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Implementation of Augmented Reality in Social Education: A Literature Analysis of Applications and Benefits

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Abstract

In an increasingly connected modern era, the implementation of Augmented Reality (AR) technology has opened new doors in social education. The researcher conducted a literature analysis of AR applications in the context of social education and identified the main benefits generated using a qualitative descriptive method through literature study. The analysis revealed that AR enables more interactive and immersive social learning by providing realistic and interactive simulations of social situations. The benefits of AR in social education include increased student understanding of social issues, increased student engagement, and active participation in social problem solving. However, challenges such as the cost of AR application development and teacher training need to be overcome to maximize the potential of this technology. This research underscores important implications, including the development of more effective learning models, close collaboration with technology developers, and integrated curriculum planning. With a deep understanding of AR applications and their benefits, social education can face a more innovative and effective future, preparing students to play an active role in social change and solving pressing social issues.

Abstrak

Dalam era modern yang semakin terhubung, implementasi teknologi Augmented Reality (AR) telah membuka pintu baru dalam ilmu pendidikan sosial. Peneliti melakukan analisis literatur terhadap aplikasi AR dalam konteks pendidikan sosial dan mengidentifikasi manfaat utama yang dihasilkan menggunakan metode deksriptif kualitatif melalui studi literatur. Hasil analisis mengungkap bahwa AR memungkinkan pembelajaran sosial yang lebih interaktif dan mendalam dengan menyediakan simulasi situasi sosial yang realistis dan interaktif. Manfaat AR dalam pendidikan sosial meliputi peningkatan pemahaman siswa tentang isu-isu sosial, peningkatan keterlibatan siswa, dan partisipasi aktif dalam pemecahan masalah sosial. Namun, tantangan seperti biaya pengembangan aplikasi AR dan pelatihan guru perlu diatasi untuk memaksimalkan potensi teknologi ini. Penelitian ini menggarisbawahi implikasi penting, termasuk pengembangan model pembelajaran yang lebih efektif, kolaborasi erat dengan pengembang teknologi, dan perencanaan kurikulum yang terpadu. Dengan pemahaman yang mendalam tentang aplikasi AR dan manfaatnya, pendidikan sosial dapat menghadapi masa depan yang lebih inovatif dan efektif, mempersiapkan siswa untuk berperan aktif dalam perubahan sosial dan memecahkan isu-isu sosial yang mendesak

Kata Kunci : Augmented Reality, Pendidikan Sosial

INTRODUCTION

Social education plays an important role in shaping individuals who are socially aware, concerned about social issues, and ready to contribute to the well-being of society (Gümbür & Avaroğullari, 2020). Social education equips students with an in-depth understanding of social issues, critical thinking skills and proficiency in addressing social challenges. Social education has become an integral part in the formation of individuals who are socially aware, concerned about social issues, and able to contribute to the

welfare of society (Hidayat et al., 2021). Social education not only teaches understanding of complex social issues, but also encourages students to think critically, empathize, and become active agents of change in society. In the modern era, social education needs to keep up with technological developments to meet the demands of students who are increasingly connected to the digital world. In the face of rapid technological development, social education must continue to adapt to meet the demands of the times. One way that has emerged to improve social education is through the utilization of technology, specifically Augmented Reality (Garzón, 2021).

Augmented reality is a technology that combines real-world elements with virtual or digital elements to create a unique interactive experience (Zhang et al., 2020). The application of AR in social education has great potential to bring more interesting and effective learning. With AR technology, students can experience simulations of real social situations, explore social contexts, and gain a deeper understanding of social issues (Saundarajan et al., 2020). However, while AR technology offers a lot of potential, there are some challenges that need to be overcome. The implementation of AR technology in the context of social education requires careful planning and the development of appropriate applications (Gurevych et al., 2021). In addition, the effectiveness of AR technology in social learning also needs to be critically assessed to understand the true benefits it provides. The importance of understanding the implementation of AR technology in social education science and its benefits is the basis of this study (Radosavljevic et al., 2020). Through literature analysis, we can explore the application of AR technology in the context of social education and identify the benefits that have been revealed in previous studies (Chen et al., 2017). In addition, we can also identify potential shortcomings and challenges that still need to be overcome to optimize the use of AR technology in social education.

