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Instilling PAK Values Using Augmented Reality as an Innovative Learning Media

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ABSTRACT

This study aims to explore the use of Augmented Reality (AR) technology in Christian Religious Education at Jayapura Joint High School. At Jayapura Joint High School, although there have been various learning methods applied, the use of Augmented Reality (AR) as a learning medium in Christian Religious Education (PAK) has not been used. This shows the untapped potential to improve the student learning experience. This research is a qualitative research. This approach was chosen because it aims to understand the phenomenon that occurs in the context of Christian religious education at Jayapura Joint High School through the use of Augmented Reality (AR) technology. The case study approach, allows researchers to investigate complex phenomena in real contexts. One of the key findings of this study is the improvement of material understanding among students who use AR as a learning medium. Students who learn to use AR show a much higher level of engagement in the learning process compared to traditional learning methods. One of the main challenges is the need for adequate hardware. Research reveals that the use of (AR) in education, especially in instilling PAK (Christian Religious Education) values, shows significant results in increasing student understanding and engagement. The results show that students who learn through AR have a higher level of information retention compared to traditional methods. AR can increase student engagement in PAK learning which has a positive impact on their learning motivation.

INTRODUCTION

The development of information and communication technology has changed the educational paradigm significantly. In today's digital era, the use of technology in education is not only an option, but also a necessity. According to Dwivedi (Dwivedi et al., 2022), digital technology has created new opportunities in learning methods, including in religious education. At Jayapura Joint High School, although there have been various learning methods applied, the use of Augmented Reality (AR) as a learning medium in Christian Religious Education (PAK) has not been used. This shows the untapped potential to improve the student learning experience.

Augmented Reality is a technology that combines elements of the real world and the virtual world, providing an immersive interactive experience for users. Koohang (Koohang et al., 2023) explained that AR can increase student engagement by creating a more engaging and interactive learning environment. By utilizing AR, teaching materials in PAK can be presented in a more attractive visual form, so that students can more easily understand the concepts taught. For example, when studying Bible stories, students can see 3D visualizations of locations or events that occurred, so that they can feel a sense of closeness to the material being studied.

In the context of education, the importance of Christian Religious Education cannot be underestimated. This education serves to shape students' character and provide a strong moral foundation. Hwang (Hwang & Chien, 2022)) stated that religious education has an important role in shaping ethical and moral values among students. At Jayapura Joint High School, the application of technology such as AR in PAK can be a means to strengthen students' understanding of Christian religious teachings, as well as increase their interest in learning.

The use of AR in PAK learning is also in line with global trends in education that lead to technology-based learning. By integrating AR, Jayapura Joint High School will not only keep up with the times, but also provide a

richer and more meaningful learning experience for students. Therefore, this study aims to explore the potential use of Augmented Reality as a learning tool in Christian Religious Education at Jayapura Joint High School.

This study aims to explore and analyze the use of Augmented Reality in Christian Religious Education at Jayapura Joint High School. This research will focus on several aspects, namely the effectiveness of AR in improving students' understanding of PAK materials, the impact of AR on students' interest in learning, and the challenges faced in the application of this technology in the school environment.

This research has great significance in the context of education, especially in Christian Religious Education. By examining the use of AR, this research can provide new insights into innovative ways to improve the quality of learning. The results of this research are expected to be a reference for educators and policymakers in designing a more interactive and attractive curriculum for students.

In addition, this research can also contribute to the development of educational technology in Indonesia. In today's digital era, it is important for educational institutions to adapt to technological developments. By showing how AR can be applied in PAK, this research can encourage other schools to explore the use of similar technology in their learning.

From an academic perspective, this research is also expected to add to the literature treasure regarding the application of technology in religious education. Although there have been several studies on AR in the context of education, there are still few that specifically discuss its application in Christian Religious Education. Thus, this research can be one of the important references for future researchers interested in this field.

