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The Role of Interactive Power point In Student Participation

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ABSTRACT
This study aims to describe the implementation of interactive PowerPoint (PPT)-based learning media in the learning process and analyze the effect of its use on student participation and activeness. This study uses a qualitative approach with descriptive methods. The research subjects consisted of teachers and students from three schools, namely MAN 1 Baubau, SMA Negeri 3 Takalar, and MA Nurul Ikhwan Maros. Data collection was conducted through semi-structured interviews with teachers and students, as well as an open-ended questionnaire given to 20 students to determine their perceptions of the use of interactive PPT in learning. In addition, supporting data was obtained through literature studies from books, scientific journals, and relevant research articles. Data validity was tested using source triangulation and technical triangulation techniques, as well as member checking to ensure the data conformity with the informant's experience. The results show that the use of interactive PPT has a positive impact on the learning process. This media is able to increase student interest and motivation in learning, facilitate understanding of concepts, and encourage student participation and activeness during learning activities. However, the implementation of interactive PPT still faces several obstacles, especially limited technological facilities and differences in the level of digital literacy of teachers and students. Therefore, adequate support for facilities and infrastructure as well as improving teacher competence is very necessary so that the use of interactive PPT media can be optimized effectively in learning.

Keywords: Interactive Power Point, Digital Learning, Student Participation.

I. Introduction

Education is a means of preparing the younger generation to face the dynamics of development in the global era. Therefore, the educational process must be optimally implemented to ensure quality and the ability to produce superior human resources. To achieve this goal, improving the quality of education is necessary, one way of doing this is through the selection of appropriate learning media. This is crucial because learning media plays a significant role in creating a more lively, engaging, and meaningful learning environment. Education in Indonesia serves as a guideline for the teaching and learning process, including the use of technology in learning. The use of technology-based learning media plays a crucial role in supporting the achievement of national education goals. Based on the Regulation of the Minister of Education and Culture (Permendikbud) No. 22 of 2016 concerning Standards for Elementary and Secondary Education Processes, which emphasizes the importance of innovation in learning methods, including the creative use of technology and media to enhance student interest and skills.

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The term media comes from the Latin medius, meaning middle, intermediary, or connector. In the context of learning, media is more specifically understood as various graphic, photographic, and electronic tools that function to capture, process, and present information in both visual and verbal forms. According to experts, learning media has various definitions that reflect its role and function in the learning process, including the opinion of Richey & Klein (2007) who stated that learning media includes all forms of media and technology whose content is to help communicate to humans. From the definition above, it can be concluded that learning media is not just a tool, but also a strategy in learning. As a strategy, learning media has many functions, one of which is media as a learning resource, learning media as a source of information or knowledge for students, and also learning media as a learning resource is a component of the learning system that includes messages, people, materials, tools, techniques, and tools that can influence student learning outcomes (Asyhar, 2010:34-35). As time goes by, the world of education is also experiencing rapid development, with innovations in learning media emerging. The use of appropriate and responsive technology is a key focus in creating more efficient learning media that meet students' needs. By optimizing the use of various learning media, opportunities arise to improve the quality of the learning process and shape a generation capable of facing future challenges.

The history of the development of learning media, which includes the evolution from the use of simple tools to the sophisticated technology used in modern education today, includes the development of computers, which began in the 1950s, bringing a new revolution in learning media. The use of computers in education was initially limited to the use of simple computer programs for basic mathematics and language learning. However, with the development of computer technology and educational software, the use of computers in education has expanded. One of the main characteristics of computer-age learning media is interactivity. Through this media, students can interact directly with learning content, perform various activities, answer questions, and receive instant feedback. This type of interactivity provides a more engaging and effective learning experience for students. In line with this concept, interactive multimedia exists as a combination of various media elements such as text, images, sound, animation, and video integrated into a learning system. The uniqueness of interactive multimedia lies in its ability to provide a dynamic learning experience, where students not only passively receive information but also actively engage in the learning process. This interactivity allows students to choose, control, and respond to the content presented, thus creating a more personalized and comprehensive learning experience (Munir, 2017).

