



THE EFFECT OF USING CANVA ON IMPROVING STUDENT LEARNING OUTCOMES IN GEOGRAPHY AT SMAN 5 TERNATE CITY

AUTHORS INFO

Cani Abas
Student at Geography Education Program
Universitas Khairun
caniabas11@gmail.com

Eva Marthinu
Geography Education Program
Universitas Khairun

Andi Tenri Pada Agustang
Geography Education Program
Universitas Khairun

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Abstract

This study was motivated by the fact that teachers have not yet used Canva as a learning medium for geography. Based on this issue, the objective of this study is to examine the use of Canva as a medium to improve learning outcomes. This is because using Canva can make it easier for teachers to design their own learning materials without spending a significant amount of time. Additionally, Canva offers a wide variety of attractive templates, allowing teachers to use them easily and practically without requiring basic design skills. The method used in this study is a pre-experiment with a one-group pretest-posttest design, which is an experiment conducted with only one treatment or only one group without a control group; the data obtained comes from a pretest and a posttest consisting of 15 questions. The research subjects were the 25 students in Class XI IPS 3 at State Senior High School 5 in Ternate City. The results of the research data analysis indicate that there is an effect of the Canva interactive learning medium on improving the learning outcomes of students in Class XI IPS 3 at State High School 5 in Ternate City, with the t-test value showing significance (two-tailed) of $0.000 < 0.005$; therefore, H_0 is rejected and H_1 is accepted. This means that the results of the test indicate an improvement in learning outcomes when using the Canva learning medium, particularly in geography instruction.

Keywords: Canva, Improvement Learning Outcome, Geography, Senior High Schools, One Group Pretest-Posttest Design.

A. Introduction

Education is a conscious and planned effort to create a learning environment and learning process, so that students actively develop their potential to possess spiritual strength, self-control, character, intelligence, noble moral values, and the skills needed by themselves, society,

the nation, and the state (Law No. 20 of 2003 on the National Education System). The teaching and learning process is a form of implementing a school-based education system and a system of learning activities that take place on a scheduled basis. The teaching and learning process is generally determined by the roles of teachers and students as individuals involved in the learning activities. Similarly, students' academic achievement depends on how teachers deliver instruction. Therefore, preparedness in teaching plays a crucial role in the success of the teaching and learning process.

According to Ima Mulyawati (2022), the skills teachers must possess include, among other things, providing learning materials so that students can easily understand the content presented by the teacher. According to Wulandari (2023), media is one of the tools that can be used to assist teachers in delivering learning materials so that students can develop an interest in the material to be presented. The word "media" comes from the Latin word "medius," meaning "middle, intermediary, or introducer," which is defined as an effort to convey information or a message from a source to a recipient (Hasanah, 2020). In a learning process, media functions as a carrier of information from the source (teacher) to the recipient (student).

In addition, the function of media can be viewed from two perspectives: that of the educator and that of the learner. For educators, the function of media is to provide guidance or direction for achieving learning objectives, explain the structure of learning systematically, facilitate the educator's control over learning materials, assist in ensuring precision in presentation, foster the educator's self-confidence, and improve the quality of the learning process, while the functions of media for students include increasing students' motivation to learn, providing and enhancing learning variety, presenting learning materials in a systematic manner, facilitating students' learning, stimulating students to focus and analyze, creating a stress-free learning environment, and enabling students to understand the learning content presented by the teacher through the learning media (Trisiana, 2020)

To optimize the teaching and learning process, one should not only deliver material using the lecture method but also strive to create an interactive classroom environment so that students can better understand the material being taught and remain engaged during the teaching and learning process. Learning that can improve students' learning outcomes and make them more attentive to the teaching and learning process involves the use of media in the learning process, which can help students understand the knowledge and basic concepts of the subject matter; thus, learning media play a very important role in the learning process (Vebrianto, 2020). The use of audiovisual learning media can increase students' interest and ability to retain the material being taught (Andina & Abdhu 2021). Hapsari & Zulberman (2021) state that animated video media created using the Canva app can boost motivation and academic achievement and are suitable for use in the learning process, and according to Ummah (2021), audio-visual media can serve as a tool for teachers to simultaneously engage students' eyes and ears during learning activities. By using the Canva app, which offers many attractive designs, it is easy to create learning materials, particularly on Disaster Mitigation, which is directly related to conditions on Earth. This means that students are expected to be able to grasp and understand the lessons taught at school so they can participate and also serve as examples to others regarding the importance of being vigilant before a disaster occurs. Not only that, but this material will also help students understand the impacts of disasters.

