The Effect of Edmodo Based E-learning and Learning Independence on Islamic Religious Learning Outcomes For Grade VIII in Junior High School 7 Medan Country

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ABSTRACT

This study aims to (1) find out the results of students' Islamic religious learning between groups taught with Edmodo-based E-learning higher than the results of students' Islamic religious learning taught with WhatsApp. (2) knowing the learning outcomes of Islamic students among groups of students who have higher learning independence than Islamic religious learning outcomes of students who have low learning independence; (3) To find out the influence between Edmodo-based E-learning and learning independence on the learning outcomes of Islamic students. This type of research is a quantitative research using the quasi-design of experiments. The population of this study is a class VIII student of SMP Negeri 7 Medan with a sample of class VIII C with as many as 33 students as an experimental class and class VIII A with as many as 32 students as a control class. Data collection uses tests and questionnaires and data analysis using a two-track ANOVA. The results showed that the results of learning the Islamic religion of students taught with Edmodo were higher than the results of learning Islamic religion students who were taught with WhatsApp. Islamic religious learning outcomes of students who have high learning independence are higher than the results of Islamic religious learning students who have low learning independence. There is an interaction between Edmodo and learning independence towards the results of learning Islamic religion students in grade VIII of SMP Negeri 7 Medan.

Keywords: E-learning, Edmodo, Learning Independence, Learning Outcomes

INTRODUCTION

Coronavirus (Covid-19) has spread across the country, and its presence has added to the long list of problems faced in both developed and developing countries. Various aspects of life have been disrupted, including the education aspect. During the COVID-19 pandemic, education has transformed from face-to-face to online learning. During online learning, students face various obstacles such as the internet network, quotas, time constraints, and the
availability of online learning tools. The impact of online learning is that students cannot gain clear knowledge, students' socio-emotional abilities decline (Kusuma & Sutapa, 2020), low student achievement (Rumata & Suyadi, 2021), and low student learning outcomes. Colao et al. (2020) state that students need a real location where students can discuss their interests, thoughts, hopes, and emotions with their friends. Self-confidence, friendship, empathy, involvement, respect, gratitude, compassion, and responsibility are just some of the social competencies that students can learn and develop in school.

Education should be able to provide opportunities for students to learn to know themselves and their environment. Allah SWT says:

![image of text]

Meaning: And He taught Adam the names (objects) all of them, then He showed them to the angels, saying, "Name all of these (things) to me, if you are right." (Surah Al-Baqarah: 31)

The above verse is a *tarbiyah verse* that explains that humans do not know anything but because of Allah's permission. According to Qurthubi (2009) states that Allah SWT has taught Prophet Adam As God's knowledge is certain. However, it is possible that the teaching was delivered through the intercession of the Angel Jibri As.

Education plays an important role in improving the quality of human resources that support the progress of the nation and state. Constitution Republic of Indonesia Number 20 of 2003 concerning System Education National state that "Education National aim for developing potency participant educate to be a man of faith and piety to God Almighty, good character noble, healthy, knowledgeable, capable, creative, independent and become democratic citizen as well as responsible answer " Chapter II, Article 4 ). Thing this give meaning that implementation education national have complex goals, apart from pious to God, education is also expected capable shape participant educate Becomes person who speaks to knowledge and independent, democratic and responsible answer.

Religious education is the basic guideline in the life of every Muslim based on the Al-Qur'an and Hadith. Primadoniati (2020) states that Islamic religious education aims to produce humans who have faith and piety to Allah SWT, and are commendable (*akhlaq alkarimah*). An educator should be able to instill Islamic values and train and develop students in Islamic values. This process requires a long time and activity and is fraught with difficult planning and challenges.

The achievement of high Islamic religious learning outcomes is reflected in the behavior of students in their lives that are under Islamic values. Toha (2018)
explains that the basic challenge of learning Islamic religion in schools is that the quality of Islamic religious education learning is still low. Islamic religious learning is still a routine, formality, and without a trace in students. Whereas Islamic religious learning is the spearhead of the younger generation of Islam who will hold the relay of Islamic values. Students' understanding of the material directly affects students' learning outcomes of Islam.

