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Optimizing Interactive Multimedia in Social Studies Learning Through the Application of POAC Management Functions in Junior High Schools

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Abstract: This study aims to describe the optimization of interactive multimedia in Social Studies (IPS) learning through the application of the POAC (Planning, Organizing, Actuating, Controlling) management functions at SMPN 187 Jakarta and SMPN 225 Jakarta. The research employed a qualitative approach with a case study design. Data were collected through interviews, observations, and documentation, then analyzed using the interactive model of Miles, Huberman, and Saldaña. The findings show that teachers were able to plan multimedia use based on the characteristics of Social Studies content, organize learning tools and student role distribution, implement multimedia-based instruction that promotes analytical activity through videos, animations, and discussions, and conduct formative and summative evaluations to monitor students' understanding. Interactive multimedia was found to enhance comprehension of abstract concepts, increase learning motivation, and foster students' critical thinking and communication skills. This study affirms that successful multimedia integration heavily depends on teachers' managerial competence and the availability of technological infrastructure in schools.

Keywords: Interactive multimedia, Social Studies learning, POAC management, Critical thinking, Junior high school.

INTRODUCTION

The rapid development of digital technology over the past two decades has significantly transformed classroom learning practices. Twenty-first-century education demands that students not only master foundational concepts but also develop critical thinking, collaboration, and technology integration skills as part of the learning process. The integration of technology in teaching becomes particularly essential when dealing with abstract subject matter, such as Social Studies (IPS). Many students struggle to understand social, economic, and geographical concepts when instruction is limited to lectures or static visuals. Therefore, the adoption of interactive multimedia serves as a strategic approach to helping students build more concrete and contextual understanding.

The theoretical basis for the effectiveness of interactive multimedia is supported by several cognitive frameworks. Mayer (2021), through multimedia learning theory, emphasizes

that students learn better when information is presented through a combination of text, audio, and integrated visuals. Sweller (2020) further explains that multimedia can reduce cognitive load by distributing information across visual and verbal channels, making interpretation easier. Yuliana (2024) also stresses that interactive multimedia bridges abstract concepts in Social Studies through simulations, animations, and digital presentations that encourage students to better grasp social phenomena. These findings indicate that the integration of interactive multimedia has strong theoretical justification for enhancing Social Studies learning effectiveness.

Empirical studies also reinforce this relevance. Haryanto (2023) demonstrated that the use of interactive digital media significantly improves conceptual understanding in Social Studies. Manurung (2024) found that game-based multimedia increases student motivation and participation, while Widiastuti et al. (2024) reported that digital media fosters learning enthusiasm starting from elementary school. However, most previous studies only highlighted media effectiveness, without examining the managerial process required to ensure optimal implementation of multimedia in school settings. In fact, effective instruction requires teachers not only to select appropriate media but also to plan, organize, implement, and evaluate its use systematically.

In practice, the integration of interactive multimedia remains challenging. Preliminary findings at SMPN 187 Jakarta and SMPN 225 Jakarta indicated that many teachers still rely on conventional methods and have not fully utilized the potential of digital technology in Social Studies teaching. Technical issues such as limited devices, internet connectivity, and varying levels of digital literacy among teachers and students frequently emerge as barriers. Additionally, the absence of systematic managerial approaches leads to sporadic use of multimedia that has not been fully integrated into instructional planning. This situation reflects that the potential of interactive multimedia has not been fully optimized.

The POAC management framework (Planning, Organizing, Actuating, Controlling) offers a systematic structure to optimize the use of interactive multimedia. Terry (as cited in Syahputra & Aslami, 2023) explains that POAC-based instructional management enables teachers to develop clear strategies, organize learning resources efficiently, implement interactive learning, and conduct continuous evaluation. Hallinger (2020), through the concept of instructional leadership, further emphasizes the strategic role of teachers in directing technology use to improve instructional quality. Therefore, managerial approaches are crucial to ensuring that interactive multimedia not only acts as supplemental material but also truly strengthens Social Studies learning.

Based on this background, the present study is essential in addressing research gaps related to the optimization of interactive multimedia from a managerial perspective. This study moves beyond media effectiveness by providing a comprehensive description of how teachers in SMPN 187 Jakarta and SMPN 225 Jakarta plan, organize, implement, and evaluate interactive multimedia in Social Studies instruction. By employing the POAC framework, the study is expected to contribute theoretical and practical insights for developing Social Studies learning that is more effective, adaptive, and aligned with 21st-century education demands.

