

Interactive Learning Media Innovation to Understand the Six Continents of the World in Grade 6 Elementary School Students

Desi Tri Tri Lesrtyo Pamungkas ,Supianto, Eka Budhi Santosa

Universitas Sebelas Maret

desitrilesty0311287@student.uns.ac.id

Article History

accepted 1/8/2025

approved 1/9/2025

published 1/10/2025

Abstract

Learning about the six continents of the world for sixth-grade elementary school students often encounters challenges in terms of spatial understanding and student interest in the material. This study aims to: 1) Identify the low level of student understanding of the six continents due to the continued use of conventional teaching approaches; 2) Explore strategies used to improve student understanding; and 3) Examine the impact of interactive media innovations on students' comprehension of the six continents. The method used is a descriptive qualitative approach with a case study method to analyze the application of interactive learning media in improving sixth-grade elementary students' understanding of the six continents. The results show: 1) Students' comprehension of the six continents remains low when teachers rely heavily on conventional methods such as lectures and textbook memorization 2) Innovative learning using interactive media serves as an alternative solution to enhance student comprehension; and 3) The use of interactive media led to an increase in students' average scores, with most initially not meeting the minimum passing grade (MPG) on the pre-test, improving to above the KKM on the post-test. Based on these findings, interactive media has proven effective in enhancing learning engagement and effectiveness, as it provides more concrete visual experiences and simulations.

Keywords: Innovation, Interactive Learning Media, Comprehension, Six Continents

Abstrak

Pembelajaran mengenai enam benua di dunia pada peserta didik kelas 6 SD seringkali menemui kendala dalam hal pemahaman spasial dan ketertarikan peserta didik terhadap materi dan. Penelitian ini bertujuan untuk: 1. Mengidentifikasi rendahnya pemahaman peserta didik terhadap materi enam benua karena pendekatan pembelajaran yang masih konvensional. 2. Mengeksplorasi strategi yang digunakan dalam meningkatkan pemahaman peserta didik. 3. Dampak dari inovasi media interaktif terhadap pemahaman peserta didik materi enam benua. Metode yang digunakan adalah pendekatan kualitatif deskriptif dengan metode studi kasus untuk menganalisis penerapan media pembelajaran interaktif dalam meningkatkan pemahaman peserta didik kelas 6 SD terhadap materi enam benua. Hasil 1) Pemahaman siswa mengenai enam benua masih rendah ketika guru terlalu banyak bergantung pada metode konvensional seperti ceramah dan hafalan dari buku teks.. 2) Inovasi pembelajaran dengan media interaktif sebagai solusi alternatif untuk meningkatkan pemahaman peserta didik. 3.) Dengan penggunaan media interaktif terjadi peningkatan rata-rata skor pada peserta didik dari semula yang sebagian besar belum mencapai KKM pada pre-test nilainya menjadi diatas KKM setelah melaksanakan post-test. Berdasarkan temuan ini, media interaktif terbukti dapat memperkuat daya tarik dan efektivitas pembelajaran, karena mampu memberikan pengalaman visual dan simulasi yang lebih konkret
Kata kunci: Inovasi, Media Pembelajaran Interaktif, Pemahaman, Enam Benua



INTRODUCTION

21st-century education demands learning that not only transfers knowledge but also equips students with critical thinking, collaboration, communication, and creativity skills. Recent studies, such as Papagiannis and Pallaris (2024), affirm that the 4C-based approach significantly enhances these skills across various educational levels. Similarly, Rahmawati and Prasetyo (2023) found that implementing the 4C model in thematic learning at the elementary level effectively improves students' higher-order thinking skills. In the context of Natural and Social Sciences (IPAS) learning in elementary schools, particularly in the topic of the six continents of the world, students are expected to understand geographical, spatial, and interregional relationship concepts in both visual and conceptual ways (Kemendikbudristek, 2023). Unfortunately, field observations and studies indicate that the conventional teaching methods still dominant in many elementary schools—such as lectures and textbook reliance—fail to adequately support the visual, auditory, and kinesthetic learning styles of students aged 11–12 years (Nuraini & Sari, 2022).

