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Increasing Student Learning Motivation in Sociology Learning Through Digital Technology: A Qualitative Study at SMAS Muhammadiyah 8 Kisaran Asahan

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Abstract: This research examines the application of digital technology to enhance students' learning motivation in Sociology subjects in the 10th grade at SMAS Muhammadiyah 8 Kisaran. The background of the study is based on the fact that learning is still dominated by conventional methods, while today's learners are a digital generation that requires a more interactive and contextual approach to learning. This research uses a qualitative approach with descriptive methods. Data were collected through in-depth interviews with teachers and students, as well as observations during the learning process. The research results show that the use of digital media such as Quizizz and Wordwall can significantly enhance students' attention, active participation, and learning motivation. Students showed positive responses as learning felt more enjoyable and competitive. However, there are challenges such as limited internet access and teacher readiness. Technology integration has proven to be effective in supporting learning that aligns with the characteristics of Generation Z. Therefore, the use of digital media is recommended as an innovative strategy in Sociology education.

Keywords: Digital Technology, Qualitative Research, Sociology Education, Student Engagement

A. Introduction

Global digital transformation has pushed the education system to adapt to more interactive and technology-based approaches (Alfianistiawati, 2022). The importance of integrating digital technology in learning to improve student participation and learning outcomes (Dalifa, Sit, & Perkasa, 2023). However, local challenges such as teacher readiness, limited training, and gaps in digital infrastructure remain major obstacles to the optimal implementation of technology in Indonesia (Handayani, 2025). High schools, particularly in non-urban areas, tend to experience a gap between technological potential and its implementation in teaching and learning activities.

In the context of Sociology learning, traditional lecture methods are still dominant and are considered less capable of fostering students' interest in learning about material

that is abstract and contextual (Marella, Valiza, Ghinna, & Suyuti, 2025). Sociology should be delivered dynamically and be relevant to the students' social lives in order to cultivate critical understanding (Nugraha, Asriati, & Ramadhan, 2023). Generation Z is more responsive to technology-based visual and interactive approaches. Therefore, innovative learning strategies are needed to enhance student motivation, one of which is through a gamification approach (Febrianita, Budimansyah, & Komariah, 2025).

The initial observation results at SMAS Muhammadiyah 8 Kisaran Asahan show that although technological infrastructure such as internet networks, computer devices, and projectors are available, their use in learning is still limited. The majority of teachers still rely on traditional lecture methods and have not fully integrated digital media into the delivery of material, especially in Sociology subjects. This situation impacts the low enthusiasm of students, who find sociology learning boring and tend to view it as merely a memorization activity.

In the last two decades, attention to the integration of digital technology in learning has increased along with the development of the concept of Society 5.0 and the globalization of education. Previous research states that (Khairo & Hairani, 2024) has shown that the use of technology, such as e-learning and gamification-based applications, has great potential in increasing student participation and motivation to learn. In Indonesia, research by (Arifin & Farizi, 2024) has studied the effectiveness of digital platforms such as Google Classroom and Quizizz in the context of general learning and exact subjects. However, there is still a research gap in the application of digital technology, especially gamification-based, in the learning of Sociology subjects at the secondary school level. Most existing studies tend to focus on exact subjects, such as Mathematics and Science, or languages, while the learning of Sociology, which inherently requires contextual social understanding, has not been widely addressed through interactive digital approaches (Nurhasanah & Rahma, 2025). In fact, Generation Z as current learners shows a strong preference for visual, competitive, and technology-based learning.

Furthermore, a qualitative study by (Saminah & Ali, 2024) which deeply explores how digitalization is applied in the sociocultural context of schools in semi-urban or non-urban areas, such as SMA Muhammadiyah 8 Kisaran, is still very limited. Previous research has mostly used quantitative or experimental approaches, resulting in aspects of direct experience, teacher-student perceptions, and contextual dynamics often being overlooked.

The novelty of this research lies in the focus on the context of the Sociology subject, which is still under-explored in studies of digital technology usage in Indonesia. The exploratory qualitative approach provides an in-depth understanding of how technologies like Quizizz play a role in motivating students from the perspectives of both teachers and students themselves. Field studies in non-urban areas illustrate the

real dynamics of technology integration in situations with limited infrastructure and pedagogical readiness. Thus, this research is expected to contribute both theoretically and practically to the literature on learning digitalization in Indonesia, particularly in the subject of Social Sciences/Sociology, as well as suggest adaptive strategies based on local needs in the implementation of educational technology.

B. Methods

This research uses a qualitative approach with a case study type aimed at deeply describing the process and dynamics of the application of technology in Sociology learning and its impact on learning motivation. The researcher selected this school and several informants who are tenth-grade students at Muhammadiyah 8 Private High School in Kisaran. A qualitative approach was chosen because it allows the researcher to explore the meanings, perceptions, and experiences of the research subjects in a natural and real context (Creswell, 2020). This approach also provides ample space to interpret complex phenomena, such as learning motivation and technology-based learning innovations.

