

The Impact of Online-Based Learning and Learning Environment on Students Outcome and Motivation

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Abstract. Many factors can influence the process of learning activities and students' motivation to learn such as student abilities, student circumstances, student environmental conditions, and dynamic elements in learning. This study aimed to decide the impact of online-based learning and the learning environment on the students' outcomes and motivation as well. Descriptive correlational research was applied in this study. The 70 students majoring in TKJ grade X of SMKN 3 Kota Bengkulu, while the sample was 35 students became the population of this study. A set of questionnaires was used as the instrument. The data were analyzed by using IBM SPSS Version 26. The result of the study has shown that online-based learning affected learning motivation significantly. Besides, the learning environment also had a high effect on learning motivation. The last, the statistic displayed that online-based learning affected students learning outcomes. However, there was no significant influence between the learning environment and learning outcome.

Keywords: online-based learning; learning environment; learning motivation; learning outcomes

How to Cite: Sujarwati, I. & Rezita, R. (2022). The Effect of Online-Based Learning and Learning Environment on Students Motivation and Students Outcome. *ISSET: International Conference on Science, Education and Technology* (2022), 987-992

INTRODUCTION

Learning motivation is the driving force of the learning process and the purpose of learning is to get benefits from the learning process. Many students faced problems in learning which influence on the result of learning achievement not being in line with expectations (Sari, 2019). Learning motivation is necessary so that a person can direct and regulate their behavior in a better direction, which in turn can improve their learning performance.

There are many factors that influence students' motivation to learn, these factors include student ideals or aspirations, student abilities, student circumstances, student environmental conditions, dynamic elements in learning, and the efforts of the student teacher when teaching students. It is in line with Barkley and Major (2020) that said that motivation driven by social and psychological factors arises from intrinsic and extrinsic motivation such as interest, personal satisfaction, or pleasure. Motivation driven by social and psychological factors arises from intrinsic and extrinsic motivation such as interest, personal satisfaction, or pleasure. Students are extrinsically motivated to study because they want to get the right grades or need to get a high-paying job after finishing their studies, or perhaps they only want to please their parents, not due to the fact they really want to learn.

The state of students' learning environment is

strongly suspected to determine their learning motivation. Conditions of the learning environment include natural conditions, the living environment, relationships with peers, and social life. In particular, this study focuses on the state of the social environment, which is a factor external to students, which includes the state of the home, school, and community environment. The family environment is the most fundamental environment for the personal development and behavior of children. In the family, Parents teach their children discipline from an early age, especially when they begin to learn. Parents continue to motivate their children to want to learn in various ways. The local community also offers support for parents. The community here means students friendly environment. According to Kapur (2018) to increase good academic outcomes, it is important for students to be in home environmental conditions that are peaceful and teachers should implement teaching-learning processes although there is another learning environment factor that is influenced.

In general, the community also applies other applicable rules/standards. The existence of these rules and standards is essentially intended to create favorable environmental conditions, especially for community members who are still in school. During school hours, the school gives learning facilities and infrastructure. The school also tries to enforce rules/standards to create an

environment conducive to learning. It is hoped that a supportive learning environment will generate students learning motivation.

In addition to the learning environment, the use of learning materials can also affect students' learning motivation. Current technological developments make students and education inextricably linked with technology. An example of an application that has emerged from this development is e-learning or better known as e-learning. E-learning is a learning process conducted using electronic media or using existing information technologies to make the learning process more effective and efficient.

However, the phenomenon that occurs at this time, especially in SMKN 3 Bengkulu City, especially the students in class X majoring in Computer Network Engineering (TKJ) is that there are many students who skip class during class hours. The large number of students who skip class hours can be caused by an unsupportive learning environment at school and unattractive online-based learning. In addition, there are still many students who are lazy to do homework or other tasks given by the teacher through e-learning.

This happened because of the implementation of school regulations that were not strict/disciplined and the invitation of classmates to play truant and not do assignments. The absence of student learning motivation that arises from the outside (extrinsic) of course will make these students truant. Moreover, learning using e-learning, they consider learning through e-learning not very meaningful.

In addition to the school environment, other learning environments, namely the family and community environment, are also the cause of many students playing truant. The basic cause is that it comes from the family environment. Parents who pay less attention to and support their children to learn will reduce students' learning motivation so that they are lazy to do homework or school assignments and, in the end, they will be truant.

Referring to the background of the problem, this study is intended to investigate the impact of online-based learning and learning environment on learning motivation and student learning outcomes in class X students majoring in TKJ of SMKN 3 Bengkulu City.

