

THE EFFECT OF THE ONLINE LEARNING PROCESS AND INDEPENDENT LEARNING PROCESS ON IMPROVING STUDENTS' ACHIEVEMENT

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Abstract

This study aims to determine the effect of the online learning process and independent learning on improving student achievement in the NPM English Education Study Program 2018, 2019, and 2020 FY 2020/2021 FKIP USI during the Covid'19pandemic. The dependent variable of the study is the online learning process and independence study. The research was conducted on students of the 2018 NPM English Education Study Program, 2019, and 2020 T.A 2020/2021 FKIP USI. The research population is 50 people. The sampling technique uses the saturated sample method, so that all members of the population participate in the observation. This study uses primary data and secondary data. Primary data was collected using a questionnaire, while secondary data was collected through documentation review. Data analysis using multiple linear regression analysis method. The results of the analysis show that the online learning process has a positive and significant effect on increasing student achievement in the NPM English Education Study Program 2018, 2019, and 2020 FY 2020/2021 FKIP USI during the Covid'19pandemic. While learning independence has no significant effect on improving learning achievement. NPM 2018 English Education Study Program students, 2019, and 2020 FY 2020/2021 FKIP USI during the Covid'19pandemic

Keywords: learning achievement, online learning process, independent learning.

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Introduction

Corona Virus disease or known as Covid'19, initially occurred in the city of Wuhan-China in December 2019. Covid'19has also spread to almost all corners of the world, including Indonesia, to be precise in February 2020. The Covid'19 pandemic attacks and destroys all aspects of life in every country. The aspect that is most affected today is the aspect of education.

In March 2020, the Minister of Education issued a regulation so that learning activities from the lowest level to higher education are carried out online or online. This regulation was issued because of the increasing outbreak of covid'19 and increasing the number of victims who were positively exposed to covid'19. One of the efforts to break the chain of spread is to reduce or limit oneself from physically interacting with each other. Or one of the best ways is to implement work from home for workers and learn by online or online for students and educators.

The English Language Education Study Program FKIP USI is one of the study programs that implement online learning starting March 2020 until now. Online learning does make teaching and learning activities less conducive both in discipline and in measuring student learning outcomes (Durahman, 2020; van Thao et al., 2021). In addition to students, lecturers also complained about the difficulty of carrying out the online teaching and learning process with various conditions and reasons that made the learning process increasingly difficult to achieve learning targets.

The online learning process carried out during the covid'19pandemic gave rise to many types of platforms such as: Zoom meetings, Google meet, Google classroom and others that can be used. All types of platforms are certainly expected to have an influence on the success or achievement of student learning. In addition to having to master all types of platforms and their operations, students in online learning are required to have independent learning in order to achieve a maximum learning achievement. For this reason, it is necessary to conduct this research to determine the effect of online learning and independent learning on student achievement.

LITERATURE REVIEW

1. Online Learning

Online learning is a learning that is carried out remotely through media in the form of the internet and other supporting tools such as cell phones and computers. Online learning is very different from learning as usual. According to Putra et al., (2020), online learning emphasizes

more on the accuracy and foresight of students in receiving and processing information presented online (Munthe et al., 2021).

According to Hadisi & Muna (2015), E-learning as a new learning model in education provides a large role and function for the world of education which has been charged with the many shortcomings and weaknesses of conventional education (education in general) including the limitations of space and time in the education process conventional. The Platform is used as a learning medium by schools and universities. At the University itself, there are various platforms used including: Google Classroom, Zoom Meeting, Whatsapp, Google Meet, and so on (Haqien & Rahman, 2020; Silalahi et al., 2022).

2. Independent Learning

Setyoningrum and Sukestiyarno (2019) revealed that the most important thing in the independent learning process is to see the improvement of students' abilities and skills in the teaching and learning process without the help of others. In independent learning, students will try to understand the content of the lesson on their own, if they have difficulty, then students will discuss it with the teacher.

