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Fostering Creative Thinking in Elementary Education: Integrating Social Inquiry Learning with Interactive Audio-Visual Media

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Abstract: This study investigates the integration of social inquiry learning with interactive audio-visual media to enhance creative thinking among primary school students. The study used a qualitative case study method, focusing on a Grade 5 class at SDN Jajartunggal III, Surabaya. Data collection methods included participatory observations, semi-structured interviews with teachers, and student artifacts analysis. The study sought to understand how this instructional Model affects fluency, flexibility, originality, and elaboration in students' creative thinking. The findings revealed that interactive media, such as digital storytelling and animated simulations, significantly increased student engagement and facilitated creative problem-solving. Students were able to delve deeper into social issues, collaborate more effectively, and express creative ideas more confidently. The study also underscored the critical role of teachers in facilitating this integrated approach, as their ability to balance structured guidance with open-ended inquiry was key to fostering creativity. In conclusion, this study contributes to understanding how combining social inquiry learning with audio-visual media can enhance creativity in elementary education. The results highlight the importance of teacher facilitation and suggest that further study should investigate the long-term impacts of this pedagogical approach across different educational contexts.
Keywords: Social Inquiry Learning; Interactive Audio-Visual Media; Creative thinking Skills; Elementary Education; Collaborative Learning

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A. Introduction

In 21st-century education, fostering creative thinking among primary school students has become a critical priority. Creative thinking, encompassing skills such as fluency, flexibility, originality, and elaboration, is essential for students to navigate complex societal and global challenges (Chen et al., 2021; Rosnawati & Ardeniyansah, 2018; Trisnayanti et al., 2020). Educators and researchers recognize the importance of equipping students to approach problems from multiple perspectives, generate innovative solutions, and adapt to rapidly changing environments (Sastradika & Defrianti, 2020; Zhanqiang, 2023). However, implementing effective instructional

strategies to cultivate these skills remains challenging, particularly in traditional classroom settings that often emphasize conformity and rote learning.

Studies on social inquiry learning and audio-visual media have shown promising results in enhancing student engagement and cognitive abilities. Social inquiry learning encourages students to explore social issues critically and collaboratively through structured questioning and problem-solving activities (Hakim et al., 2023; Nurhayati et al., 2020; Sarnita et al., 2021). Similarly, interactive audio-visual media, such as digital storytelling and animated simulations, have been found to stimulate students' interest and support the understanding of abstract concepts (Iqbal & Sami, 2020). Despite their merits, limited studies have explored how integrating these two approaches could address the multidimensional nature of creative thinking in primary education.

The present study aims to fill this gap by investigating the integration of social inquiry learning with interactive audio-visual media and its impact on fostering creative thinking among Grade 5 students at SDN Jajartunggal III, Surabaya. This study focuses on a specific educational setting where traditional pedagogical practices often constrain creativity. By examining this case, the study seeks to provide insights into how these instructional strategies can transform classroom dynamics and encourage students to engage in more profound, meaningful learning experiences.

The significance of this study lies in its focus on the interplay between structured inquiry-based activities and the dynamic capabilities of audio-visual media. Specifically, the study explores how these methods influence key dimensions of creative thinking: fluency (the ability to generate multiple ideas), flexibility (the ability to view problems from different angles), originality (the ability to produce novel solutions), and elaboration (the ability to expand and refine ideas). Furthermore, this study considers the critical role of teachers in facilitating such an integrated approach, highlighting their strategies for balancing guided instruction with open-ended inquiry to nurture creativity.

The case of SDN Jajartunggal III serves as a valuable lens through which to explore these dynamics. The school faces unique challenges, including limited resources and a curriculum that traditionally emphasizes standardized learning outcomes. These constraints provide an opportunity to investigate how innovative pedagogical methods can overcome barriers to creative expression (Moula, 2021) and foster a more engaging learning environment (Sefein et al., 2024).

The study aims to contribute to the growing body of literature on innovative pedagogical practices and provide practical recommendations for educators seeking to enhance creativity in primary education. The findings are expected to offer valuable insights into the potential of integrating social inquiry learning and audio-visual media to create more inclusive, engaging, and transformative educational experiences.

B. Method

This study employed a qualitative case study design grounded in the methodological frameworks Yin (2014) and Creswell & Poth (2018) established. The

case study approach was chosen to provide an in-depth understanding of how integrating social inquiry learning and interactive audiovisual media influences creative thinking among primary school students. Specifically, this study focused on a single-case design involving Grade 5 students at SDN Jajartunggal III, Surabaya.

