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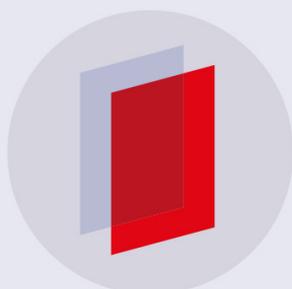# Innovation of flipped learning encouraging better communication and critical thinking skills among accounting students

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Innovation of flipped learning encouraging better communication and critical thinking skills among accounting students

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Abstract: Currently the trend among the lecturer to adopt innovation and technology as a tool in the lecture hall in fostering and increasing the positive impact among the students. Innovation and technology may encourage better impact to develop soft skills among the students such as communicate effectively, critical thinking skills**,** demonstrate appropriate interpersonal skills and teamwork, demonstrate leadership qualities and entrepreneurial skill. Many researchers have attempted to study the efficiency of e-learning and blended learning concepts on teaching and learning processes. One of the most recent developments in technology enhanced method in teaching and learning is a method called flipped learning. It is an approach where the traditional one-way lecture is flipped to make room for active learning opportunities where educators shift learning into the individual learning space facilitated by technology. This study implemented flipped learning approach in the effort to enhance communication and critical thinking skills among accounting students in Tunku Puteri Intan Safinaz School of Accounting (TISSA) in Universiti Utara Malaysia, UUM. The objective of this study is to examine how the use of flipped learning can help to improve communication and critical thinking skills in problem solving among students taking the accounting subject. From this study, the results showed that students' communication and critical thinking skill has developed with the use of flipped learning. Sufficient time however, is needed for students to understand the content from the lectures given in the form of a video used as the media in this project used as an e-learning platform in this project, as well as the 'catchy' contents should be created to enhance interest from the students to watch the video.

Keywords: Flipped learning, technology in education, action research

1. Introduction

The use of technology in delivering university's courses has become ubiquitous in this era of knowledge enhancement. Since the 1980's the use of technology to deliver accounting courses were strongly recommended (Friedman, 1981). Nevertheless, the use of technology in university courses has been reportedly to be largely focused in delivering contents rather than as a medium to interact among students. In the traditional teaching method which is also known as the teacher-centred learning approach, the teacher or instructor delivers knowledge in a classroom in a one-way direction (Keller, Hassell, Webber and Johnson, 2009). This method urges students to be passive learners where they solely rely on learning by listening, memorising and knowledge repetition. Flipped learning is an approach where the traditional one-way lecture is flipped to

make room for active learning opportunities where educator shift learning into the individual learning space facilitated by technology (Jone and Chen,2008; Kember and Leung,2005)). This paper attempted to implement flipped learning approach in a classroom to enhance active learning opportunities among business accounting students in the Tunku Intan Safinaz School of Accounting (TISSA) in Universiti Utara Malaysia.

This study employed qualitative action research methodology (McNiff, 2010). Action research is utilized in many professional learning contexts where action inquiries begin with the query, 'How do I improve my study? (McNiff, 2010). In this study, the researcher carried out a systematic investigation into her own experience of teaching Business Accounting subject. Business accounting students comprised of 49 participants were under studied. The researcher's reflection, observation checklist and interviews were utilized to collect data throughout three phases; Pre-Implementation, During-Implementation and Post-Implementation. After the activities for each phase are completed, reflections to the students and lecturers are obtained. Qualitative data analyses which include thematic analysis are used to analyse the qualitative data.

Pre – Implementation

During the pre-implementation phase, we produced two sets of videos on the lecture of two chapters from the syllabus. On the first day of class, the explanation on the project and the use of flipped learning were explained to students. There was a questions and answers session which allowed students to really understand the process and that everything are clarified. During this phase we also made all the preparations needed for the class to use flipped learning (Michael, 2006). The videos were developed and uploaded to UUM Online Learning prior to the class sessions.

During Implementation

During the implementation phase, we conducted two phases of activities in each of the classes involved in this project. Two classes were involved. The first one was the class on Budgeting topic and the next one was the class on Variance Analysis topic.