According to (Moleong, 2000), Qualitative research aims to understand social phenomena from the participants' perspectives, so the researcher needs to be physically present in the field to conduct observations and interact with the research subjects. In the context of this research, the researcher plays the role of the primary instrument who collects data through participatory observation, in-depth interviews, and documentation of learning activities. The research subjects are purposively selected, namely class X students and Sociology teachers who are directly involved in the use of technology-based learning media, particularly interactive applications like Quizizz. The selection of informants is made considering their active involvement in the learning process and their willingness to provide relevant and in-depth data (Sahputra, 2024).

The data collection technique is carried out through three main methods. First, participatory observation, where the researcher directly observes the implementation of Sociology lessons using digital applications, including the interaction between teachers and students as well as student responses to the teaching methods used. Second, in-depth interviews are conducted with teachers and several selected students to explore their perceptions, experiences, and responses to the use of technology in the teaching and learning process. Third, documentation is carried out to collect supporting data such as Lesson Plan (RPP), screenshots of learning activities using Quizizz, and student learning evaluation results.

To ensure the validity of the data, this research uses triangulation techniques, which involve comparing and examining data from various sources and collection methods. Triangulation serves to strengthen the validity of the findings and avoid interpretative bias that may arise during the analysis process (Iskandar, 2022). In addition, the

researcher also conducted member checking, which is confirming the results of data interpretation with the informants to ensure there is consistency between the researcher's understanding and the real experiences of the informants.

Data analysis is carried out through the stages of an interactive model, which includes three main processes according to (Sugiyono, 2022), Namely: data reduction, which is the process of selection, focusing attention, simplification, and transformation of raw data into a more organized form; presentation of data in the form of a systematic descriptive narrative; as well as drawing conclusions and verification, which is the interpretation of the meaning of the data that has been analyzed to answer the research problem formulation. With this method, it is hoped that the research can provide a comprehensive picture of the effectiveness of the implementation of interactive learning technology in improving students' learning motivation in the subject of Sociology, while also producing practical recommendations for the development of technology-based learning models at the secondary education level.

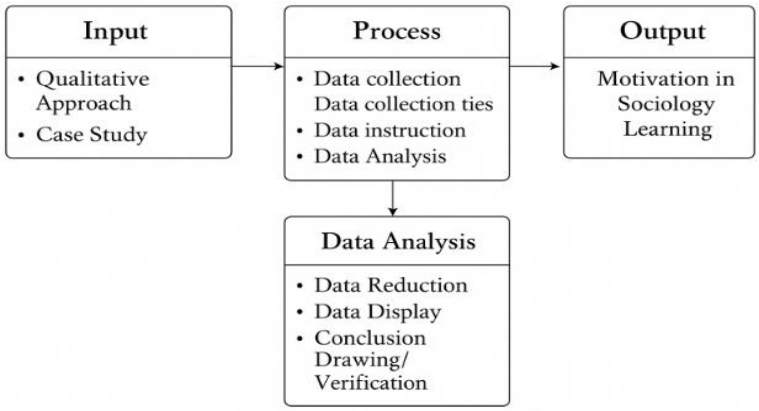

Figure 1. Research Framework

C. Results and Discussion

The Application of Technology in Sociology Learning

The results of observations in class X of Muhammadiyah Private High School 8 Kisaran indicate that the application of technology in Sociology learning is still limited and not optimally integrated. Although teachers have attempted to use projectors and interactive applications such as Quizizz, learning is still dominated by conventional lecture methods, and student participation tends to be passive. Technological facilities such as the internet and projectors are available, but they have not been maximally utilized due to limitations in digital learning planning and strategies. Nevertheless, when technology such as Quizizz is used, the classroom atmosphere becomes more interactive, and students appear more enthusiastic. This indicates that technology has great potential to enhance student learning motivation if applied appropriately and consistently.

Students show a high interest in visual and interactive learning media. However, reinforcement is needed in the aspects of technology integration, teacher training, and the development of more innovative and participatory learning approaches. The observation results in this study indicate that the application of technology in Sociology learning at SMAS Muhammadiyah 8 Kisaran Asahan is still not optimal, even though the infrastructure is available. The use of applications like Quizizz is still incidental, while the learning methods tend to be dominated by lectures. These findings are supported by interviews with several key informants. One of the informants, a Sociology teacher with the initials FZ, stated that the integration of technology in the teaching and learning process still faces challenges, especially regarding teaching habits that have not fully changed. He expressed, "I have used Quizizz before, and the students seemed very enthusiastic. But I haven't used it regularly because I feel I don't fully master its features." FZ also added that he needs further training to be able to design systematic digital learning that aligns with the characteristics of the Sociology subject.

