Students' acceptance towards blended learning implementation

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Abstract. The objective of the inquiry is to observe students’ acceptance towards blended learning implementation. It focuses on students’ perceptions and attitudes towards using easyclass.com as a learning management tool and face-to-face learning. The case study has been conducted among business students in a private university in Medan, North Sumatera. The research employed a quantitative approach based on the Technological Acceptance Model (TAM), and asked the students to answer a questionnaire. They also were interviewed to acquire insights about the blended learning implementation. The study concludes that the students’ awareness and attitudes were encouraging towards the learning management tools in term of the usefulness and the ease of use. However, negative impressions also were underlined during the interview with the students. In summary, blended learning implementation requires an integrated approach where the learning management system is useful and easy to use. Finally, an active participation from both teachers and students is a must in the blended learning implementation.

1. Introduction
Information and Computer Technology (ICT) has been widely used by private and public educational institutions for teaching and learning. The technology delivers many benefits such as the reduction of the barrier of place and time and it could improve the learning effectiveness and collaborative learning for teachers and students [1]. In fact, however, they may end to use online learning for teaching and learning after their initial experience because they are not satisfied with it [2]. The growth of virtual teaching and learning tools in educational institutions may give the students feelings of distress, frustration and confusion [3], that makes them less satisfied with their virtual learning environment [4]. Those issues may obstruct the success of the virtual learning environment implementation and the students’ achievement.

The use of technology for teaching and learning can be combined with traditional or face-to-face learning, which commonly called blended learning. It is basically “learning activities that involve a systematic combination of co-present (face-to-face) interactions and technologically-mediated interactions between students, teachers and learning resources” [5]. This terminology has a complicated issue, in term of its definition, and the effectiveness of blended learning implementation [6]. A research suggests that measuring user acceptance and adoption towards blended learning implementation is important to prevent the failures and improve the effectiveness of information technology for teaching and learning [7].

Higher education institutions in Indonesia have started implementing blended learning in the organizations. Blended learning approach has become more and more frequent in both research and
practices. A paper summarizes the definition of blended learning [8] as referring to particular practices of teaching with technology, the collaborating of e-learning with traditional learning, and as online learning combined with face-to-face teaching. Further, [8] explained that blended learning as, “the combination of distance and face-to-face learning modalities within a setting where they complete each other and are sustained by a tutor”.

Private and government universities have facilitated their teaching and learning with Internet and ICT, especially as a supplement for their regular teaching and learning process in a blended learning environment. This means that besides face-to-face learning in a classroom, students and teachers utilize an online learning management tool or virtual learning environments. The tool commonly is defined as a web-based communication platform in which permits students and teachers to access different learning instruments, for instance program and course information, course contents, help and support, discussion board, document sharing system and learning resources, without any limitation of time and place [9]. Thus, the technology offers benefits for teaching and learning and then the technologies have been incorporated into educational institution as the supplement for traditional or face-to-face learning and pedagogical principles for the benefit of student learning [10].

Combining and integrating technology with traditional learning require virtual learning environments. A blended learning approach requires a learning management system and mixes it with traditional/classroom learning. The learning management system incorporates a wide range of pedagogical and course administration tools and offer a virtual learning environment for teaching and learning activities [11, 12]. Educational institutions must set up the learning management platform such as Moodle, Blackboard in order to be used for the blended learning approach in the institutions. When the educational institutions still cannot afford building the learning management technology, the teachers on the individual level can use an online learning management system which is free and open source such as Google Classroom and Easy Class. The latter will be the focus of the research.

However, the Information and Communication Technology (ICT) practices in virtual learning environments requires students to feel comfortable to work with computer applications and computer tools in order to reduce distress. Therefore, measuring students’ acceptance and adoption towards educational technology becomes an emerging research issue [2]. It can be predicted by the users’ level of adoption and acceptance of the learning management system [13] by using the Technology Acceptance Model (TAM). Originally, the Technology Acceptance Model (TAM) was proposed by Davis [14], which purposely explains the computer usage behaviour in order to predict technology acceptance.