In response to these challenges, there is a need for learning innovations that can transform the classroom into an active, engaging, and meaningful learning environment. These innovations include technology-based learning approaches, project-based learning, and the integration of interactive digital media to enhance student engagement and comprehension. According to Sari and Nugroho (2024), 21st-century classrooms must be redesigned with participatory approaches that place students at the center of learning rather than as mere recipients of information. One form of such innovation is the use of interactive learning media, which combines visuals, animations, sounds, and hands-on activities to encourage student participation and understanding (Gunawan et al., 2021). Interactive media has been proven to bridge learning style differences, increase motivation, and create more imaginative and real-world-integrated learning experiences (Arsyad, 2021). However, not all stakeholders agree on the effectiveness of interactive media. Wibowo and Hartati (2022) emphasize that without adequate pedagogical readiness and digital literacy among teachers, the use of technology can disrupt focus and reduce learning effectiveness—particularly in elementary school environments that still face infrastructure limitations.

In IPAS learning on the topic of the six continents, interactive media helps students recognize geographic locations, physical features, cultural characteristics, and intercontinental relationships through a concrete and visually engaging spatial approach (Wulandari et al., 2023). Moreover, students' conceptual understanding increases as they are not passive recipients of information but actively involved in exploration and meaningful learning experiences through digital map simulations, interactive games, and educational videos (Marpaung, 2022). Interactive media also supports the development of geospatial literacy, critical thinking skills, and collaborative abilities through integrated project-based tasks (Rahmawati & Syahputra, 2023). Thus, interactive learning media serves not only as a learning aid but also as a relevant pedagogical strategy to enhance IPAS learning comprehensively in elementary schools. Nevertheless, as Handayani and Pranata (2021) pointed out, the success of interactive media depends heavily on proper instructional design and teachers' readiness to manage technology in the classroom; without such support, it risks becoming a distraction and reducing learning effectiveness.

The study conducted by Supriyadi et al. (2024) found that 68% of elementary school teachers have not yet maximized the use of digital media due to limited access, lack of training, and low levels of digital literacy. This finding indicates a gap between the ideals of the Merdeka Curriculum—which emphasizes differentiated and project-based learning—and the actual practices in classrooms. In fact, the advancement of educational technology has introduced interactive learning media that has been empirically proven to increase students' interest, conceptual understanding, and active participation (Ramdhani et al., 2023). Furthermore, digital media has the potential to

accommodate students' individual learning needs, particularly in IPAS learning, which requires spatial understanding and the ability to comprehend conceptual relationships (Yuliana & Wahyuni, 2023). Nevertheless, many teachers feel anxious or hesitant to integrate digital media into their teaching due to the lack of technical and pedagogical support from schools (Nasution & Hapsari, 2021). Therefore, systemic support through continuous training, equitable access to digital infrastructure, and school policies that encourage innovation are crucial factors in realizing the full potential of interactive learning media in the context of primary education.

The issue of students' low understanding of the six continents is important to investigate because it directly affects the quality of elementary education, which serves as the foundation for shaping the Pancasila Student Profile. This material not only emphasizes mastery of geographical aspects but also requires an understanding of cultural diversity, global environmental issues, and the importance of international cooperation as part of students' global literacy. Without innovative learning strategies, the topic of six continents tends to remain abstract, cognitively inaccessible, and decreases students' learning motivation. Therefore, it is necessary to develop interactive learning media that can concretize abstract concepts, foster motivation, and enhance collaborative and communication skills, thereby not only improving learning outcomes in Social Studies but also supporting the achievement of 21st-century competencies in line with national education goals.

Interactive learning media has become a relevant and contextual approach in addressing the learning needs of the 21st century. This type of media enables visualization, simulation, and exploration of content through elements such as images, animations, audio, and digital activities, which align with the diverse learning styles of elementary school students. Interactive media involves two-way interaction between the user and the system, allowing students not only to passively receive information but also to actively respond through various embedded activities (Daryono & Karim, 2020). According to Mayer's (2021) Multimedia Learning Theory, students comprehend information more effectively when it is presented through a structured combination of visual and verbal elements. This theory highlights the importance of dual coding and active processing in learning, with interactive media playing a central role in constructing meaningful understanding. This aligns with the findings of Widiyanti and Subekti (2022), who demonstrated that the use of animation-based interactive media significantly improves students' conceptual understanding. Furthermore, Wahyuni and Herlambang (2023) added that students' active engagement through interactive digital activities promotes independent learning and enhances information retention in integrated thematic learning.

