# The Effect of Using Edmodo Application on Students' Mastery Skill of Technology

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# The Effect of Using Edmodo Application on Students' Mastery Skill of Technology

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Abstract. This study aims to determine the effect of using the Edmodo application on students' technology mastery skills at SMA Nurul Jadid. This study used a quantitative approach with the type of exposure factor, the population taken in this study were students of class X SMA Nurul Jadid. The sampling technique used a purposive sampling technique, and data collection techniques were carried out through questionnaires and tests. While the data analysis using linear regression analysis with t and F tests. The results showed that the partial test results (t) were obtained with a tcount of 4.534 with a significance value of 0.00 <0.05., so Ho was rejected and Ha was accepted. Thus obtained from the results of R Square shows that the conclusion of this study has an effect of 14.80% and the remaining 86.20% is influenced by other factors that are not examined in this study.

## 1. Introduction

Currently, in the 21st century the development of information and communication technology is growing rapidly(Aksal & Gazi, 2015)(Andrews et al., 2007). Information and communication technology has an impact on changes in various aspects of human life, including in the field of education(Choeda et al., 2016). Advances in information and communication technology have helped and facilitate activities in the implementation of education, both for educators, students, and education providers(Hlásná et al., 2017). This is supported by none other than the emergence of various technology products that can be used as applications and learning resources. The use of technology as an application and learning resource is the right alternative for developing the implementation of the learning process(Özdemir, 2017)(Caird & Lane, 2015).

Every educational institution must be able to keep up with the development of information and communication technology if it is to survive the intense competition that is happening in

the world of education today(Livingstone, 2019). Learning applications also develop along with the development of the world of information and communication technology. Various online-based learning technologies have begun to emerge and are widely used by other educational institutions. So that teaching with a face-to-face system between teachers and students is no longer the only teaching system in the current education era(Reasoner, 2017).

Edmodo is a learning application with a social system for learning based on a learning management system(Azizah et al., 2017). The Edmodo application will provide safe facilities for teachers and students to communicate and collaborate on various learning content and applications, student homework, test or do assignments online, create grades, and so on(Uzun, 2015).

Several studies that have been done regarding the Edmodo application, one of which was expressed by Sudarsi with the title "Effect of Effectiveness of the Use of Edmodo on Student Satisfaction at SMKN 1 Surabaya" it can be concluded that there is a significant effect of Edmodo effectiveness on student satisfaction in using Edmodo at SMK Negeri 1 Surabaya, the level of effectiveness of Edmodo has a positive effect on student satisfaction in using edmodo(Sudarsi, 2017).

Also, similar research has been carried out by Fita Fatria with the title "Analysis of Edmodo-Based E-Learning Learning Process on Indonesian Language Subjects at SMK Multi Karya Medan." from this research, it can be concluded that Indonesian language learning carried out with Edmodo as an e-learning application in the classroom is used when the teacher will provide the material sent a day before the learning process in class takes place. Edmodo is used by the teacher as well as a means to inform material as well as a means to deliver assignments and quizzes that students can do(Fatria & Husna, 2019).

In 2008 Edmodo was launched by Nicolas Brog and Jeff O'Hara, Edmodo is a microblogging website. In his article, it was stated that Edmodo was an educational site based on social networking, which contained various content for education. Teachers can post learning materials, share links and videos, project assignments, and live student grade notifications. Also, Edmodo can store and share all digital content including blogs, links, images, videos, documents, and presentations(Mirabolghasemi et al., 2017). In a similar vein, Edmodo is a social-based platform that allows teachers and students to share ideas, files, events, and assessments(Altunkaya & Ayranci, 2020).

Mastery of technology skills is very important for every student for smooth learning in school(Oguguo et al., 2020). One of the good and bad aspects of learning in school is determined by each student and each student has different abilities to achieve the best learning achievement, one of which is determined by mastery of technology skills(Morphew et al., 2020).

Technological mastery skills in learning need to be possessed by students so that they can complete work quickly and easily and can develop skills in the learning process(Coupland et al., 2017). With the ability of technology mastery skills that students have, they will be able to complete work quickly(Mathur et al., 2018). The world of education now needs students who are good at mastering technology. So, if students already have a good mastery of technology, it can be said that these students have good readiness in learning at school(Yu & Richardson, 2015).

For this reason, it is a challenge for schools and educators, especially teachers to carry out the learning process using online applications so that students have mastery of technology skills

that can be applied in learning(Hammond, 2014). The demands of the times and advances in information and communication technology increasingly encourage renewal efforts in the use of technological results in learning that can achieve learning objectives.

