

## THE ACCEPTANCE OF SOCRATIVE AS SELF-ASSESSMENT APPROACH IN ENHANCING MOTIVATION AND ACHIEVEMENT IN LEARNING AMONG POLYTECHNIC STUDENTS

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### ABSTRACT

*The purpose of this research is to explore the acceptance of Socrative in promoting motivation and achievement in education settings among polytechnic students. Therefore, a research conducted to indicate how extent online self-assessment influence the students. A quantitative method has been used in this research. The elements of the questionnaire consist of four factors include usefulness, ease of use, ease of learning and motivation in learning. Statistical Package for Social Sciences (SPSS) version 25 used to analyse the data. The finding indicated the acceptance of students in term of usefulness is high (mean=3.46, standard deviation=0.6); ease of use is high (mean=3.58, standard deviation=0.564); ease of learning is high (mean=3.61, standard deviation=0.542) and motivation and achievement is high (mean=3.58, standard deviation=0.519). As conclusion, the research showed positive relationship between the acceptance level of Socrative and its impact on motivation and achievement. Thus, the use of Socrative as online-self assessment is suitable to implement in current teaching and learning environment towards 4.0 education.*

**Keywords:** Socrative, motivation, achievement

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### 1. INTRODUCTION

Basically, assessment is a part of teaching and learning process which is in the form of question or exercise on a test, quiz, or other form of evaluation (Black & Wiliam, 2006). Assessment capable in improving the quality of education in line with its capability in enhancing life-long learning skills (Nasri, Roslan, Sekuan, Bakar & Puteh, 2010). Towards 21st century, the implementation of online assessment is very important as it is capable to bring significant changes in Higher Education setting (Pachler, Daly, Mor & Mellar, 2010). In view of that, Socrative is one of online assessment that has elements of good design that make it a great learning experience in teaching and learning process. Socrative can be accessed by students through internet connection, mobile phones and tablet devices. Consequently, tons of paper can be saved by replacing paper-based assessments with online assessments (Piaw Chua, 2012). Socrative has unique challenges in providing effective assessment in interactive and fun way. This due to the greater potential of online assessment in providing immediate feedback and score efficiently. Besides that, Socrative

capable in generating and sharing variety of questions, digital materials and picture without the need of technical knowledge on the construction of materials. In addition, students' active involvement in learning can result changes in their attitude, critical thinking skills and the retention of information (Cavanagh, 2011). In the era of technology, students preferred to use computer based assessment compare to paper-based assessment as they felt more motivated and actively involved in answering online assessment at their own pace (Lim et al., 2006). Moreover, motivation is one of the important factor in ensuring one's achievement in learning (Bandura, 1989). Also, an individual's success varied based on their motivation and interest towards it (Komarraju, Karau & Schmeck, 2009). In view of that, students' achievement is extremely promising by implementing online assessment through Socrative (Hoskins & Van Hooff, 2005). Socrative as formative assessment tools able to offer engagement towards learning in online environment. The feedback received from an assessment capable to enhance motivation and improve achievement in learning (Vonderwell & Boboc, 2013). Therefore, Socrative can be used utilized wisely in teaching and learning process in order to provide an engaging experience for students.

## **2. PROBLEM STATEMENT**

Polytechnic is an educational institution that based on technical and vocational education. Polytechnic concerned about having skilled and knowledgeable graduates in accordance with the needs of industry. For that reason, it is important to know students' performance upon adopting an effective teaching and learning approach that should increase the students' interest and understanding (Chinn, Sheard, Carbone, & Laakso, 2010). The current assessment method tend to be less attractive to students and they have lack of motivation to participate actively in the evaluation process. The issues of lack motivation are probably happened due the lack of exposure and experience (Clarke, Thomas, & Adams, 2005). Thus, it is difficult to keep them engaged as they could not transfer knowledge gained from lectures. This is happen because of the incapability of the students to relate basic course contents. In order to enhance students' achievement, innovative assessment approaches should be applied to teaching and learning practices. Accordingly, initial exposure of an assessment should be attractive and fun for students to stimulate their interest and motivation. This is because appropriate and interesting assessment contents can engage learners to improve their achievement (Pivec, Dziabenko, Schinner, 2003). Thus, Socrative as online self-assessment is a good approach in motivating the students, besides giving a good experience as well as to increase their achievement.

## **3. OBJECTIVES**

The objectives of this study were:

- a. To analyse the level of usefulness in using Socrative as self-assessment approach.
- b. To analyse the level of ease of use in using Socrative as self-assessment approach.
- c. To analyse the level of ease of learning in using Socrative as self-assessment approach.