The perspective from the student's side was conveyed by an informant with the initials AR, a tenth-grade student in the Science major. He explained that when the learning solely involves lectures, many students feel bored and find it hard to focus. 'If it's just listening to explanations, I often feel sleepy. But when using Quizizz, it feels more exciting. We can learn while playing quizzes, so it's more fun,' he said. According to AR, the use of visual and interactive media makes the material feel easier to understand, especially abstract concepts in Sociology such as social structure or interaction between individuals. Another informant, with the initials DN from the social sciences department, stated that technology-based learning has not yet become part of the classroom routine. He said, 'Once we used a projector and played Quizizz during the formative exam. But after that, we went back to the old way.' DN believes that interactive methods like this are very helpful for him in understanding the material and making the classroom atmosphere more lively. He hopes that such methods can be implemented more frequently in Sociology lessons. Another student, with the initials SR, expressed that they are very interested in the use of technology in learning. According to them, 'We are already used to using mobile phones and the internet, so if the learning also uses technology, it is more suitable for us.' They feel that the use of applications like Quizizz not only makes learning enjoyable but also enhances a healthy competitive spirit among their peers. Similar findings were revealed by the last informant, a student with the initials RM, who highlighted the importance of interaction in the learning process. He mentioned that, "If I'm just told to take notes and listen, it's hard to concentrate. But when the teacher uses digital applications, I become more enthusiastic and understand quickly because I can see the results immediately." RM also believes that technology can help students who lack confidence to be more daring to get involved because they can respond anonymously through the application.

From the five interviews, it can be concluded that both teachers and students show interest in the use of technology in Sociology learning. However, limitations in teacher training, digital lesson planning, and the lack of a consistent habit of using technology have become the main hindering factors. In general, the use of technology such as Quizizz can create a more dynamic learning atmosphere and motivate students to engage actively, as long as its integration is designed appropriately and carried out continuously. Based on the findings from observations and interviews at SMAS Muhammadiyah 8 Kisaran Asahan, it is evident that the application of technology in Sociology learning has great potential in increasing student motivation. However, its utilization is still limited and not systematic. This phenomenon aligns with several findings from previous studies that highlight the importance of integrating technology in learning to create a more engaging and effective learning experience.

The research conducted by (Arifin & Farizi, 2024) it shows that the use of digital learning applications such as Quizizz, Kahoot!, and Google Classroom can enhance active participation and enthusiasm of students. This is consistent with field findings where students show higher spirit and involvement when teachers use Quizizz. According to (Arifin & Farizi, 2024), Digital technology creates an interactive learning environment and allows students to receive immediate feedback, which in turn encourages their intrinsic motivation. Furthermore, (Ebadi & Amini, 2024) emphasizing that the success of technology implementation in learning is largely determined by the readiness of teachers, both in terms of technological and pedagogical competence. This is reflected in the statement from a teacher with the initials FZ, who feels less confident in using learning applications due to limited mastery of the features. This finding is also supported by studies from (Chen & Cheng-Ting, 2023), which states that the main obstacle in implementing digital learning in secondary schools is the low digital literacy of teachers and the lack of continuous training. On the other hand, the positive response from students towards technology-based learning strengthens the argument that digital-native generations like today's high school students have a preference for visual and interactive media. A study by (Shariati, Niazazari, & Jabbary, 2021) It expresses that students feel more comfortable and motivated to learn when the material is presented visually, dynamically, and allows for independent exploration. This is also evident from the statements of informants SR and RM who feel more enthusiastic and focused when learning using digital applications, as it aligns with their habits of using technology in their daily lives.

However, as highlighted in the observation results, inconsistencies in the use of technology and the dominance of lecture methods have become major obstacles in creating student-centered learning. This indicates a gap between the potential of technology and actual practices in the classroom. According to (Yuningtyas, Sariyatun, & Djono, 2023), The transformation of digital-based learning is not enough just by providing infrastructure, but must be supported by a change in teaching paradigms, well-planned digital learning, and intensive training for teachers.

Therefore, the findings of this study emphasize that although the use of digital technology such as Quizizz has a positive impact on student motivation, its effectiveness is highly dependent on the readiness of teachers and integrative learning planning. Thus, interventions focused on improving teacher competencies, formulating adaptive digital curricula, and fostering a learning culture that supports the sustainable use of technology are needed. The researcher will elaborate on these findings in detail in the table below.

Table 1. Research Findings on the Use of Technology in Sociology Learning at SMAS Muhammadiyah 8 Kisaran Asahan

