Conference Paper

The Impacts of Edmodo on Students' Performance in ESP Classrooms

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Abstract

The purpose of this study is to investigate the effects of Edmodo, as a supplementary learning platform in ESP classrooms, on students' performance as measured by standardized tests. To achieve this purpose, a classroom observational design was employed to collect data using the tests and questionnaire. The sample in this study was the first year students of 2016-2017 who enrolled in a course of ESP. A total of 97 students participated in the study. The finding indicates a positive and strong impact of Edmodo on students' academic achievement. The more the students engage in their learning via Edmodo, the better the score they have. The study verifies that the traditional learning environment supported by Edmodo enabled students to learn and practice more which increase their academic achievement. Further, the study also confirms that Edmodo can be used as an effective supplementary platform in ESP classrooms.

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Keywords: EDMODO, supplementary learning platform, students' performance

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1. Introduction

Edmodo, used by over 81 million users worldwide, is an academic platform that allows for two-way interaction between teacher and learner (Scott, 2012; Hourdequin, 2014). Edmodo in educational endeavours has offered more interactive learning environment

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which makes students of the digital age more interested in class, more motivated in accomplishing tasks given, and do better in tests (Looi & Yusop, 2011; Enriquez, 2014). Several recent studies have proven many benefits of using Edmodo as a supplementary tool for learning. A study by Enriquez (2014) on the students' perceptions of the use of Edmodo showed that Edmodo is a good supplementary tool for students because it allows students to improve their learning through active participation in online discussions and tasks. In the study of Edmodo on student engagement and responsible learning, Sanders (2012) found that incorporating Edmodo in the classroom had a positive impact on student engagement and responsible learning. Further, she claimed that Edmodo has a more student-centered pedagogy and integrating Edmodo in the traditional classroom is highly recommended. Pop (2013) further said that students have had positive remarks on learning progress with Edmodo because they can share ideas with their group and teacher, keep pace with their class progress and amend their work via feedback and discussion form. In the study of students' perceptions of the use of Edmodo as a supplementary tool for learning a social science course, Enriquez (2014) claimed that Edmodo is a good and beneficial learning tool that makes and allows students to improve their learning process through active participation in online tasks and discussions. Furthermore, Looi and Yusop (2011) confirmed that Edmodo is very useful to increase student learning process. Edmodo provides more opportunities for students to practice together and get engaged with the reading tasks provided. Further, they (2011) argued that weaker students can ask questions via the note feature to interact with the teacher about the subjects learnt. The fact that Edmodo provides a motivating learning environment enables students to perform more.

Designed for educational purposes, Edmodo highly supports a traditional learning system which has several benefits and it is considered among best methods of education (Wichadee, 2017). Numerous authors have found Edmodo to have a positive impact on students' achievement. Means, Toyama, Murphy, and Baki (2013) conducted a meta-analysis study of instructional pedagogy delivered to college and pre-college students. Means et al. (2013) found the more positive effects of blended learning on student performance over face-to-face learning method. Haughton and Kelly (2015) compared a traditional classroom-based environment with a flipped-hybrid environment (i.e., viewing lecture material online prior to once-a-week, face-to-face meetings). They (2015) observed that students in the hybrid environment performed better on the common final exam compared to those in the traditional classroom-based environment. In addition, in their study, Charoenwet and Christensen (2016) used Edmodo to create supportive

learning by facilitating channels for students to communicate with the teacher and participate in class activities. Statistically proven, they (2016) found that learning activities provided on Edmodo improved student learning behaviour and performance.

Many studies have provided a general notion that students who receive instruction through interactive platforms generally outperform those who receive instruction in traditional settings. Toward this end, the purpose of this study was to investigate the effects of Edmodo, as a supplementary platform in English language learning, on students' performance as measured by standardized tests. To determine if a relationship exists between students' achievement and Edmodo, this study examined the following questions: 1) what are the advantages of Edmodo towards students' learning process? And 2) what are the impacts of Edmodo on students' academic achievement?

