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| RESEARCH ARTICLE

Analysis of the Effect of Using E-Learning on the Learning Process Using the UTAUT Method

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| ABSTRACT
The purpose of this study is to conduct empirical testing of the influence of the use of the Moodle E-learning System in the Muhammadiyah Samarinda Junior High School environment in supporting the process of ICT-based activities in the teaching and learning process in order to develop ICT-based learning that is considered innovative under the standards of the 2013 Education Curriculum. This study's subjects were Muhammadiyah Junior High School students in Samarinda. The UTAUT model is used to determine the factors influencing E-Learning Behavior's purpose. The data collection survey was conducted by distributing questionnaires directly to 56 students, using Multiple Linear Regression Analysis by conducting a statistical T-test. The results of this study show the influence of expected variables in the performance of E-Learning (PE) technology, expectations on the business of using E-Learning (EE) technology, the influence of teachers and students (SI), the condition of school facilities (FC) and the suitability of learning (JF) with the behavioral intention of Muhammadiyah Junior High School students to use E-Learning learning technology by 83.4%.

| KEYWORDS

E-learning System; Moodle LMS; UTAUT model; Statistical Analysis; Test the Hypothesis

| ARTICLE INFORMATION

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1. Introduction

The use of the role of information and communication technology is currently not only used at the government layer in Indonesia, but its use also has an essential role in the world of education which is applied in almost all schools to support the implementation of the 2013 curriculum.

Competency and Character-based curricula can equip students with various attitudes and abilities to keep up with the times and technology. However, from this, the role of the 2013 curriculum cannot be implemented optimally because there are still schools in several remote areas that need to be supported by the feasibility of implementing the 2013 curriculum.

Optimization of the curriculum k cannot be implemented optimally because it needs to be supported by human resources and inadequate technological infrastructure, such as SMP Muhammadiyah 4 in Samarinda Sebring.

This school is located in the upper reaches of the mahakam river in the Samarinda district, precisely on the other side of the river, where the river is used by most of the residents who live around the upper reaches of the Mahakam river to find a livelihood as a fisherman and is used by the surrounding community as access to crossings by small boats to carry out daily activities in the city both work and school.

Learning media are tools, methods, and techniques used in order to further streamline communication and interaction between teachers and students in the process of education and learning in schools (Oemar Hamalik, 1980).
The school has approximately 104 students and 12 teachers, as well as two administrative staff with integrated school status. The infrastructure of this school needs to be considered adequate to support school education using an integrated 2013 curriculum system where there are two schools in one learning environment of SD Muhammadiyah 3 and SMP Muhammadiyah 4 Samarinda led by one principal. Regarding the management of Muhammadiyah Junior High School in Samarinda, there is still much help, both in terms of human resources, in this case, teaching staff for infrastructure and school infrastructure.

2. Methods

In this study, researchers used the waterfall method. According to Pressman, the waterfall model is a classic model that is systematic and sequential in building software (Pressman, 2010). This method is suitable for simple application development. This model approaches systematically and in order starting from the level of system needs and then going to the stage of analysis, design, coding, and testing.

The data collection process carried out by the author starts with the observation process, interviews, questionnaires, and literature studies conducted by the author such as studying research reports, books, scientific essays, and other sources related to the influence of using E-learning on the learning process using the UTAUT method. The following is a list of literature reviews used by the author, namely:

1. Syahroi et al., (2013) in their research said that the implementation of the 2013 curriculum in the application of PPKn learning As many as 53.78376% of the answers from the results of respondents of teachers in the field of study answered Good enough to be applied to PPKn learning.
2. Suprianto et al., (2019) said in the study yes said learning using gamification on the Mobile E-learning Platform proved to be flexible
3. Susanto & Ayu, (2017), in their research said that the application of this web-based E-Learning system could make it easier for students to learn independently outside of school learning hours. SLC learning can help students and teachers use paper-based materials to become computer-based.

3. Results and Discussion

The research used direct observational studies, as well as interviews with students, educators, and education staff of SMP Muhammadiyah 4. In addition, it also uses Library Research to collect materials through books and articles related to the subject matter that will be discussed in the research.

