

Micro Learning: Motivating Students' Learning Interests

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Psychologically, students face several problems during Online Learning which will reduce their learning interest. The students' motivation may be dropped due to a lack of understanding of the subject since they have to face it alone or due to technical aspects like internet lagging. There are various ways done by the educator to grow the interest of students in order for them to participate in class activities. Information technology has helped educators learn various techniques in teaching and learning. The undeniable interest of students in media socials has triggered the development of enormous software to be used in teaching and learning. Micro learning is a bite-sized, small learning unit with just the necessary amount of information to help learners achieve a goal. In this study, the micro learning technique is implemented by using videos that contain simple explanations of certain topics. This study examined how the micro-learning approach can boost students learning interest by measuring their participation in class by employing qualitative action research methodology where it involved 40 accounting students. The outcome of the study showed that students' participation is at an excellent level. Micro learning has helped boost the interest of students in their learning.

Keywords: micro learning, learning in psychology, education technology, action research, accounting students

Learning in psychology is defined as the change in behaviour due to environmental influences believing that if most behaviour is learned and most behaviour can also be changed. Emotional issues, attitudes, motivation, self-regulation, behaviour, and self-esteem all contribute to learning and affect learning outcomes. Psychology is important in teaching and learning because it teaches and examines essential principles of human behaviour that can shape learning. Psychology also helps educators use measurements and assessments correctly, to better scale where students are in their learning. Educational Psychology helps educators to know how learning takes place. It enables an educator to understand how the learning process should be initiated, how to motivate, and how to

memorize or learn. It also helps in guiding the students in the right direction in order to canalize students' abilities in the right direction (Krapp, 2002; Krapp, 1999; Müller & Louw, 2004).

The importance of learning style in the teaching and learning process has been emphasized by academics ever since. This is because various learning style allows students to receive and process information in a variety of ways different ways (Noriati A Rashid, Boon & Sharifah Fakhriah Syed Ahmad, 2009). By since there are various theories related to learning styles, then the emphasis is necessary given to how much students learn and gain learning experience depending on the type of learning style practiced. The diversity of student learning styles has an influence on academic

achievement as reported in previous studies (Siti Wahida Awang & Siti Shahwaliah Su'ut, 2016; Rozalina et al, 2013; Marina & Suwattanah, 2018). This idea is in line with the opinion McLaughlin, (1999) who has explained that individual differences in students on competence in the teaching and learning process are influenced by aspects of thinking, reaction, tendencies, and so on. Furthermore, according to Dunn and Dunn, (1978), each individual has its own strengths that have forced teachers to understand the concept learning styles and types of learning styles to modify the teaching environment and existing teaching approaches.

Learning style is determined using a processing approach to information and learning environment (Curry, 1983), Learning style using a teaching propensity approach and an environment explains an individual's learning style is influenced by stimuli to assume, interact and respond to the learning environment. Thus, the stimulus of force physiological and sociological type learning was used in the study as suggested by Reid, (1985) in learning inventories. The tendency of physiological stimuli i.e. refers to the four visual styles (seeing), auditory style (listening), kinaesthetic style (movement), and style tactile (feeling), while the propensity of sociological stimuli in turn refers to the type of style learning identified whether students were more likely to learn alone or in groups.

One of the most recent developments in technology-enhanced methods in teaching and learning is an approach called micro learning. Micro learning refers to an educational approach that offers bite-sized, small learning units with just the necessary amount of information to help learners achieve a goal. Micro-learning is an extremely useful tool for any educator, and it brings with it numerous benefits to both the educator and the learner. Usually, each micro-learning unit will have a single objective (or 'learning outcome'), and it is

advisable to make this objective clear to the learner(s) prior to delivering the unit to facilitate their ability to reflect on and celebrate their educational achievements (Lynch, 2018; Edge, Fitchett, Whitney, & Landay, 2012).

Interest Theory in Education

Interest theory proposes that in order to capture and sustain students' motivation is by assisting students to catch the meaning and value in their subject (Harackiewicz & Hulleman, 2010). "The term interest can describe two distinct (though often co-occurring) experiences: an individual's momentary experience of being captivated by an object as well as more lasting feelings that the object is enjoyable and worth further exploration. Interest is, therefore, both a psychological state characterized by increased attention, effort, and affect, experienced in a particular moment (situational interest), as well as an enduring predisposition to reengage with a particular object or topic over time (individual interest). This duality not only highlights the richness of the interesting concept but also contributes to the complexity of defining interest precisely. Situational interest combines affective qualities, such as feelings of enjoyment and excitement, with cognitive qualities, such as focused attention and perceived value, all fostered by features of the situation" (Hidi & Renninger, 2006). Individual interest highpoints individuals' firm preferences for definite content. The immediate experience of interest reflects a well-developed personal preference to enjoy and value a particular subject or activity across situations. Interest is essential to academic success. Any approach to developing students' interests is essential in any educational context. Figure 1 recapitulates the interest interventions expected to influence critical educational outcomes.

