The Effect of Using Zenius.Net-Based Learning Video Media on Student Chemistry Learning Outcomes at MA Anshor

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Abstract
The purpose of this study was to determine the effect of the use of Zenius.Net based learning video media on student chemistry learning outcomes. This type of research is descriptive quantitative. This research was carried out using the One Group Pretest-Posttest Design method which means that there is only one research group used. This research was conducted at MA Anshor with a total of 15 students, namely 10th grade as many as 8 people, and 11th grade as many as 7 people. Learning outcome data is taken based on students' cognitive tests. The data analysis technique used in this study combines descriptive data analysis for mean measurement and inferential statistics for significance testing of t-test values. The significance of the N-gain value is tested using a t-test (paired samples t-test). The average score obtained by students after using zenius.net-based learning videos of 76.47 is greater than the average score obtained by students before being given.
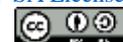
INTRODUCTION

The world of education is a very important world in human life. Educated human beings will always develop in a better direction. At every age, there will always be changes that lead to better educational progress. In addition, the world of education also requires various innovations. This is important to do for the advancement of the quality of education that not only emphasizes theory but also must be directed at practical things. Therefore, learning innovation is needed so that students become excited, have the motivation and interest in learning, and enthusiastically welcome learning at school (Mardia & Jafar, 2017).

In order for classroom learning to take place well, teachers need to make various innovations in learning activities. One of the innovations used is to use of learning media (Mardhiah & Akbar, 2018). The use of learning media in the teaching and learning process can generate new desires and interests, as well as generate motivation and stimulation to learn (Arsyad, 2011).

Learning that is still used today is simple learning so that students become bored, so learning media using videos can be used as an alternative to these problems (Budi, 2015). The development of Science and Technology today has been very advanced, as well as technological developments in the field of education, one of which is video-based learning media (Agustina & Novita, 2012).

According to research (Budi, 2015), the use of learning video media with the ASSURE model motivates students in learning Chemical properties are proven by the average score of 11th grade TEI 1 students before 69.19 to 81.48 while 11th grade TEI 2 has an average value that was originally 69.58 to 81.55 after using learning video media.

One of the learning applications whose presentation is in the form of videos is zenius. PT Zona Edukasi Nusantara (Zenius Education) is a technology-based education company from Indonesia. Zenius provides educational access services in Indonesian video format which are presented online through the website (zenius.net) and mobile applications. As of December 2020, Zenius has more than 16 million users. Zenius is present as a form of educational revolution in Indonesia by prioritizing critical, logical, rational, and integrated scientific thinking for all Indonesian students. Zenius aspires to create a generation of Indonesians who understand science and love learning, rather than becoming a generation of memorizers (Wikipedia, 2022).

One of the e-learning-based learning media in Indonesia is the Zenius application. The Zenius application, which has been established in 2008, provides educational access services in Indonesian video format which is presented online-based website (zenius.net), as well as offline with DVD media. Several Indonesian startup media said that the Zenius application is present as a form of educational revolution in Indonesia by prioritizing critical, logical, rational, and integrated scientific thinking for all Indonesian students, including high school students (Sintawana, Lazirkha, & Sari, 2020).

The use of learning media in the form of videos contained in the zenius.net application is a new thing because not all know about this application. Where, zenius.net is an application that provides many learning videos, to help students understand the material.

Based on the above problems, the importance of learning innovation in the world of education, one of which is learning innovation, namely the use of learning video media to improve student learning outcomes. So researchers want to examine the effect of using zenius.net-based learning video media on student chemistry learning outcomes at MA Anchor.

METHOD

The type of research used for research on the effect of the use of zenius.net-based learning video media on cognitive learning outcomes, chemical properties, and material of Madrasah Aliyah 10th and 11th grade students is quantitative descriptive. This research was carried out using the One Group Pretest-Posttest Design method which means that there is only one research group used, as shown in Table 1 below. This research was conducted at MA Anshor Beber with a total of 15 students, namely 10th grade as many as 8 people, and 11th grade as many as 7 people. The sampling technique is census or saturated sample, which is a sampling method if all populations are sampled, where if the number of samples is less than 30 people, this study includes population research (Safitri, Astutik, Fikri, & Saudiah, 2021).