In today's era, teachers are not only required to deliver material clearly but also to create an engaging and interactive learning environment to actively engage students in the learning process. One medium that enables this is a presentation using Microsoft PowerPoint (PPT), especially when developed into an interactive PPT that utilizes multimedia features, animations, hyperlinks, and other interactive elements. PowerPoint is a presentation tool often used to convey information organized and presented in slide form. Through PowerPoint, listeners can more easily understand the material explained thanks to the visualizations presented in the slides (Ismah 2021). The use of interactive PowerPoint in education not only improves the quality of teaching but also opens up new opportunities for more effective collaboration and communication among students. By optimally utilizing this technology, we can prepare future generations to be more skilled, creative, and independent in facing the challenges of the modern world.

Interactive PowerPoint media offers a promising solution for transforming abstract concepts into dynamic and engaging visual experiences. This digital technology has the potential to fundamentally transform traditional and one-sided educational paradigms. Through animation, interactive visualizations, and multimedia elements, concepts of number patterns and image patterns can be presented in a more engaging, comprehensive, and easily understood way for elementary school students. Based on the phenomena and empirical evidence, this study was conducted with the aim of describing the implementation of interactive PPT in the learning process and analyzing the extent to which the application of this media can increase student participation. It is hoped that the results of this study will not only theoretically enrich the literature on technology-based learning media, but practically provide recommendations for educators in choosing material delivery strategies so that students are more active and involved in the learning process.

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II. Literature Review

Student participation is a crucial indicator of effective learning, particularly in learner-centered and technology-enhanced classrooms. Active participation enables students to engage cognitively, emotionally, and socially in the learning process, leading to better understanding and retention of learning materials (Fredricks, Blumenfeld, & Paris, 2004). In the context of digital learning, instructional media play an important role in facilitating interaction and engagement. Microsoft PowerPoint, when designed interactively, moves beyond static presentations and becomes a dynamic learning medium that supports discussion, questioning, and collaborative learning (Mayer, 2009; Susskind, 2008).

Interactive PowerPoint integrates multimedia elements such as animations, hyperlinks, quizzes, videos, and visual prompts that can stimulate students' attention and encourage classroom interaction. According to Mayer's Cognitive Theory of Multimedia Learning, well-designed multimedia presentations can enhance learning by integrating verbal and visual information effectively (Mayer, 2009). Several studies indicate that interactive presentation media increase students' motivation and willingness to participate in learning activities, particularly when compared to traditional lecture-based instruction (Apperson, Laws, & Scepansky, 2006; Ismail, 2020). From the perspective of Technological Pedagogical Content Knowledge (TPACK), the effective use of interactive PowerPoint requires teachers to integrate technological skills, pedagogical strategies, and subject-matter knowledge in a balanced and coherent manner (MY, 2023; Koehler & Mishra, 2009).

Empirical research has shown that the use of interactive PowerPoint positively affects student participation and classroom activeness across various educational levels. Digital presentation tools have been found to improve students' focus, confidence, and responsiveness during learning activities (Sulaiman & Ismail, 2019; Hafifah & Widodo, 2021). However, the effectiveness of interactive PowerPoint depends on teachers' digital competence and the availability of technological facilities (Koehler & Mishra, 2009). Differences in digital literacy among teachers and students may limit the optimal use of interactive media. Therefore, continuous professional development and adequate technological support are essential to maximize the role of interactive PowerPoint in fostering active student participation in digital learning environments.

III. Research Method

The type of research used in this study is qualitative. Qualitative research is a method that utilizes descriptive data in the form of words, both spoken and written, from the individuals or groups being observed. This approach aims to describe and analyze various phenomena related to the behavior, events, social dynamics, attitudes, beliefs, and perceptions of the research subjects.Lexy J. Moleong (2005:6) in the book on qualitative research methods by Afdhal Chatra et al., states that qualitative methods aim to understand the phenomena experienced by research subjects, including explaining behavior, perceptions, motivations and so on as a whole, from a linguistic perspective and in a particular natural context using various natural methods. The data sources in this study are primary data sources and secondary data sources. The primary data or the first source in this study is an in-depth interview that the researcher has conducted with teachers and students at three different schools, namely MAN 1 Baubau, SMA 3 Takalar, and MA Nurul Ikhwan Maros. The secondary data or additional data that supports the first source comes from filling out an open questionnaire and various sources such as books, scientific journals, research articles, and other relevant literature that discusses learning media, interactive PPT, and student participation.

