Optimization of Digital Media Utilization for Anti-Bullying Campaigns Among Generation Z

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Abstract

Digital learning media based on applications are rarely found in anti-bullying education, yet the impact of using such learning tools cannot be underestimated. Therefore, this study aims to develop a digital learning media product based on an application to promote anti-bullying among Generation Z in junior high schools. This research adopts a Research and Development (R&D) approach using the ADDIE model, focusing on the process of producing application-based digital learning media suitable for educational purposes. The research subjects consist of media experts, content experts, and the director of the Children's Care Foundation (KAKAK) in Surakarta. Data collection techniques involved media validation questionnaires, which were then analyzed using percentages and described to provide an overview of the suitability level of this media. The research results show that the average validation results were 88%, while the average results from content were 87%. After validation, this digital media fall into the 'Very Good' qualification. Therefore, based on assessments from media experts, content experts, and the director of the KAKAK Foundation, it is concluded that this application-based digital learning media product is categorized as 'feasible' for use as an alternative learning medium in promoting anti-bullying in junior high schools. The existence of this media is evidently an innovative learning tool that enriches the process of anti-bullying education.

INTRODUCTION

The utilization of digital media for anti-bullying promotion among Generation Z has shown significant improvement in recent years. According to research, digital media has substantial potential to influence social behavior and shape positive norms among adolescents (Asari et al., 2023) (Coleman & Money, 2020) (Hendra et al., 2023). Studies also indicate that Generation Z is more receptive to anti-bullying messages when delivered through the digital platforms they use daily, such as social media and instant messaging applications (Rashid, 2019).

Although there are many initiatives to utilize digital media in anti-bullying campaigns, their effectiveness still varies. Some studies find that while these campaigns can raise awareness, they often fail to significantly change bullying behavior (Nisiotis, 2021; Michael, 2018)). Additionally, there is a gap in understanding how these messages should be designed and delivered to achieve maximum impact (McWilliam, King, & Drennan, 2016; Gabrielli et al., 2021).

Message design and audience engagement are The primary issues in promoting anti-bullying through digital media. Research shows that irrelevant or unappealing messages to Generation Z tend to be ignored (Sumarni, 2018). Moreover, there is a need for more interactive and participatory approaches that can engage teenagers in anti-bullying discussions and activities (Arwan et al., 2023). This condition is exacerbated by the lack of adequate digital literacy education, resulting in adolescents being less critical of the content they consume (Shing Chan, Lee, et al., 2023).

This research is important because bullying among teenagers can have long-term negative impacts on their mental health and well-being. By understanding how digital media can be effectively utilized for anti-bullying promotion, we can develop more effective strategies to reduce bullying behavior among Generation Z (Lim et al., 2023; Combi, 2015; Rizza & Pereira, 2013; West & Beck, 2019). According to data from the Indonesian Child Protection Commission (KPAI), child violence cases at the beginning of 2024 reached 141 cases. Of all these complaints, 35 percent occurred in the school environment or educational institutions.

The prevalence of bullying in Indonesia is quite alarming. According to a survey by the Ministry of Women's Empowerment and Child Protection (KPPPA) in 2018, approximately 41% of children in Indonesia have experienced bullying, both physical and verbal. Data from UNICEF in 2020 further reveals that around 50% of students reported being victims of bullying at school. A 2023 survey by the Children's Care Foundation, in collaboration with the Surakarta City Women's Empowerment and Child Protection Population Control and Family Planning Agency (DP3AP2KB), found that 39% of students had experienced verbal bullying, 11% had faced physical bullying, and 14% had been bullied on social media (yayasankakak.org). Additionally, research conducted in junior high schools in Surakarta indicated that 48.08% of students felt their school environment was not free from bullying. Moreover, 67% reported having been bullied at school, and 45% admitted to being perpetrators of bullying. These findings underscore the urgent need for effective bullying prevention efforts.

