AUGMENTED REALITY DESIGN ON THE SARISWARA METHOD IN STRENGTHENING STUDENTS' GOOD CHARACTER

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Abstract

This study aims to develop augmented reality (AR)-based educational media using the Sariswara method to strengthen students' good character. The research follows a systematic development process based on the ADDIE model, which includes analysis, design, development, implementation, and evaluation. The AR media integrates elements of cultural and character education through traditional songs, definitions, historical context, and reflective assessments. Expert validation and limited trials indicated that the media was appropriate for educational use and supported the development of positive character traits. Several improvements were made based on validator feedback to enhance accessibility and engagement. The media is considered effective for classroom integration because it combines interactive features with culturally grounded content, which enhances students' motivation and understanding. These findings suggest that AR can serve as a powerful tool for promoting character education in a meaningful and engaging way.

Keywords: Augmented reality, Character good, Design, Sariswara method, Student.

1. Introduction

The Sariswara method, developed by Ki Hadjar Dewantara, is a unique educational approach that differs from conventional methods. This method emphasizes art as a means to educate students by combining experiences from all senses, such as sight, hearing, physical movement, and feelings (*cipta-rasa-karsa*). The use of the Sariswara method can serve as an inspiration for the current education system to pay more attention to character education that integrates life values into learning methods. The importance of instilling strong character in students has become a central concern in modern education, as character shapes ethical reasoning, interpersonal relationships, and responsible citizenship. Many studies and reports have highlighted the urgency of finding effective methods to cultivate character in students [1-5], particularly in culturally diverse societies. Some reports about Sariswara's methods in education have been well-documented [6-10].

The Sariswara method is also able to make children enthusiastic about learning because it aligns education with local wisdom-based learning, allowing children to feel connected to the culture and environment in which they live [11]. It fosters a sense of pride in national culture and encourages its development, which ultimately contributes to forming a community [12-16]. This is important for improving the society and nationality. Those are the values of the Sariswara method. The Sariswara method shares similar learning elements with these approaches. It can also be applied as a solution for developing the music education curriculum in Indonesia based on national cultural heritage [17].

Understanding how to use the Sariswara method in learning must be supported by appropriate media, enabling prospective or current teachers to strengthen students' good character. One effective medium is augmented reality (AR). The purpose of this study is to explain the design process of AR media that applies the Sariswara method to strengthen students' good character, using a design-based research method. The novelties in this study include (i) the design of an AR product based on the Sariswara method, (ii) the integration of the Sariswara method with efforts to strengthen good character, and (iii) the development process of the AR product along with expert validation feedback for improvement. The findings are expected to offer a culturally rooted and digitally enhanced educational tool to support character development in classroom settings.

2. Literature Review

Nine habits that contribute to the development of good character, including doing the right thing even when it is difficult, being kind, honest, humble, not gossiping, keeping promises, being responsible, respecting others, and being helpful without expecting anything in return. These values are essential components of character education, which plays a critical role in shaping students into morally responsible individuals. Numerous studies have reported various strategies and frameworks for teaching character in schools, emphasizing the need for methods that are engaging, culturally relevant, and developmentally appropriate.

The implementation of the Sariswara method is carried out through children's game songs (*tembang* dolanan *anak*), which incorporate both cultural and moral elements. Messages embedded in *tembang dolanan* become memorable, thus promoting long-term character formation. The use of the Sariswara method has been

shown to benefit children's development across multiple domains, including cognitive, emotional, social, gross motor, language, and character development [18].

Figure 1 illustrates the process of using AR, where a target scanned by an Android device triggers the appearance of media content, such as videos, 3D models, or images, projected into the real world. AR technology enables the integration of digital content with real environments through devices like smartphones and tablets. This technology has gained attention as an innovative medium for delivering educational content, including abstract and value-based learning materials, as reported elsewhere [19-22]. In the context of character education, AR offers new opportunities for immersive learning experiences that can deepen students' engagement and understanding of ethical values.

Fig. 1. AR usage process simulation.