The interviews were semi-structured, allowing researchers to delve deeper into students' and teachers' experiences with the use of interactive PPTs, including aspects that make students more active, motivated, and engaged in discussions. Furthermore, an open-ended questionnaire was administered to students to elicit more extensive written responses. The questionnaire questions allowed students to freely describe their experiences during interactive PPT learning, such as their interest in the PPT's appearance, ease of understanding the material, and its impact on their willingness to participate. To ensure data validity, the study also employed source and technical triangulation techniques. Source triangulation was conducted by comparing information from students and teachers, while technical triangulation was conducted by

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comparing interview and questionnaire results. Furthermore, the researcher conducted member checks by reconfirming the interview results with informants to ensure the data obtained accurately reflected their experiences.

IV. Result and Discussion

Researchers interviewed three subject teachers who directly implement interactive PPT in their classrooms. Furthermore, they interviewed several randomly selected students to gain firsthand insight into their experiences with interactive PPT-based learning. Through these interviews, researchers sought to delve deeper into their learning experiences, the changes they experienced, students' perceptions of the PPT's appearance and features, and the challenges teachers frequently encounter in its implementation. In addition to interviews, researchers also conducted a questionnaire with 20 students to broadly assess their perceptions regarding the use of interactive PPTs in learning. The questionnaire included several indicators, including interest in learning, ease of understanding the material, courage to ask or answer questions, and comfort in participating in learning activities using interactive PPTs. Through a combination of these two techniques, the researcher describes the findings he obtained from books, journals and primary sources as follows:

4.1. The influence of interactive PPT on students' interest and motivation

The results of the study show that interactive ppts have a significant positive influence on students' interest and motivation, the media is proven to not only attract students' attention, but also influence their attitudes towards the learning process as a whole. This statement is also in line with the argument conveyed by one of the teachers during the interview who emphasized that "By using this interactive ppt, it can grow children's interest more persistently, because it not only presents visualizations but can also be equipped with videos and games, so that students do not get bored easily when learning." This statement is in line with questionnaire data showing that 95.2% of students feel that interactive ppts make learning more interesting, and 90.5% of students state that interactive features such as quizzes, animations, and navigation buttons encourage them to be more actively involved. This medium allows students to experience a more personalized learning experience, allowing them to control their learning through interactive features. For example, some students mentioned feeling more motivated to participate in lessons because they could answer questions or take quizzes directly on the slides, creating a sense of challenge and satisfaction when they successfully provided the correct answer. Students' intrinsic motivation increased because they felt they had an active role in their learning, rather than simply passively receiving information.

Furthermore, the interactivity of this media also fosters social motivation, as features like comment spaces or open-ended questions allow students to interact with their classmates. This fosters a sense of community in learning and encourages greater participation from students who initially tend to be passive. Psychologically, interactive and engaging learning experiences can boost students' confidence in answering questions and expressing opinions, which in turn strengthens their motivation to continue participating in class. Interviews and questionnaires revealed that this medium not only presents material but also creates a fun, interactive, and inquisitive learning experience. With engaging visualizations, animations, and educational games, students are encouraged to stay focused and motivated, significantly increasing their participation and engagement.

4.2. Facilitates understanding of abstract concepts

This interactive PPT-based media has proven to be quite effective in helping students understand abstract concepts that are usually difficult to grasp through traditional methods. Visualization elements, animations, diagrams, and videos can bridge the gap between theory and real-world understanding, allowing students to see a concrete representation of the material. For example, in material that is conceptual or requires critical thinking, interactive animations can show the process flow or relationships between concepts, making it easier to understand. During the interview session, the teacher explained that "this media is intended to stimulate students so they are motivated to focus on learning, so that students participate

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directly, we create provocative questions so that they want to interact in the learning process." This shows that interactive features, such as questions or quizzes in the middle of the material, make students more active in processing information rather than just passively receiving explanations.

Furthermore, interactive PPT is not only a tool for delivering material, but also a learning tool that allows students to learn independently and in a structured manner. Thus, this media facilitates adaptive learning and supports student learning success at a deeper level of understanding. Questionnaire data also supports this, where most students admitted that interactive PPT helped them grasp the core of the material more easily, especially because of the concise, visual, and interactive presentation of the material. Thus, this media is not only a visual tool, but also a learning instrument that encourages students' cognitive engagement, making abstract concepts easier to understand. This finding is in line with research conducted by Charisma Nabila et al., on fourth-grade elementary school students, which stated that the use of interactive PowerPoint media is effective in improving the understanding of mathematical concepts, especially in the material of picture patterns and number patterns. Through a systematic approach involving two research cycles, the study showed a significant improvement in the quality of mathematics learning at the elementary school level. Thus, the results of this study strengthen the findings of previous research that interactive PowerPoint media is able to effectively improve students' conceptual understanding in various subjects.