Subtheme	Key Findings	Conclusion
Utilization of Technology	Teachers use projectors and the Quizizz application, but usage is still inconsistent and has not become a regular part of lessons.	Technology use remains limited and suboptimal; it has not been fully integrated into the teaching and learning process.
Teaching Methods	The learning process is still dominated by lectures; students are passive; discussion-based and technology-based approaches are rarely used.	Traditional methods remain dominant; integration of interactive approaches needs to be improved to enhance student participation.
Facilities and Infrastructure	Internet, laptops, and projectors are available but not yet maximally utilized.	Infrastructure is supportive but is not matched by teachers' readiness to innovate in digital learning.
Teacher Response to Technology	Teachers are enthusiastic but lack confidence; they have not mastered digital application features and are not yet accustomed to digital learning.	Training and mentoring are needed to improve teachers' competence in designing digital learning.
Student Response to Technology	Students are enthusiastic when using Quizizz; they feel more motivated and find it easier to understand material through interactive and visual media.	Technology boosts student learning motivation when used effectively; students show a preference for digital-based learning.
Implementation Challenges	Inconsistent use of technology, dominance of lecture methods, and lack of digital learning habits.	There is a wide gap between the potential of technology and classroom practice; transformation in teaching habits and technology-based lesson planning is needed.
Impact of Technology Use	Quizizz makes the classroom atmosphere livelier, increases interaction, and boosts students' interest in learning.	Technology positively impacts classroom dynamics and learning motivation; its use should be made a systematic part of teaching strategies.
Students' Expectations	Students hope digital learning will be used more often and become a routine part of Sociology lessons.	There is a clear need among students for more engaging learning suited to the characteristics of digital natives.
Recommendations for Improvement	Teacher training, curriculum integration of digital tools, and a learning culture that promotes comprehensive and sustainable use of technology are needed.	The effectiveness of technology in learning largely depends on planning, teacher competence, and a learning environment that is adaptive to innovation.

The Results of the Application of Technology on Motivation in Learning Sociology

The results of the observation of Sociology learning in class X of SMAS Muhammadiyah 8 Kisaran Asahan indicate that the use of technology, although not yet optimal and limited to the evaluation aspect, can enhance student learning motivation. Interactive applications like Quizizz successfully create a more enjoyable, dynamic, and competitive learning atmosphere. Students appear more enthusiastic and active compared to when learning is conducted conventionally. Additionally, the use of visual media in the form of short videos on social issues also increases students' focus and interest. Even after watching the video, some students engaged in spontaneous discussions, indicating an exploratory push towards the material being studied. This demonstrates that technology can strengthen contextual and meaningful learning. However, due to its inconsistent implementation and lack of systematic planning, the positive impact on learning motivation tends to be fluctuating. In sessions that still rely on lecturing methods, student engagement decreases, marked by a reduction in focus and interaction. Technological facilities are available, but have not been maximally utilized. Overall, learning technology has great potential in enhancing students' learning motivation. However, to achieve more optimal and sustainable results, structured planning and improvement of teachers' competencies in consistently integrating technology into the learning process are needed. The results of the observation of Sociology learning in class X at Muhammadiyah 8 Kisaran High School show that the application of technology, although still limited and not systematically structured, can enhance student learning motivation. This finding is supported by the results of interviews with teachers and students directly involved in the learning process.

The Sociology teacher with the initials FZ revealed that the use of technology such as Quizizz and social video presentations has been tried before, and the results were quite positive. He stated, *When I use Quizizz, students seem more enthusiastic and active. But honestly, I haven't been consistent in using it because I'm still learning to adjust my teaching methods to the available applications.* According to FZ, training and support are still needed to design targeted digital learning. One of the students in class X IPA, with the initials AR, stated that lecture-based learning causes students to quickly lose focus. He said, "*If learning only involves listening, it gets boring quickly. But when using Quizizz, the atmosphere becomes more lively, and everyone participates actively.*" AR believes that the digital quiz model makes it easier to understand the material because of the elements of play and competition. In line with that, a social studies major student with the initials DN stated that the use of projectors and interactive applications is only done occasionally *"We once watched a short video about social issues, then immediately discussed it. It was fun and made us think. But it's rarely done."* he said. DN hopes that such an approach can be used more often because it makes the lessons feel relevant and not monotonous. Another informant, SR, emphasized the importance of technology in supporting the learning styles of the current generation. *"We are already used to gadgets and the internet. So, when learning using videos or applications, it's more*

suitable and easier to understand." he stated. According to him, the use of interactive media sparks interest and creates a less rigid classroom atmosphere. Meanwhile, RM, another student, emphasized the aspect of comfort in answering questions through the application. He explained, "*If we use Quizizz, we can answer without shame. So those who usually stay silent also participate actively."* RM feels that digital learning opens up opportunities for more equitable participation in the classroom.

From the results of the interview, it can be concluded that teachers and students have a positive perception of the use of technology in Sociology learning. However, the lack of consistent usage habits, limitations in digital learning planning, and insufficient training are the main obstacles. Nevertheless, applications like Quizizz and visual media have proven to create a more dynamic learning atmosphere, significantly increasing engagement and motivating students when used properly and sustainably. The results of this study show that the use of technology in Sociology learning at Muhammadiyah 8 Kisaran High School positively contributes to the improvement of students' learning motivation. This is in line with the findings from (Putri, Sulistyaniningsih, & Nadeak, 2025) which states that the use of technology-based learning media, such as Quizizz and educational videos, can create a more interactive and enjoyable learning atmosphere. In the context of Sociology learning, which is often abstract, technology becomes an important tool to bridge the understanding of complex social concepts.