The advantages of this theory include enhancing memory retention through concrete visualization, promoting active participation through content interaction, facilitating independent and exploratory learning, and supporting differentiated instruction tailored to students' abilities. Findings from Herlina and Wibowo (2023) also indicate that implementing interactive media in social studies (IPS) at the elementary level significantly improves students' communication and collaboration skills. Their study supports the argument that interactive media is not merely a visual aid, but a catalyst for developing essential 21st-century skills. Similarly, Ramdhani et al. (2023) found that the use of animation- and simulation-based interactive media substantially enhances elementary students' understanding of geographic concepts, as it allows them to visualize interregional relationships more concretely. In line with these results, Herlina and Wibowo (2023) emphasized that interactive digital media not only improves learning outcomes but also fosters communication and collaboration skills through exploratory activities. Meanwhile, Sari and Nugroho (2022) revealed that interactive media using digital maps and online quizzes helps students understand the location and characteristics of world regions more effectively than conventional approaches. These

three studies indicate that interactive learning media has great potential to support thematic IPAS (Natural and Social Sciences) learning, particularly on geographically oriented topics such as the six continents.

The novelty of this study lies in its integrative focus on the development of interactive media, the learning characteristics of elementary students, and the global nature of IPAS content. This research not only examines the effectiveness of the media in terms of learning outcomes but also analyzes the design, implementation strategies, and barriers to its application holistically.

Therefore, the objectives of this study are to identify the low level of students' understanding of the six continents caused by the dominance of conventional teaching approaches, explore learning strategies that can be applied to enhance students' comprehension, and analyze the impact of using interactive learning media on sixth-grade elementary students' understanding of the six continents. The focus of this research lies in examining the effectiveness of interactive media in delivering geographical concepts that are visual and spatial in nature in a more concrete, engaging, and accessible manner. The novelty of this study lies in the integration of Social Studies content with interactive learning media designed in accordance with the characteristics of elementary school students, as well as its implementation that is not only informative but also exploratory, contextual, and enjoyable. This research holds significant value as it not only enriches the literature on the development of interactive thematic learning media but also provides practical contributions for teachers in designing innovative Social Studies learning that is aligned with the Merdeka Curriculum and the current advancements in the digital era.

METHODS

This study employs a descriptive qualitative approach with a case study method, as it is considered appropriate to describe learning phenomena in a natural and contextual manner, particularly in understanding how interactive media contributes to improving students' comprehension.

The research was conducted during the second semester of the 2024/2025 academic year at SD Negeri 1 Bangsri, selected based on the availability of technological facilities and the active involvement of both teachers and students.

The research subjects were teachers and sixth-grade students of SD Negeri 1 Bangsri, while the object of the study focused on the implementation of interactive learning media, including digital maps, animated videos, and image-based online quizzes in learning the topic of the six continents.

Data collection techniques included classroom observation, to examine students' engagement and teachers' strategies in utilizing interactive media; semi-structured interviews with teachers, to gain deeper insights into the effectiveness and challenges of interactive media; and documentation of students' learning outcomes, to assess changes in comprehension before and after the implementation of interactive media.

The data were analyzed qualitatively through the stages of data reduction, data display, and conclusion drawing/verification, in order to obtain an in-depth understanding of the impact of interactive learning media on students' comprehension of the six continents.

The instruments used in this study consisted of observation sheets, learning outcome tests, and student response questionnaires. These three instruments were designed to collect comprehensive data on the learning process, learning outcomes, and students' perceptions of the use of interactive learning media. The combination of these instruments was chosen to allow the researcher to examine the research focus from multiple perspectives within a descriptive qualitative framework.

The observation sheet was used to record the activities of both students and the teacher during the learning process. The focus of the observation included student

engagement, such as active questioning, answering, participation in discussions, and how the teacher utilized interactive media in their instructional strategy. The observations were conducted systematically using a pre-designed format, allowing the data obtained to be categorized and analyzed objectively.