The purpose of this study is to describe and analyze the optimization of Social Studies learning through interactive multimedia based on four POAC components: planning, organizing, actuating, and controlling. This research illustrates how teachers design multimedia integration, manage classroom strategies, facilitate student interaction with digital media, and assess its impact on students' conceptual understanding. Furthermore, this study aims to provide practical recommendations for teachers, school leaders, and policymakers in improving Social Studies learning through structured multimedia integration.

METHOD

This study employed a qualitative approach with a case study design to gain an in-depth understanding of the process of optimizing interactive multimedia in Social Studies learning at SMPN 187 Jakarta and SMPN 225 Jakarta. A qualitative approach was chosen because it allows the researcher to explore teachers' and students' experiences contextually, including managerial dynamics that occur at each stage of instruction. Creswell and Poth (2018) emphasize that qualitative research is suitable for investigating complex educational phenomena related to real classroom practices. A case study design was implemented because the study focused on two schools with different characteristics, enabling a comprehensive exploration of the POAC implementation in the use of interactive multimedia.

This research was conducted in two schools SMPN 187 Jakarta and SMPN 225 Jakarta selected purposively due to their adoption of interactive multimedia in Social Studies instruction, but with differing levels of optimization. Research participants included Social Studies teachers, school principals, and students directly involved in multimedia-based learning activities. Participant selection followed purposive sampling, based on their ability to provide relevant and rich information, consistent with the recommendations of Miles, Huberman, and Saldaña (2014) regarding information-rich informants.

Data were collected through methodological triangulation, including in-depth interviews, classroom observations, and document analysis. Interviews were used to investigate how teachers planned, organized, implemented, and evaluated multimedia use. Classroom observations documented actual instructional activities, interactions, and digital media utilization. Documents such as lesson plans (RPP), multimedia slides, learning videos, and student learning records were analyzed to strengthen the findings. According to Patton (2015), methodological triangulation enhances data credibility because each finding is validated through multiple sources.

The researcher served as the primary instrument in this study, interacting directly with data sources, interpreting information, and ensuring consistency throughout data collection. Supplementary instruments included interview guides, observation sheets, and document analysis formats to maintain systematic data collection, consistent with Lincoln and Guba's (1985) assertion that qualitative instruments must be adaptable yet structured.

Data validity was established using Lincoln and Guba's (1985) trustworthiness criteria: credibility, transferability, dependability, and confirmability. Credibility was achieved through triangulation and member checking with teachers and school principals. Transferability was enhanced by providing detailed contextual school descriptions. Dependability was ensured by maintaining a complete audit trail of research procedures, and confirmability was maintained by linking results to raw data such as transcripts, photos, and student work.

Data analysis followed Miles, Huberman, and Saldaña's (2014) interactive analytical model, consisting of data reduction, data display, and conclusion drawing. Data reduction focused on identifying key themes related to planning, organizing, actuating, and controlling multimedia use. Findings were presented through narrative descriptions, matrices, and interview quotations. Conclusions were drawn iteratively to maintain alignment with field data. Analysis was conducted concurrently with data collection to allow continuous refinement.

The research was conducted from January to April 2025, covering preparation, field data collection, analysis, and reporting. Through this approach, the study is expected to provide a comprehensive and structured representation of how interactive multimedia is optimized in Social Studies learning using the POAC management framework.

RESULTS AND DISCUSSION

Planning for the Optimization of Interactive Multimedia in Social Studies Learning at SMPN 187 Jakarta and SMPN 225 Jakarta

The planning for optimizing interactive multimedia at SMPN 187 Jakarta and SMPN 225 Jakarta was carried out as an initial strategic step to ensure that the use of digital media effectively supports students' conceptual understanding in Social Studies. Teachers began the planning process by analyzing the Basic Competencies of Social Studies that require skills in interpretation, data analysis, and the understanding of social phenomena. Abstract content was redesigned to be visualized through interactive multimedia such as videos, animations, interactive slides, and digital quizzes. This approach demonstrates the application of instructional planning principles by Dick, Carey, and Carey (2015), which emphasize the alignment between learning objectives and the selection of appropriate media.

A teacher at SMPN 187 Jakarta stated in the interview:

"We select materials that are better presented visually because students understand faster when there are animated examples or videos."

