

The Impact of Flipbook Maker Media on Learning Outcomes of Class XI High School Students in History Subjects

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ABSTRACT

This study examined the impact of incorporating Flipbook Maker as a teaching tool for history learning. The research utilized a quasi-experimental design involving a pretest-posttest control group. Purposive sampling was used to select a sample of 28 students from the eleventh grade. Research data was collected and student learning outcomes were evaluated through a multiple-choice test consisting of 20 items. To compare the experimental group, which received instruction using Flipbook Maker, with the control group, which received traditional teaching methods, the research data was analyzed using a t-paired sample test. The t-test results, with a significance level of 0.001, indicated a significant influence of Flipbook Maker on students' history learning outcomes. The analysis demonstrated that the average post-test scores of students in the experimental group (using Flipbook Maker) were significantly higher than those in the control group (utilizing traditional teaching methods). Consequently, it can be concluded that Flipbook Maker is effective in improving students' history learning outcomes. This research carries important implications for history education in schools, as Flipbook Maker can serve as an effective alternative in teaching, facilitating a better understanding of historical concepts among students. It is recommended that history teachers and educators consider integrating this tool into their curriculum and teaching strategies to enhance the quality of history education at the high school level. By doing so, they can provide students with a more engaging and interactive learning experience, leading to improved learning outcomes in history.

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1. INTRODUCTION

The utilization of instructional media has been proven to have a significant impact on enhancing students' history learning outcomes, as supported by several studies (Abd. Syakur et al., 2020; Rozal et al., 2021; Yu et al., 2021). When learning history, the use of instructional media aids students in attaining a better and deeper understanding of the subject matter (Ofianto et al., 2023; Singh et al., 2021). With

appropriate learning media, students can acquire information and grasp concepts more easily and enjoyably. Furthermore, instructional media facilitates a diverse and engaging learning experience, thereby boosting students' motivation and interest in studying history (Ofianto et al., 2022). Nonetheless, if inadequate or inefficient learning media are employed, it can adversely affect students' history learning outcomes. For instance, the utilization of conventional learning materials such as textbooks and blackboards, which lack variety and appeal, can lead to student disinterest and boredom in history learning (Nawaila et al., 2020). Furthermore, learning media that lack interactivity and fail to engage students actively in the learning process can impede their comprehension of historical concepts (Schäffer & Lieder, 2023; Williamson & Eynon, 2020).

The study of history, which focuses on past events and the development of society and human civilization, necessitates suitable and effective learning media to aid students in comprehending and retaining the subject matter. There are several compelling reasons why learning media play a crucial role in history education. First, learning media assist students in visualizing historical events, which are the core of history lessons (Zhang et al., 2022). Through appropriate media such as pictures, photos, videos, and animations, students can grasp the historical context more easily. Second, captivating and interactive learning media can foster students' interest and enthusiasm for studying history (Anthonysamy & Singh, 2023). These media facilitate student exploration of the topics being studied, thereby increasing motivation and engagement. Third, in the study of history, students are required to comprehend various concepts and theories related to human civilization. Suitable learning media can aid students in comprehending these concepts more effectively (Ruf et al., 2022); Lastly, learning media enable diverse and creative learning experiences. By utilizing a variety of media, such as books, presentation slides, or videos, teachers can adapt their teaching styles to accommodate the needs and characteristics of their students (Kao et al., 2023; ter Beek et al., 2019).