Participants

The participants included 10 teachers and 35 Grade 5 students selected through purposive sampling. Teachers were chosen based on their experience with inquiry-based learning and familiarity with digital media (Shaik, 2023). This selection ensured that participants could provide relevant insights into the study questions. Informed consent was obtained from all participants, and ethical considerations were addressed following institutional guidelines.

Data Collection Methods

Data were collected using multiple sources to ensure triangulation and enhance the credibility of the findings. These included: 1) In-depth Interviews: Semi-structured interviews were conducted with teachers to gather detailed insights into their experiences, challenges, and strategies in implementing the integrated instructional Model. The interviews lasted approximately 60 minutes and were recorded and transcribed for analysis; 2) Classroom Observations: Participatory observations were conducted during classroom sessions to capture real-time interactions between teachers and students. Field notes were taken to document teaching strategies, student engagement, and the use of audio-visual media; 3) Student Artifacts: Examples of student work, including digital presentations, drawings, and written reflections, were collected and analyzed to assess creativity levels and learning outcomes; 4) Focus Group Discussions: Students participated in group discussions to discuss their perceptions of the integrated learning approach and its impact on their creative thinking.

Data Analysis

Thematic analysis was employed to analyze the data, following the six-step framework proposed by Braun & Clarke (2006). This involved familiarizing the data, coding significant features, identifying themes, reviewing and refining themes, defining themes, and writing the final report. The analysis focused on themes related to creative thinking dimensions, teacher facilitation, and the use of audiovisual media (Popp & Goldman, 2016).

Trustworthiness

To ensure the trustworthiness of the study, several strategies were implemented: 1) Triangulation: Data from interviews, observations, and student artifacts were compared to validate findings; 2) Member Checking: Participants reviewed the findings to confirm their accuracy and relevance; 3) Audit Trail: Detailed records of the study process were maintained to provide transparency and replicability.

This methodological approach ensured a comprehensive understanding of how integrating social inquiry learning and audiovisual media impacted students' creative thinking, providing robust evidence to address the study questions.

C. Results and Discussion

Results

Enhanced Student Engagement through Visual and Interactive Elements

One of the most prominent themes from the data was the significant increase in student engagement when audio-visual media were integrated into social inquiry learning activities. Interactive videos, digital storytelling, and animated simulations captured students' attention and provided a dynamic platform for them to explore complex social topics.

According to Informant 1 (I1), "Students were more excited and curious during the lessons that used videos and animations. They asked more questions and seemed genuinely interested in understanding the material." This heightened level of engagement was observed consistently across different classroom sessions, as noted by Informant 2 (I2), who stated, "When we discussed community roles using an animated documentary, the students not only paid attention but also shared their own experiences, connecting what they saw on screen with real-life situations."

Visual aids seemed to reduce the cognitive load associated with understanding abstract social concepts, making the learning process more accessible. This was particularly evident in sessions that focused on environmental issues, where students had to analyze the causes and consequences of pollution. As Informant 3 (I3) explained, "The visual representation of pollution's impact on wildlife made it easier for students to grasp the severity of the issue, and many of them started brainstorming solutions, which is a key aspect of creative thinking."

Overcoming Barriers to Creative Expression

While integrating social inquiry learning and audio-visual media had many positive impacts, several teachers identified challenges related to students' hesitancy to express creative ideas, particularly in a classroom environment traditionally emphasizing conformity and rote learning. However, introducing digital tools and visual prompts gradually reduced this barrier as students became more comfortable with experimentation and creative risk-taking.

Informant 10 (I10) shared, "At first, some students were reluctant to share unconventional ideas, fearing they might be wrong. But when we used visual brainstorming tools like digital mind maps, they saw that creativity was more about exploring possibilities than finding the right answer." This shift in mindset was further supported by multimedia projects, which allowed students to express their ideas through various formats, including drawings, videos, and digital presentations.

Over time, students began to take more ownership of their creative processes, experimenting with new ideas and approaches. Informant 1 (I1) observed a significant transformation: "By the end of the project, students who were previously quiet were leading group discussions and suggesting bold, innovative solutions."