## 2. Research Methods

This study uses a quantitative approach with the type of exposure factor, namely data collection is done after the incident or after the event. This research was conducted at SMA Nurul Jadid Paiton Probolinggo. The address of Karanganyar Paiton Probolinggo, the population, and samples taken in this study were 4 classes of class X students of SMA Nurul Jadid consisting of 16 classes, from class X A to class X P with a total of 120 students out of a total of 480 students, in 1 the class consists of 30 students. The sampling technique used purposive sampling technique, from 16 classes, 4 classes were taken into consideration to be selected to be the research sample with a total of 120 students, while the data collection techniques used in this study were questionnaires and tests. This study aims to determine the effect of using applications. Edmodo on students' technology mastery skills at Nurul Jadid Paiton High School, Probolinggo, East Java, Indonesia.

## 3. Results and Discussion

This study using linear regression analysis which describes the effect of the Edmodo application on technological skills.

In this study, the use of the Edmodo application can be measured by using learning indicators in the e-learning teaching and learning processes such as presentations, discussions, findings, analyzes, and/or assessments by teachers and students. Edmodo is also an area for safe free learning and comfortable collaboration between teachers and students. From these indicators, 15 questions were made with a score of 1 - 3 for each question. This is by the alternative answers in this study.

Data on the use of the Edmodo application on the technology mastery skills of class X students of SMA Nurul Jadid Paiton Probilonggo in the 2019/2020 academic year were collected from 120 students as respondents, quantitatively showing that the highest total score was 44 and the lowest total score was 28.

The acquisition of students' technology mastery skills in this study was measured by an indicator, namely the written test score of the technological mastery skills of class X SMA Nurul Jadid Paiton Probolinggo. From this value, the highest and lowest scores are obtained.

Data about the mastery of technology skills of class X SMA Nurul Jadid Paiton Probolinggo which were collected from 120 students as respondents, quantitatively showing that the highest total score was 100 and the lowest total score was 50.

### 3.1 Hypothesis Testing

### 3.1.1 Partial Test (t)

This partial hypothesis testing is intended to test the significance of the effect of the independent variable, namely the Edmodo application (X) in the technology mastery skills (Y) of class X SMA Nurul Jadid Paiton Probolinggo.

**Table 1.0 Partial Test (t)**

**Coefficients**

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Correlations | | |
|---|---|---|---|---|---|---|---|---|
| | B | Std. Error | Beta | | | Zero-order | Partial | Part |
| 1  (Constant) | 41.107 | 8.949 | | 4.593 | .000 | | | |
| Edmodo application (X) | 1.058 | .233 | .385 | 4.534 | .000 | .385 | .385 | .385 |

a. Dependent Variable: Mastery of

Technology (Y)

Based on the results of the partial test for the variable using the Edmodo application, it was obtained a tcount of 4.534 with a significance value of 0.00 <0.05, so Ho was rejected and Ha was accepted, so H1 which reads "There is an effect of Edmodo Application in students' technological mastery skills in the subject matter PAI class X SMA Nurul Jadid Paiton Probolinggo "**accepted**.

### 3.2 Regression Analysis

In this study, there are 1 independent variable and 1 dependent variable, so the model used is a simple linear regression approach. Based on the results of the calculation of linear regression analysis using the SPSS 16 program, the results are as shown in the following explanation:

### 3.2.1 The conclusion from the Linear Regression Analysis Test the Effect of Variable X on Variable Y

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. The error of the Estimate |
|---|---|---|---|---|
| 1 | .385[a] | .148 | .141 | 8.89378 |

a. Predictors: (Constant), Edmodo application

Based on calculations with the help of the SPSS 16 computation program, the coefficient of determination (R square) is 0.148.

So it can be concluded that the application of Edmodo (X) affects the Skills of Mastery of Technology (Y) of Class X Students of SMA Nurul Jadid Paiton Probolinggo by 14.80% and the remaining 86.20% is influenced by other factors that are not examined in this study. This

positive effect means that the increasing use of the Edmodo application will affect the Technology Mastery Skills of Grade X students of SMA Nurul Jadid Paiton Probolinggo.

## 4. Conclusion

Based on the results of research in the field regarding the effect of using the Edmodo application on technology mastery skills in PAI class X SMA Nurul Jadid subjects, the researchers concluded as follows :

From the Coefficients table, it can be obtained partial test results (t) with a tcount of 4.534 with a significance value of 0.00 <0.05, so Ho is rejected and Ha is accepted.

Based on calculations with the help of the SPSS 16 computation program, the value of the simultaneous determination coefficient $R^2$ (R square) was 0.148, thus showing that the use of the Edmodo application affected the technological skills of class X SMA Nurul Jadid by 14.80% and the remaining 86.20% of students' mastery of technology skills are influenced by other factors that are not examined in this study such as learning interest, learning environment, tutoring, intelligence, and others.

In this study, it shows that the use of the Edmodo application greatly influences students' technological mastery skills, so that teachers at SMA Nurul Jadid have more views in optimizing the learning process using the Edmodo application, especially teachers of Islamic Education subjects.

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