

---

## THE EFFECT OF ADOBE ANIMATE BASED INTERACTIVE LEARNING MEDIA ON ELEMENTARY SCHOOL STUDENTS' UNDERSTANDING OF ETHNIC AND CULTURAL DIVERSITY

Melly Tria Utari<sup>1\*</sup>, Syahri Ramadhan<sup>2</sup>

<sup>1,2</sup>Institut Seni Budaya Indonesia Aceh, Jl. Transmigrasi, Gampong Bukit Meusara Aceh, Indonesia  
e-mail: [mellytriautari@isbiaceh.ac.id](mailto:mellytriautari@isbiaceh.ac.id)<sup>1</sup>, [syahri@isbiaceh.ac.id](mailto:syahri@isbiaceh.ac.id)<sup>2</sup>

---

### ABSTRACT

---

**Keywords:** Social Studies Learning, Interactive Media, Adobe Animate, Ethnic and Cultural Diversity, Elementary School

This study aimed to analyze the effect of Adobe Animate based interactive learning media on elementary students' understanding of ethnic and cultural diversity. Social Studies at the elementary level plays a crucial role in developing students' awareness of social realities and cultural diversity, yet conventional teaching practices often lead to limited conceptual understanding. This research employed a quantitative approach with a quasi experimental design. The participants were fourth grade students of SDN 2 Kota Jantho, divided into an experimental group and a control group. Data were collected using a conceptual understanding test and analyzed through a t test. The results indicated that students who learned using Adobe Animate based interactive media achieved higher levels of understanding than those who learned without interactive media. These findings suggest that Adobe Animate based learning media is effective in enhancing the quality of Social Studies learning, particularly in teaching ethnic and cultural diversity at the elementary school level.

---

### Abstrak

Penelitian ini bertujuan untuk menganalisis pengaruh penggunaan media pembelajaran interaktif berbasis Adobe Animate terhadap pemahaman keragaman suku dan budaya siswa sekolah dasar. Ilmu Pengetahuan Sosial di SD memiliki peran strategis dalam membentuk pemahaman siswa terhadap realitas sosial dan keberagaman budaya bangsa, namun proses pembelajaran yang masih didominasi metode konvensional sering menyebabkan pemahaman siswa belum optimal. Penelitian ini menggunakan pendekatan kuantitatif dengan desain quasi eksperimen. Subjek penelitian adalah siswa kelas IV SDN 2 Kota Jantho yang dibagi ke dalam kelas eksperimen dan kelas kontrol. Instrumen penelitian berupa tes pemahaman konsep, sedangkan analisis data dilakukan menggunakan uji t. Hasil penelitian menunjukkan bahwa pemahaman siswa yang belajar menggunakan media pembelajaran interaktif berbasis Adobe Animate lebih tinggi dibandingkan siswa yang belajar tanpa menggunakan media interaktif. Temuan ini menunjukkan bahwa media pembelajaran berbasis Adobe Animate efektif digunakan untuk meningkatkan kualitas pembelajaran IPS, khususnya pada materi keragaman suku dan budaya di sekolah dasar.

**Kata kunci:** Pembelajaran IPS, Media Interaktif, Adobe Animate, Keragaman Suku dan Budaya, Sekolah Dasar

## INTRODUCTION

Social Studies learning in elementary schools plays a strategic role in developing students' understanding of social and cultural phenomena as well as fostering attitudes of tolerance and respect for diversity. Cultural and ethnic diversity is an essential component of Social Studies content that must be mastered by students as a reflection of Indonesia's pluralistic society. This material requires not only factual knowledge but also contextual thinking skills and an appreciative attitude toward cultural differences present in students' surroundings (Ganesha & Wiyasa, 2024). Understanding cultural diversity from an early age is considered fundamental in shaping students' social awareness and character development within a multicultural society.