4.3. Impact on student participation and activeness

The use of interactive PPT significantly increases student participation and engagement in class. Features such as quizzes, polls, navigation buttons, and open-ended questions create a different classroom dynamic than conventional learning. Students are encouraged to actively express ideas, answer questions, and take quizzes thanks to the fun and challenging format. In practice, student participation is not limited to verbal interaction; this interactive feature also encourages critical thinking and quick decision-making, such as when selecting the correct answer or responding to a quiz question. This active learning is evident in the increased interaction between students, where they focus not only on the teacher but also collaborate or engage in brief discussions through interactive media. Research shows that this media can create a more democratic learning environment, where every student feels they have an equal opportunity to participate. Student questionnaire findings support this, with 90.5% of respondents reporting greater motivation to ask and answer questions, while 95.2% reported feeling less bored when learning using interactive media. Therefore, the use of interactive PPT not only increases individual engagement but also facilitates group participation through discussions and interactions within the slides, creating a more dynamic and enjoyable learning environment.

4.4. Obstacles and challenges in using interactive PPT

Despite its many advantages, the implementation of interactive PPT also faces several challenges. One major challenge is the disparity in access to technology between schools in urban and remote areas. Not all classrooms have adequate projectors or screens, and some students lack personal devices or sufficient internet data to optimally access interactive features. Besides limited facilities, teacher skills are also a crucial factor. As one of our informants stated, "Of the 75 teachers at MAN 1 Baubau, only about 10 can use Canva, and most of them are relatively young." Other challenges include network issues and the lack of technological savvy among students. Another challenge arises from students, particularly those who struggle to navigate complex features or manage their focus when slides move too quickly. These challenges demonstrate that the effectiveness of interactive PPTs is highly dependent on technological readiness, school facilities, and the digital literacy of both teachers and students.

4.5. The role of teachers in implementing interactive PPT-based media

The teacher's role remains a key factor in the successful use of interactive PPT. This is because teachers are not only presenters of material but also facilitators, managing interactions, monitoring student participation, and providing guidance when students encounter difficulties. Research shows that teachers trained in using this medium can create a dynamic, interactive, and enjoyable classroom atmosphere.

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Ongoing training is essential for teachers to maximize interactive features. Creative teachers can utilize this medium to combine various learning strategies, such as project-based or collaborative learning, thereby simultaneously increasing student interest, motivation, and participation. An effective teacher ensures that interactive PPTs are not just visual media, but also learning tools that support active engagement, conceptual understanding, and a comprehensive learning experience.

In order to improve the quality of learning, Law Number 14 of 2005 concerning Teachers and Lecturers emphasizes the importance of the role of teachers in improving the quality of education. Law Number 14 of 2005, Article 10, paragraph 1, states that teacher competency as referred to in Article 8 states. Teachers must fulfill several requirements to have competencies including pedagogical competency, namely the ability to manage student learning. Furthermore, the role of teachers in the learning process is not only technical but also has a strong spiritual foundation. In the Qur'an, Allah SWT emphasizes the noble status of those who have knowledge, as stated in QS. Al-Mujadilah: 11, namely:

يَرۡفَعِ ٱللَّهُ ٱلَّذِينَ ءَامَنُواْ مِنكُمۡ وَٱلَّذِينَ أُوتُواْ ٱلۡعِلۡمَ دَرَجَٰتٖ ... ١١ ...

Translation*: "...Allah will raise those who believe among you and those who are given knowledge by several degrees..."*

This verse indicates that those who possess knowledge and disseminate it, such as teachers, are given a high position in the sight of Allah SWT. Furthermore, the first command revealed in Islamic teachings is "read," found in Surah Al-Alaq: 1-5. This argument emphasizes the importance of education in imparting knowledge. Thus, we can conclude that a teacher's role as a learning facilitator who regulates interactions, monitors student participation, and guides their understanding is not only pedagogically important but also has valuable support from Islamic teachings.