Phase 1 – Students were first asked to watch the video as their homework before the topic is scheduled in class. The students were also given the link to the exercise questions on the topic to be discussed in class at the end of the video. This will prompt the students to finish watching the video and get the link to download the questions to be discussed in class. In the class, the students were first given a set of open ended questions for them to give some reflections on the video of the topic given and how they think flipped learning approach will help to understand more on the topic.

Reflection questions before class activities started- Phase 1

1. What do you think about the lessons given in the video?

2. Do you think the video on the lecture is better than the normal way of conveying lecture (face to face)? Why and why not?

3. Do you think the videos can assist you in answering the exercise questions?

During class, presentations and discussions (pairing, grouping, mapping etc.) were conducted. Evaluation and analysis on the presentations and discussions were conducted based on the rubrics. During the 30 minutes before the class ended, we performed some activities to obtain reflections on the class activities from the students. Students were asked

to answer another set of open ended questions which ask the students' views on the class session of the first chapter after their experience using flipped learning approach. The enhancement in critical thinking and problem solving skills and communication skills can be obtained by the open ended questions given as well as the reflections by the lecturer that was gained through the observation process. An overall reflection by the lecturer was obtained based on the overall achievement of the sessions.

Reflection questions after class activities being conducted –Phase 1

1. Do you think that the video has assisted you in answering the exercise questions?

2. Did you discuss and communicate with your friends during the discussion on the questions?

3. Overall, do you like this new teaching and learning method compared to the normal teaching method? Why or Why not?

The data gathered from the data collection activities in Phase 1 were analysed (Du, 2011). The reflections from the students and the lecturer are considered important in order to enhance the process of conducting flipped learning approach in class (Grandzol,2004). All the suggestions and reflections provided from the student were undertaken and applied in the process of producing the next phase of video content. The second video on the preceding topic were then developed. In this video some modification have been made on the preparation of the content including shorter and more precise content, more animation on the slides to make it more interesting and shorter and clearer explanations (Freeman and Hancock,2013).

Phase 2 – A video on the next topic was developed based on the suggestions and observations input gathered and analysed in Phase 1. Students were asked to watch the video before class as their homework. Before the class started, the students were first given a set of open ended questions for them to give some reflections on the video on the topic given and how and how they think the flipped learning approach will help to understand more on the topic (Dowling,Godfrey and Gyles, 2003).

Reflection questions before class activities started – Phase 3

1. Do you think that the content of the video is better delivered that the previous one? How?

2. Do you think that the video will help you better in understanding the lessons and exercises which is going to be done in class?

During the 30 minutes before the class ended, we performed some activities to obtain reflections from the students (Bachhel and Thaman, 2014). Students were asked to answer another set of open ended questions which ask the students' views on the class session of the first chapter after their experience using flipped learning approach after modifications were made on delivery of content in the video. The enhancement in critical thinking and problem solving skills and communication skills can be obtained by the open ended questions given as well as the reflections by the lecturer that was gained

through the observation process (Chiu and Cheng, 2017; Cheng and Jone, 2007). An overall reflection by the lecturer was obtained based on the overall achievement of the sessions.

Reflection questions after class activities being conducted – Phase 3

1.   *Do you think that the video had helped you in understanding the lesson better?*

2.   *Do you think that this method of learning and teaching improves your communication skills with your groupmates? How?*

3.   *Do you think by watching the class video before class can give you more time on the exercise and think more critically in class/exercise session?*

Post – Implementation

After the open ended questions data were collected, interviews were conducted to obtain further feedback on the flipped learning approach used in teaching the course. The interview is conducted to obtain the participants' feedback on their experience using flipped learning approach and to understand their perceptions on flipped learning and how they gained the benefits from the sessions. All the data were analysed and reported.

Analysis of Data

There are two types of data were collected and analysed for this paper such as qualitative data from the open ended questions given to the participants before and after the class activities conducted and qualitative data from the interviews providing overall perceptions of the flipped learning method used in the teaching and learning process. The qualitative data collected from these two activities were coded and analysed using thematic analysis (Patton, 2002), which involves assigning each unit of data its own unique code and identifying repetitive patterns of actions and consistencies. Thematic analysis is among the collective forms of analysis in qualitative research.Data coding was performed to identify the themes and categories of qualitative data (Anderson and Moore,2005) . Data coding is a cyclical process, where usually several cycles of coding processes are needed for a good coding result, and the cycles of coding processes are performed to manage, filter, highlight, and focus the salient features of the qualitative data with the aim to generate categories, themes, concepts and build theories (Creswell, 2013; Saldana, 2009).