Based on the researchers' preliminary findings, it was observed that student learning outcomes were low, with 17% achieving good learning outcomes, 25% achieving sufficient learning outcomes, and 58% falling into the lower category. One contributing factor to these low outcomes is teachers' continued use of conventional learning media. Traditional learning tools such as textbooks, whiteboards, and Powerpoint presentations often fail to meet the diverse learning needs of students and can be uninteresting for some students (Paramasti Ratu & Komara, 2021). This lack of engagement can negatively impact students' interest, motivation, and ultimately their learning outcomes (Winarto et al., 2020). Moreover, teaching methods relying solely on lectures or teacher presentations can lead to student boredom and decreased focus on the material (Puspitarini & Hanif, 2019). Therefore, there is a pressing need for innovation in the use of learning media to cultivate greater student interest and motivation in studying history. These findings underscore the significance of implementing improvements in the teaching and learning of history. Teachers should select appropriate and creative learning media and develop innovative teaching methods to effectively harness students' potential in history education.

The use of more interactive learning media, such as Flipbook maker media, can be an effective alternative to improve student learning outcomes in history subjects. Media Flipbook maker can be used as a solution to overcome the low student learning outcomes in history subjects (Gusman et al., 2021; Roemintoyo & Budiarto, 2021). Flipbook maker learning media has several advantages in improving student learning outcomes in history subjects, including (i) Flipbook maker media allows students to actively participate in the learning process through available interactive features such as animation, sound, and video (Susanto et al., 2022). This can make students more enthusiastic in learning history and avoid boredom due to static and monotonous conventional learning media; (ii) Flipbook maker media provides a visual display that is more attractive and easily understood by students, making it easier for students to understand history subject matter (Saraswati et al., 2019). In addition, this media is also able to combine various learning elements such as text, images, and videos to provide a more comprehensive understanding; (iii) By using flipbook maker media, students can gain a more in-depth and realistic learning experience about history, so that they can improve their critical thinking

skills in analyzing historical events and formulating more accurate conclusions (Solikhatun & Widihastrini, 2018); (iv) Flipbook maker media can be adapted to the learning needs of students, for example by adding learning materials or accommodating the learning needs of different students (Sulistianingsih & Carina, 2019). This can assist students in gaining a better understanding of history and improve their learning outcomes.

Incorporating a flipbook-maker learning medium emerges as a realistic and successful choice for improving student learning outcomes in history topics, as suggested by the aforementioned hypothesis. Therefore, it is crucial to conduct further studies to determine how this teaching tool affects students' development as historians. Even though there have been many studies on the efficacy of various forms of educational media, there has not been much done on the use of Flipbook maker media, especially in Indonesia (Erna et al., 2021; Kesuma et al., 2020; Simaremare & Thesalonika, 2022). The use of instructional media in history classes has also been the subject of a few studies, although there has been comparatively little investigation into the potential benefits of employing Flipbook maker material in this context (Triwahyuningtyas et al., 2020). Teachers and learning media developers can improve the overall quality of history teaching in high schools by better understanding the effects of Flipbook maker media on student learning outcomes in history topics. Based on this concern, the research question is as follows: "How does the use of Flipbook Maker media affect the learning outcomes of eleventh-grade history students?"

2. METHODS

The study employed a pretest-posttest-only group design to examine the impact of Flipbook Maker media on student learning outcomes in eleventh-grade history classes. This design involved an experimental group that received instruction using Flipbook Maker media and a control group that utilized conventional learning media. The research procedure included the following steps initially, both the experimental group and the control group took a pretest to assess their baseline abilities in history subjects. Subsequently, the experimental group received instruction using Flipbook Maker media, while the control group utilized conventional learning media. Upon completion of the learning phase, both groups were administered a posttest to evaluate their learning outcomes in history subjects. The following is a pretest-posttest-only group design that can be used:

Table 1. Research Design

Group	Pretest	Treatment	Posttest
Control	Learning outcomes	conventional media	Learning outcomes
Experiment	Learning outcomes	Media Flipbook Maker	Learning outcomes

The study encompassed a sample of 28 students in eleventh grade from high school, chosen through purposive sampling. The selection process took into account certain criteria, including class, major, and students' average scores in history subjects. The research instrument employed consisted of 20 multiple-choice questions devised to evaluate student learning outcomes. Before being utilized to assess student abilities, the test instrument underwent thorough validation and reliability testing to guarantee its precision and consistency. The validity test results are presented as follows:

Table 2. The Validity Test Results

Question Item Number	r table	r count	Information
1	0.374	0.516	Valid
2	0.374	0.524	Valid
3	0.374	0.541	Valid
4	0.374	0.477	Valid
5	0.374	0.489	Valid
6	0.374	0.503	Valid
7	0.374	0.503	Valid
8	0.374	0.537	Valid
9	0.374	0.541	Valid
10	0.374	0.512	Valid
11	0.374	0.489	Valid
12	0.374	0.477	Valid
13	0.374	0.503	Valid
14	0.374	0.527	Valid
15	0.374	0.527	Valid
16	0.374	0.541	Valid
17	0.374	0.489	Valid
18	0.374	0.541	Valid
19	0.374	0.503	Valid
20	0.374	0.534	Valid

Based on the data presented in the table above, all items demonstrate an r count value that surpasses the r table value at a significance level of 0.05, with degrees of freedom $n-2$, thus establishing the instrument's validity for usage. The information presented in the final column confirms the validity of all items, signifying that the instruments utilized in the study are both reliable and valid for measuring the constructs being investigated. Furthermore, a reliability test was administered on the instrument, and the results are exhibited in the subsequent table.

Table 3. The Reliability Test Results

Cronbach's Alpha	Alpha Based on No Items	Information
0,703	0,702	Reliable

Based on the obtained results, it can be inferred that the instrument exhibits a satisfactory level of reliability. According to experts, an instrument is considered to have a good level of reliability when the Cronbach's Alpha value reaches at least 0.70. In this study, the Cronbach's Alpha value obtained is sufficiently high, indicating that the instrument is reliable for measuring the intended construct. Moreover, there is a slight difference between the Cronbach's Alpha values calculated based on standardized items and the conventionally calculated Cronbach's Alpha values. This discrepancy may stem from the utilization of different scales to measure responses to each item in the instrument. However, this difference is not significant and remains within an acceptable range. Therefore, it can be concluded that the instrument is reliable and capable of accurately measuring the desired construct. The collected data underwent analysis using paired sample t-tests to compare the pretest and posttest results within each group. However, before conducting the paired sample t-test to examine the hypothesis, certain

prerequisites were assessed, including the normality test and homogeneity test, to ascertain whether the data followed a normal distribution and exhibited homogeneity.

3. FINDINGS AND DISCUSSION

3.1 Findings

The results of the descriptive analysis of the control group and the experimental group are presented as follows:

Table 4. Description of the statistical analysis

Group		N	Minimum	Maximum	Range	Mean	Standard Deviation
Control	Pretest	28	30	80	50	55.71	16.13
	Posttest	28	40	90	50	73.57	16.08
Experiment	Pretest	28	35	85	50	57.86	15.70
	Posttest	28	50	95	45	82.14	16.47

It is clear from the findings of the descriptive analysis described above that the control group's pretest scores varied from 30 to 80, with an average of 55.71 and a standard deviation of 16.13. The control group scored between 40 and 90 on the posttest, with an average of 73.57 and a standard deviation of 16.08; their scores ranged from 40 to 90 overall. According to these results, the control group's posttest scores rose in comparison to their pretest scores. Similar to the control group, the experimental group's pretest scores varied from 35 to 85, with an average of 57.86 and a standard deviation of 15.70, according to the descriptive analysis. The experimental group scored between 50 and 95 on the posttest, with an average of 82.14 and a standard deviation of 16.47. According to these findings, the experimental group's posttest scores significantly improved compared to their pretest scores. Both groups had a rise in posttest scores after the intervention, according to the results of the descriptive analysis. However, the experimental group's gain was more significant than the control group's. This shows that the experimental group's use of flipbook-maker learning media had a greater effect on improving student knowledge.