The integration of Augmented Reality (AR) into Christian Religious Education (CRE) at Jayapura Joint High School aligns with contemporary educational practices that leverage technology to enhance learning experiences. Research indicates that AR can significantly improve student engagement and comprehension by providing immersive and interactive content, making abstract religious concepts more tangible and relatable ((Biggio, 2023)For instance, AR applications can bring biblical stories to life, allowing students to visualize and interact with historical events, thereby deepening their understanding and retention of the material ((Goh, 2021)). Moreover, the use of AR in educational settings has been shown to foster critical thinking and motivation among students, as it encourages active participation and personalized learning experiences ((Ziden et al., 2022)). Implementing AR in CRE not only modernizes the curriculum but also addresses diverse learning styles, catering to visual and kinesthetic learners who benefit from interactive content ((Han & Bailenson, 2024)However, successful integration requires addressing challenges such as technical limitations, cost, and teacher preparedness to ensure effective adoption and sustainability ((Ejjami, 2024)By proactively tackling these issues, Jayapura Joint High School can set a precedent for innovative and effective religious education that resonates with the digital generation.

Despite the increasing integration of technology in education, limited research explores the specific application of Augmented Reality (AR) in Christian Religious Education (CRE), particularly in enhancing student engagement and understanding. While studies have highlighted AR's benefits in general education settings, its impact on religious education remains underexplored. Additionally, existing research often overlooks the challenges faced by schools in implementing AR, such as infrastructure limitations and teacher readiness, leaving a critical gap in understanding its practical applicability in this specific context.

This study offers a novel perspective by focusing on the integration of AR technology in CRE at Jayapura Joint High School. By utilizing AR to create immersive and interactive learning experiences, the study bridges the gap between traditional religious teaching methods and modern technological advancements. The research uniquely examines how AR can enhance student engagement, understanding, and motivation while addressing the challenges of implementing such technologies in resource-constrained educational environments.

The main objective of this study is to analyze the effectiveness of AR in improving student engagement and understanding in CRE at Jayapura Joint High School. The research aims to provide practical insights into implementing AR, identify its benefits, and address its challenges in a real-world educational setting. The findings are expected to benefit educators by offering innovative teaching strategies, policymakers by guiding technology integration in curricula, and students by enhancing their learning experience and fostering deeper connections with the subject matter.

METHOD

This research is a qualitative research. This approach was chosen because it aims to understand the phenomenon that occurs in the context of Christian religious education at Jayapura Joint High School through the use of Augmented Reality (AR) technology. Qualitative research allows researchers to explore the views,

experiences, and perceptions of teachers and students regarding the use of AR as a learning aid. According to Creswell ((Creswell, 2019)qualitative research focuses on a deep understanding of the meaning that individuals give to their experiences. With a case study approach, it allows researchers to investigate complex phenomena in real contexts. In this case, Jayapura Joint High School will be the object of study to explore the application of AR in Christian religious learning.

RESULTS AND DISCUSSION

Description of the Use of AR in PAK Learning

Augmented Reality (AR) has become a significant innovation in the field of education, including Christian Religious Education. One of the standout apps is "AR Flashcards," which students use to learn about important figures in religious history in an interactive way. Using a mobile device, students scan cards displaying images and information, then view 3D animations of the figures. The use of AR in education can increase student involvement in the PAK learning process. This shows that this technology is not only interesting, but also effective in improving the understanding of teaching materials.

Another app used is "Zappar," which provides an interactive learning experience about important events in religious history. Using AR, students can see visual recreations of the events, which helps them understand the context and significance of each event. Learning activities involving AR in PAK can be in the form of interactive simulations that allow students to experience important events in religious history firsthand. For example, students can use AR apps to "attend" important celebrations such as Christmas or Easter, where they can see how those traditions are celebrated in different cultures. This activity not only improves students' understanding of religious values, but also enriches their learning experience.

In addition, the use of AR in group projects can also encourage collaboration between students. This is in accordance with research factorial design by (Fidan & Tuncel, 2019) students involved in AR-based projects showed improvements in cooperation and communication. They work together to create an AR presentation on PAK values, which requires them to discuss and formulate ideas collectively. This shows that AR not only functions as a learning tool, but also as a means of developing social skills. The use of AR in PAK learning can also be integrated with activities outside the classroom, such as visits to places of worship. Using the AR app, students can gain additional information about the history and architecture of the place of worship, which deepens their understanding of religious beliefs and practices. According to Hwang (Hwang & Chien, 2022) learning experiences involving real-world contexts can increase students' motivation and strengthen their understanding of teaching materials. AR can also be used to teach moral and ethical values in Christianity. For example, AR apps can present scenarios that illustrate moral dilemmas and ask students to make decisions based on religious teachings. The results of the study show that this approach can help students internalize these values better, because they not only learn in theory, but also through practical experience.