- d. To analyse the level of motivation in learning in using Socrative as self-assessment approach.
- e. To analyse the relationship between the acceptance level of Socrative and its impact on students' motivation and their achievement.

#### **4. RESEARCH QUESTIONS**

Through this study, researchers sought to find answers to the following:

- a. How is the level of usefulness in using Socrative as self-assessment approach?
- b. How is the level of ease of use in using Socrative as self-assessment approach?
- c. How is the level of ease of learning in using Socrative as self-assessment approach?
- d. How is the level of motivation in learning in using Socrative as self-assessment approach?
- e. How is the relationship between the acceptance level of Socrative and its impact on students' motivation and their achievement?

#### **5. METHODOLOGY**

Methodology is an important aspect in ensuring the objectives can be achieved as planned. This research is a quantitative survey. Quantitative method focuses on aspects of data collection and analysis of data in the form of numbers.

##### **5.1 Participants**

The research was conducted at Electrical Engineering Department of Sultan Azlan Shah Polytechnic. The samples were 40 students from fourth semester at December 2017 session that undertaking Interactive Multimedia Application course.

##### **5.2 Procedure**

Online quizzes created with 10 questions per quiz using Socrative. The respondents of the research were requested to answer all the quiz sessions. The mark for the quizzes were 40% (10% each) from their total marks of Interactive Multimedia Application Course. After the class session of related topic, students were supposed to answer the Socrative Quiz individually using mobile phones, tablets and PCs. Students logging in are requested to enter the room name (KALIQUEIZ) that provided by their lecturer. They were then asked to enter matric number to identify themselves. After completion of the Socrative Quiz in class, the students were asked to give their judgment about the online quizzes.

### 5.3 Instrument

A questionnaire consisting of 20 items was designed using Google docs. The online questionnaire was conducted at the end of the semester. The questionnaire divided into five important parts; Part A: Biographical information; Part B: Usefulness; Part C: Ease of use; Part D: Ease of learning and Part E: Motivation in learning. There were four-point Likert scale items were used that ranged from 1 (strongly disagree) to 4 (strongly agree). All quantitative data obtained through the questionnaire were analysed using Statistical Package for Social Sciences (SPSS) version 25. Interpretation about the students' acceptance levels is determined by mean score which categorized into low, moderate and high as shown in Table 1.

**Table 1: The interpretation of score mean**

Mean Score	Level
0 – 1.33	Low
1.34 – 2.66	Moderate
2.67 – 4.00	High

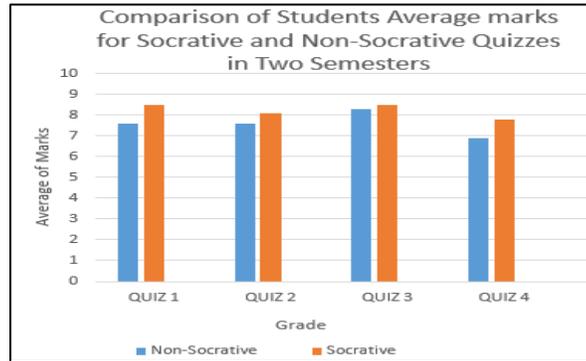
*\*Adopted from Nunally (1978)*

## 6. RESULT

The results of the research obtained through analysis on students' achievement and students' survey based on data collected through questionnaire.

### 6.1 Students' achievement

The students' achievements in Socrative quizzes were compared to paper-based quizzes that carried out to semester four students that undertaken Interactive Multimedia Application course at June 2017 session in order to identify whether assessment using Socrative has improved student performance. Figure 1 illustrate the comparison of students' average marks between Socrative and non-Socrative quizzes for two semesters respectively.



**Figure 1: The comparison on students’ average marks**

The results of figure 1 demonstrates there is improvement in the students’ achievement when quizzes implemented using Socrative. The result reveals that there is 9% improvement in Quiz 1, 5% improvement in Quiz 2, 2% improvement in Quiz 3 and 9% improvement in Quiz 4. In overall, students’ achievement improved using Socrative quizzes as they engaged and involve in online settings.

**6.2 Students’ survey**

According to the observation on the data gathered from the questionnaire, students seems very enthusiastic in using Socrative as their self-assessment method. Table 1 illustrated positive results for each factor with high percentages. The factor of motivation in learning obtained highest percentage in which Strongly Agree and Agree carried 99 percentages. The students feel very motivated in using Socrative as their quiz platform.