The TAM suggests that beliefs in a technology are related to users’ attitudes and their choice to adopt the technology. The model proposes that the perceived usefulness and perceived ease of use predict users’ acceptance and adoption of technology. Perceived usefulness is defined as “the degree to which a person believes that using a particular system would enhance his or her job performance and perceived ease of use is defined as the degree to which a person believes that using a particular system would be free of effort” [14]. A research found that perceived usefulness and perceived ease of use significantly influenced the perceived satisfaction [2].

The aim of this study is to examine students’ acceptance and adoption towards a blended learning approach using Easy Class as the learning management system. It has been conducted to measure the level of acceptance using Easy Class which is combined with face-to-face learning. The theoretical framework used is based on the Technology Acceptance Model (TAM). It basically measures the technology adoption level based on the two dimensions of TAM; perceived usefulness and perceived ease of use.

2. Methods
The case study has been conducted in 3 business classes in a private university in North Sumatera. The students were from the second and third year level. The lecturer uses a blended learning approach to combine its face-to-face learning with an online management learning tool, called Easy Class. The platform can be accessed online via www.easyclass.com, where users can freely register either as
instructors/teachers/lecturers or students. During the first meeting of the classes, the lecturer introduced Easy Class for the first time to the students. The lecturer also gave the training to the students as well as delivered a short guidance to work with Easy Class. Then the lecturer asked the students to register in Easy Class using their own smartphones and laptops, and join in the online classes which have been prepared by the lecturer.

The lecturer explained to the students that Easy Class would be “the second classroom” where the lecturer would store the class materials, deliver assignments, quizzes, announcements, or create a topic for class discussion. On the students’ side, they have to proactively log in Easy Class to download and read the class materials, work on the assignments and quizzes then send them online via Easy Class, and join in the group discussion. The lecturer will actively use Easy Class for teaching and learning during whole the semester.

Furthermore, the students have been asked by the lecturer about their experiences work at the mid semester. The lecturer asked the students to fill out a questionnaire. The questionnaire was filled out by 135 students, of which 127 questionnaires are completed seriously, these are processed for analysis. In addition, some students were interviewed to directly explain their learning experiences in face-to-face classroom and in Easy Class.

The respondents filled out 2 sections in the questionnaire with regards the perceived usefulness and perceive ease of use. The items were adapted from [2] with only some minor wording changes. Examples items regarding the scales are; for perceived usefulness (4 items) are using Easy Class would improve students’ performance, using Easy Class would enhance my productivity; for perceived ease of use (4 items) are it would be easy for me to become skilful at using Easy Class, learning to operate Easy Class would be easy for me). Those scales were measured by 1-5 Likert scales ranging from strongly disagree, disagree, neutral, agree to strongly agree.

3. Result and Discussion

This part demonstrates the data analysis and results of the research based on the descriptive analysis. Table 1 below depicts the respondents’ characteristics.

| Gender | Year Level | Number |
|--------|------------|--------|
| Male   | 2nd year   | 29     |
| Female | 3rd year   | 98     |
| Total  | Total      | 127    |

Based on Table 1, the number of male students is 51 students (40%), while the number of female students is 76 students (60%). Furthermore, the number of 2- year students on the research is 29 students (23%), while the number of 3- year students is 98 students (77%).

Furthermore, Table 2 below depicts the category that will be used for descriptive analysis to classify the average. It ranges from Very High to Very Low.

| Criteria      | Category     |
|---------------|--------------|
| 4.21 – 5.00   | Very High    |
| 3.41 – 4.20   | Above Average|
| 2.61 – 3.40   | Average      |
| 1.81 – 2.60   | Below Average|
| 1.00 – 1.80   | Very Low     |

Following the criteria, the descriptive analysis results will be explained from the questionnaire which has been answer by the students. Table 3 encapsulates the finding of the descriptive analysis.
Table 3. Perceived Usefulness.

| Item                                | Strongly Agree (weight 5) | Agree (weight 4) | Neutral (weight 3) | Disagree (weight 2) | Strongly Disagree (weight 1) | Weight x Frequency | Average |
|-------------------------------------|---------------------------|------------------|-------------------|---------------------|----------------------------|--------------------|---------|
| Easy Class enhance learning effectiveness | 52                        | 47               | 26                | 2                   | 0                          | 530                | 4.17    |
| Easy Class improve learning performance | 45                        | 61               | 18                | 3                   | 0                          | 529                | 4.17    |
| Easy Class useful                   | 56                        | 35               | 33                | 3                   | 0                          | 525                | 4.13    |
| Easy Class enhance learning productivity | 49                        | 47               | 28                | 3                   | 0                          | 523                | 4.12    |
| Total Average                       |                           |                  |                   |                     |                            |                    | 4.15    |

