

Impact of Use of Prezi-based Media on Learning Outcomes Indonesian Language Class Student XI at Muhammadiyah Rappang Vocational High School

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Abstract: This study aims to determine the effect of using of Prezi-based Media on Learning Outcomes Indonesian Language Class Student XI at Muhammadiyah Rappang Vocational High School. The study uses a quantitative methodology with a true experimental design with a posttest-only control group design. The population of this study was class XI students totaling 30 people with a sample taken from the entire class XI as many as 30 students of class XI Muhammadiyah Rappang and using saturated sampling technique. There are 2 variables in this study, namely the use of Prezi-based media (independent variable) and Indonesian language learning outcomes of grade XI students (dependent variable). This research was conducted in class XI of Muhammadiyah Rappang Vocational High School. Data collection techniques used observation, documentation, and test techniques. The test data that has been collected is then analyzed using the mean formula and t-test. Based on the results of data analysis, the mean value of the experimental group = 77,333 and the mean value of the control group = 52,444. And in the t-test obtained t-count $4,383 >$ from t-table 5% (2,046) and 1% (2,763) with db 28. Based on the results of this study, it can be concluded that the hypothesis (H1) which states the Effect of Prezi-Based Media Use on Indonesian Language Learning Outcomes of Class XI Students of Muhammadiyah Rappang Vocational High School is "accepted".

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Introduction

The long-term process of education has shaped how people live their lives in the modern world. Meeting the rising demands of life involves education. Education plays a role in meeting the increasing needs of life. Good education must be able to keep up with the times, especially in order to utilize technology that will greatly influence the field of education. The era has been in the industry 4.0 era towards the society 5.0 era where humans will always be side by side with technology.

Teachers should understand the importance of providing creative teaching materials in order to optimize student learning outcomes. So that the learning process does not seem monotonous such as the use of textbooks, educators can utilize technology by creating learning media. In the field of education, there are many software that can be used as media in the learning process. Appropriate utilization of technology as a learning medium will result in an

effective and efficient learning and teaching process (Anjeliani et al., 2022). To achieve optimal results, education requires all parties involved to participate. Teachers are one of those involved and play a role in the creation of a quality learning process by paying attention to the quality of the learning environment. In research conducted by (Nurmayanti & Ferdiansyah, 2021) explained that a good environment can have a positive effect on students, thereby increasing their interest and enthusiasm for learning. Conversely, a poor learning environment can have a negative effect such as a lack of interest in learning for students. Students require a learning environment with an adequate physical setup, facilitators and motivators in the form of teachers, learning models that are effective for their personalities, current teaching materials, and efficient media for material delivery. A teacher unquestionably needs media that can hold students' interest during instruction in order for the learning process to be successful. The media referred to here is learning media. By utilizing learning media, it is hoped that it can create a pleasant atmosphere in the learning process so that this can be one of the factors to advance the nation's education.

Indonesian language subjects are implemented at all levels of education in Indonesia. Vocational High School is one of the school levels that implement Indonesian language learning. Indonesian is one of the crucial subjects to be taught to students because it can develop knowledge and communication skills that will be needed by students in education and the world of work. In the Indonesian language subject, students will be nurtured to be able to understand, appreciate, respond, and analyze where all these soft skills are also needed in carrying out daily life. Indonesian language learning is expected to help students to form polite, cultured language characters, be able to express their opinions well, and improve analytical and imaginative skills (Kamhar et al., 2019).

From observations made on January 18, 2023, the most common media used by teachers during the learning process at Muhammadiyah Vocational High School Rappang is using textbooks and blackboards with conventional methods and presentations using Powerpoint, the media is still considered less than optimal. One of the media most often used by teachers in delivering material is the blackboard. The media cannot clearly visualize the objects displayed. A more interesting media is needed to minimize student boredom when learning. One of the efforts that can be made to improve understanding and increase students' abilities is by using creative and innovative media assistance by applying media in the form of computer application programs as part of the teaching and learning method. The media in question is Prezi online-based learning media which will be used as an effort by teachers to students in improving learning outcomes in Indonesian language subjects.