B. Methodology

1. Research Design

This study employed a pre-experimental research design, specifically a one-group pretest-posttest design. A pre-experimental method using a one-group pretest-posttest design is an experiment in which only one treatment is administered to a single group, without a control group (Saputra, 2017). The design of this study is as follows:

A One-Group Pretest-Posttest Design			
Experiment	01	X	02

Notes:

X = Treatment (Learning using Canva)

01 = Pretest (Before the treatment was administered)

02 = Posttest (After the treatment was administered)

The population consists of all individuals or objects to which the research findings will be generalized (Swarjana, 2022). Based on this definition, the population in this study consists of all 11th-grade Social Studies (IPS) students at State High School 5 in Ternate City, totaling 117 students. A sample is a subset of the population that serves as the actual data source in the research (Amin, 2023). The research sample, selected randomly, consists of students from 11th-grade Social Studies (IPS) Class 3 at State High School 5 in Ternate City.

2. Instruments

Data collection instruments are tools used to collect data. In this study, the instruments used were a pre-test and a post-test, each consisting of 15 items developed by the researcher in accordance with the core competencies. The questions administered in the post-test were identical to those in the pre-test. Validity testing is used to determine whether a question is valid or not. A question is considered valid if the question or statement is capable of revealing what the question is intended to measure. This validity test uses the Corrected Total Correlation method, which involves calculating the correlation between the weights derived from the statements or questions. A statement or question is considered valid if the calculated r value is greater than the table r value (Gustika, 2021). For reliability testing, the closer the Cronbach's alpha value is to 1 or exceeds 0.7, the higher the reliability of the item (Nasution, 2024).

3. Technique of Data Analysis

Data analysis techniques: To determine improvements in student learning outcomes, the N Gain formula from Husein (2015) is used as follows:

Table 1. Normalized N-Gain Criteria

N-Gain Criteria	Normalized
$>0,70$	g-Tinggi
$0,30 < g \leq 0,70$	g-Sedang
$< 0,30$	g-Rendah

Source: Kurniawan (2024)

A normality test is used to determine whether the data is normally distributed or not; thus, it is expected to be used in calculations to assess the normality of the data. This study utilized SPSS 23 to test the normality of the pre-test and post-test data. If the significance (sig) value of the residual is >0.05 , the data is normally distributed; conversely, if the significance (sig) value of the residual is <0.05 , the data is not normally distributed.

The homogeneity test assesses whether the variance of samples drawn from the population is homogeneous or not; if the p -value is >0.05 , the data is considered homogeneous, and conversely, if the p -value is <0.05 , the data is not homogeneous. In this study, SPSS 23 was used to test the homogeneity of pre-test and post-test data. If the results of the normality test indicate that the data are normally distributed and the homogeneity test indicates homogeneity, then the one-sample t -test is used. In this study, SPSS 23 was used to compare the pre-test and post-test scores using the one-sample t -test. This study used the one-sample t -test because there was only one group, namely the experimental group

C. Findings and Discussion

1. Findings

The researchers conducted a validity test on 20 questions drawn from 6 indicators covering cognitive, affective, and psychomotor domains, involving 25 students at State Senior High School 5 in Ternate City. The results of the validity test show that, of the 20 questions, 15 were valid and 5 were invalid, as shown in the table below, which was analyzed using SPSS 23.

Table 2. Test Item Validation Results

No	r-Table	r-Calculate	Results
1.	0,05	0,211	Valid
2.	0,05	0,211	Valid
3.	0,05	0,211	Valid
4.	0,05	0,482	Valid

5.	0,05	0,920	Valid
6.	0,05	0,482	Valid
7.	0,05	0,482	Valid
8.	0,05	0,482	Valid
9.	0,05	0,482	Valid
10.	0,05	0,920	Valid
11.	0,05	0,568	Valid
12.	0,05	0,568	Valid
13.	0,05	0,568	Valid
14.	0,05	0,920	Valid
15.	0,05	0,920	Valid
16.	0,05	0,000	Invalid
17.	0,05	0,001	Invalid
18.	0,05	0,000	Invalid
19.	0,05	0,001	Invalid
20.	0,05	0,000	Invalid

Source: results of data analysis

The closer the Cronbach's alpha value is to 1 or greater than 0.7, the higher the reliability of the items (Nasution 2024). The reliability of the 20-item conceptual understanding instrument is 0.725. Since the alpha value (0.725) > 0.7, the items are reliable and fall into the very high category.

