In short, role-playing is a technique for learning and this techniques has a positive impact to students as it gives them a chance to explore different situations of real life and enable them to speak confidently in that situation. Students were really enjoyed to have this type of learning activities.

Limitations and Recommendations

The sample of study is one of the limitation in this research. The future research may include more participants with different groups and diverse background to generalize the findings of this research and validate the usefulness of role-playing. The case studies used in this study was also a limitation for the study. The case studies limited the student for creative thinking because they are given the stipulation situation. Future research may give freedom to student to role-play any situation they like as long as is related to the subject topics.

Conclusion

The purpose of the research is to examine the effectiveness of role-playing in promoting classroom interaction and communication. The findings of this study indicated that role-playing is effectively enhanced classroom involvement and interaction as well as communicate with each other. In conclusion, with regard to the specific questions addressed in this research, the use of role-playing did (1) enhance classroom interaction, involvement and participation with peer and lecturer; and (2) improve communication skills as well as other generic soft skills, e.g. critical thinking, problem solving skills, teamwork skills and leadership skills. Hence, role-playing should be continue to implement in the class to facilitate fun learning for students.

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