Maksum et al., (2021) explained that student learning outcomes can be categorized into 2, namely, macro perspective and micro perspective. The macro perspective is related to the internalization of values and the manifestation of students' attitudes. This will affect students so that value violations occur such as acts of violence, free sex, drugs, gambling, and various other violations. While the micro perspective is related to knowledge and social skills, motivation, and student learning outcomes.

Based on the results of the evaluation of Islamic religious learning for grade 1 SMP Negeri 7 Medan, it was found that there were low student learning outcomes of Islam for the last 2 years. Most students get low Islamic learning outcomes. The low student learning outcomes can be seen in the table below:

| No | Academic year | Average value |
|----|---------------|---------------|
| 1  | 2019/2020     | 72.7          |
| 2  | 2020/2021     | 74.3          |

The acquisition of Islamic religious learning outcomes for students above needs serious attention and immediate action is taken to improve students' Islamic religious learning outcomes. Student learning outcomes of Islam describe the knowledge, skills, values, and behaviors that students acquire from the learning process. In short, the low Islamic learning outcomes of students indicate that Islamic religious learning has not had a positive impact on students. In addition, the use of learning methods is also a problem. Many teachers do learn using conventional methods such as lectures and expository without involving students in learning. Student participation in learning is one indicator of learning success. With the learning method, the teacher should be able to activate students in learning.

From the results of the evaluation, the school carried out E-learning based on Edmodo. Ekawati (2018) states that Edmodo is one of the learning platforms based on a learning management system (LMS). Supriyatno et al. (2020) stated that the use of Edmodo and Schoology is an alternative form of learning model that
is handled very well to increase motivation, solve learning problems, and critically think about students. Edmodo was chosen as E-learning because it has ease of use such as using social media (Almoeather, 2020; Ekawati, 2018; Subiyanto et al., 2018).

Psychological elements also affect students' Islamic religious learning outcomes during online learning. Student learning independence is one of the determinants of student learning success in achieving student learning goals. Student independence is the key to student success in online learning (Sulisworo et al., 2020). Independent learning is an active cognitive learning method that allows people to realize their abilities and conditions, manage their learning (Jansen et al., 2019; Wan Yunus et al., 2021), and initiate the learning process (Chu et al., 2020). In addition, independent learning also has an influence on predicting and is a tool in learning knowledge that is difficult to understand (Huang & Lajoie, 2021). Based on the description above, shows that student learning independence is related to students' knowledge, attitudes, and learning environment. For this reason, it is important to know the relationship between student learning independence and student learning outcomes of Islam.

Based on previous research, it was shown that the use of the Edmodo-based blended learning model could affect students' critical thinking skills (Denny et al., 2020). The results of the research by Trisniawati et al., (2019) showed that there was an effect of using Edmodo on students' interest in learning mathematics. Research conducted by Hashim et al., (2019) shows that the use of Edmodo affects student achievement. Meanwhile, research conducted by Atmojo et al., (2020) shows that student learning independence and self-awareness have an impact on student learning outcomes during the pandemic. The results of Yıldızlı & Saban's research (2016) explain that student learning independence affects mathematics learning outcomes and motivational beliefs.

Based on the above constellation, the researcher will conduct a comprehensive follow-up study with the title The Effect of Edmodo-Based E-learning and Independent Learning on Islamic Religion Learning Outcomes for Class VII Students of SMP Negeri 7 Medan.

RESEARCH METHODE

This study uses a quantitative approach to the type of quasi-factorial experiment 2x2. Through this design will be compared the influence of Edmodo and Whatssapp. Edmodo was treated in the experimental class and WhatssApp was treated in the control class with different learning independence to determine its effect on students' Islamic religious learning outcomes.
The following is a 2x2 factorial quasi-experimental research design in this study.