The role of an educator in independent learning is only as a facilitator and not the only source of knowledge (Herman et al., 2022). According to Yamin (2008) in independent learning, students are accustomed to applying active and participatory learning methods to develop each individual, who is not bound by the presence of educators and classmates. In independent learning, students are free to determine the direction, plans, sources, and decisions to achieve academic goals.

According to Setyoningrum & Sukestiyarno, (2019), a person who is already independent in learning has the following characteristics:

1. Knowing exactly what he wants to achieve in his learning activities.
2. Can choose their own learning resources.
3. Can assess the level of ability needed to carry out work or solve problems encountered in life.

Measurement of learning independence can be done using several indicators proposed by Danim and Khairil (2010) as follows:

1. Set learning goals
2. Finding the right resources
3. Determine the learning method
4. Evaluating learning progress
3. Achievement

Achievement is the mastery of knowledge or skills that are developed and then shown by test scores or numbers given by the teacher. Learning achievement is a reflection of the level that can be achieved by students in achieving the goals that have been set in each field of study.

According to Slameto (2010), the factors that influence learning achievement can be classified into 2, namely internal and external factors.

1. Internal Factor

- a. Physical factors: health and disability factors
- b. Psychological Factors: Intelligence, attention, interests, talents, motives, maturity and readiness
- c. Fatigue factor is physical fatigue that can be seen with a weak condition

2. External Factors

- a. Family factors, including the way parents educate, relationships between family members, home atmosphere, family economic conditions, parental understanding and cultural background
- b. School factors, including curriculum teaching methods, teacher-student relations, student-student relations, school discipline, learning tools, school time, building conditions, learning methods, and homework
- c. Community factors, including the activities of students in the community, mass media, friends, and forms of community life.

The indicator that is used as a benchmark in stating that learning achievement can be declared successful if it meets the provisions of the enhanced curriculum. Measurement of learning achievement can use a tool to evaluate the test. The test is used to assess student learning outcomes and teaching and learning outcomes from educators. In this study, the authors use documentation data in the form of the Mid-Semester Examination (UTS) and Final Semester Examination (UAS) scores which are expressed in the form of numbers obtained from the learning process for one year, namely the 2020/2021 school year.

RESEARCH METHODOLOGY

This research is quantitative descriptive. The research was conducted on students of the Pend Study Program. The English language of FKIP USI Pematangsiantar NPM 2018, 2019 and 2020 T.A 2020/2021 was 50

people. Because the number of population members is below 100 people, all members of the population participate in the observation. Or in other words, the sampling technique uses a saturated sampling technique.

The variables in this study consisted of independent variables (X1 and X2) and dependent variables (Y). The independent variable of the study is the online learning process (X1) and independent learning (X2), while the dependent variable is student learning achievement (Y).

This study uses primary data. Data was collected through questionnaires or questionnaires distributed to respondents. The data analysis method used is multiple linear regression analysis method (Herman et al., 2023). Data analysis techniques include research instrument testing, classical assumption test and hypothesis testing. The instrument test consists of a validity test and a reliability test. Classical assumption test includes normality test, multicollinearity test and heteroscedasticity test. While the hypothesis test includes the coefficient of determination test, simultaneous significance test (F test) and partial significance test (t test). This study uses the value of (alpha) 5% or 0.05. The value of is the error tolerance limit set by the researcher.

The regression equation analyzed in this study can be written as follows:

$$Y = a + b_1X_1 + b_2X_2 + e$$

Information:

Y : Student achievement

X1 : Online learning process

X2 : Independent learning

a : Constant

b_{1,2} : Regression coefficient

e : Standard error

Hypothesis

Based on the explanation above, the following hypothesis can be written:

H1: The online learning process has a significant effect on student achievement in the NPM English Education Study Program 2018, 2019 and 2020 T.A 2020/2021 during the Covid'19pandemic.

H2: Learning independence has a significant effect on student achievement in the NPM English Education Study Program 2018, 2019 and 2020 T.A 2020/2021 during the Covid'19pandemic.