However, the implementation of Social Studies learning in many elementary schools still relies heavily on conventional instructional approaches dominated by teacher explanations and textbook based learning. Such approaches often result in passive learning environments, limiting students' opportunities to actively engage with cultural content. As a consequence, students tend to memorize information without deeply understanding the meaning and values embedded in cultural diversity (Gunardi., et al., 2024). Learning media that lack interactivity and contextual relevance frequently reduce students' interest and motivation, which ultimately affects their level of conceptual understanding of cultural diversity.

The rapid advancement of information and communication technology has provided new opportunities to enhance the quality of learning through the integration of digital and interactive learning media. Interactive learning media enable learning content to be presented visually, dynamically, and contextually, allowing students to construct knowledge more effectively. According to constructivist learning theory, learning becomes more meaningful when students actively engage in the learning process and interact with learning environments that support knowledge construction (Piaget, 1971). In this context, interactive digital media serve as a powerful tool to facilitate active learning experiences and support students in connecting abstract concepts with concrete visual representations.

Recent studies have shown that interactive multimedia can significantly enhance students' understanding of cultural diversity in elementary education. Ganesha and Wiyasa (2024) developed interactive multimedia for teaching Indonesian cultural diversity and reported that the media were effective in increasing student engagement and learning participation. Similarly, Jannah., et al. (2024) found that Android based interactive learning media improved students' ability to describe cultural diversity, as the media provided attractive and contextual learning experiences aligned with the elementary school curriculum. Other studies have also demonstrated that interactive multimedia combining animation, audio, and formative assessment elements is valid and practical for improving students' learning outcomes related to local culture and cultural heritage content (Adnyani., et al., 2025).

Along with the development of multimedia technology, animation based software such as Adobe Animate has emerged as a promising tool for developing interactive learning media. Adobe Animate allows educators to design animated, interactive, and visually rich learning materials that can stimulate students' cognitive engagement and curiosity. Research conducted by Rahayu., et al. (2022) revealed that Adobe Animate based learning media for Social Studies in elementary schools were feasible, practical, and effective in improving students' learning outcomes. These findings suggest that animation based interactive media can enhance students' understanding by presenting learning content in a more engaging and meaningful manner.

Quantitative studies in other subject areas also indicate that interactive animation based media have a significant effect on students' learning outcomes when compared to conventional instructional media. Interactive media encourage students to explore learning materials independently, provide immediate feedback, and support different learning styles (Inayah., et al., 2025). Such characteristics are particularly relevant for teaching cultural diversity, as students need opportunities to observe, reflect, and interpret cultural representations through multiple sensory modalities.

Despite the growing number of studies on interactive learning media, many existing studies primarily focus on media development, feasibility, or practicality rather than examining the empirical effect of media use on students' conceptual understanding. In particular, studies that quantitatively analyze the influence of interactive learning media developed using Adobe Animate on elementary students' understanding of ethnic and

cultural diversity in Social Studies remain limited. This condition highlights the need for empirical evidence that examines the relationship between the use of Adobe Animate based interactive media and students' conceptual understanding of cultural diversity.

In addition, the demands of education in the digital era require innovative learning strategies that are aligned with students' characteristics as digital natives. Interactive learning media not only support cognitive development but also contribute to students' digital cultural literacy, enabling them to understand and appreciate cultural diversity through modern learning experiences. Integrating Adobe Animate based interactive media into Social Studies learning offers opportunities to create meaningful learning environments that combine visual narratives, cultural representations, and interactive activities relevant to students' daily lives.

Therefore, examining the effect of Adobe Animate based interactive learning media on elementary students' understanding of ethnic and cultural diversity is considered important. This study is expected to contribute to the development of evidence based learning practices in elementary education and provide empirical support for educators in selecting effective instructional media to enhance students' understanding of cultural diversity in Social Studies learning.

## **METHODS**

This study employed a quantitative approach using a quasi experimental design, specifically the non equivalent control group design. This design was selected because random assignment of students was not feasible, as the classes had already been established by the school. The study involved two groups, namely an experimental group and a control group. The experimental group received instruction using interactive learning media developed with Adobe Animate, while the control group received conventional instruction through teacher centered methods and textbook based learning. Both groups were administered a pretest prior to the treatment and a posttest after the treatment to measure changes in students' understanding of ethnic and cultural diversity in Social Studies learning.