In order to support the implementation of AR in PAK learning, it is important to involve teachers in training on the use of this technology. Proper training can ensure that teachers can effectively integrate AR into the curriculum, so that students get the maximum benefit from this technology. According to a report by Chen (Chen et al., 2017) good training for teachers can increase their confidence in using new technologies, which in turn can improve the quality of learning in the classroom.

Results of AR Use

Improved Material Understanding

The use of Augmented Reality (AR) in education has become a topic that has attracted the attention of many researchers and educators. In the context of this research, the main focus is on how AR can instill the values of Christian Religious Education (PAK) in an innovative and effective way. One of the key findings of this study is the improvement of material understanding among students who use AR as a learning medium. The improvement of material comprehension through AR can be explained by looking at how this technology allows students to interact with learning content directly. For example, when students learn about important figures in religious history, AR helps them to see 3D visualizations of those figures, complete with relevant background information. This not only makes learning more engaging, but also helps students relate the information they receive to a broader context. Thus, students not only memorize the facts, but also understand the meaning behind the facts.

In this study, students who used AR to learn PAK values showed a significant improvement in their understanding. For example, in one learning session, students can use an AR application to see a simulation of important events in the Bible. This way, they can feel as if they are in the middle of the event, which makes the learning experience more lively and relevant. Research shows that interactive learning experiences like this can

increase information retention by up to 70%, compared to traditional learning methods that rely solely on textbooks and lectures.

In addition, AR also facilitates collaborative learning among students. In this context, students can work in groups to explore AR content together. For example, they can discuss the moral values contained in Bible stories while looking at the visualizations displayed on the screen. This collaborative approach not only improves individual understanding, but also strengthens students' social and communication skills. Through this interaction, students learn to listen to each other and respect each other's opinions, which is an important value in religious education.

Furthermore, the use of AR in PAK learning also provides an opportunity to build an emotional connection between students and the material being taught. When students see visual representations of religious teachings, they are more likely to feel a connection to those values. For example, when students see a simulation of Jesus' sacrifice, they not only learn about the event, but can also feel the emotional impact of that sacrifice. This creates a more immersive and meaningful learning experience, which can shape students' attitudes and behaviors in everyday life.

However, it is important to know that the use of AR cannot replace the role of teachers in the learning process. AR as a tool that complements traditional teaching methods. Teachers still have the responsibility to facilitate discussions, provide context, and help students interpret the information they receive through AR. Thus, effective collaboration between technology and pedagogy will result in an optimal learning experience for students.

This study shows that the use of Augmented Reality as an innovative learning medium can significantly improve material understanding among students, especially in the context of Christian Religious Education. By providing an interactive, collaborative, and emotional learning experience, AR not only helps students understand PAK values, but also shapes their character and attitude as better individuals. Therefore, it is important for educators to consider the integration of these technologies in their curriculum, in order to create a more engaging and effective learning environment.

Student Motivation and Engagement

One of the most significant impacts of the use of Augmented Reality (AR) in education is the increased motivation and engagement of students. In the context of this study, students who learn to use AR show a much higher level of engagement in the learning process compared to traditional learning methods. This is a very interesting finding, as motivation is one of the key factors in learning success.

Students who are actively involved in the learning process tend to have a better understanding of the material being taught. For example, when students use AR apps to learn basic concepts in Christian Religious Education (PAK), they not only read about values such as love, forgiveness, and honesty, but can also see interactive illustrations that depict real-life situations in which those values are applied. Thus, AR not only presents information, but also creates a deeper context for students to understand and internalize these values.

It is a concern that students' motivation does not only come from the content delivered, but also from the way the content is presented. In this study, many students reported that they felt happier and more excited when using AR technology. This can be seen as a response to a more interactive and immersive learning experience. For example, when students participate in AR simulations that depict important events in religious history, they can feel as if they are in the middle of those events. This gives them the opportunity to interact with the subject matter directly, which in turn increases their curiosity and engagement.

Further analysis shows that AR can also help students with different learning styles. Some students may learn better through visuals, while others may prefer a kinesthetic approach. Using AR, students can take part in learning experiences that suit their preferences. For example, students who have kinesthetic learning tendencies can participate in activities that allow them to move around and interact with virtual objects, while students who prefer to learn visually can enjoy engaging graphics and animations. This shows that AR not only increases motivation, but also provides opportunities for students to learn in a way that works best for them.