The learning outcome test consisted of pre-test and post-test questions administered to students before and after the intervention. This test aimed to measure the improvement in students' understanding of the six continents after the use of interactive learning media. The questions were developed based on indicators of basic geographic concept comprehension aligned with the sixth-grade elementary school curriculum. The content validity of the test was consulted with subject matter experts to ensure alignment with the learning objectives.

Meanwhile, the student response questionnaire was structured using a Likert scale and aimed to explore students' perceptions of the learning media used. The questionnaire covered aspects such as the ease of understanding the material, students' interest in IPAS subjects, and their learning experiences. According to Herlina and Suryanto (2023), the use of a combination of observation, testing, and questionnaires is crucial in educational research, as it provides a holistic picture of the effectiveness of a learning strategy—both in terms of process and outcomes—while also capturing the voices of students as the primary subjects of learning. The type of questionnaire used was an open-ended questionnaire.

RESULTS

The results of the study indicate that the use of interactive learning media has a positive impact on sixth-grade elementary students' understanding of the topic of the six continents. Based on observational data, students who engaged in learning activities supported by interactive media demonstrated high levels of involvement throughout the learning process. They appeared more enthusiastic, actively asked questions, responded to the teacher's prompts, and showed a strong sense of curiosity—especially when interacting with digital maps and animated videos that illustrated the characteristics of each continent.

During the learning process, students appeared more focused and directed. When the teacher facilitated the use of visual media such as animations, interactive simulations, and educational games, students were visibly more engaged and enjoyed the learning experience. They were able to verbally explain the information they had acquired, such as identifying the distinctive features of each continent, their geographical locations, and climate differences between regions. This suggests that interactive media supported students in building both visual and conceptual understanding.

Data from observation sheets and field notes also revealed that the use of interactive learning media affected classroom dynamics. The teacher no longer served solely as an information provider, but rather as a facilitator who guided students through the exploration process. The classroom atmosphere became more vibrant and participatory. Students engaged in small group discussions, showed genuine interest in the subject matter, and spontaneously connected the learning material to their personal experiences.

Tabel 1. Classroom Observation

Data Source	Finding	Description
Classroom Observation	The teacher acted as a facilitator, not merely an information provider	The teacher guided student exploration using interactive media such as digital maps and animated videos.

	The classroom environment became active and participatory.	Students engaged in small group discussions and were involved in learning activities.
	Students related the learning material to their personal experiences	A contextual connection was established between the content and students' real-world experiences.

In addition, interview results with students revealed that they felt the learning process was more enjoyable and easier to understand. Most students stated that interactive media helped them comprehend the topic of the six continents, which they had previously considered difficult or uninteresting. Some students even expressed that they developed a greater interest in IPAS subjects after learning through the use of interactive media. The teacher also reported that interactive learning media was highly beneficial in explaining abstract concepts such as longitude and latitude, continental divisions, and climate characteristics, as these were presented visually and dynamically.

Tabel 2. Student and Teacher Interview Results

Student Interview	Learning felt more enjoyable and easier to understand.	Interactive media helped visualize materials that were previously considered difficult.
	The six continents topic became more interesting with digital media.	felt more engaged and were not bored during IPAS lessons.
	Students expressed increased interest in IPAS after using interactive media.	Indicates a positive affective impact on students' attitudes.
Teacher Interview	Interactive media helped explain abstract concepts (longitude, latitude, continent features).	Spatial concepts became easier to understand through animations and dynamic visuals.
	The teacher felt that content delivery was more effective and engaging.	Interactive media accelerates student understanding because the information is delivered visually and contextually.

The analysis of test results indicated an improvement in students' comprehension.

Table 3. Comparison of Students' Learning Outcomes

Assessment Stage	Average Score	Mastery Percentage ($\geq$ Minimum Standard)
Before Implementation	67.5	56%
After Implementation	83.2	88%

These results demonstrate an increase of 15.7 points in the average score and a 32% rise in the percentage of students achieving mastery.

The student questionnaire revealed very positive responses toward interactive media.