3. Methods

This study employed the ADDIE development model, consisting of analysis, design, development, implementation, and evaluation stages. Detailed information regarding the method is explained elsewhere [23]. The analysis identified the need for culturally rooted character education media. In the design phase, a storyboard and interface layout were created to align with the Sariswara method. Development involved building AR content using Unity and Vuforia. Implementation included limited trials with five Primary School Teacher Education students. The AR media was validated by three experts in media, language, and culture. We analyzed statistics to get a better understanding of the results. Detailed information on how to analyze using statistical analysis is reported elsewhere [24-26].

4. Results and Discussion

Figure 2 shows the workflow for creating the AR media. The process began with identifying problems in character education and conducting a needs analysis to justify the relevance of developing AR media based on the Sariswara method. This informed the creation of a storyboard and flowchart to structure the media content. The AR application was then developed using Unity and Vuforia platforms. After technical development, the product was validated by experts and tested on a limited scale to gather feedback for refinement before broader implementation.
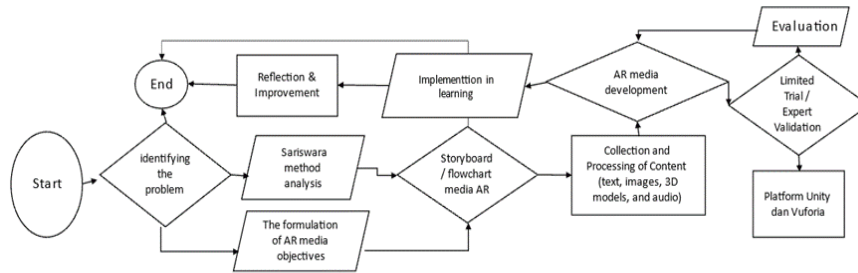
Fig. 2. Flowchart develop AR media about Sariswara.

Figure 3 presents various components of the AR application, including a barcode for accessing the application (Fig. 3(a)), the welcome screen (Fig. 3(b)), the main interface featuring Sariswara learning materials (Fig. 3(c)), the definition of the Sariswara method (Fig. 3(d)), traditional Javanese children's songs with embedded educational values (Fig. 3(e)), and practice questions for formative assessment (Fig. 3(f)). These features were designed to combine traditional character education with modern, interactive learning experiences.

Validation results from three experts in media, language, and culture yielded an average score of 3.45, categorized as valid. Meanwhile, trials with five students in the PGSD program resulted in a mean Likert scale score of 3.20, indicating the AR media was suitable for classroom use. However, validators suggested three key improvements: (i) include Indonesian subtitles in regional song videos to enhance accessibility for users across the archipelago, (ii) incorporate student reflection features to promote internalization of moral values, and (iii) display scores from practice activities to provide feedback and motivate users. By integrating feedback from diverse expert perspectives, the product becomes more pedagogically sound and culturally inclusive.

The use of AR in education has shown consistent benefits in increasing motivation, engagement, and comprehension, particularly in abstract or value-laden topics such as character education [27-30]. The Sariswara-based AR media provides students with meaningful interactions that encourage empathy, reflection, and emotional connection to moral messages embedded in traditional songs and stories. Furthermore, the media promotes culturally responsive pedagogy by rooting moral instruction in Indonesia's heritage. This approach bridges the gap between modern digital learning preferences and traditional value systems, which is critical in a globalized yet culturally diverse society. The Sariswara AR media aligns with both national character education goals and current trends in educational innovation.

Overall, the results suggest that the designed AR media has strong potential to be used effectively in the classroom. However, wider implementation and longitudinal studies are needed to measure its impact on various aspects of student character development, including responsibility, empathy, and social awareness. Future research may also explore how the media influences teacher attitudes and instructional practices related to character education. Finally, this study adds new information regarding the use of media for improving teaching and learning process [31-35].

**Fig. 3. Appearance of AR application. (a) barcode,
(b) start page, (c) interface, (d) definition, (e) display of traditional
children's songs (dolanan), and (f) assessment questions.**

5. Conclusion

This study designed AR media using the Sariswara method to strengthen students' good character through the ADDIE development model. Validation by experts and limited trials showed that the media were appropriate and effective for educational use. Features such as cultural content, interactive design, and traditional songs engagingly support character development. Validator feedback guided improvements, including subtitles, reflection sections, and score displays. The findings suggest that AR media rooted in local wisdom can enhance moral education. Future studies should explore broader classroom implementation to evaluate long-term impact on students' attitudes, values, and learning experiences.

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