



Effectiveness of Animated Video Assisted Experiential Learning in Improving Elementary Students Learning Outcomes

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Abstract

This study examines the effectiveness of the Experiential Learning model assisted by animated videos in improving the learning outcomes of Natural and Social Sciences (IPAS) students at the elementary school level. A quasi-experiment with a Non-Equivalent Control Group Design was used, with purposive sampling selecting students from Presidential Elementary School, Beriwit State Elementary School 1, and Beriwit State Elementary School 2. The experimental group received animated video-assisted learning, while the control group followed conventional methods. Validity and reliability tests were conducted, and data were analyzed using an independent sample t-test. Results showed the experimental class had a significantly higher post-test average score (83.77) compared to the control group (65.00). The hypothesis test yielded a t-value of 2.018, greater than the t-table value of 1.771, with a significance of 0.007 (< 0.05). These findings confirm that the Experiential Learning model with animated videos effectively enhances students' learning outcomes. This model promotes active engagement and can be widely applied in elementary school curricula.

Keywords

Animated Videos; Elementary School; Experiential Learning Model; Learning Outcomes

INTRODUCTION

Education at the elementary school level has a fundamental role in shaping students' knowledge and skills base that will support learning at a higher level (Kian et al., 2020; Prihatmojo et al., 2026). It is important for educators to use learning methods that are not only effective but also relevant to the times (Maria et al., 2026). One of the great challenges in primary education is to create a learning environment that is able to retain students' attention, while building a deep understanding of the material (Tazkia & Darmiyanti,

2024). In this case, the application of innovative and interesting learning models, such as the Experiential Learning model, is very important. This model provides opportunities for students to be directly involved in an active and contextual learning process, thus encouraging students to understand concepts more thoroughly and applicatively (Pole & McGee, 2025).

The Experiential Learning model is a learning approach that prioritizes real experience as the main source in the learning process (Kong, 2021). In contrast to traditional learning models that tend to prioritize theory and memorization, Experiential Learning encourages students to actively participate in activities that are directly related to the material being studied (Kong, 2021). Through this experience, students not only memorize information, but also construct students' knowledge based on observation and reflection on the experience. The learning process in this model consists of a cycle of concrete experience, reflection, abstract conceptualization, and active experimentation, which allows students to connect theory with practice directly (Chang et al., 2023; O'Connor et al., 2021). The main advantages of this model are increasing student engagement, strengthening concept understanding, as well as developing critical thinking and problem-solving skills, which are essential to prepare students for future challenges.

Animated videos are one of the educational technologies that have shown great potential in improving the quality of learning, especially in the context of delivering difficult material (Cholifah & Saputro, 2022). In Natural and Social Sciences (IPAS) learning, which often involves abstract concepts and complex natural processes, animated videos can simplify the delivery of information in a more visual and engaging way (Kristiari & Cahyadi, 2023; Sae & Radia, 2023). The main advantage of animated videos lies in their ability to depict phenomena that are difficult to see directly, such as natural processes, physical changes, or scientific concepts that require visual representation (Cholik & Umaroh, 2023). In addition, animated videos can convey information in a dynamic format, thus being able to keep students' attention for longer. Thus, the use of animated videos in learning can increase student engagement and understanding, as well as provide a more enjoyable learning experience.

Research on the use of the Experiential Learning model and animated videos in education has been widely conducted (Chang et al., 2023; Graul et al., 2022; Motta & Galina, 2023). These studies indicate that the Experiential Learning model can enhance

student engagement and improve learning outcomes, while animated videos help students understand abstract concepts more easily (Bailey et al., 2022; Lia et al., 2023). However, the integration of these two approaches, specifically in elementary school education for Social and Natural Sciences (IPAS), remains underexplored. Previous research has largely focused on one approach at a time or on higher education contexts, leaving a gap in understanding how combining both methods impacts elementary school students' learning. Therefore, this study fills a critical gap by exploring the combined application of the Experiential Learning model and animated videos in IPAS learning at the elementary school level. The novelty of this research lies in its attempt to merge these two effective methods to enhance students' conceptual understanding in elementary classrooms, particularly in Indonesia, where the integration of technology into education is becoming increasingly prioritized. This research will contribute to a deeper understanding of how these modern learning tools can improve elementary students' academic outcomes.