Table 3. Reliability Test

Cronbach's Alpha	
	N of Items
.725	20

Based on the table 5., it can be concluded that for the pretest of Class XI IPS 3, with 25 students, the highest score was 28, the lowest score was 2, and the average pretest score was 18.9; whereas for the posttest of Class XI IPS 3, with 25 students, the highest score was 50, the lowest score was 27, and the average post-test average score was 65.6. Based on the pretest and posttest results for the experimental class, a comparison of the average learning outcomes will be provided. To assess the effectiveness of the learning process, the N-Gain formula will be used. It can be concluded that the change in learning outcomes—or the difference between the average pretest and posttest scores for Class XI IPS 3—is 46.7, with an N-Gain value of 0.57, which falls into the moderate category.

Table 4. Pretest & Posttest Score

Test	Highest Score	Lowest Score	Average Score	Improvement in Result	N-gain (g)
Pretest	28	3	18,9	46,7	0,57
Posttest	50	27	65,6		(Moderate)

A normality test is used to determine whether data is normally distributed or not; therefore, the following formula is used to assess the normality of a dataset:

- H0: The data is normally distributed.
- H1: The data is not normally distributed

With a significance level of $\alpha = 0.05$ and the following testing criteria:

- Accept H0 if sig > α
- Reject H0 if sig < α

The normality test was conducted on the results of two samples from class XI IPS3, as shown in the SPSS 23 output (Table 6) below:

Table 5. Normality Test

Test	Saphiro Wilk				Descriptions
	Statistic	Statistic	Df	Sig.	
Pretest	,111	,943	25	,169	Normal

Posttest	,112	,967	25	,559	Normal
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Based on the table above, the normality test conducted on the pretest and posttest learning outcomes of students in the experimental class used a significance level of 0.05. After processing the data in SPSS 23, the sig value for the posttest learning outcomes in the experimental class was 0.559, meaning that the sig value is greater than the significance level ($0.559 > 0.05$). Therefore, it can be concluded that the posttest scores in the experimental class are normally distributed. For the pretest learning outcomes, the sig value was 0.169, meaning the sig value is greater than the significance level ($0.169 > 0.05$). Therefore, it can be concluded that the posttest scores in the experimental class are normally distributed.

The homogeneity test was conducted on the pretest and posttest results. The purpose of the homogeneity test is to determine whether the data in a class originate from a homogeneous population. The hypothesis testing in this study uses the ANOVA (Analysis of Variance) test in SPSS 23 with the following hypothesis formula:

- a. H_0 = Homogeneous variances
- b. H_1 = Non-homogeneous variances

With a significance level $\alpha = 0.05$ and the testing criteria are as follows:

- a. Accept H_0 if $\text{sig} > \alpha$
- b. Reject H_0 if $\text{sig} < \alpha$

The homogeneity test was performed on the results of two samples from the experimental class, as shown in the SPSS 23 output (Table 7) below:

Table 6. Test of Homogeneity of Variances

Levene Statistic	df1	df2	Sig.
2,566 ^a	7	9	,094

Based on the table above from the SPSS output, a significance value of 0.94 was obtained, meaning that the significance value is greater than the significance level $\alpha = 0.05$ ($0.94 > 0.05$). Thus, H_0 is accepted. It can therefore be concluded that the data from the pretest and posttest results in the experimental class are homogeneous.

The hypothesis test used in this study was the t-test (Paired-sample t-test) using SPSS version 23. The research hypotheses H_0 and H_1 are stated as follows:

H_0 : There is no improvement in the learning outcomes of Grade 11 Social Studies Class 3 students at State High School 5 in Ternate City before and after using the Canva medium.

H_1 : There is an improvement in the learning outcomes of students in Class XI IPS 3 at State High School 5 in

Ternate before and after using the Canva media. Hypothesis testing criteria: If the sig value (2-tailed) < 0.05 , then H_0 is rejected and H_1 is accepted, If the sig value (2-tailed) > 0.05 , then H_0 is accepted and H_1 is rejected

Table 2. Paired Sample T-Test

Table 2. Paired Sample T-Test								
		Paired Differences				T	Df	Sig. (2-tailed)
		95% Confidence Interval of the						
Pretest – Posttest	Mean	Std.	Std. Error	Lower	Upper			
	-28,52000	5,95903	1,19181	-30,97977	-26,06023	-23,930	24	,000

Based on Table 4.10, the p-value (two-tailed) is 0.000. Since $0.000 < 0.05$, H_0 is rejected and H_1 is accepted, in accordance with the established criteria; thus, it can be concluded that there is an increase in the use of Canva in teaching natural disaster mitigation in the experimental class XI IPS 3 at State High School 5 in Ternate City