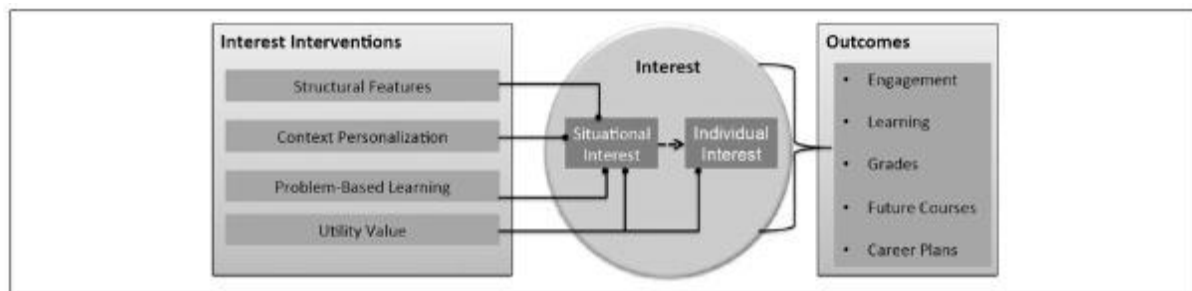


Figure 1 Conceptual model showing how interventions promote interest development and subsequent educational outcomes.

Dewey (1913) argued that educational activities should rouse and motivate the immediate needs of the individual. One way to trigger interest is to structure learning activities in ways that catch students' attention. Berlyne (1970) recognised a number of task features, called collative variables, which affect attention and arousal. He varied the novelty, complexity, surprisingness, and incongruity of visual stimuli, and found that each of these collative variables increased attention, arousal, and interest. These principles underlie many interventions intended to promote situational interest in educational contexts, which Renninger and Hidi (2016) refer to as “triggers for interest.”

Micro Learning

In today's era, societies devote their time online, whether for communication, entertainment, study, or work. Over time, electronic devices have grown to be more flexible and more accessible with various software. This leads to diverse learning methods and techniques. These variations make the learning experience one of the important factors for modern learners. Learners or students have limited time to cover all the courses at the same time due to many tasks and responsibilities. Therefore they are likely to forget the essence of learning after reading long content because it has exceeded the capacity of memory to absorb knowledge. The lack of interest between information

and students makes the goal of learning unachieved. Micro learning as one of the E-Learning methods can help thwart a swing in the objectives of the learning, with one of its functions. E-Learning is the concept of presenting knowledge through electronics or online technology, with various formats like website pages, videos, live streaming, etc. with brief duration and other interesting features. Micro learning is one of the E-Learning approaches that present information concisely and emphasizes the fundamental of learning. This approach is a perfect means to speedily learn the subject matter. Micro learning is also often used to update skills at work where companies regularly do trainings with Micro learning for a new procedure or as a guide to doing the task. This learning approach is often applied through simulations, interactions, video tutorials, or short scenarios. As a trend in terms of learning, micro learning should be implemented in educational institutions. Micro learning makes learning seem easy and practical.

Micro-learning is an approach to forming content into small, focused sections. Content can be videos, infographics, or articles with a short duration of about 5 minutes. This approach is very appropriate to be used in learning especially with mobile phones because it is flexible to be accessed at any time and does not affect the throughput of the students. This is undoubtedly dissimilar when compared to the macro-learning learning system. In teaching and learning, using the micro-

learning method, material on a particular subject is carried in extensive content. Usually, micro-learning takes hours to days in the form of courses, classes, Massive Open Online Courses (MOOC), and other programs. Because it is in the form of classes or courses, students can only attend classes according to the schedule that has been set. This is not suitable for students who are busy and bound to other subjects.

Gap of Study

Most studies were done on how mobile technology integration gives benefits to teaching and learning as well as the technology tools that can be used to improve students' awareness of absorbing knowledge (Cheng, Hwang & Chen, 2019; Kapoor & Datir, 2019; Lall, Rees, Law, Dunleavy, Cotič & Car, 2019; Leem & Sung, 2019; MacCallum & Bell, 2019; McMullen, Hannula Sormunen, Kainulainen, Kiili & Lehtinen, 2019; Zhai, Li & Chen, 2019). Previous studies agreed that the use of technology in teaching and learning increases students' academic performance and may complement a teacher's existing pedagogy (Callaghan, Long, Es, Reich, & Rutherford, 2018; Shyr, & Chen, 2018; Kareem, 2018; Kale, 2018; Tadesse, Gillies, & Campbell, 2018). Studies on microlearning have shown positive effects on teaching and learning (Polasek & Javorcik, 2019; Mohammed, Wakil & Nawroly, 2018; Tolstikh, Pankova & Krasnova, 2021; Huo, & Shen, 2015; Jomah, Masoud, Kishore, & Aurelia, 2016; Yin, Goh, Yang & Xiaobin, 2021). Intervention in teaching and learning has yet been done for increasing accounting students' interest in participating in the classroom.

Significance of Study

This study is significant for the proper recognition of improving students' interest in online learning. The results are expected

to provide an alternative way to reach the course learning outcome thus will boost the students' engagement with the online learning session. It may encourage the educator and the administrators to make changes and adapt to changes in today's environment. Thus, help the educators in their teaching performance to develop students' knowledge and skills. This study will assist the educators in the proper selection of methods, techniques, and strategies that need to be reinforced.