V. Conclusion

Based on research results obtained through interviews and questionnaires, it can be concluded that the use of interactive PPT-based learning media positively contributes to the learning process. This media can increase student interest, motivation, and active participation in learning, while also helping them understand the material, including abstract concepts. The visual, concise, and interactive presentation of material encourages students to be more cognitively and emotionally engaged, making the learning process more enjoyable and meaningful. However, the effectiveness of interactive PPT implementation still faces several challenges, particularly related to limited technological facilities, device and internet access, and differences in digital literacy levels between teachers and students. Therefore, the role of teachers is crucial as learning facilitators who not only master the material but also are able to manage learning media creatively and adaptively. With the support of pedagogical competence, ongoing training, and the readiness of facilities and infrastructure, interactive PPT has the potential to be an effective learning medium in improving the quality of learning and students' overall learning experience. Teachers are expected to improve their competency in developing and using interactive PPTs to make learning more engaging and participatory. Schools need to support the implementation of digital learning by providing adequate facilities and infrastructure and ongoing training for teachers. Future research is recommended to examine the use of interactive PPTs using more diverse methods and contexts to obtain more comprehensive results.

References

Abdullah, R., & Nasution, MIP "Effectiveness of Using Interactive PowerPoint in Encouraging Student Collaboration and Communication in Islamic Religious Learning", Al-Qayyimah Journal, 7.2 (2024) 19-32.

Al-Quranul Karim, Al-Hufaz Al-Qur'an memorizes easily, (Bandung: Cordoba, 2021).

Anshari, Amaliah Luthfiah, Arabic Language Teacher, MA Nurul Ikhwan Maros, Interview, 2025.

ISSN [Online]: 2776-6411

Apperson, J. M., Laws, E. L., & Scepansky, J. A. (2006). An assessment of student preferences for PowerPoint presentation structure in undergraduate courses. *Computers & Education, 47*(2), 188–200.

Chatra, M. Afdhal, et al., Qualitative research methods, (Jambi: PT. Sonpedia Publishing Indonesia, 2023).

Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research, 74*(1), 59–109.

Hafid, Abd, Muliadi, Mirna, "The Effect of Using Powtoon-Based Animation Video Media on Students' Interest in Learning Indonesian". Journal of Elementary School Education & Learning, 5.1 (2025) 207-214.

Hafifah, N., & Widodo, A. (2021). The use of interactive multimedia to increase student participation and learning engagement. *Journal of Educational Technology Systems, 49*(4), 483–497.

Harahap, Olivia Feby Mon, Mastiur Napitupulu, Novita Sari Barubara, Learning Media, (West Pasaman: CV. Azka Pustaka, 2022).

Ismail, I. (2020). The effectiveness of interactive PowerPoint presentations in improving students' learning motivation. *International Journal of Instruction, 13*(2), 23–38.

Koehler, M. J., & Mishra, P. (2009). What is technological pedagogical content knowledge (TPACK)? *Contemporary Issues in Technology and Teacher Education, 9*(1), 60–70.

Law of the Republic of Indonesia Number 14 of 2005 concerning Teachers and Lecturers.

Mahmud, Syahruddin, et al., Learning Media, (Cirebon: Publisher Lovrinz Publishing, 2023).

Mayer, R. E. (2009). *Multimedia learning* (2nd ed.). New York, NY: Cambridge University Press.

MY, N., Ardiansyah, M., & Sarbani, A. A. (2025). Meningkatkan Keaktifan Siswa Melalui Model Project Based Learning dengan Pendekatan TPACK. *Pinisi Journal PGSD*, *5*(1), 62-68.

Nabila, C., Utami, R., Ayu, R., & Ngazizah, N. "The Use of Interactive Powerpoint Media in Improving Understanding of Mathematical Concepts on Picture Patterns and Number Patterns in Grade 4 Elementary School". Jurnal Review Pendidikan dan Pengajar (JRPP), 8.1 (2025) 1787-1798.

Nurjiah, PPKN Teacher, SMA 3 Takalar, Interview, 2025.

Nurmin, Indonesian Language Teacher, MAN 1 Baubau, Interview, 2025.

Prawesti, Larasati Nur Indah, et al., Learning media, (Klaten: Lakeisha Publisher, 2024).

Sulaiman, T., & Ismail, Z. (2019). Teachers' perceptions of interactive presentation tools and their impact on student engagement. *Malaysian Journal of Learning and Instruction, 16*(2), 57–78.

Susskind, J. E. (2008). PowerPoint's power in the classroom: Enhancing students' self-efficacy and attitudes. *Computers & Education, 50*(4), 1228–1239.

Syafei, Isop, Learning Media, (Bandung: Widina Media Utama, 2025).