

The Effect of Online Learning on Learning Interest and Concepts Understanding During the Covid-19 Pandemic

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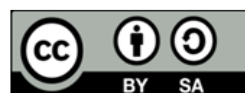
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ABSTRAK

Pandemi covid-19 menyebabkan terjadinya transformasi pelaksanaan pembelajaran yang semula luring/tatap muka menjadi pembelajaran daring. Penelitian ini bertujuan untuk menganalisis pengaruh metode pembelajaran daring terhadap minat belajar peserta didik di masa pandemic covid-19. Pembelajaran daring sangat dirasakan manfaatnya untuk tetap menjalin komunikasi pembelajaran antara guru dan peserta didik. Penelitian ini didasarkan dengan metode one-Group Pretest-Posttest. Dimana kemampuan awal peserta didik didapat melalui Pretest sebelum pelaksanaan perkuliahan, dan hasil belajar peserta didik didapat dari Posttest yang dilaksanakan setelah perkuliahan dengan menggunakan metode daring. Penelitian dilaksanakan terhadap 21 orang peserta didik yang mengambil mata pelajaran kimia asam-basa. Teknik analisis data yang digunakan yaitu analisis regresi linier sederhana. Dari hasil penelitian didapatkan rata-rata nilai peserta didik pada Pretest 59.5 dan nilai rata-rata peserta didik pada Posttest sebesar 74. Sedangkan hasil respon menunjukkan bahwa metode pembelajaran daring memiliki pengaruh positif meskipun tidak signifikan terhadap minat belajar peserta didik di masa pandemi covid-19. Artinya semakin baik kualitas pembelajaran daring maka semakin tinggi minat belajar peserta didik. Besarnya pengaruh metode pembelajaran daring terhadap minat belajar peserta didik hanya sebesar 3,8%. Itu artinya meskipun tidak signifikan akan tetapi kemampuan dosen dalam melaksanakan metode belajar daring tetap memiliki pengaruh terhadap minat peserta didik untuk belajar.

ABSTRACT

The Covid-19 pandemic caused a transformation in the implementation of learning from offline/face to face to online learning. This study aims to analyze the effect of online learning methods on students' learning interest during the Covid-19 pandemic. Online learning is very beneficial for maintaining learning communication between teachers and students. This research is based on the one-group pretest-posttest method. Where the initial ability of students is obtained through the Pretest before the lecture, and student learning outcomes are obtained from the Posttest which is carried out after the lecture using the online method. The research was conducted on 21 students who took acid-base chemistry courses. The data analysis technique used is simple linear regression analysis. From the research results, it was found that the average score of students in the Pretest was 59.5 and the average score of students in the Posttest was 74. Meanwhile, the response results showed that online learning methods had a positive, although not significant, effect on students' interest in learning during the Covid-19 pandemic. This means that the better the quality of online learning, the higher the learning interest of students. The magnitude of the influence of online learning methods on students' learning interest is only 3.8%. That means that even though it is not significant, the lecturer's ability to carry out online learning methods still has an influence on students' interest in learning.

1. INTRODUCTION

Since it was announced by President Joko Widodo regarding the first case of Corona Virus Disease 2019 (Covid-19) in early March 2020 ago, Indonesia was then faced with a pandemic. Since that day, the number of positive cases of Corona has been increasing day by day. As a result of the Covid-19 pandemic,

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various policies have been implemented to break the chain of the spread of the Covid-19 virus in Indonesia (Masban, 2021; Sari, 2021). One of the efforts made by the government in Indonesia is to apply an appeal to the public to practice physical distancing, namely an appeal to maintain distance between people, stay away from activities in all forms of crowds, associations, and avoid gatherings that involve many people. This effort is aimed at the community so that it can be done to break the chain of spread of the Covid-19 pandemic that is currently happening (Baltà-Salvador et al., 2021; Peng et al., 2020).