Encouraging better communication and critical thinking skills among accounting students during post – implementation phase

During the post-implementation phase, interviews were conducted to obtain further feedback on the flipped learning approach used in teaching the course. Six participants were interviewed. Appointments to interview them were made after class and the students were interviewed in the lecturer office.

From the results, it has been found that students have positive thoughts about flipped learning concept (Detlor, Booker, Serenko and Julien, 2012). However they are concerned about the video contents that are too lengthy, boring and uninteresting. Some of their comments are as follows:

> *"It is good. But the video which is too long and no creativity will make students fell bored and fall sleep. But the discussion is good because we can ask questions, rather than just lecture in class".*

> *"To be honest, when I watched the video, it was actually at night, I got sleepy from watching the video and it was too long. But it gives a picture on what the lecturer is going to teach in class so it helps me a bit on the preparation even though I couldn't understand the whole content".*

> *"Flipped learning concept has its pros and cons. First I think it's ok but when too long and too many details make it boring".*

> *"For me the idea is very good. When I get the video, I did not watch it, I listen to it while having my breakfast. So it saves my time".*

The result shows that students able to demonstrate passion for the topic presented. The classroom became lively where the students can actively communicate with each other on the exercise given. This is consistent with previous studies which shows that through flipped learning, the students actually are able to identify issue/ problem in a complex situation and able to assess and justify the situation (Kashefi, Ismail and Mohammad Yusof, 2012). When asked whether they can communicate better with their friends and lecturers through flipped learning activities, the participants give the following answers:

> *Yes. One day before class we communicate with WhatsApp".*

> *"In class we can communicate".*

> *"Yes, we have the opportunity to discuss in class. Some of my friends can understand more than me so they can teach us during the discussion".*

> *"Yes, whenever we can't hear what the lecturer says in front because I sit at the back, so when we can discuss and communicate, I can ask my friends anything that I don't understand".*

> *"Yes I communicate a lot during discussions with my friends. Moreover I am not good in English so this improves my English because I am force to speak and discuss with my friend at my table who are foreign students".*

When asked whether they can communicate better with the lecturer through flipped learning approach, the participants said that:

> *"Yes, because we can ask the lecturer that time".*

> *"Of course, because most of the times lecturers come in class and teach and we can only do minimal exercises in class, the rest we have to do it ourselves and we don't even have the time to ask the lecturer more detail. So when the class is fully utilised with exercises*

activity, it is good, when we don't understand we can straight ask the lecturer questions. That is one advantage for us".

"I like that I can ask the lecturer during class and not like usual where I need to wait until the next class to ask the question on that topic".

"Yes I feel that my time spent in class is so valuable because this is the time I can speak to my lecturer".

However, from the results, it has been found that that not all students are able to watch the video. This is due to limited time given for the students to watch the video. They also stressed that they need more time to watch the video repeatedly in order to understand. Reflectively, not all students can understand the content of the video since their level of understanding are at different level.

The participants were also asked in to give their opinion on how to improve the method used to conduct flipped learning in the future. The participants suggested that the video to convey the topics should be less lengthy and should be more interesting. One participant also added that students can do presentations based on the lessons given in the video. The followings are their suggestions:

"Lessen the length".

"The tone of voice in the video plays an important part. It must be interesting. The content or PowerPoint could be more interesting by adding more animations colours and creativity. We will feel more alive when watching the video and not get sleepy. And the video must not be too long".

2. Conclusion

Researchers have demonstrated positive impacts resulted from their studies done to examine the effect of flipped learning approach on students' learning processes (Ferreira-Meyers, 2015; Musallam, 2010; Warter-Perez & Dong, 2012). From the results of their survey, Warter-Perez and Dong (2012) demonstrated that students felt that the flipped class learning environment was more interactive and that the new learning environment allowed them to gain better hands-on skills and they also agreed that the flipped class helped them to learn the content better. In addition, Ferreira-Meyers (2015) argued that the flipped learning model can enable educators to pull in the transformation from instructor-driven education to student-centered learning where the excellence in students' communication and critical thinking skills are the essence of concern.

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