The research was conducted at SDN 2 Kota Jantho, Aceh Besar Regency, Indonesia. The participants of the study were fourth grade students selected through purposive sampling based on the similarity of students' academic abilities and learning characteristics. A total of 55 students participated in the study, consisting of 28 students

in the experimental class and 27 students in the control class. This sampling technique was considered appropriate to ensure comparability between the two groups and to minimize potential bias in the research results.

The independent variable in this study was Adobe Animate based interactive learning media, while the dependent variable was students' understanding of ethnic and cultural diversity. Students' understanding was operationally defined as the ability to identify, explain, and interpret concepts related to ethnic and cultural diversity in Indonesia, including recognition of various ethnic groups, cultural characteristics, and the importance of mutual respect in a multicultural society.

Data were collected using a conceptual understanding test in the form of multiple choice questions. The instrument consisted of 20 items developed based on the Social Studies learning indicators for elementary schools. Prior to its use, the instrument was validated by content experts to ensure its relevance and clarity. The reliability of the test was analyzed using the Kuder Richardson formula 20, indicating that the instrument was suitable for measuring students' conceptual understanding consistently.

The research procedure began with the administration of a pretest to both the experimental and control groups to assess students' initial understanding of ethnic and cultural diversity. The experimental group then received instruction using Adobe Animate based interactive learning media, which incorporated animated visual representations of cultural diversity, audio narration, interactive navigation, and formative quizzes. Meanwhile, the control group received instruction using conventional learning methods without the support of interactive digital media. After the instructional sessions were completed, both groups were given a posttest to measure the improvement in students' understanding.

Data analysis was conducted using inferential statistical techniques. Before hypothesis testing, prerequisite tests including normality testing using the Kolmogorov Smirnov test and homogeneity testing using Levene's test were performed. The hypothesis was tested using an independent samples t test to examine differences in posttest scores between the experimental and control groups at a significance level of 0.05. Ethical approval and permission to conduct the study were obtained from the school authorities, and all data collected were used solely for academic purposes.

## RESULTS AND DISCUSSION

The results of this study indicate that the use of Adobe Animate based interactive learning media has a positive and significant effect on elementary students' understanding of ethnic and cultural diversity. The analysis of pretest scores shows that students' initial abilities in the experimental and control groups were relatively comparable. The mean pretest score of the experimental group was 62.14, while the control group obtained a mean score of 61.48. This similarity indicates that both groups had equivalent initial understanding prior to the implementation of different learning treatments.

After the learning process was conducted, both groups showed improvement in their understanding; however, the increase was more substantial in the experimental group that utilized interactive learning media developed with Adobe Animate. The mean posttest score of the experimental group increased to 84.32, whereas the control group reached a mean posttest score of 73.26. This difference in score improvement suggests that interactive learning media provided a more effective learning experience in helping students understand the topic of ethnic and cultural diversity. A summary of the pretest and posttest results for both groups is presented in Table 1.

**Table 1. Descriptive Statistics of Pretest and Posttest Scores**

Group	N	Pretest Mean	Posttest Mean	Score Gain
Experimental	28	62.14	84.32	22.18
Control	27	61.48	73.26	11.78

As shown in Table 1, the score gain of the experimental group was almost twice that of the control group. This finding indicates that the use of Adobe Animate based interactive learning media contributed significantly to the improvement of students' conceptual understanding.

Prior to hypothesis testing, prerequisite tests were conducted. The normality test results indicated that the posttest data were normally distributed with significance values greater than 0.05, while the homogeneity test results showed that the variances of the two groups were homogeneous. Therefore, the data met the assumptions required for inferential statistical analysis.

Hypothesis testing was performed using an independent samples t test on the posttest scores. The results revealed a significance value of 0.001, which is lower than

the significance level of 0.05. This result indicates a statistically significant difference between students who were taught using Adobe Animate based interactive learning media and those who were taught using conventional learning methods. The summary of the t test results is presented in Table 2.