2. Methods

Total of 97 students participated in the study, enrolling in a subject of English for academic purposes in the second semester of the academic year 2016-2017 at Surabaya college of engineering. A quantitative research approach was selected as the most suitable method to investigate the impacts of Edmodo on students' performance in language learning. For data collection, systematic classrooms observational approach was used to examine the students' learning process by observing how many students use Edmodo (i.e., following the lesson instructions posted by the teacher for the next meeting, doing the quizzes, posting replies and comments). The classroom observational approach is objective and reliable measures because it allows educators or researchers to study the processes of education in naturalistic settings and to obtain more detailed and precise evidence than other data sources (Babbie, 2010). This study conducted 14 weeks of classroom observation. Each week took a 20-minute observation. Second, formative and summative assessments (i.e., quizzes, mid-term test and final test) were used to examine the students' learning performance (academic achievement). The quizzes were given twice within 14 weeks or in one-semester course (i.e., in week 5 and in week 12), the mid-term test was given in week 8 and the final exam was given in week 16.

Additionally, to support the results of the previous methods, a closed-ended questionnaire was used to explore the students' perception on the use of Edmodo related to their academic achievement. The closed-end approach was used in the questionnaire because firstly, they allow greater precision and uniformity, and secondly, they provide easier recall for the respondent and easier analysis for the researcher than open-ended questions (Babbie, 2010). The questionnaire was a 5-point Likert survey ranged from 1

(strongly disagree) to 5 (strongly agree). To achieve the internal reliability, the questionnaire was tested and distributed to 10 students who have ever used Edmodo. The alpha value for the 5 items was 0.839, indicating that the reliability of the questionnaire was acceptable.

The analyses of the study were performed by using descriptive, correlation and regression analysis. Descriptive analysis was used to measure students' learning process and performance (academic achievement). Pearson correlation was used to investigate the relationship of students' learning process and their academic performance. Linear regression analysis was used to determine the impacts of Edmodo as a supplementary tool in language learning on students' academic achievement. In this analysis, students' academic achievement was the dependent variable and students' learning process (i.e., frequency of use of Edmodo) was the independent variable. As mentioned earlier, in the week 14, all students were asked to fill out a questionnaire related to Edmodo. The data of the questionnaire was measured by using descriptive and Pearson correlation statistical methods.

3. Results and Discussion

Of the 97 participants, 89% are male and 11% female. This suggests the predominance of male students at an engineering college. The average age of the respondents was between 18 and 19 years old.

3.1. Students' learning process

The participants of the study used Edmodo as a supplementary learning platform for 14 weeks, starting from February 6, 2017 to June 16, 2017. The result indicates that 88% of the students accessed and used Edmodo very often ($\geq$ 10 times), whereas only 3% of the students seldom accessed and used Edmodo ($\leq$ 5 times). Furthermore, based on the learning activities done by the students via Edmodo, more than 85% of the students used Edmodo for downloading the class materials, 77% doing the quizzes, 23% posted direct messages, and more than 30% liked the messages posted by the teacher. These suggest that the engagement of the students through Edmodo is relatively high, indicating that Edmodo provides a positive learning process.

In line with the studies of Looi and Yusop (2011), Sanders (2012), Pop (2013), and Enriquez (2014), this study confirms that Edmodo provides responsible learning and active learning engagement in which Edmodo allows students to access their online

class materials easily and conveniently, that is, at any time, any place and any speed. In this study, the active participation of students was indicated by the high percentage of the students who downloaded the class materials before the class (> 85 per cent) and did the quizzes (> 75 per cent).