Table 1. Research Design

Pretes	Treatment	Postes
O_1	X	O_2

Information:

O_1 : Pretes

O_2 : postes

X : Use of zenius.net

The research data was taken from the cognitive learning outcomes of students contained in the zenius.net application. Cognitive learning outcome scores are taken from all answers that answer correctly, then converted into scores. The gain value is obtained from data on improving students' cognitive learning outcomes after the learning process using zenius.net learning video media and before using zenius.net learning videos. The following n-gain formula is based on the below Table 2 categories.

$$\text{N-gain} = \frac{Spost - Spre}{SGmax - Spre}$$

Table 2. N-gain Score Criteria

N-gain	Criterion
g > 0,7	High
0,3 ≤ g ≤ 0,7	Medium
g < 0,3	Low

Source: (Riduwan & Akdon, 2013)

Based on the prerequisite test, using the t test (paired sample t test) can be obtained the significance of obtaining student cognitive learning outcomes determined through a hypothesis test, which can be calculated using Microsoft office excel for windows. Test the hypothesis is stated as follows.
H0 : zenius.net-based learning videos cannot improve students' cognitive learning outcomes.
H1 : zenius.net-based learning videos can improve students' cognitive learning outcomes.

RESULTS AND DISCUSSION

The number of students who took the pretest and posttest was the same, which was 15 people. The test questions used are the same, namely the test measuring students' cognitive learning outcomes on the zenius.net application. The pause for giving prettes with posttes is three weeks. The material given is chemical properties as shown in Figure 1 below.
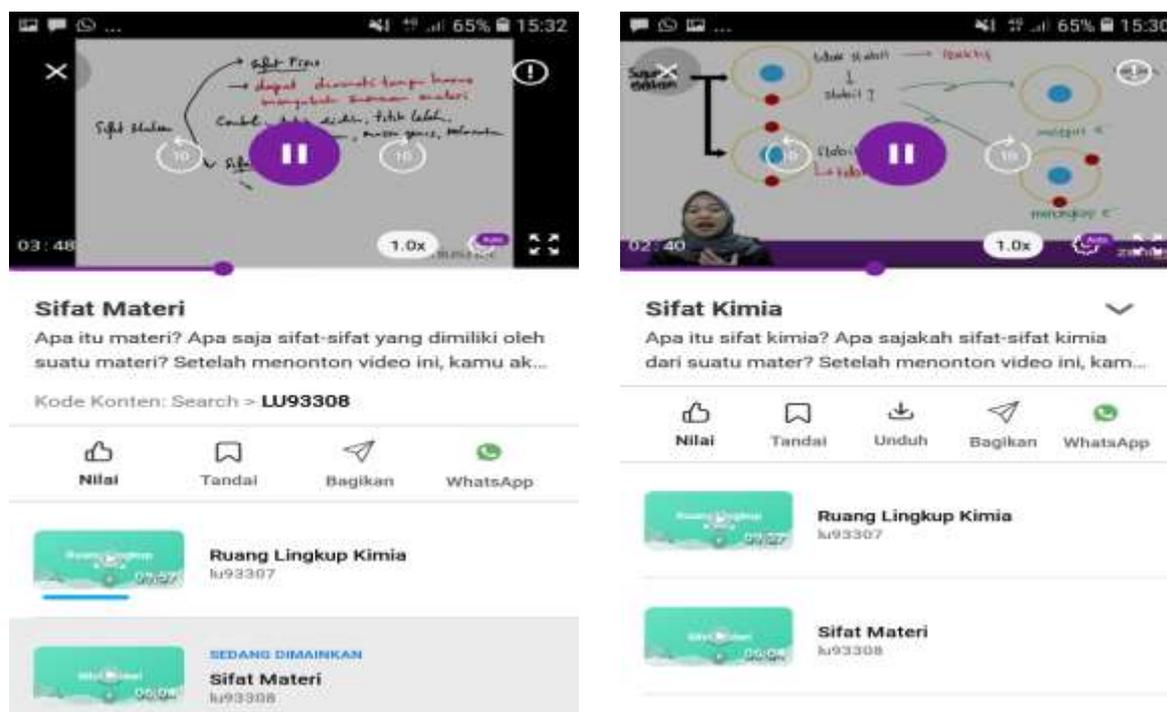