There are 4 items to measure Perceived Usefulness construct. The analysis shows that the average of perceived usefulness items is classified on the fourth category; 3.41 – 4.20. Overall, the total average is 4.15 which are classified on the Above Average category.

Moreover, Table 4 below illustrates the descriptive statistical analysis from the perceived ease of use items.

Table 4. Perceived Ease of Use.

| Item                                | Strongly Agree (weight 5) | Agree (weight 4) | Neutral (weight 3) | Disagree (weight 2) | Strongly Disagree (weight 1) | Weight x Frequency | Average |
|-------------------------------------|---------------------------|------------------|-------------------|---------------------|----------------------------|--------------------|---------|
| Easy become skilful using Easy Class | 69                        | 43               | 13                | 2                   | 0                          | 4.41               |         |
| Operate Easy Class would be easy    | 55                        | 48               | 21                | 3                   | 0                          | 4.22               |         |
| Easy to get Easy Class to do what I want | 44                        | 55               | 26                | 2                   | 0                          | 4.11               |         |
| Find Easy Class easy to use         | 50                        | 48               | 27                | 2                   | 0                          | 4.15               |         |
| Total Average                       |                           |                  |                   |                     |                            |                    | 4.22    |

There are 4 items to measure Perceived Ease of Use construct. The data analysis demonstrates that the average of perceived ease of use items is classified on the fourth and fifth categories; 3.41 – 4.20 and 4.21 – 5.00. Overall, the total average is 4.22 which are classified on the very high category.

A descriptive statistical analysis shows that students find that Easy Class as the learning management system in the blended learning is useful. This means that Easy Class can help the students to enhance learning effectiveness, learning performance and learning productivity. From the perceived ease of use perspective, the respondents also find that Easy Class is easy to use. They think that working with Easy Class as the learning management tool is not so difficult and complicated.

Besides filled out a questionnaire, the respondents have been interviewed to get more insights from the students about their experiences. It should be noted that most students mentioned that Easy Class is helpful and useful for them. They can easily get announcements from the teachers, download materials and Power Points, and work on the assignments/quizzes from the learning management platform. In addition, a student said that using Easy Class is efficient in term of less money for printing and paperless. The students do not need to print out the materials and Power Points because they can open the materials on their smartphones and laptops. In addition, the students also do not need to print out the assignments since they are sent digitally through Easy Class.

However, negative impressions also were underlined during the interview with the students. They notified the lecturer that students overwhelmed with the contents and educational activities. In addition, teachers also should be careful on checking and reading the assignments because of the possibility of copying and pasting. This may influence fair assessment and work quality.

4. Conclusion
The research aims to measure the blended learning adoption based on the Technology Acceptance Model; perceived usefulness and perceived ease of use. The data analysis shows that students have a high level of adoption towards Easy Class as the learning management tool for the blended learning. It
should be noted that the students have been introduced in Easy Class for the first time, meaning that they are new users of Easy Class. However, the data analysis shows that their level of adoption is high. One of the reasons is that the students are millennial generations who are native users and active on using technology such as laptops, smartphones and the Internet.

It is noted that Easy Class as the learning management platform for blended learning has usefulness and ease to use for teaching and learning. Lecturers must proactively use the learning management platform, and explain the students about the usage of the platform. The negative impression raised by the students must be taken into consideration by managing the learning contents and assignments.

The research has three limitations, however. First, the research measured the adoption once which was in the mid semester. The next research is suggested to measure the level adoption for several times, such as at the beginning, mid and at the end of semester. Second, the research did measure the level of adoption in general without measuring the gender differences. It is suggested for future research to investigate the adoption level based on gender differences. Third, the research did not measure the time duration and the activities that students did when using Easy Class. Thus, future research can add those aspects which will enrich the analysis.

5. References
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