2. Discussion

Improving learning outcomes through the learning process involves, among other things, students understanding the material taught, completing assignments, and reviewing the material

that has been taught. The use of Canva as a learning tool in this study is believed to be an effective approach. Therefore, student learning outcomes serve as the benchmark that must be validated. Consequently, teachers must serve as learning role models capable of designing effective lessons so that learning objectives can be optimally achieved. So that students are able to strive to develop their potential. One of the benchmarks for determining whether learning is effective or not can be seen through students' learning outcomes. If students have a high average learning score, the learning process is considered effective; conversely, if students have a low average learning score, the learning process is considered ineffective. Students' learning outcomes can be assessed through test scores. The learning process is an educational activity conducted by two parties: the teacher as a facilitator and the students as the recipients of learning, serving as intermediaries to convey messages in cognitive, affective, and psychomotor messages. Learning is anything that can convey messages through various channels, such as stimulating the students' thoughts, feelings, and wills, thereby promoting the creation of an effective learning process (Daniyati, 2023).

Next, to assess the effectiveness of a particular medium, the N-Gain formula was used to evaluate the gain criteria. The N-Gain score for Class XI IPS3 was 0.58, indicating moderate effectiveness. This aligns with Uba's (2022) finding that the use of Canva in the teaching-learning process is considered good/sufficiently effective, with an N-Gain value of 0.66. Since instructional media is a crucial component in the teaching-learning process—as it is used to convey information to students in a planned manner—it facilitates effective learning. One of the learning media that can be used to achieve effective learning is, as stated by Wulandari & Mudinillah (2022), that Canva is an online design application that is easy to use; the use of learning media via Canva can help students clarify their understanding of abstract material, thereby preventing verbalism among students and overcoming limitations of space, time, and resources during the learning process, as well as enhancing students' interest in learning, whether in online or in-person settings.

The class was taught using Canva (Grade 11 Social Studies Class 3, experimental group) without a control or comparison group, in accordance with the research method that uses a single class as the experimental group (one-group pretest-posttest design). At the beginning of the study, a pretest was administered to assess initial ability, using normality and homogeneity tests on the pretest and posttest results. From the analysis of the pretest and posttest scores, it was found that Class XI IPS3 exhibits a normal distribution, as shown in (Table 4.4), with a significance value (sig) of 0.169 for the pretest and 0.559 for the posttest, both falling within the normal category. There was no difference in the data from the pretest and posttest results for Class XI IPS3, indicating homogeneity with a sig value of 0.94. Since the data were normally distributed and homogeneous, the subsequent statistical analysis used hypothesis testing, specifically the t-test, with the assistance of SPSS version 23.

The results of this study show that the average pretest score for Class XI IPS 3 was 18.9, which increased to 65.6 after the posttest. This is consistent with the findings of Anas Munawir & Jufri Muh (2023), who noted that using Canva as a learning medium can improve learning outcomes, with an average pretest score of 52 and a posttest score of 74.9. According to Desi (2020), the use of learning media in the learning process is crucial as it helps improve educational quality. One such example is Canva-based media, where analysis indicates that students' learning outcomes using Canva are higher than those in learning that does not utilize Canva. Thus, according to Lisa Elianti Nasution (2023), learning media using the Canva application especially the creation of presentation slides can provide new knowledge and skills for teachers in designing visual learning media to help students understand more easily.

Next, a t-test was conducted on the mean scores of the pretest and posttest data, yielding a significance level (two-tailed) of 0.000. Since $0.000 < 0.05$, H_0 is rejected and H_1 is accepted, in accordance with the established criteria, indicating that the use of Canva had an effect on learning outcomes before and after its implementation in the natural disaster mitigation lesson for the experimental class XI IPS 3 at State High School 5 in Ternate City. Thus, this study also found an improvement in learning outcomes resulting from the use of Canva as a learning medium for natural disaster mitigation material at a moderate level, such that students' learning outcomes after using Canva were higher compared to those without using the medium in the learning process. This aligns with Ahmad's (2024) view that the interactive Canva learning medium can enhance students' understanding, as the visually engaging content is easier for students to grasp and retain. Consequently, the t-test results yielded a significance level (sig, two-tailed) of $0.000 <$

0.005, leading to the rejection of H_0 and acceptance of H_1 —indicating an improvement in students' learning outcomes. Fadila (2023) states that learning media greatly assists teachers in the teaching and learning process, serving as a tool to facilitate the desired learning activities so that they can proceed effectively to achieve learning objectives.