In addition, the suitability between technology characteristics and the learning styles of the digital generation is also an important factor. Research by (Qodr, Efendi, & Musadad, 2021) emphasizing that current students are more interested in learning methods that are visual, fast, and allow for active participation. This aligns with the statements of student informants in this study who mentioned that media such as Quizizz makes them feel more engaged and competitive in the learning atmosphere. Thus, technology functions not only as a medium for conveying information but also as a tool to stimulate students' intrinsic motivation. Nevertheless, the limitations in the consistency and systematic use of technology have become an obstacle that was also found in this study. This phenomenon is reinforced by the findings (Iranti, Zaharah, & Bahar, 2025) which shows that even though teachers have access to technology, low digital pedagogical skills result in suboptimal technology implementation. As expressed by a teacher with the initials FZ in this study, there is a need for continuous training for teachers to be able to design digital learning in a more structured and targeted manner.

Furthermore, the irregular use of digital media causes students' motivation to fluctuate, especially when learning returns to conventional lecture methods. This is in line with the findings from (Madini, Samsiah, & Haryono, 2023), which explains that without consistent integration of technology in the curriculum and classroom practices, the positive impact of digital learning will be temporary and unsustainable. Overall, the results of this study strengthen the understanding that the integration of

technology in Sociology learning has great potential in enhancing student motivation to learn. However, the success of its implementation is highly determined by the readiness of teachers, systematic lesson planning, and the sustainability of technology use in daily practice. The researcher will present the findings in more detail based on the table below.

Table 2. Findings on the Application of Technology in Sociology Learning at SMAS Muhammadiyah 8 Kisaran Asahan

Subtheme	Key Findings	Conclusion
Impact of Technology Implementation on Motivation	Students are more enthusiastic and active during lessons using Quizizz and social videos compared to the lecture method.	Technology can enhance students' learning motivation by creating a livelier, more competitive, and less monotonous classroom atmosphere.
Student Response to Technology	Students feel more interested and engaged when given active roles through digital applications and interactive media.	Student responses to technology-based learning are very positive, especially when they are directly involved in the learning process.
Suitability with Learning Styles	Students find that learning with videos, quizzes, and digital media better suits their visual and interactive learning habits.	Technology supports the learning style of the digital generation and helps bridge the understanding of abstract concepts in Sociology.
Participation and Interaction	Technology provides opportunities for usually passive students to participate actively, such as through anonymous quizzes.	Digital media increases equitable participation and creates an inclusive learning environment.
Teacher Limitations and Planning	Teachers do not routinely use technology due to limited mastery of applications and lack of systematic digital lesson planning.	Teachers' limited digital skills and suboptimal planning are challenges to the consistent and sustainable implementation of technology.
Technical Constraints	Facilities are available (projector, network) but not maximally utilized because they have not become a regular part of lessons.	The effectiveness of technology is influenced by infrastructure readiness and teachers' pedagogical habits in using digital media.

The Effectiveness of Technology in Creating Sociology Learning

Observations show that the implementation of digital technology such as Quizizz, Wordwall, and Canva has brought positive changes in Sociology learning. The classroom atmosphere, which was previously passive, has now become more interactive, communicative, and enjoyable. Students appear more active in answering questions, discussing, and presenting assignments through digital media. Teachers are also able to convey the material in a more visual and varied manner, which enhances students' focus and motivation to learn. Quiz-based applications have proven to be effective in igniting the spirit of learning through competitive elements and games. Students admit that they find it easier to understand the material because it is presented in an engaging and relevant way. In addition, visual media such as videos and animations help students understand complex social concepts. However, constraints such as limited devices and internet connectivity still pose challenges for

some students. Nevertheless, in general, technology-based learning is perceived positively by both students and teachers as it enhances engagement, understanding, and a meaningful learning atmosphere.

Based on the observation results in class X of SMAS Muhammadiyah 8 Kisaran, it can be concluded that the use of technology-based learning media, especially applications like Quizziz, Wordwall, and Canva, has been proven effective in increasing students' motivation, engagement, and understanding in sociology subjects. Technology creates a more vibrant, collaborative learning environment that is relevant to students' life contexts. However, the effectiveness of technology use is still influenced by the readiness of devices, availability of networks, and the teacher's ability to design and manage interactive and targeted learning. This finding is reinforced by interviews with several key informants, namely teachers and students from class X of SMAS Muhammadiyah 8 Kisaran. One of the sociology subject teachers, with the initials DR, stated that the application of technology in learning has brought significant changes to classroom activities. He conveyed that students have become much more active, especially during digital quizzes. "*Previously, they tended to be passive, but now the classroom atmosphere is much more lively. Quizzes like Quizziz are able to capture their attention because they have a game-like feel,*" said DR. He added that the delivery of material has also become more effective because of appealing visualizations and systematic presentations. Meanwhile, a student with the initials RS stated that learning feels more enjoyable when using digital media. He said, *'When teachers use Wordwall or Canva, learning feels like playing a game, but I still understand the material. I become more enthusiastic about participating in lessons.'* RS also acknowledged that he finds it easier to remember material when presented visually and interactively, unlike the conventional lecture method which he finds boring. Another informant, a student with the initials WL, stated that although he sometimes experiences difficulties because he does not have a personal phone, he still feels helped by the materials that can be accessed from other devices. "*As long as there is a network and help from friends, I can still participate in learning. But it is indeed easier if I have direct access to my own phone,*" he said. WL's statement shows that technological constraints do not entirely hinder learning, as long as there is support and collaboration among students.