**Table 2. Independent Samples t Test Results on Posttest Scores**

Variable	t value	Sig. (2 tailed)	Interpretation
Understanding of Ethnic and Cultural Diversity	3.87	0.001	Significant

These findings can be explained through the constructivist learning theory, which emphasizes that meaningful learning occurs when students actively engage in the learning process. Adobe Animate based interactive learning media allow students to interact directly with learning content through animated cultural visuals, audio narration, and interactive quizzes. Such interactions help students connect abstract concepts of cultural diversity with concrete representations, thereby enhancing conceptual understanding.

In addition to improving cognitive outcomes, interactive learning media also enhance students' learning motivation and attention during Social Studies instruction. Animated cultural representations, illustrations of traditional clothing, and examples of social interactions among different ethnic groups attract students' interest and encourage sustained engagement in learning activities. This condition supports previous research indicating that interactive multimedia can increase student engagement and deepen conceptual understanding in Social Studies learning.

In contrast, conventional learning methods applied in the control group tended to limit students' learning experiences, as instruction relied mainly on verbal explanations and textbooks. As a result, students had fewer opportunities to visualize and contextualize cultural diversity concepts. The differences in learning outcomes between the two groups demonstrate that Adobe Animate based interactive learning media are more effective in presenting Social Studies content in a contextual, dynamic, and student centered manner that aligns with the characteristics of elementary school learners.

Overall, the results of this study strengthen empirical evidence that Adobe Animate based interactive learning media are effective for improving elementary students' understanding of ethnic and cultural diversity in Social Studies learning.

## CONCLUSION

The findings of this study demonstrate that interactive learning media using Adobe Animate significantly improves elementary school students' understanding of ethnic and cultural diversity. Students exposed to interactive media achieved better learning outcomes than those taught through traditional instructional approaches. This indicates that interactive digital media is effective in supporting students' conceptual understanding in social studies learning.

Furthermore, the use of interactive media encourages more engaging and student centered learning experiences, which are essential in primary education. The integration of Adobe Animate based media provides an alternative instructional strategy that can enhance the quality of social studies learning related to socio cultural content in elementary schools.

## REFERENCES

- Adnyani, N. K., Mahartini, K. T., & Primayana, K. H. (2025). Pengembangan multimedia interaktif untuk materi keragaman budaya dan kearifan lokal pada IPAS SD. *Jurnal Pendidikan Guru Sekolah Dasar*, 2(4), 1–15.
- Alawiyah, I. A., & Ahmadi, F. (2024). Nearpod-based interactive learning media to improve outcomes on Indonesian cultural diversity content. *Journal of Integrated Elementary Education*, 4(2), 1–15.
- Cahyaningsih, L. W., & Tyas, D. N. (2024). Macromedia Flash interactive multimedia on Indonesian cultural diversity material in elementary schools. *Jurnal Pendidikan dan Pengajaran*, 57(2), 445–456.
- Inayah, A. N., Maftuh, B., & Sumantri, Y. K. (2025). Pengaruh penggunaan media interaktif berbasis articulate storyline terhadap minat belajar IPS. *JIPSINDO*, 10(2), 1–12.
- Jannah, A. F., Laila, A., & Basori, M. (2024). Pengembangan media pembelajaran interaktif berbasis Android pada mata pelajaran IPS untuk mendeskripsikan keragaman budaya. *Pendas : Jurnal Ilmiah Pendidikan Dasar*, 9(4), 1–12.
- Komalasari, M. D., & Wihaskoro, A. M. (2025). Multimedia interaktif bermuatan keanekaragaman budaya Indonesia pada pembelajaran tematik untuk siswa SD. *Elementary School: Jurnal Pendidikan dan Pembelajaran Ke-SD-an*, 5(1), 1–10.

Rahayu, D. D., Sakdiyah, S. H., & Chrisyarani, D. D. (2022). Pengembangan media interaktif berbasis Adobe Animate CC pembelajaran IPS kelas IV. *Sistem-Among: Jurnal Pendidikan Sekolah Dasar*, 2(1), 1–9.