Therefore, using Canva as a learning tool can improve student learning outcomes. Students' understanding of the material improves because they grasp concepts by hearing explanations and directly viewing real-world examples presented in the learning materials created using the Canva app. The advantage of the Canva app is that it provides a variety of attractive designs and templates that are easy to use, even for beginners, while the disadvantage is that it cannot be used offline or without an internet connection.

D. Conclusion

Based on the research results described above, the researcher concludes that the use of the interactive learning tool Canva has an effect on improving the learning outcomes of students in Class XI IPS3 at State Senior High School 5 Kota. This is evidenced by the t-test results using SPSS 23. The sig value (two-tailed) was 0.000, which is < 0.05 ; therefore, according to the criteria, H_0 is rejected and H_1 is accepted. Thus, the test results indicate an improvement in learning outcomes among students resulting from the use of the Canva learning medium.

E. References

- Amin, N. F. (2023). Konsep Umum Populasi dan Sampel dalam Penelitian. *Jurnal Pilar*, 14(2).
- Andina, A., & Abdhu, W. M. (2021). Efektivitas Media Audio Visual dalam Meningkatkan Minat Belajar Siswa. *Jurnal Pendidikan dan Konseling*, 3(2).
- Daniyati, N. A. (2023). Hubungan antara Media Pembelajaran dengan Efektivitas Proses Belajar Mengajar. *Jurnal Pendidikan Indonesia*, 4(1).
- Desi, P., & N. S. (2020). Efektivitas Media Pembelajaran Pop Up Book Terhadap Peningkatan Kemampuan Membaca Siswa Sekolah Dasar. *Jurnal Pendidikan Dasar*, 5(2).
- Gustika, G. G. (2021). Penggunaan Corrected Item Total Correlation dalam Uji Validitas Instrumen. *Jurnal Penelitian Pendidikan*, 8(1).
- Hapsari, G. P. P., & Zulherman, Z. (2021). Analisis Penggunaan Media Video Animasi Berbasis Canva terhadap Motivasi Belajar Siswa. *Jurnal Basicedu*, 5(4).
- Hasanah, S. U. (2020). Hakikat Media dalam Pembelajaran. *Jurnal Ilmu Pendidikan*, 2(1).
- Mulyawati, I. (2022). Kesiapan Guru dalam Menyediakan Media Pembelajaran yang Inovatif. *Jurnal Profesi Keguruan*, 8(2).
- Munawir, A., & Muh, J. (2023). Efektivitas Canva sebagai Media Pembelajaran dalam Meningkatkan Hasil Belajar. *Jurnal Pendidikan dan Teknologi*, 5(1).
- Nasution, L. E. (2023). Pengembangan Media Pembelajaran Visual Berbasis Canva untuk Meningkatkan Pemahaman Siswa. *Jurnal Teknologi Pendidikan*, 11(2).
- Nasution, S. (2024). Interpretasi Nilai Cronbach Alpha dalam Uji Reliabilitas Instrumen. *Jurnal Metodologi Penelitian*, 9(1).
- Saputra, A. (2017). Penggunaan Media Pop-up sebagai Peningkatan Kemampuan Menulis Karya Ilmiah. *Jurnal Ilmiah Pendidikan Guru Sekolah Dasar*, 4(2).
- Swarjana, I. K. (2022). *Populasi-Sampel & Teknik Sampling dalam Penelitian*. Yogyakarta: Andi Offset.
- Trisiana, A. (2020). Fungsi Media Pembelajaran bagi Pendidik dan Peserta Didik. *Jurnal Inovasi Kurikulum*, 7(1).
- Uba, A. (2022). Efektivitas Penggunaan Media Canva terhadap Hasil Belajar Siswa. *Jurnal Ilmiah Pendidikan*, 4(3).
- Ummah, S. (2021). Optimalisasi Media Audio Visual dalam Pembelajaran Daring. *Jurnal Komunikasi Pendidikan*, 5(1).
- Vebrianto, R. (2020). Peran Media Pembelajaran dalam Memahami Konsep Dasar Materi Ajar. *Jurnal Pendidikan dan Kebudayaan*, 8(2).

- Wulandari, A. P., Salsabila, A. A., Cahyani, K., Nurazizah, T. S., & Ulfiah, Z. (2023). Pentingnya Media Pembelajaran Dalam Proses Mengajar. *Journal of Education*, 5(2).
- Wulandari, Y., & Mudinillah, A. (2022). Efektivitas Penggunaan Aplikasi Canva sebagai Media Pembelajaran Daring dan Luring. *Jurnal Pendidikan Tambusai*, 6(1).