The planning also included selecting interactive multimedia that meets student needs. Teachers considered the suitability of media with student characteristics, material complexity, and students' digital literacy levels. The chosen media included animated instructional videos, interactive simulations, digital presentations, and multimedia materials that allow students to independently explore social phenomena. This planning reinforces Mayer's (2021) principle that effective multimedia should fulfill three criteria: coherence, clarity, and relevance.

A teacher at SMPN 225 Jakarta noted:

"We choose media that is not too heavy so that students' devices do not lag. Simple but interactive media works better."

Furthermore, teachers planned learning scenarios that integrate multimedia with inquiry-based activities. Lesson plans were arranged to include stages such as introduction, multimedia exploration, class discussion, and final reflection. This approach represents student-centered learning, giving students opportunities to develop conceptual understanding through visual observation, data analysis, and interaction with media. It aligns with Anderson and Krathwohl's (2010) revised taxonomy, which promotes the development of higher-order thinking skills through interpretation and evaluation tasks.

A teacher at SMPN 187 Jakarta emphasized:

"We place multimedia in core learning activities, not just as decoration. Students must analyze the content, not simply watch it."

In addition, teachers planned for technological readiness by identifying supporting facilities such as LCD projectors, teacher laptops, internet access, and students' personal devices. They coordinated with administrative staff and homeroom teachers to prevent technical obstacles during instruction. This demonstrates the administrative planning function described by Terry (as cited in Syahputra & Aslami, 2023), which highlights that the success of digital learning is highly influenced by infrastructure readiness.

The teacher at SMPN 225 Jakarta added:

"We check the network and available devices beforehand. If the internet connection is unstable, we prepare offline videos as a backup."

Teachers also planned various assessment forms aligned with multimedia-based instruction. Evaluation addressed not only outcomes but also students' thinking processes during interaction with digital media. Assessments included observation rubrics, multimedia-based project evaluations, and analytical questions following video or simulation activities. This reflects authentic assessment principles advocated by Mueller (2018), which emphasize assessing real learning processes rather than memorization.

Overall, multimedia planning in both schools shows that teachers have integrated pedagogical principles, management strategies, and digital literacy requirements into a coherent

instructional design. The comprehensive planning covered learning objectives, instructional strategies, infrastructure readiness, and assessment scenarios, serving as a solid foundation for the effective implementation of interactive multimedia to enhance Social Studies conceptual understanding.

Organizing the Optimization of Interactive Multimedia in Social Studies Learning at SMPN 187 Jakarta and SMPN 225 Jakarta

The organization of interactive multimedia use at SMPN 187 Jakarta and SMPN 225 Jakarta was carried out by structuring teacher roles, preparing supporting devices, and arranging the learning flow so that multimedia implementation could run effectively. Teachers acted as designers, facilitators, and learning directors in multimedia-based instruction. At this stage, they ensured that all supporting components such as laptops, LCD projectors, and internet access were available and accessible to students. This organizational practice aligns with Robbins and Coulter's (2018) view that the organizing function in education involves structuring resources, distributing tasks, and arranging work systems to optimize the learning process.

A teacher from SMPN 187 Jakarta explained:

"Before teaching, we make sure all devices are ready. If the media cannot be opened, the activity will be disrupted."

Organization was also carried out through task distribution among teachers, students, and the school. Students were assigned to operate devices in turns, while the school provided technical support such as internet connectivity and device maintenance. In addition, teachers coordinated with administrative staff to ensure the smooth use of projectors and multimedia classrooms. This reflects the application of **distributed responsibility** in classroom management, where responsibilities are shared according to each party's capacity to maintain the continuity of learning activities.

A teacher from SMPN 225 Jakarta described:

"We have divided roles: who turns on the LCD, who controls the audio volume, and who helps ensure that all students can see the screen."

In terms of classroom structure, teachers organized the seating arrangement to ensure that all students had a clear view of the screen. Students were grouped based on their learning styles and digital skills. Those who were more proficient in using devices were designated as peer assistants to help classmates who were still struggling. This collaborative organization aligns with Vygotsky's (1978) social constructivist theory, which emphasizes the importance of peer support in cognitive development.

A teacher at SMPN 187 Jakarta stated:

"Students who are already familiar with gadgets are assigned as group assistants. That way, when multimedia is used, the teacher doesn't have to assist each student individually."