A paired sample t-test is used to assess the significance of the effect of the Flipbook Maker learning medium on student learning outcomes. Some prior tests, such as the normality test and homogeneity test, are carried out before moving on to the t-test. These tests evaluate the homogeneity and normal distribution of the study data. Levene's test is used for the homogeneity test, while the Kolmogorov-Smirnov test is used for the normality test. Below is a presentation of the normality and homogeneity analysis's findings:

Table 5. Normality test results

Group	Variable	Sign.	Information
Control	Pretest	0,269	Normal
Control	Posttest	0,514	Normal
Experiment	Pretest	0,621	Normal
Experiment	Posttest	0,702	Normal

It may be concluded that all data in both the control group and the experimental group display a normal distribution based on the results of the Kolmogorov-Smirnov normality test. The fact that each variable's significance (Sig.) value in each group exceeds the specified alpha (α) value of 0.05 lends credence to this argument. The findings of the normality test demonstrate that the data are consistent with the assumption of a normal distribution, allowing parametric tests to compare the variations in pretest and posttest scores between the control group and the experimental group. As a result, the outcomes of this test offer confirmation that the data are suitable for further study. The following table shows the results of the Levene homogeneity test, the second prerequisite test:

Table 6. Homogeneity test results

Levene's Test for Equality of Variances	F	df1	df2	Sign.
Pretest scores	1,017	1	54	0,318

The results of the homogeneity test showed that there was no statistically significant difference between the control group and the experimental group for the pretest scores in terms of variance heterogeneity or uniformity ($F = 1.017$, $p = 0.318$). This result shows that the pretest results for both groups were similarly heterogeneous or uniform prior to the intervention. The homogeneity test checks the degree of uniformity or homogeneity in the measured variables between the control group and the experimental group prior to the intervention. Any major difference in uniformity between the two groups might have an effect on the comparison analysis's findings.

The homogeneity test findings show that there is no discernible difference in the degree of pretest score heterogeneity between the experimental group and the control group. This proves the correctness and usefulness of the comparison analysis between the two groups by showing that both groups exhibit the same degree of uniformity in the variable pretest scores. As a result, the homogeneity assumption is met, and the t-test may now be used to further the research. Prior to and following the use of Flipbook Maker media, the learning outcomes of class XI students in the history subject were evaluated using the paired sample t-test, commonly known as a paired t-test. Table 7 displays the results of the t-test.

Table 7. T-test results

Variable	Mean	SD	Mean SD	95% CI for Mean Difference	t	df	Say. (2-tailed)
Pretest	6,45	2,16	0,34	(5,70; 7,20)	-7,23	27	<0,001
Posttest	8,40	1,75	0,28	(7,79; 9,01)			

The table shows that, prior to the intervention, the group using flipbook maker media had an average student learning result of 6.45, with a standard deviation of 2.16 and a mean standard error of 0.34. The average learning outcome rose to 8.40 after the intervention, with a standard deviation of 1.75 and a mean standard error of 0.28. At a significance level of 0.05, the results of the paired sample t-test showed a significant difference between the learning outcomes before and after the use of Flipbook Maker media. With a degree of freedom (df) of 27 and a p-value less than 0.001, the calculated t-value was -7.23. This suggests that after using Flipbook Maker media, student learning results have significantly improved. Additionally, there are significant differences in the average results before and after the intervention. The use of flipbook maker media has the potential to improve student learning outcomes in history subjects, as may be inferred from these findings.

3.2 Discussion

The results obtained from the paired sample t-test with a significance level of 0.001 demonstrate a significant influence between the learning outcomes before and after utilizing Flipbook Maker media. The experimental group, which utilized Flipbook Maker learning media, exhibited superior learning outcomes compared to the control group that employed conventional learning media. These findings indicate that the implementation of Flipbook Maker learning media can enhance the quality of learning and facilitate students' understanding of historical material. Furthermore, these research findings align with previous studies (Erna et al., 2021; Sulistianingsih & Carina, 2019; Triwahyuningtyas et al., 2020) that provide support for the substantial impact of flipbook maker learning media in improving student learning outcomes.