Education in Indonesia is also one of the areas affected by the Covid-19 pandemic (Purnasari & Sadewo, 2020; Purwanto et al., 2020). With the limitation of interaction, the Ministry of Education in Indonesia also issued a policy, namely by closing schools and changing the teaching and learning process (Purnasari & Sadewo, 2020; Purwadi et al., 2020). The Joint Decree of the 4 Ministers, namely the Minister of Education and Culture, the Minister of Religion, the Minister of Health, and the Minister of Home Affairs as outlined in the Guidelines for the Implementation of Learning in the 2020/2021 Academic Year and the 2020/2021 Academic Year in the Corona Virus Disease 2019 (Covid-19) Pandemic Period stated that that education units located in the Yellow, Orange, and Red Zone areas are prohibited from conducting face-to-face learning processes in education units and continuing to study from home (BDR) in accordance with the Circular Letter of the Minister of Education and Culture Number 4 of 2020 concerning the Implementation of Education Policies in Emergency Period for the Spread of Corona Virus Disease 2019 (Covid-19) and Circular Letter of the Secretary General of the Ministry of Education and Culture Number 15 of 2020 concerning Guidelines for Organizing Learning from Home in an Emergency Period Ratification of the Spread of Corona Virus Disease 2019 (Covid-19), Decree of the Director General of Islamic Education Number 2791 of 2020 concerning Emergency Curriculum Guidelines for Madrasas, Circular Letter of the Director General of Islamic Education Number 657 of 2020 concerning Efforts to Prevent the Spread of Covid-19 in Islamic Religious Universities.

Online learning is a solution for teaching and learning activities to continue in the midst of the corona pandemic (Batmang et al., 2021; Satrianingrum & Prasetyo, 2020). In the midst of the many pros and cons related to online learning, it turns out that there are also various lessons for education in Indonesia. Among them, students and teachers can master technology to support online learning. Teachers and students are required to have the ability in the field of learning technology (Antara & Dewantara, 2022; Siahaan, 2020). The mastery of students and teachers of very varied learning technologies is a challenge for them (Antara et al., 2022; Boardman et al., 2021). The problem that occurs today is that there are still many students who have difficulty learning chemistry. Other research states that teacher-centered learning makes students passive in learning so that it has an impact on low student learning outcomes (Minarni et al., 2022). Different conceptions of learning depend on the chemistry learning experience felt by students. This difference is increasingly visible when students have to undergo distance learning due to the pandemic (Rivaldo et al., 2022). Online learning greatly affects student learning outcomes. The online learning process which is very different from face-to-face requires students to be able to adapt well. The learning process is carried out online, most students will have difficulty understanding the material so that the learning outcomes obtained are less than optimal (Gani et al., 2022). The end of 2019 to 2020 is a special year. It is said to be special because of the emergence of the covid-19 pandemic. Covid-19 is an acronym for Coronavirus Disease -19. Corona virus is a new type of virus that was first discovered in Wuhan, China (Handayani et al., 2020; Putri et al., 2020). The Covid-19 case that occurred in Wuhan occurred in early December 2019 where an unusual pneumonia patient was found (Susilo et al., 2020; Yamali & Putri, 2020). Covid-19 has changed all aspects of life in the world, including politics, economics, social, culture, and education. Economic life that initially went well suddenly had many obstacles and obstacles caused by the corona virus/covid-19 (Saleh & Hanik, 2020; Yamali & Putri, 2020). Not much different from the world of education. The world of education was also affected by this event. The implementation of social restrictions, the prohibition of crowds, the limitation of activities outside the home inevitably has a significant impact on the world of education, especially in Indonesia. Disturbances in the direct learning process between students and teachers and cancellation of learning assessments have an impact on the psychology of students and the decline in the quality of students' skills (Siahaan, 2020). Practical learning activities which are generally carried out with face-to-face methods must be changed to non-face-to-face methods. This method is known as the online learning method (Sadikin & Hamidah, 2020).

Through this practicum learning method, teachers and students do not make direct contact in the real world but simply meet through online/virtual media (Handarini & Wulandari, 2020). The online practicum learning method can be applied through an application on Android (Wilson, 2020). This is done as a form of participation in the government's appeal in anticipating the spread of the corona virus which is very disturbing. Without face-to-face or direct physical contact, it is hoped that the spread of this virus can be controlled more quickly. This online practicum learning method is of course something new

for the community, especially in Indonesia. This is because the learning process that is commonly carried out in Indonesia is conventionally by making direct contact with students. Therefore, there are a lot of polemics that occur in society which are pros and cons regarding this learning method (Basar, 2021). People who are pro argue that the online practicum learning method is considered more fun because in carrying out learning activities it can be carried out anywhere and anytime without having to go to school and take part in a series of many school activities (Asmuni, 2020). In addition, the online learning model is also said to be able to hone students' abilities in using and utilizing the sophistication of information and communication technology so that the scientific quality of each student can increase (Handarini & Wulandari, 2020). However, people who are against this online practicum learning method are a burden. This is because for the Indonesian people, whose average economic condition is middle to lower, with this learning method, they must automatically prepare various things to support learning activities. These include sophisticated communication tools, a capable internet network, and large internet quotas.