The implementation of Indonesian language learning in practice teachers must be skilled in solving problems faced by students. One of the important factors that influence student learning outcomes is the application of learning models that teachers apply in the classroom. In order for the learning process and the teacher's objectives in teaching to be achieved, it is necessary to choose the right learning model and in accordance with students. The right learning model will make it easier for students to develop creativity in writing (Lestari & Atmazaki, 2023). Prezi is an internet-based presentation application that uses a virtual canvas to create its slides and can be an alternative that can provide an interconnected display in one slide with other slides easily. The virtual canvas can be inserted with images or photos, text, animations, or videos that can be presented online or offline (Ikram et al., 2021). Prezi is an attractive medium to deliver a material. Prezi can integrate te interesting visual and storyline to make the viewer comprehend the material deeper (Yanto & Warsono, 2023). Research

conducted by (Meidina & Rizal, 2019), states that fun prezi media can make students happy to learn even if they are studying at home. So prezi media can be said to be an innovative application of technology in the field of education.

Research Method

This study's methodology is quantitative. Quantitative research techniques are considered scientific methods or ways by (Sugiyono, 2013) because they adhere to the standards of science, which include being concrete, objective, measurable, rational, and systematic. Making a plan for the research to be conducted is necessary before you can obtain the research's findings. This study employs an experimental methodology with a posttest-only control group design and a true experiment design model. The reason it is referred to as a true experiment is that the researcher can control all external variables in this design that have an impact on the experiment's outcome. As a result, internal validity (the standard of how the research design was implemented) is high. The straightforward table that follows provides a general overview of how this study was put into practice:

Table 1. Design Study

Group	Treatment
Experiment	X
Control	-

Information:

- X : There is treatment in the experimental class using Prezi-based media
- : No There is treatment on class control with using Prezi-based media

Research variables have an important role and are closely related to the comprehensive study process. (Sugiyono, 2017) suggests that research variables are all that has been determined by the researcher which will then be studied so that data can be obtained about the research and then conclusions drawn. In this study, there are two variables used, namely as follows:

Table 2. Research Variable

No.	Component	Variable
1.	Use of Prezi-based media	Independent
2.	Indonesian language learning outcomes	Dependent

The term "population" refers to a category of objects or subjects that researchers have chosen to study in order to make generalizations about and draw conclusions from (Sugiyono, 2013). The population of this study consisted of 30 Muhammadiyah Rappang Vocational High School grade XI students during the 2023–2024 academic year.

Table 3. Circumstances Population

Class	Man	Woman	Amount
XI TKJ	16	1	17
XI Animasi	4	9	13
	Amount		30

Source Data: Muhammadiyah Rappang Vocational High School

(Sugiyono, 2017) defines the sample as part of the quantity and character that the population has. To determine the number of samples to be drawn from the population, the

researcher must carry out appropriate sampling techniques. In this study, the total population only amounted to 30 students. If the total population is relatively small, then the sampling technique used is saturated sampling / total sampling or lifting all members of the population to be used as samples (Sugiyono, 2017). Based on the explanation above, the sampling technique used is a saturation sampling technique or taking the entire population in this study to then be used as a sample, namely all students of class XI at Muhammadiyah Rappang Vocational High School totaling 30 students in two classes. More he explained can seen on table below:

Table 4. Sample Study

Class	Amount
XI TKJ	17
XI Animasi	13
Amount	30

Grouping the samples into experimental and control groups was done by uniting the two classes (XI TKJ and XI Animasi) then each student was given a serial number (XI TKJ serial number 1-17 and XI Animasi 18-30). Students who get odd numbers are used as the control group, while students who get even numbers are used as the experimental group. The data collection techniques used in this study are observation, documentation, and test techniques. Observation is a technique in collecting information by observing objects in the field. This technique is used with the aim of directly observing the learning and teaching process in the classroom. In the process of collecting data on student learning outcomes, the test used is a written test. The documentation technique was used in the study to obtain information about the state of students who actively participated in the learning process and also used to determine the number of students in class XI at Muhammadiyah Rappang Vocational High School. The questions are in the form of multiple choices totaling 30 items with 4 answer options, namely A, B, C and D which are then selected one of which is the most correct option according to the students' understanding. If the answer is correct then it will be given a score of 1, if the answer is wrong then it is not given a score (score 0). The acquisition score is then multiplied by 100 and then divided by the maximum score (number of questions). Test technique is used to determine how the difference in learning outcomes between groups that use Prezi and groups that do not use Prezi during the learning process.