METHODS

The type of research is descriptive correlational research. According to Grove & Gray (2018) "Descriptive correlational research is research conducted with a simple descriptive design and predictive correlational design. In accordance with this opinion, this study aimed to investigate how big the impact of online-based learning (X1) and learning environment (X2) on students' motivation (Y) and students' outcomes (Y2) at SMK Negeri 3 Bengkulu City. The total population was 70 students coming from class X majoring in Computer Network Engineering (TKJ) of SMKN 3 Bengkulu City. Meanwhile, the sample was determined by using a simple random sampling technique so that the number of samples obtained was 35 students. The instrument of this research is a questionnaire in form of a *Likert scale*. The validity and reliability of the instrument were determined by using SPSS 26. Furthermore, in analyzing the data in the form of mean, mode, median, standard deviation, maximum value, minimum value, and a total of all data was used SPSS version 26.

There were four hypotheses used in this study:

1. H_0 = There is no significant effect of online-based learning on learning motivation
2. H_0 = There is no significant effect of the learning environment on learning motivation
3. H_0 = There is no significant effect of online-based learning on learning outcomes
4. H_0 = There is no significant effect of the learning environment on learning outcomes

RESULTS AND DISCUSSION

As mentioned there are four hypotheses that would be tested in this study. The result of each hypothesis test can be seen in the following description.

The Impact of Online-Based Learning (X₁) on Students' Motivation (Y₁)

The first hypothesis test is done by using a simple correlation formula, namely by using the *product moment formula* which is analyzed using SPSS 26. This test serves to determine whether there is an influence between online-based learning on learning motivation.

The results of testing this hypothesis can be seen in the table below.

Table 1. Simple Linear Regression Test Results of Hypothesis 1

| | | ANOVA ^a | | | | |
|-------|------------|--------------------|----|-------------|--------|-------------------|
| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
| 1 | Regression | 10.848 | 1 | 10.848 | 15.395 | .000 ^b |
| | Residual | 23.253 | 33 | .705 | | |
| | Total | 34.101 | 34 | | | |

Table 1 shows that a simple linear correlation test finds the value of sig. Online-based learning is less than 0.05, that is, $0.000 < 0.005$, which means rejecting H_0 and accepting H_a , indicating that online learning has a significant impact on learning motivation. In addition, according to the analysis results using IBM SPSS Statistic Version 26 program, it can be seen that the correlation coefficient (r) is 0.564 and the determination coefficient (r^2) is 0.318. This means that 56.4% of the learning motivation of SMK Negeri 3 Bengkulu City students was determined by the online learning variable. At the same time, 43.6%

of students' learning motivation is determined by other variables.

The Impact of Learning Environment (X_2) on Students' Motivation (Y_1)

The second hypothesis test is done by using a simple linear regression formula. This test serves to see whether or not there is an influence between the learning environment on learning motivation.

The results of testing this hypothesis can be seen in the table below

Table 2. Simple Linear Regression Test Results of Hypothesis 2

| | | ANOVA ^a | | | | |
|-------|------------|--------------------|----|-------------|--------|-------------------|
| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
| 1 | Regression | 17.252 | 1 | 17.252 | 33.788 | .000 ^b |
| | Residual | 16.849 | 33 | .511 | | |
| | Total | 34.101 | 34 | | | |

Table 2 shows the results of a simple linear correlation test with values of sig. A learning environment greater than 0.05 corresponds to $0.000 < 0.005$. H_0 was rejected, H_a was accepted, it can be said that the learning environment has a significant impact on learning motivation. In addition, according to the analysis results using IBM SPSS Statistic Version 26 program, it can be seen that the correlation coefficient (r) is 0.711 and the determination coefficient (r^2) is 0.506. This shows that 71.1% of the learning motivation of SMK Negeri 3 Bengkulu City students is determined by learning environment variables. And 28.9% of learning motivation variables are determined by

other variables.

The Impact of Online-Based Learning (X_1) on Students' Outcome (Y_2)

The third is testing the effect of online-based learning on learning outcomes, testing this hypothesis is done using a simple correlation formula, namely by using the *product moment formula* which is analyzed using SPSS. This test serves to determine whether there is an influence between online-based learning on learning outcomes.

The results of testing this hypothesis can be seen in the table below.