This research offers a new contribution by combining two important elements in the world of education, namely the Experiential Learning model and animated videos, which have not been widely researched simultaneously in the context of social studies learning in elementary schools. Although each of these approaches has been shown to be effective in improving student learning outcomes (Ye et al., 2022), research integrating the two to improve understanding of science and social materials at the elementary school level is still very limited. In addition, this research also fills the knowledge gap related to the implementation of technology in basic learning in Indonesia, a country that increasingly prioritizes the use of technology in education.

The main purpose of this study is to test the effectiveness of the application of the Experiential Learning model assisted by animated videos on student learning outcomes in social studies subjects in elementary schools. Specifically, this study aims to find out whether experiential learning supported by animated videos can significantly improve student learning outcomes, compared to conventional learning.

THEORETICAL SUPPORT

Experiential Learning Models in Education

The Experiential Learning (EL) model is one of the learning approaches that is widely used at various levels of education, including in elementary schools. This model

emphasizes the importance of real experience in the learning process, where students play an active role in activities that allow students to develop understanding through hands-on experience (Kuhail et al., 2022). Learning is a cycle consisting of four stages: concrete experience, reflection, abstract conceptualization, and active experimentation (Wijnen-Meijer et al., 2022). Each of these stages provides an opportunity for students to reflect on student experiences, connect theory to practice, and apply new knowledge in different situations. Research by (Ye et al., 2022) shows that experiential learning can improve students' understanding and memory because it involves students directly in the decision-making and problem-solving process. The application of the EL model in elementary schools can create more active and enjoyable learning for students.

The Experiential Learning (EL) model offers an effective approach to learning in elementary schools by involving students in deep, hands-on experiences, rather than just theoretical knowledge. With its four-stage cycle concrete experience, reflection, abstract conceptualization, and active experimentation this model not only enhances conceptual understanding but also hones students' practical skills. Its application in elementary schools can create a more interactive and enjoyable learning environment, which in turn improves memory retention and problem-solving abilities (Ye et al., 2022). In this context, EL provides students with opportunities to engage more actively, thus significantly enhancing learning outcomes.

[The Use of Animated Videos in Learning](#)

Along with technological developments, animated videos have emerged as one of the most effective media in improving students' understanding of hard-to-understand subject matter (Anggraini et al., 2026; Khotimah et al., 2026). Animated videos have the advantage of presenting information visually, which makes abstract and complex material easier to digest (Cholik & Umaroh, 2023). According to (Sae & Radia, 2023) animated videos can enhance the learning process by combining visual and verbal elements simultaneously, which can enrich the learning experience and improve comprehension.

The use of animated videos in learning provides an effective solution for explaining difficult-to-understand material, especially abstract or complex concepts. By combining visual and verbal elements, animated videos can enrich the learning experience, enhance comprehension, and strengthen students' memory (Sae & Radia, 2023). This technology

helps students better grasp challenging concepts in a more engaging and interactive way, thereby improving overall learning effectiveness (Cholik & Umaroh, 2023).

METHOD

Research Design

This study is a quasi-experimental research that aims to test the effectiveness of the Experiential Learning model assisted by animated videos on student learning outcomes in Natural and Social Sciences (IPAS) subjects at the elementary school level. The research design used is Non-Equivalent Control Group Design, where there are two groups that are compared, namely the experimental group and the control group. The experimental group received treatment in the form of learning using the Experiential Learning model supported by animated videos, while the control group used conventional learning methods that are commonly applied in the classroom.

Research Subject

This research was conducted in several State Elementary Schools in Presidential Elementary School, Beriwit State Elementary School 1, and Beriwit State Elementary School 2, in the 2025/2026 Academic Year. The research sample was determined using the purposive sampling technique, taking into account the readiness of the school and students to participate in the research. The research subjects consisted of 52 students in class V who were divided into two groups, namely the experimental group and the control group, each totaling 26 students. The selection of class V was carried out because students at this level already have a sufficient level of basic understanding of IPAS material and are ready to be given a more interactive learning treatment.