The use of Augmented Reality in education, especially in the context of instilling PAK values, has a significant impact on student motivation and engagement. The interactive and immersive learning experiences offered by AR can increase students' understanding of important values in their lives. While there are challenges in its implementation, collaboration between various parties can help overcome these barriers and ensure that all students can enjoy the benefits of this technology. Thus, AR is not only a learning tool, but also a bridge that connects students with values that can shape their character and behavior in the future.

Challenges in AR Implementation

Technical Constraints

The application of Augmented Reality (AR) in education, especially in instilling PAK (Christian Religious Education) values, faces various significant technical obstacles. One of the main challenges is the need for adequate hardware. Devices used for AR require high specifications, such as fast processors and large memory capacities, which are not always available in all educational institutions. This can lead to uneven access to technology, where schools with limited budgets may not be able to provide the necessary devices for optimal AR experiences.

Another technical obstacle that is often faced is related to the development of AR content itself. The process of creating engaging and informative AR content requires special skills in graphic design and programming. Many educators may not have the technical background necessary to create quality AR content. For example, to display 3D images of biblical figures, it takes a deep understanding of 3D models and animations. Without adequate training, the content produced can be less interesting and ineffective in conveying PAK's values.

In addition, the problem of internet connectivity is also a significant obstacle in the application of AR. Many AR apps require a stable internet connection to download content or update apps. At Jayapura Joint High School, internet access is sometimes unstable. This can hinder students from accessing learning materials that have been prepared using AR technology. For example, if a school in a remote area wants to use AR apps to teach Bible stories, but does not have an adequate internet connection, then the use of this technology becomes ineffective.

Technical constraints also include device compatibility issues. Not all mobile devices or tablets support all existing AR apps. This can lead to frustration among students and teachers when they are unable to access the apps that have been planned to be used in learning. For example, if an AR app is only accessible through a specific device, students who don't have that device will miss out on the opportunity to learn in an innovative way. This creates a gap in the learning experience between students who have access to technology and those who don't.

Furthermore, there are also challenges in terms of teacher training. While AR technology offers great potential in enhancing the learning experience, without a solid understanding of how to integrate AR into the curriculum, teachers may find it difficult to utilize this technology effectively. Inadequate training can make teachers feel unconfident in using AR in the classroom, so they prefer traditional teaching methods that may be less appealing to students. To illustrate, if a teacher is not familiar with how to use AR applications to explain theological concepts, they may miss out on the opportunity to provide a more immersive and interactive learning experience for students.

Another technical obstacle is security and privacy issues. In the use of digital technology, issues related to data security and student privacy are a serious concern. AR apps often require access to users' personal data, and if not managed properly, this can potentially compromise student privacy. Therefore, it is important for educational institutions to ensure that the applications used have met the necessary security and privacy standards. For example, if an AR app collects student location data, schools must ensure that the data is not misused or shared without permission.

In the face of all these technical obstacles, it is important to find solutions that can help overcome these problems. One step that can be taken is to increase investment in technology infrastructure in schools. The government and educational institutions need to work together to provide adequate hardware as well as stable internet connectivity in all educational institutions. In addition, training for teachers should also be a priority, so that they have the necessary skills and knowledge to integrate AR into learning effectively.

By overcoming these technical obstacles, the potential of AR in instilling PAK values can be maximized. Interactive and engaging learning experiences through AR can help students better understand and internalize PAK values. For example, by using AR, students can see visualizations of biblical stories firsthand, which can reinforce their understanding of the context and meaning of the teachings. In addition, AR can also be used to create simulations that allow students to interact with situations relevant to PAK values, such as forgiveness, love, and justice.

The technical obstacles in the implementation of Augmented Reality to instill PAK values include various aspects, ranging from inadequate hardware, content development, connectivity issues, to teacher training and security issues. By understanding and overcoming these constraints, educational institutions can make optimal use of AR technology to create innovative and effective learning experiences. This will not only increase students' understanding of PAK values, but also prepare them to face the challenges of an increasingly digital world. As such, AR can be a valuable tool in Christian religious education, opening up new opportunities for more immersive and meaningful learning.