Table 3. Simple Linear Regression Test Results of Hypothesis 3

| | | ANOVA ^a | | | | |
|-------|------------|--------------------|----|-------------|-------|-------------------|
| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
| 1 | Regression | .148 | 1 | .148 | 3.029 | .091 ^b |
| | Residual | 1.608 | 33 | .049 | | |
| | Total | 1.756 | 34 | | | |

Based on the table above, it can be seen that the value of sig. of online-based learning is smaller than 0.05, which is $0.091 < 0.05$. This means H_0 is rejected and H_a is accepted, which also be said that there is no significant influence between online-based learning on learning outcomes. Furthermore, based on the results of the analysis using the *IBM SPSS Statistic Version 26 program*, it shows that the correlation coefficient (r) is 0.290 and the coefficient of determination (r^2) is 0.084. This shows that the student learning outcomes of SMK Negeri 3 Bengkulu City are 29% determined by online-based learning variables. Meanwhile, 99,7% of

student learning outcomes are determined by other variables.

The Effect of Learning Environment (X_2) on Students' Outcome (Y_2)

The fourth, testing the influence of the learning environment on learning outcomes, testing this hypothesis is done by using a simple linear regression formula. This test serves to determine whether there is an influence between the learning environment on learning outcomes.

The results of testing this hypothesis can be seen in the table below.

Table 4. Simple Linear Regression Test Results of Hypothesis 4

| ANOVA ^a | | | | | | |
|--------------------|------------|----------------|----|-------------|-------|-------------------|
| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
| 1 | Regression | .083 | 1 | .083 | 1.631 | .211 ^b |
| | Residual | 1.673 | 33 | .051 | | |
| | Total | 1.756 | 34 | | | |

a. Dependent Variable: Students' Outcome

b. Predictors: (Constant), learning environment

Based on the results of a simple linear correlation test, it was found that the value of sig. from the learning environment is greater than 0.05 which is equal to $0.211 > 0.05$, this means that H_0 is accepted and H_a is rejected, which means that there is no significant influence between the learning environment on learning outcomes. Then, based on the results of the analysis using the *IBM SPSS Statistic Version 26 program*, it shows that the price of the correlation coefficient (r) is 0.217 and the coefficient of determination (r^2 is 0.047. This shows the learning outcomes of students of SMK Negeri 3 Bengkulu City that 21.7% is determined by the learning environment variable. While 78,3% of learning outcomes are determined by other variables.

Data analysis shows that the value of sig is found first. Online-based learning is less than 0.05, that is, $0.000 < 0.05$, which means rejecting H_0 and accepting H_a , indicating that online learning has a significant impact on learning motivation. Consistent with the results of this study by Cahyani (2020), Mann Whitney U has a significance value of 0.000, which means that students who study online or online during the Covid-19 or virus pandemic The value of significance 0.000 is less than 0.05 ($p < 0.05$). This is also consistent with Zulfikar's (2021)

titled Achievement Motivation in the Psychology Student Class of 2017 at Padang State University, where he showed that online learning does not give students a reason not to be achievement-motivated, although some students are still not fully academically-achievement-motivated. According to Susilawati (2020) with online learning using WhatsApp shows that there is a correlation between the two variables of 0.776 it shows that there is a correlation between the pretest-posttest, the significance was $0.00 < 0.05$ then H_0 was accepted. It further confirms that there is a significant increase in student learning outcomes before and after using WhatsApp. One of social media like WhatsApp have positive impact as a language learning. It is accordance with Barrot (2021), his paper revealed that high-profile platforms, such as Facebook, Skype, and WhatsApp remain to attract the greatest attention in language learning.

Second, the value of sig. of the learning environment is smaller than 0.05 that is equal to $0.000 < 0.05$, this means that H_0 is rejected and H_a is accepted, which means that there was a significant influence between the learning environment on learning motivation. It is in line with Kurniawan (2018) study with results showed that 1) there is a significant influence of school

environment on students' learning motivation, 2) there is a significant influence between family environment on students' learning motivation, 3) there is a significant influence between the school environment on students' learning outcomes. Learning environment has important role for students' motivation in learning. It is also accordance with study from Eccles (2020) the results support the essential role of the learning environment for students' expectancies and values for academic tasks and areas and as such for their motivation in school.

Third, the value of sig. of online-based learning is smaller than 0.05, which is $0.091 < 0.05$, this means that H_0 is rejected and H_a is accepted, which means that there was a significant influence between online-based learning on learning outcomes. It is in line with study result from A'yun et al. (2019) that showed that online-based learning has significant effect on learning outcomes. The result was accordance with Husain (2019), his study concluded that the online electronic learning model developed has been effective in improving students' learning outcomes. It means that the model has significant association with learning outcomes.