A similar experience was also expressed by a student with the initials KY. He explained that when assigned to create a group presentation using Canva, followed by a quiz on Quizziz, the classroom atmosphere felt like a healthy competition. "*Everyone became excited because there were extra points for the best group. So we became more serious but still had fun,*" said KY. According to him, the competitive element instilled in the digital media was able to encourage active participation from all students, including those who are usually passive. From the results of the interview, it can be concluded that the implementation of technology-based learning media is not only well received by teachers but also increases students' enthusiasm, engagement, and understanding. Although there are technical obstacles, the use of

technology in sociology education has been proven to enrich teaching methods and create a collaborative, relevant, and meaningful learning environment for students.

The results of the observations show that the use of digital technology in sociology learning has a positive impact on student participation, motivation, and understanding. These findings are in line with research. (Permata, Syafrini, Fitrisia, & Erianjoni, 2024) which emphasizes that the use of interactive media such as Quizziz and Wordwall can enhance student learning activities through enjoyable gamification elements. Score elements, rankings, and attractive visuals create a learning atmosphere that is competitive yet cooperative, as also observed in class X SMAS Muhammadiyah 8 Kisaran.
Furthermore, the research results by (Ramadani, Yasin, & Wahyuni, 2025) shows that Canva as a visual presentation medium can enhance students' communication and collaboration skills. This finding is consistent with the experiences of KY students in this study, who felt more motivated and enthusiastic when creating group assignments using Canva and following it up with an application-based quiz. Students' active engagement in technology-based learning is also supported by findings from (Gymnastiar, 2022), which indicates that digital media makes learning materials easier to understand because they are accompanied by concrete visualizations and relevance to students' daily lives. This is in line with the statements of students RS and Anggun, who felt that learning became more real and enjoyable when the teacher presented the material with the help of images and videos. However, as also found in this study, technical barriers such as limited devices and internet connectivity remain a challenge. This is reinforced by the results of the study from (Rosyidi, 2025), which states that disparities in access to technology and networks affect the effectiveness of digital learning implementation, especially in school environments that are not yet fully prepared in terms of infrastructure. In addition, the findings from (Yogi & Pahriyah, 2025) It reveals that the success of technology-based learning depends not only on the tools but also on the teachers' skills in designing meaningful learning experiences.

In this context, the sociology teacher at SMAS Muhammadiyah 8 Kisaran has demonstrated competence in managing media such as Quizziz and Wordwall, thus creating a participatory and enjoyable learning atmosphere. Consequently, the findings from observations and interviews in this research are supported by literature indicating that technology-based learning media is effective in enhancing students' motivation, understanding, and collaboration. Nevertheless, this effectiveness is still influenced by technical and pedagogical factors that require further attention. The research results have been presented in a table for more detail below.

Table 3. Findings of Digital Technology-Based Sociology Learning at SMAS Muhammadiyah 8 Kisaran Asahan

Subtheme	Key Findings	Conclusion
Digital Classroom Activities	Technologies such as Quizizz, Wordwall, and Canva transform the classroom atmosphere into one that is livelier, more interactive, and enjoyable.	Learning becomes collaborative and fosters a higher level of enthusiasm among students.
Student Learning Focus	Visual displays such as videos, images, and animations help students understand complex sociology concepts.	Technology enhances learning focus when used appropriately and aligned with students' learning styles.
Engagement and Participation	Gamified quiz applications foster healthy competitive spirit and increase engagement from all students, including those who are usually passive.	Digital media encourages student activeness through enjoyable and competitive approaches.
Teacher Perceptions	Teachers find that digital media facilitates material delivery and boosts student responses.	Teachers can maximize the role of technology to create more effective and engaging learning experiences.
Student Perceptions	Students state that learning feels like playing yet they still understand the material, and they feel more motivated when using digital media.	Digital media makes students feel more connected to the material as it is delivered visually, interactively, and in ways relevant to their daily lives.
Technical Constraints	Some students face challenges due to limited personal devices and internet access.	The effectiveness of technology use is still influenced by infrastructure readiness and individual access to devices and networks.
Collaboration and Competition	Group tasks using Canva and quizzes with Quizizz foster cooperation and healthy competition among students.	Technology promotes both cooperative and competitive learning, enhancing students' social skills and intrinsic motivation.
Support and Solutions	Students without personal devices can still learn through peer support and group work.	Collaboration among students can be a solution to technological barriers, highlighting the importance of teamwork in digital learning.