Method

This study employed action research where the data will be collected through rubric assessments and observations, checklists and reflections as well as literature. The study involved 40 accounting students taking the subject Seminar in Management Accounting. This course is a fully theoretical subject and a core subject for Bachelor in Accounting and Bachelor in Accounting (Information System) students. To achieve the objectives of the study, the Participation rubric was used as a measurement instrument. There are three stages, Pre-Stage, During-Stage, and Post-Stage.

Pre-Implementation Stage

The educator prepares short and lively videos that explain the topics for the duration of 5 to 10 minutes. The videos also contain the discussion to be discussed during class hours.

During Implementation Stage

There were two cycles involved:

Cycle 1 – In this cycle, the lecturer uploaded videos based on the topic in the syllabus. The students were given 3 days to look at the videos. During the class hour, the discussion took place where the students formed into 5 groups. From this discussion, the educator observed the

participation that took place in class. The participation skill rubric was used as the measurement.

First reflection: Made adjustments/improvements by considering all feedback and observations.

Cycle 2 – In this cycle, the lecturer uploaded another video based on the topic in the syllabus. The students were given 3 days to look at the videos. During the class hour, the discussion took place where the students formed into 5 groups. From this discussion, the educator observed the participation that took place in class. The participation skill rubric was used as the measurement.

Second reflection: Made adjustments/improvement by considering all feedback and observations.

The same cycle was conducted in cycle 3 if more improvement to be made.

Post-Implementation-Stage

The reflection on the whole observation, field notes, and rubrics was analysed. The rubric of participation skill was assessed to understand the enhancement of the skill. All data were analysed and reported.

Results and Discussion

Cycle 1:

Table 1

Participation rubric in first cycle

	Traits/Marks	N	Poor	Fair	Good	Excellent
1	Involvement	5 (100%)	0 (0%)	0 (0%)	1 (20%)	4 (80%)
2	Contribution	5 (100%)	0 (0%)	0 (0%)	1 (20%)	4 (80%)
3	Attention	5 (100%)	0 (0%)	0 (0%)	2 (40%)	3 (60%)
4	Group Collaboration	5 (100%)	0 (0%)	0 (0%)	2 (40%)	3 (60%)

Observations and assessment rubrics were taken by the educator on each group to understand the situation during the discussions (Participation Rubric). The assessment on participation rubric (See Table 1) showed that in terms of involvement and contribution, one group at Good level and 4 groups at Excellent level while for Attention and Group collaboration, two groups at Good level and 3 groups at excellent level.

Cycle 2:

Observations and assessments rubrics were

taken by the educator on each group to understand the situation during the discussions (Participation Rubric). The assessments on participation rubric (See Table 2) showed that in terms of involvement, contribution and group collaboration, and all groups at Excellent level while for Attention, one group at Good level and 4 groups at excellent level.

Table 2

Participation rubric in first cycle

	Traits/Marks	N	Poor	Fair	Good	Excellent
1	Involvement	5 (100%)	0 (0%)	0 (0%)	0 (0%)	5 (100%)
2	Contribution	5 (100%)	0 (0%)	0 (0%)	0 (0%)	5 (100%)
3	Attention	5 (100%)	0 (0%)	0 (0%)	1 (20%)	4 (80%)
4	Group Collaboration	5 (100%)	0 (0%)	0 (0%)	0 (0%)	5 (100%)

The Refection

Students were very excited at the discussion time. They have a lively time and participating joyously. The students understand what they have to do. Thus, the knowledge or basic knowledge they gained from micro learning videos had helped the understanding the content of the subject matter clearly. From this basic understanding, it is easy to bring the students to another difficult level. On the educator part, there are things that need to be taking care of or improve. The educator has to learn to create videos that simple and enjoyable to watch. This will grow the interest of students. Most of educators may not have the skills needed to make an interesting videos with animations. Thus, the educators need to attend to video making workshop for improvement.

Conclusion

Findings of the study reveal that accounting students responded positively toward micro learning. The students were happy with the concept of micro learning since their understanding increase and they were not overburden to sit and hear the lecture in front of the computer or hand phone. With this approach, they can rewind the video if they do not understand and discuss with educator and other students about their difficulties regarding assignments during class hours or at any

time. Through micro learning, the educator can have more time to focus on students' problems in doing exercise questions. Since, the videos are uploaded earlier, therefore the students can understand the topic before they enter the class session. Hence, they can also have more time to think critically in solving the problems in class. However, there are some limitations that have been encountered while conducting this study. Often, short lessons can be a challenge, when the knowledge presented far exceeds the skills of the student at that time. The educator is suggested to develop the videos before the semester begins since there are not much time to develop the videos when the classes are running. The making of a video will take time. The educator also need to be skillful in making video. Therefore, it is suggested that the educator take several courses on video making.

Psychologically, the motivation of students increase with the use of micro learning. The change of students' behaviour can be seen through observation and the measurement of rubrics. The students' high motivation interest makes it easy for the educator to canalize student's abilities in right direction and to achieve the learning outcomes.

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