For people who can afford this, of course, this is not a problem, but for those who are less able, living in remote areas, there is no communication network or internet yet, electricity may also not be available. Of course, this is a fairly serious and burdensome problem for the community. Not to mention related to the passion/interest of students to take part in learning activities that are also affected. Through the online learning model, students are busy with activities related to gadgets and social media (Mustakim, 2020). This is of course contrary to the conventional learning model where certain educational institutions prohibit students from carrying and operating these communication tools during learning activities. The higher intensity in accessing social media during online learning will have an impact on students' interest in participating in learning activities. Because, it is not impossible when students will be more active with their social media accounts than participating in online learning activities. The lack of control from teachers and parents plus the lack of teacher ability to use online learning applications will indirectly have an impact on students' interest in learning. In fact, interest in learning is an important element in learning activities (Arlavinda & Pujiastuti, 2022).

Etimologically, interest comes from the English language interest which means liking, attention (tendency to something), desire. So in the learning process students must have an interest or preference to take part in ongoing learning activities, because interest will encourage students to show attention, activities and participation in learning that takes place (Sirait, 2016). Interest is a sense of liking and feeling of interest in a thing or activity, without anyone asking (Heriyati, 2017). The statement means that interest is a sense of interest, attention, more desire that someone has for something, without any encouragement from others. Students are expected to have a high interest in learning in order to foster learning concentration. So that it can make it easier for students to understand the material being studied. A good interest in learning can reduce the boredom of students towards the lesson. This shows that interest is closely related to learning. As previously explained, interest plays an important role in learning activities. Interest has the benefit of being a strong motivator for learning activities in order to achieve learning achievement. The higher the interest in learning to eat, the more impact on learning achievement (Rozikin et al., 2018). Thus, learning interest has an effect on student achievement (Rofiqah & Sunaini, 2017). Interest in learning can also create and lead to concentration in learning. Students will have good concentration if they have an interest in learning what they want to know. This concentration is formed, which makes it easier for students to understand the material being studied (Setyani & Ismah, 2018). As part of learning people, students are also affected and have to adapt to online practicum learning methods. So that the impact that appears is certainly not much different from that experienced by students in general where their passion or interest in learning has decreased. This study aims to analyze the effect of online learning on students' interest in learning and understanding of concepts during the Covid-19 pandemic. The purpose of this study was to determine whether there was an influence of online learning methods on students' interest in learning and understanding of concepts during the pandemic.

2. METHOD

This research uses One-Group Pretest-Posttest Design. Where the Pretest is used as an indicator to determine the students' initial ability in acid-base chemistry. While the Posttest is an indicator to determine student learning outcomes after carrying out online learning. The research was carried out on 21 students of MAN Blora in the even semester of 2021/2022. E-learning in chemistry learning by looking at the initial abilities of students first by giving an initial test of the material to be presented in learning which then looks at its effect on student learning outcomes by using a final test, can be described in Figure 1.

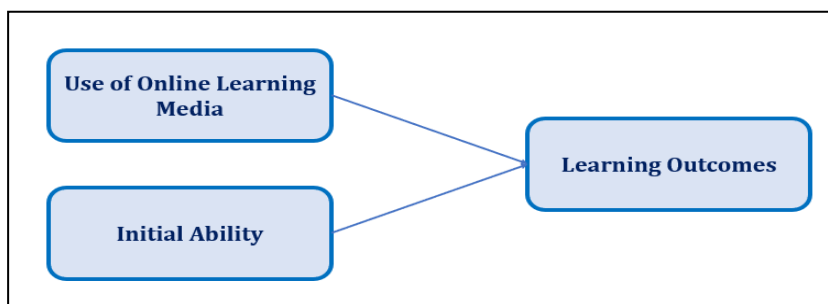


Figure 1. Research Design

Furthermore, the data analysis technique used is simple linear regression analysis by carrying out normality tests and data homogeneity tests first. The calculation process in the analysis of research data is assisted using the SPSS 15 program. The data obtained in the study are in the form of questionnaire data. There are two questionnaires used, namely the online learning method questionnaire and the student learning interest questionnaire. Each questionnaire consists of 20 question items.

3. RESULT AND DISCUSSION

Result

The online learning method revealed in this study is the response of students to the quality of online learning carried out by teachers during lectures. The results of the questionnaire by students were classified into three levels, namely high, medium, and low. The high category is if the teacher implements the online learning method appropriately in accordance with the online learning application used, is able to arouse the enthusiasm of the students, and carries out structured online learning. The medium category is if the teacher has implemented online learning methods even though they have not been able to maximize the enthusiasm of students and have not been maximal in utilizing the technology used in online learning. The low category is if the teacher has not been able to apply online learning methods appropriately and cannot manage the class well to raise the spirit of students. The results of the questionnaire were obtained is presented in Table 1.