D. Conclusions

This research shows that the implementation of technology in Sociology learning at Muhammadiyah Private High School 8 Kisaran has a positive impact on student motivation and participation. The use of applications such as Quizizz, Wordwall, and Canva creates a more engaging, interactive learning environment that aligns with the characteristics of digital-native learners. Students become more enthusiastic, active, and able to understand the material more contextually. However, the utilization of technology is still limited and not fully integrated into the learning process. This is due to the teachers' limited competency in operating digital tools, a lack of training in educational technology, and technical constraints such as uneven access to devices and internet connectivity.

To maximize the benefits of using technology in learning, schools are advised to take strategic steps, including: (1) providing intensive training to teachers regarding the use of gamification tools and digital learning media; (2) investing in technological infrastructure such as stable internet and adequate supporting devices; and (3) developing internal policies that consistently support the use of technology in the teaching and learning process. In addition, a collaborative culture among students also needs to be built as a solution to address the gap in access to technology.

This research has several limitations that need to be considered. Its scope only covers one school with a limited number of respondents, so the results cannot yet be generalized to a broader educational context. The approach used is descriptive qualitative, hence it has not been able to quantitatively measure the effectiveness of technology in improving learning outcomes. The relatively short duration of the research also poses a limitation, as it has not captured sustainable changes in the learning process. Based on these limitations, future research is recommended to use a mixed methods approach in order to produce more comprehensive data, both qualitatively and quantitatively. Future studies also need to involve more schools from various backgrounds to broaden the scope and enhance the external validity of the findings. Additionally, longitudinal research is recommended to observe the long-term impact of technology integration in learning, as well as specifically evaluate the effectiveness of teacher training in sustainably improving the quality of digital learning.

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References

Alfianistiawati, R., & Alfianistiawati, R. (2022). The implementation of quizwhizzer as a digital learning media in Sociology learning for class X and XI at SMAN 8 Malang. *Jurnal Integrasi dan Harmoni Inovatif Ilmu-Ilmu Sosial, 2*(7), 698-706. https://doi.org/10.17977/um063v2i7p698-706

Arifin, A. S., & Farizi, Z. A. (2024). Increasing the Interest and Motivation of 12th Grade Students Through the Integration of AI and IoT in Digital Technology Learning in the Era of the Merdeka Curriculum. *Biochephy: Journal of Science Education, 4*(2), 945-952. https://doi.org/10.52562/biochephy.v4i2.1358

Chen, H.-L., & Cheng-Ting. (2023). A digital role-playing game for learning: effects on critical thinking and motivation. *Interactive Learning Environments, 31*(5), 3018-3030. https://doi.org/10.1080/10494820.2021.1916765

Creswell, J. (2020). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (4th edition).* Thousand Oaks: Publikasi Sage.

Dalifa, S. N., Sit, M., & Perkasa, R. D. (2023). Teacher Creativity in the Utilization of Digital Technology in Social Science Subjects (Sociology, Economics, History, Geography) at Madrasah Aliyah Negeri 3 Medan. *JPM: Jurnal Pendidikan Modern, 8*(3), 119 -127. https://doi.org/10.37471/jpm.v8i3.698

Ebadi, S., & Amini, A. (2024). Examining the roles of social presence and human-likeness on Iranian EFL learners' motivation using artificial intelligence technology: a case of CSIEC chatbot. *Interactive Learning Environments, 32*(2), 655-673. https://doi.org/10.1080/10494820.2022.2096638

Febrianita, T., Budimansyah, D., & Komariah, S. (2025). Literature Review On Data-Based Learning Evaluation And Its Implications For Sociology Learning. *Jurnal Education and Development, 13*(1), 564-570. https://doi.org/10.37081/ed.v13i1.6765

Gymnastiar, I. A. (2022). Implementation Of The Kahoot Application As A Digital Gamification-Based Learning Media In Increasing Students' Learning Motivation At Pasundan High School Banjaran. *Sosio Religi: Jurnal Kajian Pendidikan Umum, 20*(1), 1-8. https://doi.org/10.17509/sosioreligi.v20i1.57379

Handayani, T. (2025). A Literature Review on the Role and Challenges of Using Technology in Mathematics Learning. *Elementary School: Jurnal Pendidikan dan Pembelajaran ke-SD-an, 12*(3), 393-402. https://doi.org/10.31316/esjurnal.v12i2.4444

Iranti, N. T., Zaharah, & Bahar, S. (2025). The Influence of Technology-Based Learning Media on Learning Motivation in Sociology. *Prosiding Seminar Nasional Fakultas Ilmu Tarbiyah Dan Keguruan UIN Syarif Hidayatullah Jakarta, 2*(1), 127-141. https://doi.org/10.64277/semnas.v2i1.169

Iskandar, T. (2022). The Education of Monotheism on Life Motivation From the Perspective of the Quran. *Reflektika, 17*(2), 397-412. https://doi.org/10.28944/reflektika.v17i2.986