Data Analysis

The data obtained from the pre-test and post-test were analyzed using both descriptive and inferential statistical techniques. Descriptive tests were performed to describe the characteristics of student learning outcomes, based on the average pre-test and post-test scores. To ensure the validity of the inferential analysis, prerequisite tests for statistical assumptions were first conducted. These included a normality test to assess whether the data were normally distributed and a homogeneity test to verify if the variances

of the groups were equal. Normality was tested using the Shapiro-Wilk test, while homogeneity was assessed using Levene's test. After confirming the assumptions were met, an independent sample t-test was performed to test the hypothesis, determining whether there was a significant difference in the learning outcomes between the experimental group, which used the experiential learning model assisted by animated videos, and the control group, which employed conventional learning methods.

RESULT

Pre-test and Post-test results

This study aims to test the effectiveness of the application of *the Experiential Learning* model assisted by animated videos in improving student learning outcomes in Natural and Social Sciences (IPAS) subjects. Two groups of students, the experimental group and the control group, followed different learning processes to measure their impact on improving student learning outcomes.

At the beginning of the study, all students were given a pre-test to measure the level of students' understanding of the IPAS material before the treatment was carried out. Based on the results of the pre-test, the experimental group had an average score of 68.15, while the control group had an average score of 63.27. Despite the initial differences, the two are still within a similar range, suggesting that the level of basic knowledge of students in both groups before learning is relatively comparable.

After the learning treatment, both the experimental group and the control group were given a post-test to measure students' understanding of the IPAS material after being given different treatments. The post-test results showed a striking difference between the two groups. The average post-test score in the experimental group reached 83.77, which was much higher compared to the control group which only obtained an average score of 65.00.

Analysis of Statistical Test Results

To find out if the difference between the post-test values of the experimental group and the control group was statistically significant *Independent Sample t-Test* was performed. This t-test was conducted with the aim of verifying whether the improvement in learning outcomes in the experimental group using *the experiential learning* model

assisted by animated videos differed significantly compared to the control group using conventional learning methods.

The results of the *t-test* showed that the *t*-value of the calculation was 2.018, which is greater than the table *t* of 1.771 at the degree of freedom (df) 89. In addition, the significance value obtained is 0.007, which is smaller than the specified significance limit of 0.05. Thus, it can be concluded that there is a significant difference between the experimental group and the control group in terms of learning outcomes of IPAS.

Table 1. Independent Sample T-Test Results

| t count | T table (DF 89) | Significance Value |
|----------------|------------------------|---------------------------|
| 2,018 | 1,771 | 0,007 |

Average Learning Outcome Score

The average pre-test and post-test scores in both groups can be further analyzed to see the magnitude of the changes that occurred during the learning process. Control Group: The mean pre-test score in the control group was 63.27, and after conventional treatment, the average post-test score increased only slightly to 65.00. An average increase of 1.73 indicates an improvement, but this result is not significant enough, considering that the methods used in the control group are conventional methods that may not be able to motivate students to be actively involved in learning. Experimental Groups: In contrast, experimental groups that used an animated video-assisted *Experiential Learning* model showed a much greater improvement. The average pre-test score in this group was 68.15, and after treatment, the average post-test score of the students reached 83.77, with an average increase of 15.62. This significant improvement illustrates the effectiveness of animated video-assisted learning models in improving student learning outcomes.

Significance of Difference

Based on the results of the *Independent Sample t-Test*, it can be concluded that the application of the *Experiential Learning* model assisted by animated videos in the experimental group led to a greater increase in learning outcomes compared to conventional learning methods applied to the control group. This is reflected in the *t*-value of the calculation greater than the *t* table ($2.018 > 1.771$) and the significance value smaller than 0.05 ($0.007 < 0.05$).