RESULTS AND DISCUSSION

Descriptive Statistics

A summary of research data information is presented in the following descriptive statistical table:

Table 1. Descriptive statistics

| Variable | Minimum | Maximum | Mean | Std. Deviation |
|-------------------------|---------|---------|-------|----------------|
| Learning Achievement | 3,14 | 3,9 | 3,64 | 0,17516 |
| Online Learning Process | 45 | 75 | 62,12 | 7,599 |
| Independent Learning | 59 | 80 | 67,06 | 5,389 |

Table 4.4 shows the average score of the student achievement index of English Education Study Program FKIP USI Pematangsiantar NPM 2018, 2019 and 2020 of 3.64. This shows that on average, student learning achievement of the English Language Education Study Program FKIP USI Pematangsiantar NPM 2018, 2019 and 2020 is classified as good. Furthermore, the highest IP value is 3.9, while the lowest IP value is 3.14 with a standard deviation of 0.17516.

The average value of online learning process variable data is 62.12. This shows that the respondents on average stated that they did not agree with the statements in the online learning process variable questionnaire. The highest value is 75, and the lowest value is 45. Meanwhile, the standard deviation is 7.599.

The average value of the learning independence variable data is 67.06. That is, the average respondent agreed to the statement in the questionnaire on the learning independence variable. The highest value is 80, and the lowest value is 59. Meanwhile, the standard deviation is 5.389.

Validity and Reliability Test

Validity and reliability testing was only carried out on two independent variables, namely the online learning process and independent learning variables. The learning achievement variable does not require validity and reliability tests because these variables use secondary data.

Table 2. Validity Test Results

| Variable | Statement | Pearson Correlation | Sig. (2-tailed) | Description | |
|-------------------------|--------------|---------------------|-----------------|-------------|-------|
| Online Process | Learning | Statement 1 | 0,504 | 0,000 | Valid |
| | Statement 2 | 0,696 | 0,000 | Valid | |
| | Statement 3 | 0,702 | 0,000 | Valid | |
| | Statement 4 | 0,717 | 0,000 | Valid | |
| | Statement 5 | 0,460 | 0,001 | Valid | |
| | Statement 6 | 0,579 | 0,000 | Valid | |
| | Statement 7 | 0,664 | 0,000 | Valid | |
| | Statement 8 | 0,792 | 0,000 | Valid | |
| | Statement 9 | 0,783 | 0,000 | Valid | |
| | Statement 10 | 0,750 | 0,000 | Valid | |
| | Statement 11 | 0,678 | 0,000 | Valid | |
| | Statement 12 | 0,650 | 0,000 | Valid | |
| | Statement 13 | 0,493 | 0,000 | Valid | |
| | Statement 14 | 0,442 | 0,001 | Valid | |
| | Statement 15 | 0,377 | 0,007 | Valid | |
| | Statement 16 | 0,618 | 0,000 | Valid | |
| Independent Learning | Statement 1 | 0,632 | 0,000 | Valid | |
| | Statement 2 | 0,711 | 0,000 | Valid | |
| | Statement 3 | 0,560 | 0,000 | Valid | |
| | Statement 4 | 0,701 | 0,000 | Valid | |
| | Statement 5 | 0,783 | 0,000 | Valid | |
| | Statement 6 | 0,624 | 0,000 | Valid | |
| | Statement 7 | 0,673 | 0,000 | Valid | |
| | Statement 8 | 0,660 | 0,000 | Valid | |
| | Statement 9 | 0,681 | 0,000 | Valid | |

Table 2 shows the value of Sig. (2-tailed) all items of the statement of online learning process variables and independent learning are less than 0.05 and the Pearson correlation is positive. Thus, it can be concluded that all statements in the research instrument are valid.

Table 3. Reliability Test Results

| Variable | Cronbach's Alpha | N of Items | Description |
|-------------------------|------------------|------------|-------------|
| Online Learning Process | 0,892 | 50 | Reliable |
| Independent Learning | 0,919 | 50 | Reliable |

Reliability testing in this study used Cronbach's Alpha. An instrument is declared reliable if the value of Cronbach's Alpha > 0.6. The test results show that the value of Cronbach's Alpha for all variables is greater than 0.6. Thus, it can be concluded that the research instrument used is reliable.