Fostering Creative Collaboration and Idea Sharing

Integrating social inquiry learning and audio-visual media also facilitated a collaborative learning environment, which contributed to developing students' creative thinking skills. Students used digital media during group activities to present their ideas, engage in discussions, and build on each other's thoughts. Several teachers noted this collaborative dynamic as a catalyst for creative ideation.

Informant 4 (I4) remarked, "Digital storytelling allowed students to work together in new ways. They divided roles, shared responsibilities, and built on each other's creative inputs, resulting in richer, more complex narratives." Similarly, Informant 5 (I5) observed that students who were typically more reserved became more active in group discussions when they had visual prompts to guide their thinking. "The images and videos seemed to give them a starting point, something concrete to respond to, which made it easier for them to express their ideas," she noted.

The emphasis on collaboration extended beyond the classroom. Several teachers reported that students continued discussing their projects outside class, using digital platforms to share resources and ideas. Informant 6 (I6) highlighted this phenomenon: "I noticed students using social media to share articles, videos, and even their drawings related to our topics. This kind of engagement shows that the learning didn't stop when the class ended—it became a continuous process."

Encouraging Creative Problem-Solving through Inquiry-Based Activities

Combining social inquiry learning and audio-visual media encouraged students to engage in more complex problem-solving activities, a critical component of creative thinking. The inquiry-based approach required students to formulate questions, seek out information, and propose innovative solutions to social issues. When supported by visual media, students could contextualize problems more clearly and think more flexibly about potential solutions.

Informant 7 (I7) observed, "During the session on social justice, students used a video case study to analyze a real-world scenario. They identified problems, debated different perspectives, and ultimately proposed creative and practical solutions." This critical engagement was echoed by Informant 8 (I8), who noted, "The visual case studies helped students see the human side of social issues. This empathy drove them to develop more thoughtful and creative solutions."

Furthermore, the structured inquiry process, supported by visual aids, seemed to help students develop a more systematic approach to problem-solving. Informant 9 (I9) highlighted how the visual timelines and infographics used in class guided students in organizing their thoughts: "The visual timelines helped them map out cause-and-effect relationships, which is crucial in understanding and solving complex problems."

Challenges faced by teachers when implementing the Integrating Social Inquiry Learning with Interactive Audio-Visual Media approach

The findings also underscored the importance of teacher facilitation in nurturing students' creative thinking. Teachers were crucial in guiding inquiry-based activities,

providing scaffolding, and creating a safe space for students to express their ideas. Informant 2 (I2) emphasized, "The teacher's role was to pose challenging questions, encourage deeper thinking, and ensure that the classroom was where students felt their ideas were valued, no matter how unconventional."

Moreover, teachers' familiarity with digital tools significantly influenced the effectiveness of the integrated learning Model. As Informant 5 (I5) noted, "Teachers need to be comfortable using digital media themselves if they want to inspire creativity in their students. When I used interactive simulations, the students responded much better because I was able to guide them confidently."

The teachers' use of reflective journals provided additional insights into how they adapted their facilitation strategies over time. Informant 8 (I8) wrote in her journal, "I struggled to balance open-ended inquiry with curriculum goals. But as I observed how students responded to visual media, I started using it more strategically to direct their inquiries without stifling their creativity."

The integration of social inquiry learning and audio-visual media had a profound impact on students' creative thinking skills. Using visual and interactive elements significantly increased student engagement, making abstract concepts more accessible and stimulating deeper inquiry. Collaborative activities fostered creative ideation and peer-to-peer learning, while inquiry-based problem-solving encouraged systematic and empathetic thinking. Although initial barriers to creative expression were present, digital tools helped overcome these challenges, allowing students to take more ownership of their learning. The role of teachers as facilitators was crucial in maintaining a balance between structured guidance and creative freedom.

Discussion

This study investigated the impact of integrating audio-visual media within a social inquiry learning framework on primary school students' creativity. The findings highlighted three main aspects: enhanced student engagement, the facilitation of collaborative creativity, and improved problem-solving abilities. Specifically, the use of interactive media not only captured students' attention but also made complex social concepts more accessible (Vilarinho-Pereira & Fleith, 2020). Including digital storytelling and animated simulations allowed students to visualize abstract ideas, leading to a deeper understanding and appreciation of the material (Reed et al., 2022). Moreover, students overcame initial hesitance in expressing creative ideas, significantly transforming their engagement and ownership of their learning processes. The integration of visual elements facilitated a collaborative environment where students actively participated in idea sharing, problem identification, and solution generation (Raymundo, 2020).