Organizing also included the establishment of procedural guidelines for multimedia-based lessons. Teachers arranged a clear learning sequence, starting from the introductory phase, multimedia viewing, analysis of video or animation content, class discussion, and final reflection. Each step was communicated to students before the lesson began so that they understood the activity sequence and learning objectives. This is consistent with Gagné, Wager, and Briggs' (2017) concept of *instructional flow*, which posits that a structured sequence of activities facilitates students' learning.

A teacher from SMPN 225 Jakarta added:

"We explain the steps in advance. Students must know that after watching the video, they will answer questions or engage in discussion."

In addition, teachers organized multimedia content to make it more structured and aligned with students' cognitive levels. They selected essential video segments, adjusted playback speed, and prepared analytical questions to be discussed after the multimedia presentation. This

reflects the function of **content organizing** in instructional design, which emphasizes that material must be arranged in accordance with students' information-processing capacity (Mayer, 2021).

A teacher at SMPN 187 Jakarta explained:

"We divide the video into several parts so that students do not feel overwhelmed and can focus on the key points."

Overall, the organization of interactive multimedia in both schools demonstrates that teachers systematically structured resources, prepared devices, delegated roles, and arranged the instructional flow so that multimedia-based learning proceeded in a focused and orderly manner. This sound organization serves as a crucial bridge between planning and implementation; without proper structuring, digital media could potentially hinder or distract from learning rather than enhance it.

Implementation of Interactive Multimedia Optimization in Social Studies Learning at SMPN 187 Jakarta and SMPN 225 Jakarta

The implementation of interactive multimedia in Social Studies learning at SMPN 187 Jakarta and SMPN 225 Jakarta demonstrates that teachers have successfully integrated digital media into the core learning process. In this stage, multimedia was not merely used as a visual aid; rather, it served as a tool for analysis, discussion, and the reinforcement of social concepts. Implementation began with an introductory activity to activate students' prior knowledge, followed by the use of videos, animations, and digital presentations relevant to the lesson topics, such as social interaction dynamics, environmental changes, or historical events. This practice aligns with Mayer's (2021) multimedia learning theory, which argues that students learn more effectively when information is processed simultaneously through visual and verbal channels.

A teacher from SMPN 187 Jakarta explained:

"We start the learning session by showing a short video so students can get a clear picture before we move into the material explanation."

After viewing the multimedia content, students were instructed to analyze the information presented. They were guided to take notes on key facts, identify cause-and-effect relationships, and explain social phenomena based on the visuals. This analytical activity positioned students as active learners and is consistent with Anderson and Krathwohl's (2010) revised cognitive taxonomy, which emphasizes activities requiring interpretation, reasoning, and evaluation.

A teacher from SMPN 225 Jakarta noted:

"After watching the video, students must answer analytical questions. They need to explain the reasons, not just mention the facts."

The implementation further included collaborative group discussions. Students worked in small groups to formulate interpretations of social issues based on the multimedia content. Through discussion, they compared ideas, debated perspectives, and presented group conclusions to the class. This approach reinforces Vygotsky's (1978) theory of social learning, emphasizing that cognitive development is strengthened through meaningful interaction with peers.

A student from SMPN 187 Jakarta shared:

"We discussed the video in groups, then presented our opinions. Each group sometimes had different viewpoints."

Teachers also integrated inquiry-based learning by encouraging students to examine multimedia content in greater depth. For example, after exploring interactive simulations on environmental change, students were asked to draw conclusions about causes and impacts by analyzing the presented data. This illustrates the use of multimedia as a **source of evidence**, not merely an information display. It reflects Heinich et al.'s (2019) view that multimedia can promote exploration, investigation, and independent discovery.

A teacher from SMPN 225 Jakarta emphasized:

"We don't just show the video. Students must look for patterns, compare, and draw conclusions based on what they see."

Students were also asked to construct learning products such as visual diagrams, digital concept maps, or reflective summaries based on multimedia analysis. These activities fostered higher-order thinking skills such as evaluation and creation, aligning with Brame's (2016) active learning concept, which believes learning becomes more meaningful when students generate new knowledge artifacts.

A teacher from SMPN 187 Jakarta remarked:

"We assign students to create a cause-and-effect diagram after watching the video. This way, they gain a deeper understanding of the content."