Khairo, N. T., & Hairani, E. (2024). The Role of Technology in Enhancing Student Learning Motivation. *Indonesian Journal of Teaching and Teacher Education, 4*(1), 43-48. https://doi.org/10.58835/ijtte.v4i1.360

Madini, D. K., Samsiah, A., & Haryono. (2023). The Application of Bamboozle Learning Media in Increasing Learning Motivation Among Class X Students at SMAN 1 Pamarayan. *Edu Sociata: Jurnal Pendidikan Sosiologi, 6*(1), 509-520. https://doi.org/10.33627/es.v6i1.1457

Marella, J. P., Valiza, D. M., Ghinna, N., & Suyuti. (2025). Integration of Social Issues Through Digital Media in Class XII Sociology Learning. *Wissen: Jurnal Ilmu Sosial Dan Humaniora, 3*(3), 239–247. https://doi.org/10.62383/wissen.v3i3.1066

Moleong, L. J. (2000). *Qualitative Research Method.* Bandung: Remaja Rosdakarya.

Nugraha, T. J., Asriati, N., & Ramadhan, I. (2023). The Effectiveness of Kahoot!-Based Assessment of Learning Outcomes in Sociology Learning at State Senior High School 2 Pontianak. *Jurnal Sustainable, 6*(2), 319-331. https://doi.org/10.32923/kjmp.v6i2.3883

Nurhasanah, B. F., & Rahma, S. T. (2025). Models and Learning Techniques in the Context of Contemporary Sociology Education. *Jurnal Ilmiah Research Student , 2*(2), 365-377. https://doi.org/10.61722/jirs.v2i2.5636

Permata, B. D., Syafrini, D., Fitrisia, A., & Erianjoni, E. (2024). Educational Transformation through Digital Learning for Sociology Students at Padang State University. *Didaktika: Jurnal Kependidikan, 13*(1), 489-498. https://doi.org/10.58230/27454312.1500

Putri, L. N., Sulistyaniningsih, E., & Nadeak, T. E. (2025). The Influence of Digital Literacy Culture And Interest In Reading on Sociology Learning Achievement. *Research and Development Journal of Education, 11*(1), 483-495. https://doi.org/10.30998/rdje.v11i1.26446

Qodr, T. S., Efendi, A., & Musadad, A. A. (2021). Opportunities for Using Smartphones in the Digital Era to Facilitate Students in Learning Sociology in High Schools. *Journal of Education Technology, 5*(2), 263–271. https://doi.org/10.23887/jet.v5i2.34806

Ramadani, A., Yasin, F., & Wahyuni, Y. S. (2025). The Influence of Using Interactive Learning Media Based on Wordwall on Students' Learning Motivation in Sociology Subject For Class X Phase E At Sman 16 Padang. *Pendas : Jurnal Ilmiah Pendidikan Dasar, 10*(2), 244-249. https://doi.org/10.23969/jp.v10i02.29047

Rosyidi, D. (2025). The Development and Effectiveness of Digital Media-Based Blended Learning Model To Enhance Social Literacy In Sociology Education. *International Journal of Educational Technology and Innovation (EduTechno), 1*(1), 32-36. https://doi.org/10.61677/edutechno.v1i1.378

Sahputra, H. Y. (2024). The Utilization of Social Media as a Support Tool for Educational Success at Bumi Qur'an Siantar Junior High School. *Jurnal Mudarrisuna: Media Kajian Pendidikan Agama Islam, 14*(4), 476-487. http://dx.doi.org/10.22373/jm.v14i4.24509

Saminah, J. I., & Ali, M. (2024). Implementation of Digital Comic Teaching Materials Based on Canva for Education in Sociology Learning at High Schools. *Jurnal Cakrawala Akademika, 1*(2), 1-10. https://doi.org/10.70182/jca.v1i2.16

Shariati, F., Niazazari, K., & Jabbary, N. (2021). Presenting a Model for Virtual Education Considering Educational Equity with a Phenomenological Approach in Schools of Golestan Province. *Iranian Journal of Educational Sociology, 7*(1), 66-78. https://doi.org/10.61838/kman.ijes.7.1.7

Sugiyono. (2022). *Quantitative, Qualitative, and R&D Research Methods.*Bandung: Alfabeta.

Yogi, A. S., & Pahriyah, S. (2025). Innovation In Civic Education Learning In The Digital Era Through The Utilization of Technology to Increase Student Motivation And Interest In Learning. *Social: Jurnal Inovasi Pendidikan IPS, 5*(2), 484-494. https://doi.org/10.51878/social.v5i2.5725

Yuningtyas, L. A., Sariyatun, & Djono. (2023). Problem Based Learning E-Module for Facilitating Sociology Learning in the Digital Era. *Jurnal Edutech Undiksha, 11*(1), 107–118. https://doi.org/10.23887/jeu.v11i1.58123