The data that has been obtained is then analyzed. Data analysis technique is an indispensable step of a study because data analysis plays a role in formulating the results of a study. In this study, the data analysis used was descriptive statistical techniques using the mean formula and then significance testing using the t-test. The steps for analyzing data are student test results used to determine the classification of student scores. The scores obtained were converted into scores with the following calculation formula:

$$N = \frac{SP}{SM} \times 100$$

Information:

- N = Value
- SP = Acquisition Score of Each Student
- SM = Maximum Score
- 100 = Standard Score

1. The Mean Formula

The following mean formula is used to determine whether using Prezi-based media has an impact on student learning outcomes in class XI Indonesian Language courses at Muhammadiyah Rappang Vocational High School:

$$M_x = \frac{\sum f_x}{N_x} \quad M_y = \frac{\sum f_y}{N_y}$$

Information:

M_x = Symbol Mean X

M_y = Symbol Mean Y

X = Variable Value x

Y = Variable Value y

$\sum f_x$ = The number of frequencies of each individual value x

$\sum f_y$ = The number of frequencies of each individual y value

N_x = Number of individual X

N_y = The number of individual Y

2. T-test

T-test is a statistical test technique that compares the means of two samples to test whether or not a hypothesis is true or test assumptions in a population. For example, researchers want to test the significance of learning outcomes between groups that use certain learning methods and groups that use other learning methods (Anonim, 2022). To determine the significance of the scores between the experimental and control groups, the following inferential t-test formula was used:

$$t\text{-test} = \frac{M_x - M_y}{SD_{bm}}$$

Information:

T = Significance level (t-count)

M_x = Mean of experimental group

M_y = Mean of control group

SD_{bm} = Standard deviation of the mean

The steps to analyze the formula as found in (Mundir, 2012) are as follows:

a. The formula for finding the SD^2 value:

$$SD^2_x = \frac{\sum f_x^2}{N_x} - (M_x^2)$$

$$SD^2_y = \frac{\sum f_y^2}{N_y} - (M_y^2)$$

b. The formula for finding the SD^2M value:

$$SD^2M_x = \frac{SD^2_x}{N_x - 1}$$

$$SD^2M_y = \frac{SD^2_y}{N_y - 1}$$

c. The formula for finding the SD_{bm} value:

$$SD_{bm} = \sqrt{SD^2M_x + SD^2M_y}$$

The results of the t-test data analysis of the control group and the experimental group will be compared with the T-table formula. After finding the value of the t-test of the two groups, if the learning results are greater ($>$) than the t-table then the use of prezi media can be said to have an effect, and vice versa if the t-test results ($<$) from the t-table results then prezi media can be said to have no effect. To determine the significance in the experimental and control

groups, according to (Raharjo, 2014) the data analysis obtained is then compared between the t-count and t-table values using the following two references in making basic decisions:

- a. If the acquisition value of t-count is greater than t-table 5%, then H_0 is rejected and H_1 is accepted.
- b. If the value of t-count is smaller than t-table 5%, then H_0 is accepted and H_1 is rejected.