Table 1. Results of Online Learning Method Questionnaire

No	Category	Amount
1	High	4
2	Medium	13
3	Low	4
Total		21

Referring to Table 1, information is obtained that from the 21 research samples, 4 students gave an assessment that the quality of online learning methods was in the high category, 13 in the medium category, and 4 in the low category. Based on these results, it can be concluded that the quality of online learning methods is in the medium category. This means that teachers have implemented online learning methods but have not been able to maximize the enthusiasm of students and have not been maximal in utilizing the technology used in online learning. The interest in learning of students revealed in this study is the interest in learning of students during a pandemic related to online learning methods carried out by teachers. The results of the student learning interest questionnaire were classified into three levels, namely high, medium and low. The high category is if students have a good interest, mood and enthusiasm for learning during the pandemic. The medium category is if students have an interest in learning but the mood for learning is still not stable and the enthusiasm for learning is still up and down. The low category is when students are not at all interested and not enthusiastic about carrying out learning activities. Based on the results of the questionnaire were obtained is presented in Table 2.

Table 2. Results of Student Learning Interest Questionnaire in the Covid-19 Pandemic Period

No	Category	Amount
1	High	0
2	Medium	6
3	Low	15
Total		21

Referring to [Table 2](#), it was obtained information that from the 21 research samples, 0 students had high interest in learning during the pandemic, 6 students had moderate interest in learning, and 15 students had low interest in learning. Based on these results, it can be concluded that the level of student interest in learning during the COVID-19 pandemic is in the low category. This means that teachers have implemented online learning methods but have not been able to maximize the enthusiasm of students and have not been maximal in utilizing the technology used in online learning. Furthermore, the data analysis in this study used a simple linear regression test with the help of SPSS 15. The results of the linear regression test of this study are shown in [Table 3](#).

Table 3. Regression Test Results

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	B		
(Constant)	27.142	11.579		2.344	0.036
Online Learning Method	0.157	0.220	0.195	0.716	0.487

Referring to [Table 3](#), the t-value obtained a score of 0.716 and a significance value of 0.487. These results mean that there is an insignificant positive effect between online learning methods on students' interest in learning. Furthermore, seen from the R Square value obtained a score of 0.038. The score means that the magnitude of the influence of online learning methods on students' interest in learning is only 3.8%. This means that the online learning method only affects students' learning interest by 3.8%, where the remaining 96.2% is influenced by other variables. Online learning in acid-base chemistry subjects contains learning videos, module teaching materials that are downloaded by students themselves, and also assignments as exercises to increase students' understanding of the material. In accordance with this study, the teacher gave an initial test (Pretest) to determine the initial ability of students who were answered by students in online learning with a working time limit of 50 minutes. From the results of the initial abilities of 21 students who attended lectures on acid-base chemistry subjects, [Figure 2](#) shows the results were obtained.

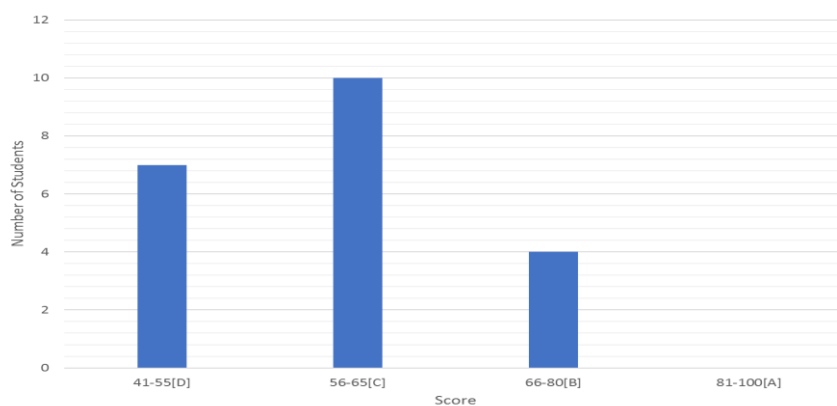


Figure 2. Recapitulation of Student Initial Ability (Pretest)

From the [Figure 2](#), it can be seen that many students do not understand the concept of acid-base chemistry itself, even though they have also received this material in high school. It can also be described statistically the value of the students' initial abilities as presented in [Table 4](#).

Table 4. Results of Descriptive Analysis on Students Initial Ability (Pretest)

Score	Pretest
Highest	74.00
Lowest	42.00
Average	59.50
median	60.50
Standard Deviation	7.70

As for the data on the ability of students' learning outcomes after lectures using online learning methods through MAN Blora e-learning, data were obtained is presented in Figure 3.