The significant increase in average post-test scores in the experimental group illustrates that the use of animated videos not only makes learning more interesting, but also allows students to better understand material that is abstract or difficult to understand in the context of IPAS learning. This greater improvement can be explained by the characteristics of animated videos that are able to simplify the explanation of complex scientific concepts in a visual and easy-to-understand way.

The results of this study show that *the Experiential Learning* model assisted by animated videos has a significant impact on improving student learning outcomes. The higher improvement in learning outcomes in the experimental group provides strong evidence that this model is more effective compared to conventional learning methods. The application of this model allows students to be more active in learning, connecting theory with practice through hands-on experiences that are more engaging and relevant to students' lives.

Thus, this study provides important implications for educators and education managers to consider the use of technology in learning, especially for materials that require complex visual explanations such as IPAS. The use of animated videos in *Experiential Learning* models can be a more effective learning strategy to increase student engagement and understanding.

DISCUSSION

This study shows that the application of the Experiential Learning model assisted by animated videos significantly improves student learning outcomes in Natural and Social Sciences (IPAS) subjects in elementary schools. These results are in line with the Experiential Learning theory put forward by Kolb (1984), which states that effective learning occurs when students are directly involved in the experience, followed by a process of reflection, conceptualization, and active experimentation (Wijnen-Meijer et al., 2022). This theory underscores the importance of hands-on experience in shaping student understanding, where students not only receive information, but also engage in activities that allow students to construct knowledge through practical experience (Bailey et al., 2022). In the context of basic education, this model provides students with the opportunity to understand difficult scientific and social concepts in a more interactive and meaningful.

The application of Experiential Learning supported by animated video media offers an additional advantage in the form of visualization of material that is easier to understand. Multimedia, especially those that blend text and visual images, can improve students' comprehension by presenting information through two visual and verbal cognitive channels (Wu, 2024). In the context of IPAS learning, animated videos serve to simplify complex concepts, such as scientific processes or social phenomena, in a way that is easier for students to understand (Kristiari & Cahyadi, 2023). These findings are in line with previous research that shows that the use of animation can accelerate students' understanding of abstract concepts and strengthen students' memory of the material being studied (Cholifah & Saputro, 2022; Lia et al., 2023; Sae & Radia, 2023)

The success of the video animation-assisted Experiential Learning model in improving student learning outcomes does not only depend on the use of technological media itself, but on the proper integration between the active learning model and the media. In this case, animated videos do not simply serve as visual aids, but as a means that support students' hands-on experience in connecting theory with practical applications (Chakra Setiawan et al., 2022). According to (Lia et al., 2023), the use of media such as animated videos must be adjusted to the cognitive capacity of students so as not to increase the cognitive load which can actually reduce learning effectiveness. This indicates that the quality and relevance of the media used must consider the learning objectives and the level of understanding of the students.

Overall, the results of this study have significant implications for education policy and teaching practice at the primary school level. Experiential learning models supported by technology, such as animated videos, have proven to be effective in improving student learning outcomes, and should be integrated more widely in the basic education curriculum (Usmaedi, 2021). It is recommended that educators not only rely on traditional methods in teaching science subjects, but also utilize technology as a tool to enrich learning and improve student understanding.

CONCLUSION

This study shows that the Experiential Learning model assisted by animated videos significantly improves student learning outcomes in Natural and Social Sciences (IPAS) subjects in elementary schools, compared to conventional learning methods. This model

allows students to be more actively involved in the learning process and deepen their understanding through experiences directly connected to the concepts taught. However, this study has limitations, such as a sample limited to several elementary schools in Murung Raya Regency and a duration of only one semester, so the results may not be generalizable. Additionally, the study only measured learning outcomes through pre-test and post-test scores, without considering other factors such as student motivation. Therefore, further research with a larger sample and more comprehensive evaluation methods is needed. The implications are that schools and educators are encouraged to consider implementing this model as a more interactive and engaging learning strategy, as well as the importance of developing curricula that support the use of educational technology to prepare students with relevant skills for the challenges of the 21st century.

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