Of the fifty-six questionnaires distributed, fifty-six respondents were collected for analysis. Data analyzed using SPSS 22 software SPSS (Statistical Program for Social Sciences) is a program package used by analysts to analyze statistical data. In making reports in tabulations, graphs, and plots for various distributions and descriptive statistics. As shown in Figure :1

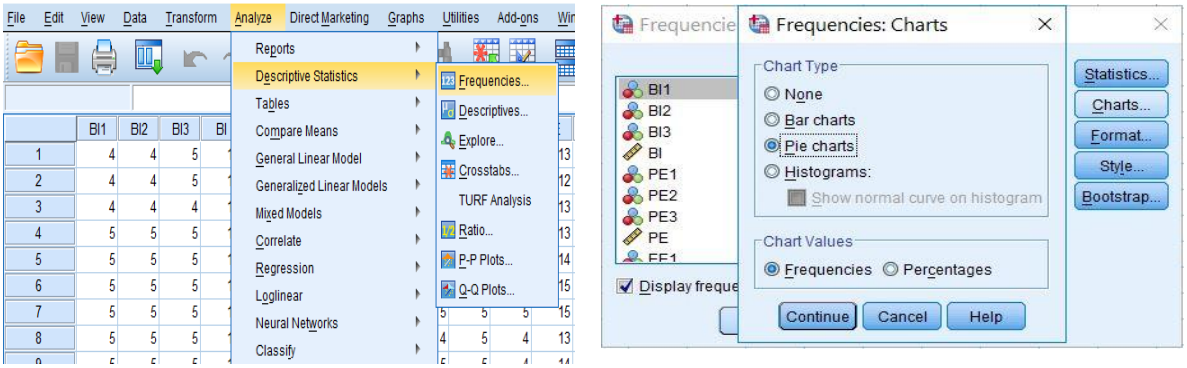


Figure 1: based on the position of the respondent.

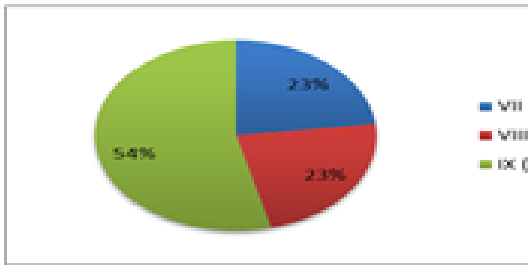
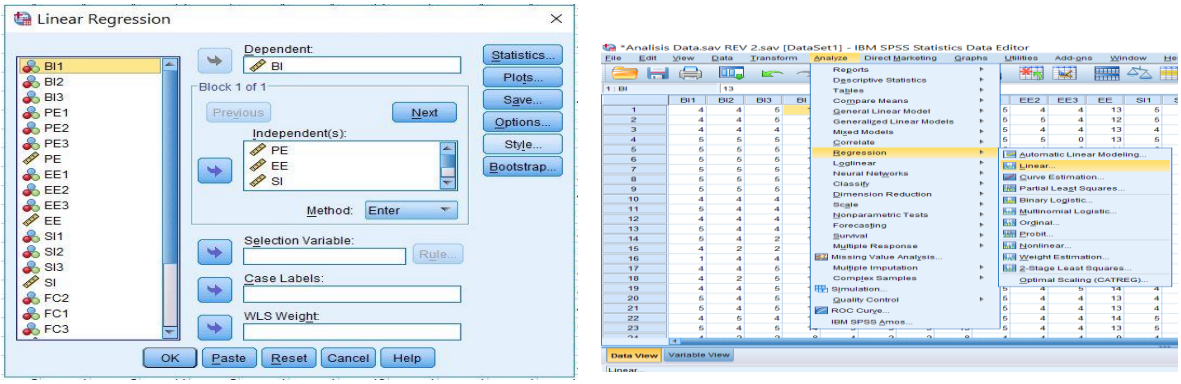


Figure 2: Results of respondent response analysis

The results of the analysis of respondents' responses based on Figure: 2 show that 54% of respondents from Class IX students have answered 30 questions and 23% of respondents are from Class VIII students who answered 13 questions. and 23% of respondents came from Class VII students who answered 13 questions. This suggests that most targeted respondents had Converge for the study sample. With these responses, it can be seen how the condition of each indicator variable was studied.