Table 4. Summary of Student Questionnaire Results

Evaluated Aspect	Percentage of Students Agreeing
Material became easier to understand	92%
More motivated to learn Social Studies	89%
Enjoyed teamwork through interactive play	85%
Desired similar media for other topics	87%

These findings are consistent with the opinion of Ramdhani et al. (2023), who stated that interactive learning media plays a crucial role in improving both the process and outcomes of learning, particularly in subjects that require spatial and visual understanding, such as geography. Moreover, this study reinforces the notion that educational technology can create more meaningful learning experiences, stimulate motivation, and foster students' emotional engagement in the learning process. Therefore, interactive media can be considered an effective strategy for enhancing the quality of IPAS learning in elementary schools.

DISCUSSION

The findings of this study indicate that the use of interactive learning media has a positive impact on improving sixth-grade elementary students' understanding of the topic of the six continents. This improvement is evidenced by post-test scores surpassing the Minimum Mastery Criteria (MMC) as well as increased participation and enthusiasm during the learning process. Media such as digital maps and animated videos proved effective in attracting students' attention and making the learning process more engaging, interactive, and meaningful.

These findings are consistent with the Cognitive Theory of Multimedia Learning proposed by Mayer (2021), which emphasizes that learning becomes more effective when information is presented through both visual and auditory channels. In this context, interactive media delivers information simultaneously in the form of images, sounds, and movements, thereby strengthening conceptual understanding, particularly in spatial subjects such as geography. This result is also supported by Ramdhani et al. (2023), who found that the use of visual-based digital media significantly increased student participation in Social Studies learning.

In addition to the cognitive aspect, this study also highlights the affective impact on students. Questionnaire results showed that most students felt happier and more motivated when learning with interactive media. This finding aligns with Sari and Wahyuni (2022), who noted that technology-based learning media enhance students' intrinsic motivation by creating enjoyable learning experiences. Enjoyment in the learning process contributes to increased interest and retention of information, thereby influencing not only academic achievement but also the overall learning experience.

Nevertheless, the effectiveness of interactive media is highly dependent on supporting factors, such as the availability of technological infrastructure and teachers' competence in integrating digital tools into instruction. Putri and Rahmawati (2021) found that limitations in school facilities and a lack of teacher training often become major obstacles in the use of digital media. Therefore, policy support from the government and schools is essential in the form of infrastructure provision, teacher training, and systematic integration of technology into the curriculum.

Furthermore, this finding is consistent with UNESCO's (2022) perspective that the integration of educational technology must be carried out systematically and sustainably to support the development of 21st-century skills. Thus, this study contributes practically by showing that interactive media is not only a learning aid but also an innovative strategy that fosters global competencies in line with the Merdeka Curriculum.

CONCLUSION

This study demonstrates that the innovation of interactive learning media can significantly improve sixth-grade elementary students' understanding of the topic of the six continents. The findings identified that students' low comprehension was caused by the dominance of conventional approaches, which tend to be abstract and less engaging. Through the exploration of strategies using interactive media such as digital maps, animated videos, and geographic quizzes, it was found that these tools not only enhanced learning outcomes but also stimulated students' interest, active participation, and emotional engagement in the learning process. The improvement in test scores and the positive responses from both students and teachers reinforce the conclusion that interactive media is effective in overcoming the limitations of conventional approaches.

In addition to cognitive benefits, interactive media also supports the development of 21st-century skills, such as critical thinking, collaboration, and communication, in line with the objectives of the Merdeka Curriculum. Nevertheless, the effectiveness of implementing such media remains influenced by external factors, including the availability of technological infrastructure and teachers' digital literacy. Therefore, the success of this innovation requires continuous support from schools and educational policymakers.

Thus, interactive learning media represents a strategic alternative to strengthen Social Studies learning in elementary schools, particularly for topics that demand spatial and visual understanding such as the six continents.

The implication of this study is that the development of interactive media should become an integral part of educational innovation in elementary schools to enhance students' global literacy. The recommendation is the need for teacher training in digital literacy and the provision of adequate technological resources so that interactive media can be implemented optimally and sustainably across schools.

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