A major challenge in social education is creating engaging and effective learning that motivates students to actively engage in understanding social issues. The implementation of AR technology in social education can overcome this challenge by presenting more interactive and realistic learning (Gupta & Rohil, 2017). According to (Martinez et al. 2017), with AR technology, students can see, feel and respond to social issues directly, which can increase their engagement and understanding. However, despite its great potential, the implementation of AR technology in social education also poses a number of challenges. One of the main challenges is the development of appropriate and effective AR applications for social education. In addition, the effectiveness of AR technology in achieving social education goals needs to be critically evaluated. Therefore, analyzing the literature on the implementation of AR in social education science and its benefits is important to understand the extent to which AR technology has influenced the learning process and student learning outcomes (Martinez et al., 2017).

With the growing number of research and development of AR applications in education, it is important to formulate a more comprehensive understanding of the applications and benefits of AR in the context of social education. This literature analysis can provide a clearer view of the various AR applications that have been piloted in social

learning, as well as their impact on student learning and participation (Rakuasa, 2023). The importance of this research lies in the need to identify successes, barriers, and potential uses of AR technology in social education. By understanding the positive contributions and limitations of AR technology in social learning, educators and researchers can better guide the development and implementation of AR in social education curricula (Manakane et al., 2023). This research will also help define best practices in using AR technology for more effective and engaging social learning (Gustavo & Rakuasa, 2023). This will assist teachers and curriculum developers in effectively integrating AR technology in social learning, as well as guide educational policies that are more adaptive to technological developments in education.

In addition, this study can provide important guidance in formulating further research directions in the use of AR technology in social education science (Wu et al., 2013). By understanding the various concepts, methods, and results of existing research, future research can focus more on certain aspects that require deeper understanding. In an increasingly connected and rapidly changing global context, this research will contribute to the development of relevant and innovative social education (Altinpulluk, 2019). As a result of this research, social education can become more effective in shaping young people who are socially aware, empathetic, and active in social issues, by utilizing the potential of AR technology to better achieve these goals (Rakuasa & Latue, 2023). In the face of rapid technological development, social education must continue to adapt to meet the demands of the times. One way that has emerged to improve social education is through the utilization of technology, particularly Augmented Reality (AR).

This literature analysis will provide a clearer view of how AR technology has influenced learning and teaching in social studies. It will also help determine whether AR technology can provide significant value addition in students' understanding and participation in social issues. In addition, this research can provide practical guidance for educators and curriculum developers to integrate AR technology more effectively in the social learning process. Thus, this research is expected to be a foundation for developing more innovative and relevant educational strategies in social education science, in line with the development of modern technology.

METHODOLOGY

This research uses a descriptive qualitative approach. Qualitative research is a research procedure with descriptive data results in the form of written or spoken words (Hamilton & Finley, 2019). Qualitative research aims to analyze the quality of a study. The type of research used is a literature study which is research that has been done before by collecting journal books, magazines, and scientific papers that are interrelated with the problems and research objectives. Literature study is a data collection technique carried out by conducting a study of books or literature related to the problem being solved (Roller, 2019). The literature study used is by searching for journal articles on Google Scholar, Scopus, and Google Book related to the title of this research.

RESULT AND DISCUSSION

The Use of Augmented Reality (AR) in Social Learning

According to (Pochtoviuk et al.2020), the use of Augmented Reality (AR) in social learning is a technological innovation that has made a significant contribution in improving the quality of social education. AR allows the incorporation of virtual or digital elements into the real world, creating an interactive and engaging learning experience. In the context of social education, AR is used to create simulated situations that approximate real-life circumstances, allowing students to experience and interact with social issues directly (Nainggolan et al., 2018). For example, students can use AR devices to explore city neighborhoods and identify social issues, such as unequal access to public facilities. They can see relevant data and statistics displayed in visual form over their physical environment, which helps them understand social concepts better**.**

The use of AR in social learning also includes the exploration of complex social issues. Students can use AR devices to visualize the impact of social policies, climate change, or other global issues (Gümbür & Avaroğullari, 2020). This technology provides opportunities for students to engage in social debates, formulate solutions, and develop empathy towards various social issues (Altinpulluk, 2019). In addition, the use of AR in social learning can motivate students to participate more actively in social problem solving and become more socially aware and concerned citizens. Thus, AR has opened the door to a more immersive and engaging social education.