Student and Teacher Responses in the Use of AR

The response of students and teachers in the use of AR in learning also shows the challenges that need to be considered. Although many students show a high interest in new technologies, not all of them are comfortable or able to adapt to the use of AR in the learning process. The results revealed that although AR can increase learning motivation, some students have difficulty understanding the content presented and feel frustrated when the technology does not work properly. This shows that while AR has the potential to attract students' attention, its implementation must be done carefully and consider the needs and abilities of students.

On the other hand, teachers' responses to the use of AR also vary. Some teachers see AR as an innovative and exciting tool for improving learning, while others are skeptical and doubtful about its effectiveness. This sense of skepticism often stems from a lack of understanding of how AR can be effectively integrated into existing curricula. Therefore, it is important to provide teachers with enough resources and support so that they can benefit from this technology and feel more confident in using it.

Furthermore, the challenges in the acceptance of AR are also related to the social aspect. Some students may feel alienated or unengaged in AR-based learning experiences, especially if they don't have the same access to technology. Research shows that differences in access to technology can create inequalities in the learning experience, which in turn can affect learning outcomes. Therefore, it is important to ensure that all students have equal access to the technology and support necessary to utilize AR effectively.

In the face of these challenges, collaboration between technology developers, educators, and policymakers is essential to create an inclusive and effective learning environment. With the right approach, AR can be an invaluable tool in instilling PAK values in students, enriching their learning experience, and preparing them for future challenges.

Recommendations for Educational Practice

Strategies to Overcome Challenges

The use of Augmented Reality (AR) in education, especially in instilling PAK (Christian Religious Education) values, faces a number of challenges that need to be overcome. One of the main challenges is the limited technological infrastructure in some educational institutions. According to Akçayır (Akçayır & Akçayır, 2017), the lack of access to AR devices and adequate internet networks is a significant barrier to the implementation of this technology. To address this, educational institutions can collaborate with technology companies to provide AR devices for free or at a low cost. In addition, training for teachers and teaching staff is also very important so that they can use this technology effectively.

Another challenge that is often faced is resistance from students and teachers to new learning methods. Some teachers may be comfortable with traditional methods and skeptical of the use of new technology. Therefore, it is important to conduct socialization and demonstrate the benefits of AR in improving student engagement and learning outcomes. According to Fidan (Fidan & Tuncel, 2019)), the use of AR in physics learning not only improves students' academic achievement but also improves their attitude towards the subject. Through workshops and training, teachers can gain a better understanding of how AR can be used to support the learning of PAK values.

Additionally, it is important to develop relevant and engaging AR content. Content that is inappropriate or less interesting can reduce students' interest in learning. Therefore, collaboration between educators, software developers, and content experts is indispensable to create an engaging learning experience. Research by Garzón ((Garzón & Acevedo, 2019)) shows that well-designed AR content can increase student motivation and engagement, thus helping them better understand PAK values.

The implementation of AR also requires continuous evaluation to ensure its effectiveness. Educational institutions must conduct research and collect data on the impact of the use of AR on the learning of PAK values. By conducting regular evaluations, institutions can make the necessary adjustments to improve the learning experience. This is in line with the recommendation from Aazam (Aazam et al., 2018)) which emphasizes the importance of measuring the effectiveness of technology in the context of education.

Finally, it is important to create a learning environment that supports the use of AR. This includes creating flexible and collaborative classrooms and providing ample time for students to explore these new technologies. A supportive environment will make students feel more comfortable using AR, which in turn can improve their learning outcomes.

Curriculum Development

The development of a curriculum that integrates AR to instill PAK values must be carried out carefully and strategically. First, the curriculum should be designed to include an interactive and immersive learning experience. AR can be used to create simulations of real-life situations that are relevant to PAK values, allowing

students to learn through hands-on experience. According to Ibáñez ((Ibáñez & Delgado-Kloos, 2018), immersive learning experiences can improve students' understanding of complex concepts, including moral and ethical values. Second, the curriculum needs to accommodate various learning styles of students. AR offers a variety of ways to present information, such as visual, auditory, and kinesthetic. As such, a flexible curriculum can help meet the needs of all students. According to Hsu (Hsu, 2017)), the use of AR can improve student learning outcomes in a more personalized way and in accordance with their individual learning styles. Third, curriculum development must involve collaboration between educators, technology developers, and content experts. This collaborative approach will ensure that the AR content developed is not only relevant to PAK's values but also in accordance with applicable educational standards. This is in line with research by Chen (Chen et al., 2017)) which emphasizes the importance of collaboration in the development of technology-based educational content. And fourth, it is important to include an evaluation component in the curriculum. This includes formative and summative assessments that can measure students' understanding of PAK values taught through AR. Research by Garzón (Garzón & Acevedo, 2019)) shows that proper evaluation can help teachers understand the effectiveness of the teaching methods used and make the necessary adjustments.