Classic assumption test

Normality test

The normality test in this study used the Kolmogorov-Smirnov Test. A research model is said to meet the assumption of normality if the value is Asymp. Sig. (2-tailed) > 0.05.

Table 4. Normality Test Results

| | | Unstandardized Residual |
|----------------------------------|----------------|--------------------------------|
| N | | 50 |
| Normal Parameters ^{a,b} | Mean | ,0000000 |
| | Std. Deviation | ,14986776 |
| Most Extreme Differences | Absolute | ,112 |
| | Positive | ,059 |
| | Negative | -,112 |
| Test Statistic | | ,112 |
| Asymp. Sig. (2-tailed) | | ,160 ^c |

Table 4 shows the Asymp values. Sig. (2-tailed) of 0.160. The value is greater than 0.05. Thus, it can be concluded that the distribution of research data meets the assumption of normality.

Multicollinearity test

Multicollinearity testing was carried out by taking into account the VIF value. The VIF value must be less than 10 so that the research model is free from multicollinearity problems.

Table 5. Multicollinearity Test

| Variable | VIF | Description |
|-------------------------|------------|---------------------------------------|
| Online Learning Process | 1,000 | There is no multicollinearity problem |
| Independent Learning | 1,000 | There is no multicollinearity problem |

The summary of the multicollinearity test results presented in Table 5 shows that the VIF value of all independent variables is less than 10. Thus, it can be concluded that the research model is free from multicollinearity problems.

Heteroscedasticity Test

Heteroscedasticity test in this study used the Glejser test. A model is said to meet the assumption of heteroscedasticity if the Glejser test results show the significance probability value of the independent variable > 0.05 .

Table 6. Heteroscedasticity Test

| Variable | Sig. | Description |
|-------------------------|-------|--|
| Online Learning Process | 0,106 | There is no heteroscedasticity problem |
| Independent Learning | 0,883 | There is no heteroscedasticity problem |

The test results show that the significance probability of all independent variables is greater than 0.05. Thus, it can be concluded that the research model fulfills the assumption of heteroscedasticity.

Hypothesis Testing

Coefficient of Determination Test (R²)

The value of the coefficient of determination in this study is indicated by the value of R Square (R²). The results of the coefficient of determination test are presented in Table 7.

Table 7. Coefficient of Determination Test (R²)

| Model Summary ^b | | | | |
|----------------------------|-------------------|----------|-----------------|------------------------------|
| Model | R | R Square | Adjusted Square | R Std. Error of the Estimate |
| 1 | ,518 ^a | ,268 | ,237 | ,15302 |

Table 7 shows the R² value of 0.268. That is, the variables of the online learning process and independent learning are able to explain the variation in learning achievement by 26.8%, while the remaining 73.2% is influenced by other variables not included in the research model.

Simultaneous Significance Test (F Test)

The F test aims to test the effect of the independent variables on the dependent variable simultaneously. All independent variables are said to have a simultaneous effect on the dependent variable if the probability value of the F test is less than 0.05. The results of the F test are presented in Table 8 below:

Table 8. Simultaneous Significance Test (F Test)**ANOVAa**

| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
|-------|------------|----------------|----|-------------|-------|-------------------|
| 1 | Regression | ,403 | 2 | ,201 | 8,603 | ,001 ^b |
| | Residual | 1,101 | 47 | ,023 | | |
| | Total | 1,503 | 49 | | | |

a. Dependent Variable: Learning Achievement

b. Predictors: (Constant), Independent Learning, Online Learning Process

Table 8 shows the significance probability value of the F test of 0.05. The significance probability value is greater than 0.001. Thus, it can be concluded that the online learning process and learning independence simultaneously have a significant effect on student achievement in the 2018 NPM English Education Study Program, 2019 and 2020, T.A 2020/2021 during the Covid'19pandemic.