Result and Discussion

The study was carried out in Muhammadiyah Rappang Vocational High School's class XI. The classes XI TKJ and XI Animasi were selected as the sample. In this study, participants were separated into two groups: the experimental group, which used Prezi-based media during learning activities, and the control group, which did not. The two groups were given tests following the teaching and learning process. The acquired data would first be presented, examined, and then followed with hypothesis testing using statistical techniques to make the process of data analysis easier. The purpose of this study was to ascertain the impact of Prezi-based learning resources on student learning outcomes in Indonesian Language class XI Muhammadiyah Rappang Vocational High School. The Muhammadiyah Rappang Vocational High School served as the setting for the implementation of this study, with a sample size of 30 students. In determining the division of experimental groups and control groups by uniting the two classes then dividing then each student is given a serial number (XI TKJ serial numbers 1-17 and XI Animation 18-30). Students who get odd serial numbers are used as a control group, while students who get even serial numbers are used as an experimental group.

According to the results of this study's tests, students at Muhammadiyah Rappang Vocational High School's class XI who use Prezi-based learning materials perform better than those who follow the regular learning process. When test results for students are compared at the conclusion of the learning process, learning outcomes can be seen. When compared to the control group, which did not use Prezi-based learning materials, the experimental group's results showed that it was more successful at using the Prezi-based learning materials. This is evident from the data analysis results, which show that the control group's average value ($M_y = 52,444$) is lower than that of the experimental group ($M_x = 77,333$). In the t-test, this value yields a t-count of $4,383 >$ from t-table 5% ($2,046$) with 28 db, and indicating that the M_x value is greater than the M_y value ($77,333 > 52,444$).

Based on the gains obtained in the statement above, the hypothesis which states that there is an effect of using the Prezi-based media on the learning outcomes of Indonesian Language class XI Muhammadiyah Rappang Vocational High School is "accepted". As a consequence of this acceptance, the hypothesis which states that there is no effect of using the Prezi-based media on the results of learning Indonesian Language for class XI Muhammadiyah Rappang Vocational High School is "rejected".

The results in this study are in line with the results of research conducted by (Nurtsani & Hidayatullah, 2023) entitled "Pengaruh Media Prezi terhadap Hasil Belajar Siswa SMK Mata Pelajaran Gambar Teknik" with the acquisition a significance value of 0.00 and a hypothesis that rejects H_{02} and accepts H_{a2} so that it can be stated that there is a significant influence on the learning process using the application of prezi learning media to be able to improve learning outcomes in students in the Experimental class of Technical Drawing subjects at SMK Krian 2 Sidoarjo in the 2022/2023 school year as evidenced by data from the pretest scores of this experimental class getting good scores with a total of 1670 with an average of 52.19 and the number of posttests totaling 2450 with an average value of 76.56. Thus, there

was an increase of 46.6%. Thus, there was an increase of 46.6%. There was a significant difference in the average data from student learning outcomes in the posttest of the experimental and control classes with an increase of 13.9%. So it can be concluded that using Prezi learning media is more effective. In addition to this research, the results of research by Risa Meidina and Fahmi Rizal (2019) entitled "Pengaruh Media Pembelajaran Berbasis Prezi terhadap Hasil Belajar pada Mata Pelajaran Dasar-Dasar Konstruksi Bangunan di Kelas X TGB SMKN 5 Padang" show that the quality of mathematics learning media using Prezi software is very good based on the acquisition of the average value of the experimental class pretest 51.481 then after being treated the average value increased by 29.26 to 80.740, while for the acquisition of the average value of the control group pretest 44.583 then increased by 25.625 in the posttest average value to 70.208. When compared to the control group, the experimental group had a greater increase. The significant difference between the control class and the experimental class is due to the positive impact, namely because students feel that learning is not boring and more fun.

Conclusion

The following conclusions can be drawn from study on the impact of employing Prezi-based media on students' learning outcomes in class XI Muhammadiyah Rappang Vocational High School. The learning outcomes of Indonesian Language Class XI Muhammadiyah Rappang Vocational High School are influenced by the use of Prezi-based media in the teaching and learning process. The average value of this study's results, after analysis, is $M_x = 77,333 > M_y = 52,444$, and the t-test yields t-count 4,383 > from t-table 5% (2,046) with 28 db. According to the average value obtained, employing Prezi-based media has an impact on the learning outcomes of Indonesian language class XI at Muhammadiyah Rappang Vocational High School. The end results demonstrate that, when compared to students who simply study as normal, students who learn to use the Prezi-based media have a good impact.