Throughout implementation, teachers continuously provided **formative feedback** to correct conceptual misunderstandings and refine students' learning process. The feedback helped students adjust their interpretations, strengthen arguments, and improve the clarity of their visual outputs. This is consistent with Hattie and Timperley's (2007) assertion that timely, specific feedback significantly enhances comprehension and learning performance.

Evaluation of the Optimization of Interactive Multimedia in Social Studies Learning at SMPN 187 Jakarta and SMPN 225 Jakarta

The evaluation of interactive multimedia use in Social Studies learning at SMPN 187 Jakarta and SMPN 225 Jakarta was carried out systematically to assess the effectiveness of media in improving students' conceptual understanding and learning engagement. Teachers applied both process evaluation and outcome evaluation to examine how multimedia supported students' analytical skills and comprehension during classroom activities. This approach aligns with Black and Wiliam's (1998) concept of formative assessment, which emphasizes that ongoing feedback during learning can significantly enhance students' understanding.

A teacher at SMPN 187 Jakarta explained:

"While multimedia is being played, we observe students' responses. If they look confused, we pause and explain the difficult part first."

Outcome evaluation was conducted through analytical tasks, short presentations, and multimedia-based quizzes administered after the video or animation viewing. Teachers assessed students' abilities to identify key information, make causal connections, explain social phenomena, and draw conclusions based on the multimedia content. This assessment approach is in line with Mueller (2018), who emphasizes that authentic assessment must reflect real thinking processes occurring during learning.

A teacher at SMPN 225 Jakarta stated:

"We do not only look at correct answers but also how students justify them. That shows whether they truly understand the concept."

In addition to evaluating learning output, teachers carried out reflective evaluation to determine how multimedia enhanced students' interest and motivation. Reflection activities included open-ended questions, end-of-class discussions, and short written notes about students' learning experiences. This reflective practice aligns with Schön's (1983) view that evaluating one's learning process can improve the quality of learning.

A student from SMPN 225 Jakarta shared:

"Learning through videos makes it easier to understand because we can see the events being explained. But if the video plays too fast, it's hard to follow."

Teachers also evaluated technical components such as visual quality, audio clarity, and digital accessibility. Technical issues like unstable internet connections often influenced the learning process. This shows teachers' awareness of the importance of technological readiness as part of the TPACK framework (Mishra & Koehler, 2006).

A teacher at SMPN 187 Jakarta said:

"If the connection is unstable, the video keeps buffering. We always prepare offline files as a backup."

Peer review was also used to evaluate students' metacognitive skills. Students assessed their classmates' work using simple criteria such as relevance of visual content and accuracy of information. This peer assessment practice aligns with Flavell's (1979) metacognition theory, as students engage in reflection and develop awareness of their thinking processes.

A student from SMPN 187 Jakarta noted:

"We can give comments to our friends, so we can see which design is better and why."

Overall, the evaluation shows that interactive multimedia strengthened high-level cognitive processes when teachers used structured assessments. By evaluating students' process, product, and reflection, teachers were able to identify students' ability to connect textual and visual information and plan necessary improvements for future lessons. Thus, evaluation becomes a continuous improvement effort that ensures the sustainability of interactive multimedia learning in Social Studies.

Discussion

The results of this study indicate that the optimization of interactive multimedia in Social Studies learning at SMPN 187 Jakarta and SMPN 225 Jakarta was effective because teachers were able to consistently integrate digital media into the POAC instructional management framework. The planning process demonstrated teachers' understanding that multimedia can overcome the abstract nature of Social Studies content, which has long been one of the main obstacles for students. This aligns with Mayer's (2021) theory that high-quality multimedia supports meaning-making by simultaneously activating both visual and verbal processing channels. Teachers designed lesson scenarios that combined multimedia with analytical tasks, allowing higher-order thinking skills to develop more systematically.

The instructional planning implemented by the teachers also supports findings from Haryanto (2023), which show that selecting appropriate digital media can significantly improve students' conceptual understanding in Social Studies. In this study, teachers matched multimedia formats with the specific learning content to ensure relevance and instructional suitability. These findings highlight that the effectiveness of digital media does not rely solely on the availability of technology, but more importantly on pedagogical quality and structured planning. Thus, planning based on the POAC framework provides clear direction for teachers in optimizing interactive multimedia.