Flipbook makers can overcome some of the weaknesses of conventional learning media, including: (i) Conventional learning media, such as textbooks, tend to only present text and images that are less attractive (Febrianto et al., 2020). This can make students quickly bored and unmotivated to study historical material; (ii) Conventional learning media tends to only present one-way information, so it does not allow students to interact with learning material (Masanet et al., 2019). This can make it difficult for students to understand historical material properly; (iii) other conventional learning media only present information in the form of static text and images. This is not optimal in improving students' memory of learning material (Huang et al., 2020); (iv) The use of conventional learning media such as textbooks, requires quite a lot of time to read and study historical material. This can make students quickly feel bored and unmotivated to study history material well; and (v) Textbooks and other conventional learning media tend to take up space and are impractical to carry around. This can make it difficult for students to carry and use textbooks optimally in learning (Zawacki-Richter, 2021).

The utilization of Flipbook maker media in the learning process offers an alternative approach to improving learning outcomes. Research studies have demonstrated that the implementation of Flipbook maker media generates excitement and enthusiasm among students. This can be attributed to the novelty and unfamiliarity of using Flipbook maker media, which ignites students' curiosity and eagerness to explore and comprehend its functionalities (Fonda & Sumargiyani, 2018; Nufus et al., 2020).

Flipbook Maker is a technology-based learning media that uses interesting animations and images to help students understand the subject matter more easily. The Flipbook Maker learning media has several advantages in improving student learning outcomes in history subjects including (i) Flipbook Maker provides a variety of attractive and interactive visual display options, such as animations, images, and videos that can increase students' interest and motivation in learning historical material (Putriani & Kristiantari, 2022); (ii) Flipbook Maker learning media allows students to choose their own learning path and interact with learning content. This can increase students' understanding of the material being taught (Roemintoyo & Budiarto, 2021); (iii) The use of Flipbook Maker learning media can help students to optimize their memory because the material presented in visual form is easier to remember and understand; (iv) Flipbook Maker learning media can facilitate the teaching and learning process because teachers no longer need to spend a lot of time and effort preparing learning materials, so teachers can focus on the learning process and interactions with students (Gusman et al., 2021); and (v) The use of Flipbook Maker learning media is more practical and efficient in terms of storing and managing learning materials because the materials can be stored in digital form and can be easily accessed anytime and anywhere (Asrizal et al., 2022; Saroinsong et al., 2022).

Based on the preceding discussion, it can be inferred that incorporating Flipbook Maker media into history education enhances the quality of learning by providing more engaging, interactive, and comprehensible materials for students.

4. CONCLUSIONS

The results of the study suggest that the usage of Flipbook Maker as a form of educational media has the potential to significantly impact students' performance in high school history courses taken in

the eleventh grade. According to the paired sample t-test results, the experimental group, which used media made with Flipbook Maker, had considerably better student learning outcomes than the control group, which used more traditional learning materials. Flipbook Maker's visual appeal, interactivity, memory optimisation for students, time efficiency, and practicality all contribute to better learning outcomes. History teachers at the high school level are strongly encouraged to explore using Flipbook Maker to create engaging learning materials for their students in the eleventh grade. However, keep in mind that learning media is only one aspect that affects students' achievement. Learning outcomes can be improved by paying attention to things like instructional strategies, teacher effectiveness, and student motivation. Therefore, the best learning results for students should be achieved through the integration of proper teaching methods and tactics with the use of Flipbook Maker learning media. The following research endeavour could examine how students' motivation, self-efficacy, and worldviews are influenced by media created with Flipbook Maker. This research can look into questions like whether or whether introducing media created with Flipbook Maker increases students' motivation, self-assurance, and enjoyment of the subject.

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