3.2. Students' academic achievement

Formative and summative assessments (i.e., quizzes, mid-term test and final test) were used to measure students' academic achievement. The quizzes were given in week 5 and in week 12, the mid-term in week 8 and the final exam in week 16. The results indicate that there is slightly improvement in the students' average scores on the four assessments as seen in Figure 1. These results suggest that Edmodo is a useful learning tool for students to perform better in their academic achievement. The findings of this study are in line with the study of Looi & Yusop (2011) confirming that Edmodo helps students improve their grades.
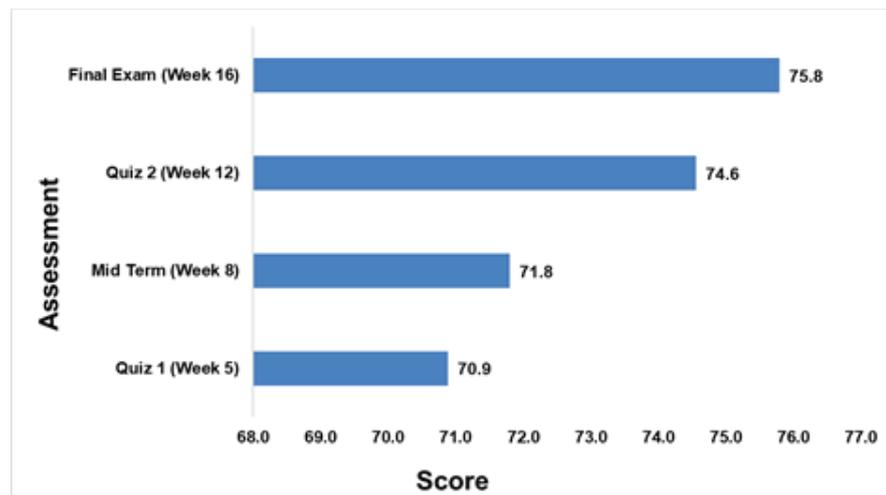

Figure 1: Students' average scores on the assessments.

3.3. Effect of Edmodo on students' academic achievement

Before analysing the effect of Edmodo on students' academic achievement, the study first investigated the relationship between students' learning process and their academic achievement by using Pearson correlation. Table 1 indicates that there was significant positive correlation between the students' learning process and their academic achievement. It means that students' academic achievement represented by the students' total score is related to students' learning process represented by the frequency

of use of Edmodo during the given course. Furthermore, as seen in Table 1, strength of correlation of students' learning process and their academic achievement was relatively strong (r = 0.564 at 0.001 level of significance). It indicates the strong relationship between the two dimensions.

TABLE 1: Relationship between students' learning process and their academic achievement.

		Academic achievement (Total Score)	Learning process (Frequency of use of Edmodo)
Total Score	Pearson Correlation	1	.564**
	Sig. (2-tailed)		.000
	N	97	97
Frequency	Pearson Correlation	.564**	1
	Sig. (2-tailed)	.000	
	N	97	97

**. Correlation is significant at the 0.01 level (2-tailed).

Linear regression analysis was used to determine the effect of Edmodo on students' academic achievement. In this analysis, students' academic achievement was the dependent variable and students' learning process (frequency of use of Edmodo) was the independent variable. The results of Table 2 indicate that linear regression of students' academic achievement on the independent variables of students' learning process (frequency of use of Edmodo) was found to be statistically significant ($F_{(1,95)}$ = 44.256, and p-value = 0.000). For this study, students' learning process was found to have a significant impact on students' academic achievement, and it explained 56.4% of the model. This suggests that students' learning process significantly and strongly influence students' academic achievement. The findings of this study are in line with numerous studies confirming a positive impact of Edmodo on student achievement compared to traditional learning (Means et al., 2013; Haughton & Kelly, 2015, Wichadee, 2017).