In the organizing stage, teachers arranged resources, classroom structure, and student roles to ensure seamless multimedia operations. This finding aligns with Robbins and Coulter's (2018) view that organizing involves coordinating resources and structuring work processes to achieve learning objectives efficiently. Organizing tasks such as assigning technical responsibility to students helped increase participation and strengthened classroom management. These results also support Lin, Warschauer, and Blake's (2020) findings, which reveal that technology-enhanced collaboration can improve the quality of interaction and comprehension.

Furthermore, the organizing mechanism applied in this study reflects social constructivism principles, especially Vygotsky's (1978) concept of peer scaffolding. By positioning students with higher technological literacy as peer assistants, teachers were able to facilitate smoother transitions into digital learning environments. This reduced instructional barriers and enabled teachers to concentrate more on conceptual exploration rather than technical troubleshooting. Thus, organizing becomes a critical foundation in ensuring the effective implementation of interactive multimedia.

The implementation phase demonstrated that interactive multimedia served not merely as a visual supplement but as a cognitive tool that promoted analysis, discussion, and evidence-based reasoning. Students interpreted videos, identified essential information, and formulated

causal relationships from animated representations of social phenomena. These practices reflect the integration of multimedia within active learning, consistent with Brame (2016), who asserts that learning becomes more meaningful when students actively construct knowledge. In addition, the present results support findings from Mutlu-Bayraktar, Cosgun, and Altay (2021), showing that digital visualization strengthens analytical problem-solving skills.

Teachers also facilitated group discussions and student-produced learning artifacts, demonstrating multimedia's role in promoting inquiry and creativity. These activities confirm that well-structured implementation can enhance both cognitive and socio-emotional aspects of learning.

In the evaluation stage, teachers applied a balanced combination of formative and summative assessments. Continuous feedback provided during multimedia-based activities enabled students to correct misunderstandings and improve conceptual clarity. This is in line with Black and Wiliam's (1998) argument that formative assessment plays a crucial role in improving learning outcomes. Authentic assessments such as multimedia-based projects and visual summaries also reflect Mueller's (2018) perspective that assessments must represent real-world thinking processes.

Peer review was additionally implemented to strengthen students' metacognitive awareness. This aligns with Flavell's (1979) theory that learning improves when students evaluate both their own and others' cognitive processes. By identifying errors, giving suggestions, and reflecting on video content, students demonstrated deeper understanding of their learning experience.

Overall, this discussion shows that the effectiveness of interactive multimedia relies heavily on the teacher's ability to manage learning through a structured POAC approach. These findings support the TPACK framework (Mishra & Koehler, 2006), which emphasizes that the successful integration of technology occurs when teachers balance content knowledge, pedagogical strategies, and technological tools. In this study, teachers effectively utilized multimedia to enhance conceptual understanding, analytical skills, and student engagement.

In conclusion, interactive multimedia has strong potential to improve the quality of Social Studies learning when systematically managed through planning, organizing, implementing, and evaluating. This study reinforces that educational technology is not merely a supplement but a pedagogical instrument capable of promoting higher-order thinking when applied through structured instructional management. The findings contribute to the development of modern Social Studies instruction and advance the literature on multimedia integration based on POAC in school environments.

CONCLUSION

This study concludes that the optimization of interactive multimedia in Social Studies learning at SMPN 187 Jakarta and SMPN 225 Jakarta was effective due to the consistent implementation of the POAC managerial functions. Teachers were able to plan instruction by selecting appropriate materials for visualization, organize learning resources and student roles, implement multimedia-based analytical learning that fostered critical thinking, and continuously evaluate learning processes and outcomes. Interactive multimedia has been proven to help students understand abstract Social Studies concepts through visualization, simulation, and modeling of social phenomena. Its use also enhances students' motivation, participation, and analytical abilities. Thus, the success of interactive multimedia integration is not solely determined by the quality of the media, but more importantly by how teachers manage the learning process in a structured, adaptive, and student-responsive manner.

The implications of this study indicate that integrating interactive multimedia requires pedagogical, technological, and managerial readiness from teachers, as well as institutional support from schools. Teachers must strengthen their competence in aligning technology with instructional strategies so that multimedia becomes not merely a visual aid but an analytical

tool that encourages the development of higher-order thinking skills. Schools should provide sufficient digital infrastructure, continuous professional development, and support systems to enable optimal implementation of multimedia. For policymakers, the findings serve as a foundation for designing programs that enhance teachers' digital literacy and expand the use of multimedia in Social Studies education. With proper management, interactive multimedia can become a key strategy in improving the quality of learning processes and outcomes in secondary schools.

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