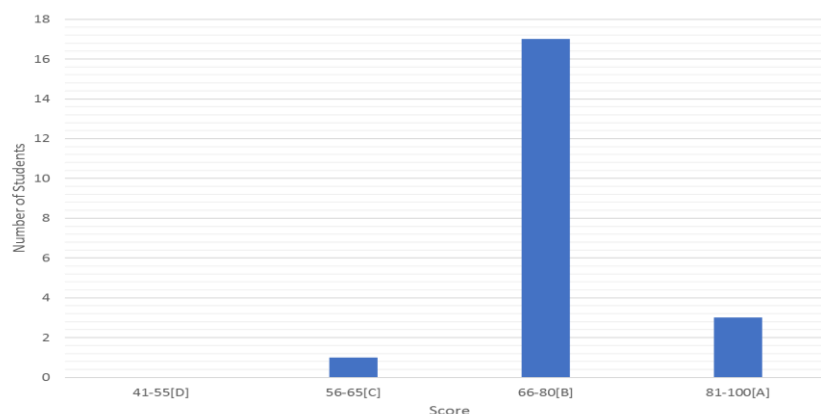


Figure 3. Recapitulation of Student Learning Outcomes After Online Learning (Posttest)

From Figure 3, we can see an increase in student learning outcomes after using the E-learning platform. From observations, it turns out that students who get a C value do not take part in learning as a whole, because learning is carried out online, the teacher cannot directly monitor the whereabouts of these students during lectures. In a statistical table we can summarize the learning outcomes of these students as shown in Table 5.

Table 5. Results of Descriptive Analysis on Student Learning Outcomes (Posttest)

Score	Posttest
Highest	87
Lowest	58
Average	74
median	75
Standard Deviation	6

We then see the data based on the increase in the average score of the 21 students, which is $74 - 59.5 = 14.5$. it means that there is an increase in the average value of students after carrying out lectures using e-learning by 14.5, this means that there is an effect of using e-learning media on student learning outcomes in acid-base chemistry subjects.

Discussion

As it is known, that the covid pandemic requires individuals not to congregate, maintain distance, and always apply very strict health protocols. This has an impact on the process of learning activities. The existence of the pandemic requires educational institutions to carry out online learning (Kumar & Nanda, 2018; Wulandari & Agustina, 2020). The online learning method is a learning method that is carried out non-face-to-face using several platforms that have elements of information technology. Through this learning method, students do not need to meet directly with educators so that the process becomes simpler and easier to implement. Online learning methods are an alternative solution when the COVID-19 pandemic arises. The impacts that arise from online learning methods vary. In general, the impact that is often raised is a decrease in students' interest in learning. Online learning methods have an impact on decreasing student interest in learning (Arlavinda & Pujiastuti, 2022; Dewi, 2017). Students feel bored when the learning process does not meet directly with the teacher. The interaction between teachers and students also decreased when learning was carried out online. This causes students' interest in learning to experience a significant decrease (Basar, 2021; Rosali, 2020).

Basically, online learning can have a positive impact on students' interest in learning. This can be done when educators are able to apply this learning method well. The ability of educators to master IT, online learning platforms, evaluation of learning outcomes, as well as the ability to liven up the classroom atmosphere is very much needed so that students' enthusiasm for learning increases (Handarini & Wulandari, 2020; Purwanti & Krisnadi, 2020). In addition, educators should also be able to innovate to implement fun online learning (Jamaluddin et al., 2020; Mustakim, 2020). The results showed that the

online learning method had a positive, although not significant, effect on students' interest in learning during the COVID-19 pandemic. This means that the better the quality of online learning, the higher the learning interest of students. The magnitude of the influence of online learning methods on students' interest in learning is only 3.8%. That means that although it is not significant, the teacher's ability to implement online learning methods still has an influence on the level of student interest in learning. Referring to the results of this study, it is hoped that educators will be able to manage classes by applying fun online learning methods so that they can increase the enthusiasm of students to carry out learning activities.

4. CONCLUSION

Based on the results of the study, it was found that the use of online media had an effect on student learning outcomes in online acid-base chemistry learning which contained video explanations of the material, learning modules and also the exercises collected in the study. Where this initial ability is an ability that already exists in the student, because this acid-base material is a strengthening material that has been studied in high school. Meanwhile, students' learning interest in online learning methods implemented at MAN Blora is in the moderate category, which means that teachers have implemented online learning methods but have not been able to maximize the enthusiasm of students and have not been maximal in utilizing the technology used in online learning. The level of interest in learning for MAN Blora students during the COVID-19 pandemic is in the low category.

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