1. Hypothesis Test

Hypothesis testing was carried out using the multiple linear regression analysis methods using SPSS 22 software in Figure :3



Gambar 3: Multiple Linear Regression Testing Process

Table 1: Table of Results of Multiple Linear Regression Analysis

Model	**Unstandardized coefficient**		**Standardized Coefficient**	**T**	**Itself**
	B	**Std Error**	**Beta**		
(constant)	-2.068	0.974		21124	0.039
ON	0.214	0.085	0.226	-2.525	0.15
I	0.267	0.19	0.250	2.453	0.009
YES	0.220	0.080	0.203	2.738	0.003
FC	0.280	0.090	0.255	3.127	0.023
JF	0.201	0.086	0.194	2.343	0.023

The result of the multiple linear regression equation obtained the value of the constant is -2.068. Namely, the variable of behavioral intention in the use of E-Learning technology in Muhammadiyah Junior High School in Samarinda is influenced by five free variables (expectations of E-Learning technology (PE) performance, expectations of efforts to use E-Learning -Learning Technology (EE), the influence of teachers and students (SI), condition of school facilities (SF) and suitability of learning (LS) is

zero, then the average number of variables of intention to use E-Learning technology in muhamamdiyah junior high school in Samarinda is -2,068.

2. Partial Hypothesis Test (t-test)

The partial hypothesis test (t-test) shows that the influence of each variable is independent of the dependent variable. The test was carried out using SPSS 22 with the equation:

a = 5%
Test Statistics:
this =, free degree = n-k-1
Test Criteria:
a. Accept H0 if -t table t count t table
b. Reject H0 if t count <- t table or t count > t table

Partial hypothesis test results. The value of t for the learning suitability variable (JF) to the behavioral intent variable for using E-Learning (BI) technology = count 2.334 > t table 2.004 and the probability of significance 0.023 < 0.05. So it is concluded that hypothesis Ha5. Then it was concluded that learning suitability influenced the intention of behaving using E-Learning technology at Muhammadiyah Junior High School in learning in his school.

3. Simultaneous Hypothesis Testing (F Test)

Table 2 Simultaneous Hypothesis Testing Results (Test F)

F count	**df**	**F_{table}**	**Itself**	**Information**	**Conclusion**
50.184	df1 = 5 df2 = 50	2,400	0.000	H_0 rejected	There is an influence (Significant)

Simultaneous hypothesis test results are based on Table 2. The Fhitung value of 50.184 > Ftabel 2.400 means H0 is rejected. Thus, it can be concluded that there is a significant influence of expectation variables on the performance of E-Learning (PE) technology, expectations for the use of E-Learning (EE) business technology, and teacher and student development (SI). (FC) Moreover, the suitability of learning (JF) to use the E-Learning technology of Muhammadiyah Junior High School in Samarinda to carry out their E-Learning learning tasks.

4. Coefficient of Determination Analysis (R2)

Table 3: Coefficient of Determination Analysis (R2)

Model Summary

Model	R	R Square	Adjusted R Square	Std. The error in the Estimate
1	0.913[a]	0.834	0.817	0.816

a. Predictors: (Constant), JF, EE, PE, SI, FC

a. Predictors: (Constant), JF, EE, PE, SI, FC

The analysis of the coefficient of determination test based on Table 3 shows the magnitude of the role of the free variable on the variable of behavioral intent. The value of the number R (correlation) or the degree of relationship between variables is 0.913. This means that the expected variables on the performance of E-Learning (PE) technology, expectations for the use of E-Learning (EE) technology, the influence of teachers and students (SI), the condition of school facilities (FC) and the suitability of learning (JF) as a whole have a very strong correlation with behavioral intentions to use E-Learning technology at Muhammadiyah Junior High School in Samarinda.