The results indicated a strong correlation between the use of audio-visual media and heightened student engagement. By integrating interactive elements such as digital storytelling and animated simulations, students were able to connect theoretical

knowledge with real-world scenarios (Monika et al., 2023). This connection is crucial in fostering creative thinking, as it allows students to contextualize their learning experiences and see the relevance of their studies. Furthermore, the initial hesitance observed among some students diminished as they adapted to using digital tools (Hsu et al., 2021). The introduction of visual aids helped alleviate fears associated with creative expression, showcasing the role of supportive learning environments in nurturing creativity (Kolyvas & Nikiforos, 2023)These findings suggest that educators should prioritize using diverse instructional methods that cater to various learning styles, enhance student engagement and foster an inclusive classroom atmosphere.

The impact of visual representation on cognitive load cannot be understated. By simplifying complex social issues through audio-visual media, students were better equipped to analyze and understand abstract concepts (Traynor, 2020). This aligns with cognitive load theory, which posits that reducing extraneous cognitive load allows greater cognitive capacity to engage with learning materials. As students graphed cause-and-effect relationships through visual aids, they could better articulate their understanding and apply it to problem-solving situations (Sweller et al., 2019)This underscores the importance of thoughtful instructional design that considers cognitive processes in learning, particularly fostering creative problem-solving skills.

The findings align with existing literature that emphasizes the role of interactive audio-visual media in enhancing student engagement and creativity. Study by (Tawil & Dahlan, 2021) Supports the notion that multimedia resources improve creative thinking skills by engaging students more actively in learning. Similarly, Putri et al. (2023) found that interactive multimedia significantly boosts creative task performance among students. These studies reinforce that combining social inquiry methods with digital media creates an enriching educational experience that fosters creativity.

Furthermore, the collaborative aspect of the learning process resonates with Pedersen et al. (2024) assertion that digital tools enhance team dynamics and creative ideation. The current study's emphasis on collaborative learning mirrors findings from (Hermawan et al., 2023), which indicates that new media facilitates mixing diverse viewpoints, further enhancing creative thinking. The results also support (Liu et al., 2021), which highlights the necessity of cognitive engagement in problem-solving through varied modalities. The integration of audio-visual media, therefore, provides a multidimensional approach to fostering creativity among primary school students, which previous studies have consistently recognized as effective.

The significance of emotional engagement in learning is also evident in the literature. For instance, Mystakidis et al. (2014) suggest that immersive media captivates students' attention and evokes emotional responses crucial for deeper learning. This emotional engagement, paired with cognitive involvement, creates a holistic learning experience that enhances students' overall educational journey (Yang et al., 2023). The current findings support this view by demonstrating that when

students feel emotionally connected to the content, their creativity flourishes, and they are more willing to engage in critical thinking and collaborative efforts.

Practical Implications

The implications of this study are significant for educators and policymakers. From a practical standpoint, teachers are encouraged to incorporate interactive audio-visual tools into their lesson plans, especially when employing inquiry-based learning methods. Educators can foster a more engaging and dynamic classroom environment that promotes creativity and critical thinking. This approach not only enhances students' understanding of complex social issues but also equips them with the skills necessary for problem-solving in real-world contexts (Aguilar & Pifarre Turmo, 2019).

Professional development opportunities should be available to teachers to effectively implement these strategies, focusing on integrating digital pedagogy and creative facilitation techniques. This training should encompass the technical skills required to utilize digital tools and pedagogical approaches that promote inquiry-based learning (Cook et al., 2023). Education policies should prioritize the inclusion of digital literacy and creativity in the curriculum, ensuring that teachers have access to the resources and training needed to integrate these methods into their teaching practice successfully. Furthermore, investment in digital infrastructure is essential to support the ongoing development of these teaching methods. This includes providing schools with up-to-date technology and resources that facilitate the incorporation of audio-visual elements in the classroom (Harsa et al., 2020).

The role of families and communities in supporting educational initiatives cannot be overlooked. Engaging parents and community members in the educational process can further enhance students' learning experiences (Ramesh, 2024). Schools should strive to create partnerships that encourage community involvement in classroom activities, providing students with additional resources and real-world contexts for their learning. Collaborative efforts between schools and communities can foster a culture of creativity and inquiry, ultimately benefiting students' educational outcomes.