Forth, the value of sig. of the learning environment is smaller than 0.05, which is $0.211 > 0.05$, this means that H_0 is accepted and H_a is rejected, which means that there was no significant influence between the learning environment on learning outcomes. It is in line with Barret (2015), The impact of the classroom environmental factors explains only 16% of the variation in pupils' academic progress achieved.

CONCLUSION

Based on data analysis, it can be interpreted that there is a significant effect of online-based learning on learning motivation, there is a significant influence of the learning environment on learning motivation, and there is a significant influence of online-based learning on learning outcomes. However, there is no significant effect of the learning environment on learning outcomes. From the result, the teachers should have the capability not only of various learning models but also management. Therefore, the teacher really needs more professionals to increase their skills to produce benefits of the model used and needs support from stakeholders including the school by giving training. Other researchers are expected to carry out further research to uncover other factors that influence student motivation and learning outcomes both

quantitatively and qualitatively.

REFERENCES

- A'yun, Q., Sujiwo, D. A. C., & Hidayatullah, A. W. (2019). Pengaruh e-learning terhadap hasil belajar matematika pada mahasiswa teknik informatika. *JUSTINDO (Jurnal Sistem dan Teknologi Informasi Indonesia)*, 4(1), 27-35.
- Aini, Q., Zaharuddin, Z., & Yuliana, Y. (2018). Compilation of Criteria for Types of Data Collection in Management of Research Methods. *Aptisi Transactions on Management (ATM)*, 2(2), 97-103.
- Barkley, E. F., & Major, C. H. (2020). *Student engagement techniques: A handbook for college faculty*. John Wiley & Sons.
- Barrett, P., Davies, F., Zhang, Y., & Barrett, L. (2015). The impact of classroom design on pupils' learning: Final results of a holistic, multi-level analysis. *Building and Environment*, 89, 118-133.
- Barrot, J. S. (2021). Social media as a language learning environment: a systematic review of the literature (2008-2019). *Computer Assisted Language Learning*, 1-29.
- Cahyani, A., Listiana, I. D., & Larasati, S. P. D. (2020). Motivasi belajar siswa SMA pada pembelajaran daring di masa pandemi covid-19. *IQ (Ilmu Al-qur'an): Jurnal Pendidikan Islam*, 3(01), 123-140.
- Eccles, J. S., & Wigfield, A. (2020). From expectancy-value theory to situated expectancy-value theory: A developmental, social cognitive, and sociocultural perspective on motivation. *Contemporary Educational Psychology*, 61, 101859.
- Grove, S. K., & Gray, J. R. (2018). *Understanding nursing research e-book: Building an evidence-based practice*. Elsevier Health Sciences.
- Honest, B.G. 2019. Guru di Era Revolusi Industri 4.0. (Online), (https://www.kompasiana.com/baldwine_honest/5df45e6cd541df6f5d6d20b2/guru-di-erarevolusi-industri-4-0?page=all), accessed 4 Februari 2020.
- Husain, H., Thalib, S. B., Arifin, A., & Anshar, A. (2019). Development of analog-based online electronic learning models in improving students learning outcomes in informatics engineering study programs. *TEM Journal*, 8(1), 284.
- Kapur, R. (2018). Factors influencing the students academic performance in secondary schools in India. *University Of Delhi*.

- Kurniawan, J., Effendi, Z. M., & Dwita, S. (2018). The Effect of school environment, family environment and learning motivation on students' learning performance. In *1st International Conference On Economics Education, Economics, Business and Management, Accounting and Entrepreneurship (PICEEBA 2018)* (Vol. 572).
- Sari, L. Y., & Adnan, M. F. (2019). Enhancing Students' Active Involvement, Motivation and Learning Outcomes on Mathematical Problem Using Problem-Based Learning. In *International Conference of Mental Health, Neuroscience, and Cyber-psychology* (pp. 83-89). Fakultas Ilmu Pendidikan.
- Susilawati, S., & Supriyatno, T. (2020). Online learning through WhatsApp group in improving learning motivation in the era and post pandemic COVID-19. *Jurnal Pendidikan: Teori, Penelitian, dan Pengembangan*, 5(6), 852-859.
- Zulfikar, Z., & Magistarina, E. (2021). Tingkat Motivasi Berprestasi Mahasiswa Psikologi Angkatan 2017 di Universitas Negeri Padang Selama Pembelajaran Daring Covid-19. *Jurnal Pendidikan Tambusai*, 5(3), 7436-7445.