### Table 2.
#### 2x2 Factorial Research Design

| Medium (A) | Independence | Edmodo (A1) | Whatsapp (A2) |
|------------|--------------|-------------|---------------|
| Height (B1)| A1B1         | A2B1        |
| Low (B2)   | A1B2         | A2B2        |

A1B1: Student learning outcomes of Islam taught by using Edmodo to students with high learning independence
A1B2: Islamic learning outcomes of students who are taught using Edmodo to students with low learning independence
A2B1: Islamic religious learning outcomes of students who are taught using *Whatsapp* to students with high learning independence
A2B2: Islamic religious learning outcomes of students who are taught using *WhatsApp* for students with low learning independence

Data analysis was carried out after the data collected by researchers using research instruments had been collected. Data analysis according to Sudijono (2012), the percentage of the feasibility of the aspects assessed by the formula:

\[ P = \frac{\sum x}{N} \times 100\% \]

Information
P = Category Percentage
Total Answer Score of Selected Category
N = Total Ideal Score

### RESULT AND DISCUSSION

Hypothesis testing in this study uses 2-way ANOVA using SPSS IBM 22 *for windows*. From the results of the 2-way ANOVA analysis, the average for each group is as follows:

### Table 2.
#### Descriptive Statistics

| Dependent Variable: Learning Outcomes | E-Learning | Independence Study | mean   | Std. Deviation | N  |
|---------------------------------------|------------|--------------------|--------|----------------|----|
| Edmodo                                | Tall       | 89.75              | 4,123  | 16             |    |
While the statistical description of the output data from the 2-way ANOVA test can be seen as follows:

Table 3.
Tests of Between-Subjects Effects

| Source          | Type III Sum of Squares | df | Mean Square | F       | Sig. |
|-----------------|-------------------------|----|-------------|---------|------|
| Corrected Model | 16683,155 \(^a\)       | 3  | 5561,052    | 152,265 | .000 |
| Intercept       | 333445,647              | 1  | 333445,647  | 9129.919| .000 |
| A               | 7545,285                | 1  | 7545,285    | 206.594 | .000 |
| B               | 7214,993                | 1  | 7214,993    | 197.550 | .000 |
| A * B           | 829.995                 | 1  | 829.995     | 22,726  | .000 |
| Error           | 2227,860                | 61 | 36.522      |         |      |
| Total           | 347713,000              | 65 |             |         |      |
| Corrected Total| 18911,015               | 64 |             |         |      |

\(^a\) R Squared = .882 (Adjusted R Squared = .876)

Based on the table above, the researcher uses it to test the hypothesis that the researcher has put forward in this study. Following are the results of this research hypothesis testing:

1. First Hypothesis

\(H_0 = A_1 = A_2\)

\(H_a = A_1 > A_2\)

Based on the results of data analysis, it shows that student learning outcomes taught using Edmodo-based E-learning obtained an average score of 82.55, while student learning outcomes taught using WhatsApp obtained an average score of 59.34. Thus, it can be concluded that the group of students who
were taught using Edmodo-based E-learning had higher Islamic religious learning outcomes than the group of students who were taught using WhatsApp.

ANOVA test results show that the value of sig. 0.000 < 0.05. The results of testing the 2-way ANOVA hypothesis show that H0 is rejected and Ha is accepted. This means that there is an influence of Edmodo-based E-learning on students' Islamic religious learning outcomes.

2. Second Hypothesis
H0: B1 = B2
Ha: B1 > B2

Based on the results of data analysis shows that the learning outcomes of students who have high learning independence get an average score of 83.00, while the learning outcomes of students who have low learning independence get an average score of 60.94. Thus it can be concluded that the group of students who have high learning independence is higher than the group of students who have low learning independence.

While the results of the ANOVA test show that the value of sig. 0.000 < 0.05. The test results show that H0 is rejected and Ha is accepted. This means that there is an influence of student learning independence on students' Islamic religious learning outcomes.

3. Third Hypothesis
H0: A><B = 0
Ha: A><B 0

Based on the results of the 2-way ANOVA test, it shows that the interaction between Edmodo and learning independence on students' Islamic religious learning outcomes has a big value. 0.000 < 0.05. The test results show that H0 is rejected and Ha is accepted. This means that there is an interaction based on E-learning between Edmodo and independent learning on students' Islamic religious learning outcomes.