Limitations and Recommendations for Future study

Despite the valuable insights gained from this study, several limitations must be acknowledged. First, the study was conducted in a single elementary school in Surabaya, which may limit the generalizability of the findings to other educational contexts. Future studies should aim to include a broader sample across different schools with varying demographics to validate and extend these findings. Additionally, the reliance on qualitative methods, such as interviews and observations, may introduce bias. While triangulation and member checking were utilized to enhance the reliability of the data, future studies could benefit from incorporating quantitative measures, such as standardized assessments of creative thinking, to provide a more comprehensive evaluation of the impact of audio-visual media in education.

Moreover, this study's focus on social studies concepts may have encouraged more creative expressions than in subjects with more rigid structures, such as

mathematics or science. Future investigations should explore the applicability of these findings across different subject areas to determine if the same positive outcomes can be achieved in diverse educational contexts. Understanding how these methodologies affect creativity in subjects like STEM is crucial, as these areas often emphasize standardized testing and rigid structures that may limit creative exploration.

Another limitation is the relatively short duration of the study. The study was conducted over a limited period, which may not fully capture the long-term effects of integrating audio-visual media with inquiry-based learning. Longitudinal studies are essential to understanding how these approaches influence students' creative thinking and engagement over time.

Building on the findings and limitations of this study, several recommendations for future study emerge. First, there is a need for longitudinal studies that examine the lasting effects of integrating audio-visual media and social inquiry learning on students' creativity over time. Such studies could provide deeper insights into how these teaching methods contribute to developing creative thinking skills throughout students' academic journeys. Investigating how students' creative competencies evolve through various educational stages can yield valuable information for educators and curriculum developers.

Additionally, researchers should explore the potential of integrating these methodologies within various subject areas beyond social studies, such as language arts and STEM (science, technology, engineering, and mathematics). Understanding how different disciplines can benefit from combining inquiry-based learning and interactive media could lead to more comprehensive educational frameworks that foster creativity across the curriculum. For instance, exploring the use of audio-visual media in the context of science experiments could help elucidate how visual aids enhance understanding and creativity in a traditionally rigid subject.

Finally, further investigation into the role of teachers in facilitating creative learning environments is essential. Understanding how educators can effectively balance guidance and freedom in inquiry-based activities will be crucial for optimizing the potential of audiovisual media in nurturing creativity among students. The study should focus on teacher professional development and best practices for effectively integrating technology into inquiry-based learning. By addressing these areas, future studies can contribute to developing innovative teaching practices that prepare learners for the challenges of the 21st century.

This study highlights the significant role of integrating audio-visual media within a social inquiry learning framework in fostering creativity among primary school students. The findings illustrate the necessity of engaging instructional methods that cater to diverse learning styles, promote collaboration, and enhance problem-solving skills. As education evolves in response to societal demands, embracing innovative approaches that foster creativity and critical thinking will be essential in preparing students for a dynamic future.

D. Conclusion

In conclusion, this study highlights the significant role of integrating social inquiry learning with interactive audio-visual media in fostering creative thinking among primary school students. The study explored how this instructional Model enhances creative thinking, focusing on fluency, flexibility, originality, and elaboration. The findings suggest that students who engaged with these integrated approaches demonstrated higher levels of cognitive engagement and collaborative creativity. They were more interested in the material presented and willing to ask questions, challenge conventional ideas, and propose innovative solutions to complex social issues. One of the key contributions of this study is demonstrating how interactive media, such as digital storytelling and animated simulations, provide an accessible platform for exploring abstract social concepts. This method increases student engagement and facilitates deeper inquiry and creative problem-solving. Moreover, integrating audio-visual tools fostered a cooperative learning environment where students collaborated effectively, sharing ideas and enhancing each other's creative outputs. However, the success of this instructional Model relies heavily on the role of teachers. Educators who effectively used digital tools and structured inquiry-based activities created a learning environment where creativity thrived. Teachers' guidance in balancing open-ended inquiry with structured learning goals was crucial in nurturing students' ability to think creatively. This study contributes to the growing literature on innovative pedagogical methods in elementary education. By emphasizing the importance of audio-visual media and inquiry-based learning, the study offers practical insights for educators seeking to enhance creative thinking in their classrooms. Future studies should explore the long-term effects of this instructional Model and its application across various educational contexts.

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