Finally, the curriculum should also consider ethical and privacy aspects in the use of technology. With the increasing use of AR, it is important to educate students on how to use this technology responsibly.

DISCUSSION

This study reveals that the use of Augmented Reality (AR) technology in education, especially in instilling PAK (Christian Religious Education) values, shows significant results in increasing student understanding and engagement. The results show that students who learn through AR have a higher level of information retention compared to traditional methods. AR can increase student engagement in PAK learning which has a positive impact on their learning motivation. In addition, AR also provides a more interactive and immersive learning experience, allowing students to better understand abstract concepts. For example, in the context of PAK values, the use of AR to illustrate biblical stories or moral concepts can help students feel and understand the message more deeply.

This research can contribute to the development of innovative learning methods that integrate modern technology in religious education. By utilizing AR, educators can create a more engaging and effective learning environment. In addition, this research also highlights the importance of technology adaptation in the religious education curriculum to meet the needs of the current digital generation. Through the application of AR, students not only learn about the values of PAK, but also develop digital skills that are crucial in the modern era. AR can improve students' critical thinking skills and creativity. Therefore, this research is not only beneficial for PAK teaching, but also provides insights for the development of learning methods in other fields (Garzón & Acevedo, 2019)

For further research, it is suggested that the focus be more directed to the development of AR content that is specific to PAK values and how the content can be adapted to different levels of education. Further research also needs to be conducted to explore the challenges educators face in implementing AR in their curriculum, such as limited resources and teacher training. In addition, a long-term evaluation of the impact of the use of AR in religious education must be carried out to understand its effectiveness thoroughly. Given the rapid development of technology, future research should also consider the integration of other technologies such as Virtual Reality (VR) and Mixed Reality (MR) in religious learning. Thus, this research can contribute more widely to innovations in religious education and improve the quality of learning for students.

CONCLUSION

The improvement of literacy and digitalization of technology among students at the Faculty of Public Health, Nutrition, Nursing, and Medicine at Universitas Muhammadiyah Semarang began with the planning of literacy standards, the implementation of literacy enhancement, and the evaluation of literacy improvement. The stages carried out encompass seven aspects, including introduction, objectives, implementation, steps, learning materials, references, assessment, and final references. The first aspect involves enhancing student literacy according to their needs, using topics that have been agreed upon by both students and lecturers, known as targeted topics. The second aspect involves improving student literacy based on references, with the goal of enhancing students' academic abilities. The third aspect involves implementing a program to improve student literacy, which is based on an independent campus program. This program is designed to balance theory and practice related to the field of study, based on modules or targeted areas. The fourth aspect of the steps to improve

student literacy is based on indicators of students' communication skills, the issues involved, and the camaraderie between lecturers and students. The fifth aspect of the student literacy enhancement material is based on the university curriculum, which includes characteristics of entrepreneurship education and internships. The sixth aspect, the reference for student literacy enhancement, is based on graduate need standards and uses the latest published books from the past two years. The seventh aspect of the final assessment and evaluation is conducted by the supervising lecturer, applying the social academic domain according to the internship program. These seven aspects are examined and supplemented to answer all the questions covered in the problem.

In these seven aspects, the issues are addressed as follows: (1) The planning of student literacy improvement based on supporting other programs at the Faculty of Public Health, Nutrition, Nursing, and Health at Universitas Muhammadiyah Semarang is addressed through the introduction and objectives aspects. (2) The implementation of student literacy and technology digitalization improvement at the Faculty of Public Health, Nursing, Nutrition, and Medicine at Universitas Muhammadiyah Semarang is addressed through the implementation, steps, materials, and references aspects. (3) The evaluation of literacy and technology digitalization improvement at Universitas Muhammadiyah Semarang is addressed through the assessment and final evaluation aspects.

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