Post Hoc Testing

The Post Hoc test, in this study, was conducted by researchers to determine the interaction between Edmodo-based E-learning and independent learning on student learning outcomes in detail. This test is done by comparing the learning outcomes of each group. The criteria for testing that the researchers carried out were as follows:

- If the value of sig <0.05 then there is a difference in learning outcomes between the two groups
- If the value of sig> 0.05 then there is no difference in learning outcomes between the two groups
The results of further tests can be seen in the following table:

Table 4. Post Hoc Analysis Results

| Multiple Comparison | Tukey HSD |
|---------------------|-----------|
| Dependent Variable: Learning Outcomes | |

| (I) Interaction | (J) Interaction | Mean Difference (IJ) | Std. Error | Sig. | 95% Confidence Interval |
|-----------------|-----------------|----------------------|------------|------|------------------------|
|                 |                 |                      |            |      | Lower Bound | Upper Bound |
| A1B1            | A2B1            | 13.99 *              | 2.105      | .000 | 8.43       | 19.55       |
|                 | A2B1            | 14.46 *              | 2.212      | .000 | 8.62       | 20.31       |
|                 | A2B2            | 42.81 *              | 2.076      | .000 | 37.32      | 48.29       |
| A2B1            | A1B1            | -13.99 *             | 2.105      | .000 | -19.55     | -8.43       |
|                 | A2B1            | -48                  | 2.181      | .996 | -5.28      | 6.24        |
|                 | A2B2            | 28.82 *              | 2.044      | .000 | 23.42      | 34.22       |
| A2B1            | A1B1            | -14.46 *             | 2.212      | .000 | -20.31     | -8.62       |
|                 | A2B1            | -48                  | 2.181      | .996 | -6.24      | 5.28        |
|                 | A2B2            | 28.34 *              | 2.154      | .000 | 22.65      | 34.03       |
| A2B2            | A1B1            | -42.81 *             | 2.076      | .000 | -48.29     | -37.32      |
|                 | A2B1            | -28.82 *             | 2.044      | .000 | -34.22     | -23.42      |
|                 | A2B1            | -28.34 *             | 2.154      | .000 | -34.03     | -22.65      |

Based on observed means.
The error term is Mean Square( Error) = 36,522.

* The mean difference is significant at the .05 level.

Based on the table above, the results of the post hoc test with the Tukey test are as follows:

1. The results of the Tukey test calculation show that there is a significant difference in learning outcomes between the group taught with Edmodo-based E-learning which has high learning independence and WhatsApp which has high learning independence. (mean diff= 13.99; sig.0.000 <0.05
2. The results of the Tukey test calculation show that there is a significant difference in learning outcomes between the group taught with Edmodo-based E-learning which has high learning independence and WhatsApp which has low learning independence. (mean diff= 42.81; sig.0.000 <0.05
3. The results of the Tukey test calculation show that there is a significant difference in learning outcomes between the groups taught by WhatsApp
which has high learning independence and WhatsApp which has low learning independence. (mean diff= 28.82; sig.0.000 <0.05.

From the analysis above, it can be concluded that there is a positive interaction between Edmodo-based E-learning and independent learning on students' Islamic religious learning outcomes.

Discussion
Islamic Religion Learning Outcomes of Students Taught Using Edmodo-Based E-learning are Higher Than Students' Islamic Learning Outcomes Taught Using Whatsapp

The results of data analysis showed that the results of Islamic religious learning of students who were taught using Edmodo-based E-learning were higher than those of students who were taught using WhatsApp. This can be identified from the average value of religious learning outcomes taught using the two platforms.

Islamic religious learning outcomes are related to affective, cognitive, and psychomotor. Learning outcomes are measured to determine the achievement of educational goals so learning outcomes must be by educational goals (Purwanto, 2011: 53-54). Learning outcomes need to be evaluated. Evaluation is intended as a reflection to review whether the goals set have been achieved and whether the teaching and learning process has been effective in obtaining learning outcomes (Purwanto, 2011:47).