Partial Significance Test (t Test)

The t-test aims to test the proposed hypothesis can be accepted or rejected. The results of the t-test are presented in Table 4.13 below:

Table 9. Partial Significance Test (t Test)

| Model | Coefficients ^a | | | | | |
|-------|---------------------------|-----------------------------|------------|---------------------------|-------|------|
| | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| | (Constant) | 3,138 | ,325 | | 9,646 | ,000 |
| | Online Learning Process | ,012 | ,003 | ,508 | 4,068 | ,000 |
| | Independent Learning | -,003 | ,004 | -,104 | -,832 | ,410 |

a. Dependent Variable: Learning Achievement

Table 9 shows the regression coefficient of the online learning process variable of 0.012 and has a positive sign, with a significance probability of 0.000. The significance probability value is less than 0.05, so it can be concluded that the online learning process has a positive and significant impact on student achievement in the 2018 NPM English Education Study Program, 2019, and 2020 T.A 2020/2021 FKIP USI during the Covid'19pandemic. This means that online learning has a significant impact on increasing student achievement, especially in the English language study program.

The regression coefficient of the learning independence variable is known to be -0.003 and has a negative sign, with a significance probability of 0.410. The significance probability value is greater than 0.05, so it can be concluded that learning independence has no significant negative effect on increasing student achievement in the

2018 NPM English Education Study Program, 2019, and 2020 T.A 2020/2021 FKIP USI during the Covid'19pandemic.

2. DISCUSSION

A. The Effect of Online Learning Process on Learning Achievement

The results of the analysis show that the online learning process has a positive and significant impact on student achievement in the NPM English Education Study Program 2018, 2019, and 2020 T.A 2020/2021 FKIP USI during the Covid'19pandemic. The Covid'19pandemic caused all learning activities at USI not to be carried out. in class or face to face, but through a network by utilizing learning media such as Google Classroom, Zoom, Google Meet, Whatsapp and other learning media.

Likewise with exam activities, its implementation is also not carried out in the classroom. The exam implementation policy that is applied requires students to work on exam questions at home. The answer sheet is submitted a week later according to the specified time. With this method, the work on exam questions is not carried out in real time with adequate supervision from the lecturer in charge of the course. In addition, students have a lot of time and flexibility in completing their exam questions. Therefore, it is certain that students are able to do the exam questions as well as possible. This can be seen from the average GPA of students of the 2018 NPM English Education Study Program, 2019, and 2020 T.A 2020/2021 FKIP USI which reached 3.64. So, the method of administering the exam greatly contributes to the improvement of student achievement as shown by the results of this study.

B. The Effect of Independent Learning on Learning Achievement

The results of the analysis show that learning independence has no significant effect on student achievement in the NPM English Education Study Program 2018, 2019, and 2020 T.A 2020/2021 FKIP USI during the Covid'19pandemic. In this study, learning achievement was measured based on the student's Achievement Index value in particular in the even semester of the 2020/2021 academic year. The Grade Point Average is determined by the test scores of all courses taken by a student. The examination method applied may be the reason why learning independence has no significant effect on learning achievement. The exam method applied gives students enormous time and flexibility in working on exam questions. The time period of a week is more than enough for students to do their best on exam questions, even for students who are not prepared. That is, the method of examination or assessment carried out obscures the direct impact of student self-study on the test scores they get. With this test method, the opportunity to get good grades is balanced between students who study independently and students who do not study

independently. This is what causes learning independence to have no significant effect on learning achievement as shown by the results of this study.

CONCLUSION

This study aims to examine the effect of the online learning process and independent learning on the learning achievement of NPM English students 2018, 2019 and 2020 T.A 2020/2021 during the Covid'19 pandemic. Based on the results of the analysis that has been carried out, the following conclusions can be drawn:

1. The online learning process has a positive and significant impact on the learning achievement of NPM English students 2018, 2019 and 2020 T.A 2020/2021 during the Covid'19 pandemic.
2. Learning independence has no significant effect on learning achievement of NPM English students 2018, 2019 and 2020 T.A 2020/2021 during the Covid'19 pandemic.

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