Benefits of Augmented Reality in Social Learning

The use of Augmented Reality (AR) in social learning brings various significant benefits to students. One of the main benefits is the improvement of students' understanding of social issues (Wu et al., 2013). AR allows students to experience and interact with real or simulated social situations that are close to the real world. This allows them to more deeply understand the complexity of social issues, experience their impact firsthand, and develop a deeper understanding of the social challenges facing society. Thus, AR enables social education to move beyond theoretical learning and allows students to internalize and apply their knowledge of social issues in a more relevant context (Nurbekova & Baigusheva, 2020).

In addition, another benefit of using AR in social learning is increased student engagement. AR creates an engaging and interactive learning experience, which tends to be more appealing to students than traditional learning methods (Gurevych et al., 2021). Students can actively participate in simulated situations and undergo a more personalized and student-centered learning experience. This enhanced engagement can motivate students to become more active in learning, encourage them to think critically, collaborate with peers, and develop crucial social skills (Radosavljevic et al., 2020). Thus, AR can improve the quality of social learning and help students become better prepared to participate in social issues that exist in society.

Challenges of AR Implementation in Social Education

According to (Gurevych et al. 2021), the main challenges in the implementation of Augmented Reality (AR) in social education are technical and logistical factors. The development of AR applications that fit the needs of the curriculum and social education objectives can involve high costs, both in initial development and ongoing maintenance and updates. In many cases, schools and educational institutions may face budget limitations to accommodate this technology. Therefore, it requires wise funding strategies and skilled developers to overcome these barriers. In addition, training teachers and educators in the use of AR technology is also an important challenge. The use of AR in social learning requires technical understanding and the ability to integrate this technology into the learning process (Hidayat et al., 2021). Teachers need to receive adequate training in order to optimally utilize the potential of AR in teaching social issues. Also, they need to understand how to assess student learning outcomes using AR as a learning tool. Therefore, continuous coaching and support in the use of AR is a very important aspect in overcoming this challenge.

Evaluation of AR Effectiveness in Social Learning

According to (Kesim & Ozarslan, 2012), evaluating the effectiveness of Augmented Reality (AR) in social learning is an important step in understanding the extent to which this technology successfully achieves social education goals. To conduct this evaluation, scientific research is often used to measure the impact of using AR on student understanding, participation, and overall learning outcomes. This involves collecting quantitative and qualitative data that includes knowledge tests, observations of student participation, and feedback from students and educators.

The evaluation results should provide clear insights into the effectiveness of using AR in improving students' understanding of social issues. In addition, the evaluation can compare student learning outcomes using AR with traditional learning methods to measure the extent to which AR is more effective in achieving social education goals (Nainggolan et al., 2018). This allows curriculum developers and educators to make better informed decisions on how to integrate AR into social learning and ensure that the use of this technology has a positive impact on student learning outcomes. In addition, the evaluation of AR effectiveness can also identify certain aspects that need to be improved or enhanced in the use of AR technology in the context of social education.

Implications and Recommendations for the Future

According to (Saundarajan et al. 2020), implications and recommendations for the future in the use of Augmented Reality (AR) in social education have an important role in the development of more effective and innovative learning strategies. Based on the results of evaluating the effectiveness of AR, social education can utilize these findings to design a more relevant and engaging curriculum. The implementation of AR in social learning should be a consistent and integrated part of the curriculum, taking into account the clear

objectives of social education. Recommendations include developing learning models that make better use of AR, expanding access to AR technology, and involving continuous training for teachers and educators to maximize the potential of this technology.

In addition, social education needs to collaborate with AR technology developers to create applications that better suit educational needs and facilitate continuous updates and improvements. The involvement of interested parties, including teachers, students, and local communities, should also be integral in planning and implementing the use of AR in social education (Gupta & Rohil, 2017). By understanding the implications and following these recommendations, social education can develop better, provide more meaningful learning experiences for students, and help create young citizens who are more socially aware and contribute to solving social issues in society.

CONCLUSIONS

This research highlights the important role that Augmented Reality (AR) technology plays in enriching social education. The results of the literature analysis show that the use of AR in social learning provides significant benefits, such as increased student understanding of social issues, increased student engagement, and encouragement of active participation in social problem solving. However, implementation challenges, such as application development costs and teacher training needs, need to be addressed to maximize the potential of AR in social education. The implications of this research involve developing more effective learning models, close collaboration with technology developers, and more integrated curriculum planning. With a deep understanding of AR applications and their benefits, social education can face a more innovative and effective future, preparing students to play an active role in social change and solving pressing social issues.

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