The results of this study are in line with the results of research conducted by Muhajir et al., (2019) which found that the application of Edmodo learning media was more effective because there was an increase in interest and learning outcomes. In addition, Ansori research (2020) found that the PAI learning process in classes that were tested using Edmodo had a greater influence when compared to the results of the PAI learning process in controlled classes.

In using Edmodo-based E-learning students are involved, learning occurs in two directions compared to using WhatsApp. Students' knowledge is formed from learning interactions with teachers and other students even though learning online (online), provides space for students to think and discuss with other students in solving problems given by the teacher.

The learning environment created by the teacher through the features contained in Edmodo can improve student learning outcomes so that it can assist teachers in achieving the learning objectives that have been formulated by the teacher. Meanwhile, WhatsApp with the features contained is very limited, students have not been able to explore and play an active role in learning. This has an impact on the lack of achievement of the learning objectives that have
been formulated by the teacher. Thus, the use of Edmodo is better than WhatsApp in influencing students' learning outcomes of Islam.

The learning outcomes of students who have high learning independence and the learning outcomes of students who have low learning independence

The results of this study indicate that the learning outcomes of students who have high learning independence are higher than the learning outcomes of students who have low learning independence. Bandura (1999) states that persons are the outcome of causal structures that are interconnected from the personal aspect, behavior, and environment. These three aspects are interconnected where the personal aspect will self-regulate to produce behavior and behavior will change the environment. Students who have independent learning can automatically manage their learning activities. When viewed from the aspect of self, a student who can rehabilitate himself to learn includes the aspect of communal self, or interdependence, meaning that all his actions, values, and goals reflect what is in him, and he is responsible for the values and goals he makes and works together with the group to achieve a common goal. In addition, in line with the opinion Zimmerman (2015) defines learning independence as an active participant involving metacognitive, motivational, and behavioral processes that personally initiate knowledge and ability needs such as goal setting, planning, learning strategies, self-reinforcement, self-registration, and teaching self.

The results of this study are in line with the results of research conducted by Hajrah (2021) who found that student learning independence has a positive effect on learning outcomes, this is evidenced by the t arithmetic value greater than t_table (3.661>1.671) and a significance value of 0.001 <0.05. In addition, the results of research conducted by (Sa’adah, 2021) found that there was a positive correlation between learning independence during the Covid-19 pandemic and the cognitive learning outcomes of class XI students in SKI subjects at MAN 2 Pati with a sig. (2-tailed) at 5% error level of 0.022.

Thus the results of this study strengthen the argument that has been produced by previous researchers that students who learn by self-regulation not only know what they need but can also apply the strategies they need. Students can use various memory strategies or organize the material.

There is an interaction between the use of Edmodo and learning independence on student learning outcomes

Based on the results of data analysis shows that there is an interaction between the use of Edmodo and learning independence on student learning outcomes. Islamic religious learning outcomes students who are taught using Edmodo and have positive learning independence have higher positive
learning outcomes when compared to students who are taught using WhatsApp and have low learning independence.

The use of WhatsApp in learning has not been able to train students to express their opinions and ideas using their language. Students can only read and watch learning videos shared by the teacher. However, using Edmodo, besides students being able to read and watch videos, students can also discuss, play games, do quizzes, and do exercises and assignments. Students have the opportunity to develop themselves as learners.

Students can build their knowledge, remember and re-express their experiences. Students can test their understanding and knowledge. Then students can compare and make decisions about similarities, and differences between the concepts they have and other students.

CONCLUSION

Based on the results of the study, it can be concluded that:
1. Edmodo-based e-learning can affect students' learning outcomes of Islamic religious education.
2. Independent learning can affect the learning outcomes of students' Islamic religious education.
3. There is an interaction between Edmodo and independent learning on the Islamic religious learning outcomes of students in grade VII SMP Negeri 7 Medan

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