References

- Anjeliani, A., Nurmayanti, & Takdir, M. (2022). Development of Web-Based Pascal Programming Multimedia at UPT SMK Negeri 2 Sidrap. *Edumaspul*, 6(2), 3160–3165. <https://ummaspul.e-journal.id/maspuljr/article/view/4159>
- Anonim. (2022). *Uji T-test*. Universitas Ciputra Creating World Class Entrepreneurs. Informatics Study Program. <https://informatika.uc.ac.id/2022/12/uji-t-test/>
- Ikram, A. F. Z., Elvia, R., & Handayani, D. (2021). Pengaruh Pemanfaatan Media Presentasi Online Prezi pada Materi Konsep Mol terhadap Hasil Belajar Siswa (Studi Eksperimen di Kelas X MIPA SMAN 9 Bengkulu Utara). *Alotrop, Jurnal Pendidikan Dan Ilmu Kimia*, 5(1), 64–73. <https://doi.org/10.33369/atp.v5i1.16488>
- Kamhar, Y., Lestari, M., & Erma. (2019). Pemanfaat Sosial Media Youtube Sebagai Media Pembelajaran Bahasa Indonesia di Perguruan Tinggi (Utilizing Youtube Social Media as Indonesian Language Learning Media in Higher Education). *Inteligensi : Jurnal Ilmu Pendidikan*, 1(2), 1–7.
- Lestari, S., & Atmazaki. (2023). Pengaruh Model Pembelajaran Project Based Learning Berbantuan Media Prezi terhadap Keterampilan Menulis Teks Eksposisi Siswa Kelas X SMAN 2 Kota Sawahlunto. *Jurnal Pendidikan Tambusai*, 7. <https://jptam.org/index.php/jptam/article/view/9028/7368>
- Meidina, R., & Rizal, F. (2019). Pengaruh Media Pembelajaran Berbasis Prezi terhadap Hasil

- Belajar pada Mata Pelajaran Dasar-Dasar Konstruksi Bangunan di Kelas X TGB SMKN 5 Padang. *Cived*, 6(3). <https://doi.org/10.24036/cived.v6i3.106230>
- Mundir, H. (2012). Statistik Pendidikan (Pengantar Analisis Data untuk Penulisan Skripsi dan Tesis). In Muhibbin, H. Hasanah, & M. Faisol (Eds.), *A psicanalise dos contos de fadas. Tradução Arlene Caetano* (I). STAIN Jember Press.
- Nurmayanti, & Ferdiansyah, H. (2021). Pemanfaatan Aplikasi Remote Desktop Teamviewer pada Praktikum Jarak Jauh di Sekolah Menengah Kejuruan Negeri 5 Sidrap. *Jurnal Basicedu*, 5(5), 3(2), 524–532. <https://journal.uui.ac.id/ajie/article/view/971>
- Nurtsani, I. M., & Hidayatullah, R. S. (2023). Pengaruh Media Prezi terhadap Hasil Belajar Siswa SMK Mata Pelajaran Gambar Teknik. *Jurnal Universitas Negeri Surabaya*, 12(02). <https://ejournal.unesa.ac.id>
- Raharjo, S. (2014). *Cara Melakukan Uji T Parsial dalam Analisis Regresi*. SPSS Indonesia. <https://www.spssindonesia.com/2014/02/cara-mudah-melakukan-uji-t-dengan-spss.html>
- Sugiyono. (2017). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Alfabeta.
- Yanto, A., & Warsono, W. (2023). The Effectiveness of Prezi Web-Based Teaching Media to Improve Nursing Students' Comprehension. *South East Asia Nursing Research*, 2(1). <http://repository.unimus.ac.id/6620/1/similarity> - The Effectiveness of Prezi Web-Based Teaching Media to Improve Nursing Students' Comprehension.pdf