**Table 2: The Score For Each Factor**

Description	Percentage (%)	
	Strongly Agree & Agree	Disagree & Very Disagree
Usefulness	95	5
Ease of use	96	4
Ease of learning	98	2
Motivation in learning	99	1

Furthermore, the factor of ease of learning achieved 98 percentages which significantly increases their learning process. The factors of ease of use obtained 96%. This indicated that the structure of Socrative easy to understand and easy to answer as well. Consequently, students felt comfortable

with this approach in educational setting. The score for the factor of usefulness is 95%. In overall, the developed Socrative quizzes get a good response from students.

## 7. DISCUSSION

Each part of the questionnaire discussed in order to answer the research questions from the analysis of the collected data.

### a. Part B: Usefulness

In this part, five items used to assess the usefulness of Socrative as self-assessment approach. It has been found that the average mean score is 3.46 with standard deviation of 0.6. Table 3 shows that the highest mean is for item B3- “The facilities of Socrative makes me feel not bored” with mean of 3.65 and standard deviation 0.483. The lowest mean is for item B2- “Socrative is very helpful for my learning and give satisfaction to me” with mean of 3.35 and standard deviation 0.700. Based on the findings, the students realised the use of Socrative as online self-assessment and satisfied with facilities provided in Socrative environment.

**Table 3.** Part B-Usefulness

NO	ITEM	MEAN	STD.DEVIATION	LEVEL
B1	The Interaction through Socrative is clear and easy to understand.	3.40	0.545	High
B2	Socrative is very helpful for my learning and give satisfaction to me.	3.35	0.700	High
B3	The facilities of Socrative makes me feel not bored.	3.65	0.483	High
B4	The assessment questions in Socrative introduced a bit of competition.	3.43	0.675	High
B5	The feedback from Socrative helped my understanding of course material	3.45	0.597	High
<b>Average</b>		<b>3.46</b>	<b>0.6</b>	

### 7.2 Part C: Ease of Use

According to the result of Part C in Table 4, students absolutely agreed that Socrative is an online assessment that very easy to use. This is found from the highest mean score obtained for item C1- “The content of Socrative is easy to use” with mean of 3.70 and standard deviation 0.464.

**Table 4.** Part C-Ease of Use

NO	ITEM	MEAN	STD.DEVIATION	LEVEL
C1	The content of Socrative is easy to use.	3.70	0.464	High
C2	I can easily access Socrative without time constraints	3.55	0.677	High
C3	I can easily access Socrative without any restrictions.	3.45	0.639	High
C4	I can obtain results quickly through Socrative	3.55	0.552	High
C5	I can share my understanding by answering assessment questions in a variety formats through Socrative.	3.63	0.490	High
<b>Average</b>		<b>3.58</b>	<b>0.564</b>	

### 4.3 Part D: Ease of Learning

Based on Table 5, all items are at high level with average mean score of 3.61. The result of Table 5 shows that students prefer to use Socrative frequently in learning. The respondents showed a positive interest in using Socrative through the highest score for the item D4-“ I like to answer assessment questions using Socrative”. This shows that students interest in using Socrative can stimulate the process of understanding in learning process.

**Table 5.** Part D-Ease of Learning

NO	ITEM	MEAN	STD.DEVIATION	LEVEL
D1	Learning is more easily understood by using Socrative.	3.48	0.506	High
D2	Socrative can improve my learning performance.	3.58	0.501	High
D3	I think the Socrative is an effective interactive learning	3.70	0.648	High
D4	I like to answer assessment questions using Socrative.	3.73	0.554	High

D5	The assessment using Socrative attracted me to continue learning.	3.58	0.501	High
<b>Average</b>		<b>3.61</b>	<b>0.542</b>	

#### 4.4 Part E: Motivation in Learning

Based on the result of Table 6, students participated actively during teaching and learning using Socrative as one of Web 2.0 technology. The readiness of students in using the Socrative lead to the increment of their motivation and achievement in learning process. The findings prove the effectiveness of using Socrative as self-assessment for students.

**Table 6.** Part E-Motivation in Learning

NO	ITEM	MEAN	STD.DEVIATION	LEVEL
E1	I am very interested in using Socrative.	3.50	0.506	High
E2	Socrative capable to improve my motivation in learning process.	3.43	0.636	High
E3	I felt that I actively collaborated in my learning experience	3.78	0.423	High
E4	I felt I have the freedom to participate in my own learning experience	3.68	0.526	High
E5	Socrative capable to improve my achievement in learning process.	3.53	0.506	High
<b>Average</b>		<b>3.58</b>	<b>0.519</b>	

## 8. CONCLUSION

Socrative is online self-assessment approach that capable to create engaging, fun and interactive environment in order to promote motivation and improve achievement among students. The data obtained from the research showed positive acceptance level of Socrative among polytechnic students as it is simple, effective and user-friendly. Therefore, it is worth to implement the approach in teaching and learning environment towards 4.0 education.

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