The R-square value is 0.834 (83.4%). Then the magnitude of the contribution in the influence of expected variables on the performance of E-Learning (PE) technology, expectations on the business of using E-Learning (EE) technology, the influence of teachers and students (SI), the condition of School Facilities (FC) and The Suitability of Learning (JF) on Student Behavior

Intentions at Muhammadiyah Junior High School, Samarinda City in the Use of E-Learning Learning Technology was 83.4%. At the same time, the remaining 16.6% was influenced by other factors that were not studied in this study.

5. Implementation

The implementation of the e-learning system is the stage of system installation and application, made under system modeling that has been designed in system analysis and design based on UML (unified modeling language) modeling so that this application is ready to be operated in its closest state.

Figure 4. E-Learning Main page view

Picture 4 above is the main page view of the E-learning system, which is an initial view when visiting the application system. On the main page display, there are several options, namely: student login, Teacher login, and administrator login. How to run it by clicking the Log in button.

The following display asks the admin to fill in the username and password to continue on the administrator menu.

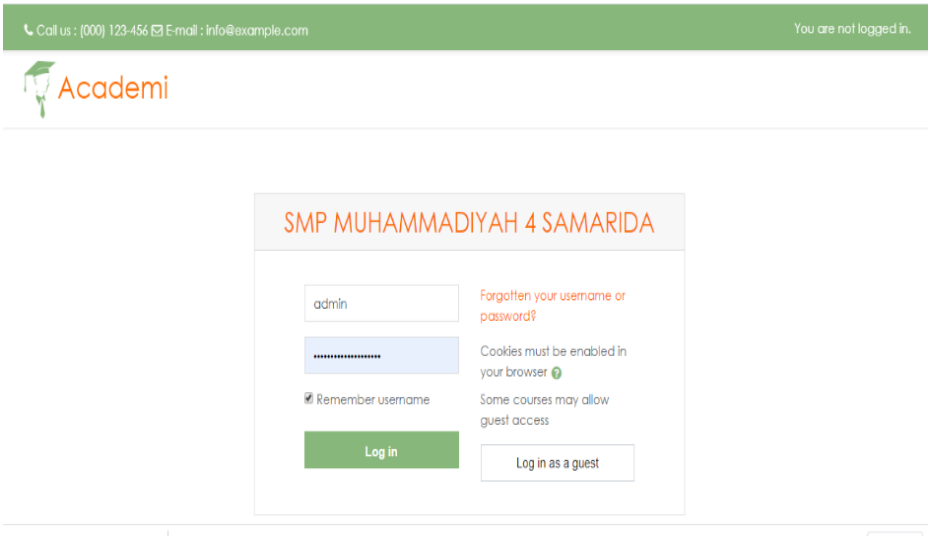


Figure 5. Log in admin

Figure 5 Is a picture Where the admin is asked to fill in the username and password to continue on the administrator menu. To run it, click the Admin login category, fill in the Username and Password Click Login on the Moodle Display Menu.

Figure 6. Log in Home page view

In Figure 6, the Main Page view in Log in. It is an initial display when the admin has logged in to the admin login. Here there are many categories that the admin can manage.

Figure 7. ICT Subject Matter Display

Displaying ICT subject matter is a display where students, after logging in and looking for material to be studied.

4. Conclusion

Based on the discussion and evaluation that has been carried out previously, the system design was carried out in the development of Moodle-based E-Learning, which was carried out by looking at several aspects of learning needs and curriculum 2013 system requirements needed by Admins, Teachers, and Students for the E-learning system including user management (Add, edit, and delete), Materials, Assignments, Online Exams, Grades and Forums and the results of the SPSS 22 Analysis on the UTAUT Model as much as 83.4%. Behavioral intentions the application of technology E–Learning students feel that the E–Learning system that is built is beneficial in the learning process at school and home.

So, the implementation of the 2013 curriculum with the standard of revolution 4.0 character education can be carried out optimally at SMP Muhammadiyah 4 Samarinda and the level of interaction between teachers and students increases and allows students to have their materials or subject matter that can be downloaded directly through the website and makes the interaction between teachers and communication via online where students and teachers can interact with each other at any time through this E-learning application.

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