TABLE 2: Effect of Edmodo on students' academic achievement.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3326.844	1	3326.844	44.256	.000[b]
	Residual	7141.486	95	75.174		
	Total	10468.330	96			

a. Dependent Variable: Academic achievement (total score)

b. Predictors: (Constant), Learning process (frequency of use of Edmodo)

3.4. Students' perceptions towards Edmodo

In the last meeting of the course (in week 14), a closed-ended questionnaire was distributed to all students and it had a 100% response rate. It aimed to explore the students' perception of the use of Edmodo in improving their academic achievement. The questionnaire was a 5-point Likert survey ranged from 1 (strongly disagree) to 5 (strongly agree). The results illustrate that the students had positive perceptions of the use of Edmodo in improving their academic achievement. More than 75 per cent of the students agreed that Edmodo helps learn directly from immediate feedback of quizzes (M = 4.35, SD = 0.768) and helps increase academic achievement increases motivation to learn more about the course (M = 4.01, SD = 0.817). More than 70 per cent of the students agree that Edmodo helps develop self-learning skills (M = 3.88, SD = 0.881), facilitates effective learning environment (M = 3.80, SD = 0.824), and increases motivation to learn more about the course (M = 3.77, SD = 0.810).

All the results support the previous studies (Looi & Yusop, 2011; Sanders, 2012; Pop, 2013; Enriquez, 2014) confirming that the use of Edmodo facilitated students' learning process which gradually developed their learning skills. Moreover, the immediate feedback of online quizzes that the students got from the teacher helped them learn more timelessly. Further investigation in the students' perception towards Edmodo, the data reveal that there was a significant, positive but weak correlation of learning directly from immediate feedback of quizzes with increasing academic achievement (r = 0.25, p value = 0.014 at 0.05 level of significance). This means that the more the students learnt directly from immediate feedback of quizzes, the better score they obtained.

4. Conclusion and Implication

This study reveals the advantages and usefulness of Edmodo in learning process. First of all, Edmodo motivates students to learn more when compared to the traditional learning approach. Students became more active to learn the materials before classes and do their assignments and quizzes as assigned. Second, Edmodo allows learner-content interaction, in this study, which refers to any interactive activities between the students and lesson materials uploaded in an online learning environment. These conclude that Edmodo provides learner-centered method and learner-content interaction which foster autonomous learning and make learning more convenient and effective.

This study proves the advantages of Edmodo in improving academic achievement. First, based on the four assessments, the average score of each was improving ranging

from 1.2% to 3.8%. This indicates that Edmodo can bolster students' academic achievement. Second, the more the students actively engaged in Edmodo every week, the better grades they obtained. It was indicated by an increase of 17.5% of the students obtaining A grade in the last assessment compared to the first one. These conclude that Edmodo provides assessment-centered environment which makes students be able to self-evaluate, peer-evaluate other's work and learn from the feedbacks given by the teacher. The supportive assessment environment provided by Edmodo makes students learn and practise much more than before resulting in obtaining better academic scores.

This study highlighted the positive and strong impact of Edmodo on students' academic achievement. The study verifies that the more the students exposed to Edmodo, the better they performed in the academic achievement. It indicates that the usage of Edmodo is a good predictor of academic achievement. In this study, the traditional learning supported by Edmodo enabled students to learn and practise more which improve their academic achievement. The positive perceptions of the students towards Edmodo proved that Edmodo can be used as an effective supplementary learning tool in an English language classroom. After using Edmodo for 14 weeks, the students believed that Edmodo facilitated effective learning environment which made them learn more about the course and from the direct feedback provided by the teacher. More importantly and statistically tested, this study shows that the students positively perceived and agreed that Edmodo is very helpful for them to improve their learning approach via direct feedback provided online by the teacher resulting in better score gains.

Given the ubiquitous presence of technology in today's society, educational platforms such as Edmodo will likely be used with much greater interest and frequency. Edmodo, as educational networking site, offers opportunities for greater interactivity to facilitate learning. For teachers, the use of Edmodo redefines their role to be more flexible in delivery options, depending on the content, subject, and capabilities of the students. It means that teaching can now be far more interesting and attractive which makes students much more engaged in learning environment. Hopefully, the findings of this study encourages teachers to implement Edmodo into their classroom and exercise the full potential of it to meet desired learning outcomes.

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