Figure 1. Material Delivered Through Zenius.net

Descriptive data for the measurement of mean values. By using the N-gain formula, the average prettes score before using the learning video was 34.67, the average posttest score was obtained after using the learning video of 76.47. The gain value is the difference between the value of prettes and posttes of 41.8 with a gain index value (N-gain) of 0.64 including the medium category. This suggests that, zenius.net-based learning videos can have an effect on cognitive learning outcomes of students' chemical properties, as shown in Figure 2 below.
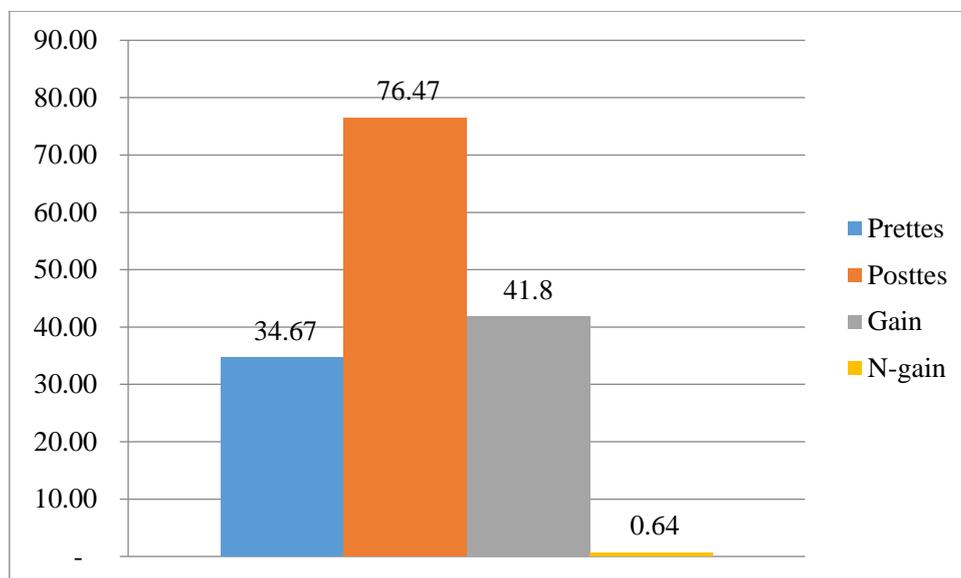

Figure 2. Average Score of Prettes, Posttes, Gain, and N-gain Values

According to Safitri, et al (2021), the results of data analysis that have been carried out have obtained a pretest value of 34.4, while a posttest value of 78.6. These results showed that there was an increase in student cognitive learning outcomes (gain) by 44.2. The n-gain value is 0.7 which indicates the medium category. This shows that the use of video media in learning biology science has an influence on students' cognitive learning outcomes.

In the hypothesis test, using the t test (paired sample t test) with the help of Microsoft office excel for windows obtained t-count = 23.61 > t-critical = 2.14, this shows that Ha is accepted i.e. zenius.net-based learning videos can improve students' cognitive learning outcomes. This is in accordance with research by Safitri, et al, (2021), stating that the use of learning videos through Zenius.Net significantly improves students' biological assessments in the cognitive domain. In line with research (Safitri, Pahriah, &; Fuaddunnazmi, 2022) concluded that the application of zenius.net-based learning videos is effective in increasing students' understanding of chemistry concepts. Likewise, research (Dwiya, 2019) states that students' learning attention and understanding of the subject matter through zenius.net website has a positive value, which means that students' understanding as a dependent variable will increase if there is an increase in the independent variable.

The Zenius application has its own advantages over other online learning platforms, this is the reason why the Zenius application is used as an object of research to find out how influential this application is. Because the Zenius application uses a system that emphasizes more detail when presenting the material, so that students better understand the material taught. As a result, students have mastered when the material is taught in their school. A system like this is actually very helpful to improve the dynamics of online learning activities in Indonesia and can be applied directly by students, but many people who do not use the Zenius application do not know it so they just think that the Zenius application is just an ordinary learning platform (Sintawana, Lazirkha, & Sari, 2020).

CONCLUSION

The average score obtained by students after using zenius.net-based learning videos of 76.47 was greater than the average score obtained by students before being given treatment of 34.67. The average value of N-gain of 0.64 is included in the medium category and is shown t-calculate = 23.61 > t-critical = 2.14. It can be concluded from this study that zenius.net-based learning videos can improve students' cognitive learning outcomes.

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