The proposed solution is the development of a digital media-based anti-bullying campaign specifically designed to gain the attention of Generation Z. This campaign must be interactive, participatory, and relevant to the daily lives of teenagers. The importance of this solution lies in its potential to create more significant behavioral changes through a more personal and contextual approach (Iivari et al., 2021; Vasquez, 2019). Digital media has great potential as a means of spreading anti-bullying messages. Media literacy and digital communication are key to understanding and effectively utilizing digital media (Rahma & Al Rasyid, 2023; Zovinec & Sender, 2021). Specifically, this research will apply Social Cognitive Theory (Bandura, 1986) to design the campaign's messages and engagement strategies. This theory emphasizes the importance of observational learning, self-efficacy, and reinforcement in influencing behavior. By incorporating these elements, the campaign can create more impactful and lasting behavioral changes. Theories such as interactive and participatory communication can help design more effective and engaging campaigns for Generation Z. Through the application of these theories, the study aims to develop strategies that resonate with

teenagers and encourage positive behavior changes by leveraging the power of digital media.

The advantages of interactive and participatory communication theories include the ability to create greater audience engagement, enhance a sense of ownership of the conveyed message, and promote discussion and critical reflection among teenagers (Lim et al., 2023; Shing Chan, Lee, et al., 2023). This approach also allows for the adaptation of messages based on direct feedback from the audience. Previous research has shown that digital media-based anti-bullying campaigns can be effective if designed considering the preferences and digital habits of teenagers (Combi, 2015; Rizza & Pereira, 2013; West & Beck, 2019). However, there is a need for a more structured and theory-based approach in designing and implementing these campaigns (Iivari et al., 2021).

The main difference of this research is developing campaigns that are highly tailored to the characteristics and preferences of Generation Z, using interactive and participatory approaches. Specifically, this research will apply Social Cognitive Theory to design the campaign's messages and engagement strategies, leveraging the observational learning, self-efficacy, and reinforcement principles. This research will also test the effectiveness of these campaigns in different contexts to determine the key factors for their success. By focusing on the utilization of digital media for anti-bullying promotion among Generation Z, this study aims to develop and test the strategies that can effectively change bullying behavior among teenagers. The results of this study are expected to provide practical guidance for educators, policymakers, and non-profit organizations in their efforts to combat bullying in the digital era. Through the application of Social Cognitive Theory, the study will provide insights into how digital campaigns can foster positive behavior change and reduce instances of bullying among teenagers.

METHODS

This study adopts a research and development (R&D) approach and methodology with the aim of designing and developing interactive game-based learning media to support anti-bullying promotion activities. We also aim to evaluate the feasibility of the product resulting from this research (Nichols Hess & Greer, 2016). The ADDIE model, which stands for Analysis, Design, Development, Implementation, and Evaluation, was selected based on its relevant research framework. Several previous studies have adopted this model to design learning products (Pribadi, 2016). However, the primary focus of this research is on the Development stage, particularly in evaluating the feasibility of the digital media product we have developed. During this stage, activities involve needs analysis and subsequently developing digital media products for junior high school students. Below is the research diagram using the ADDIE model adopted for this research and development.
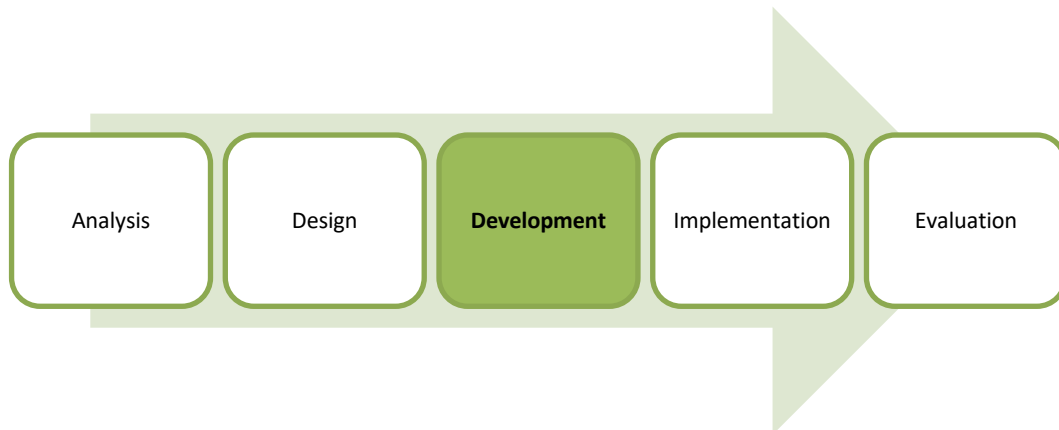
Figure 1. ADDIE Model

The subjects in this study will consist of media expert validators, content expert validators, and the director of the Children's Care Foundation (KAKAK) Surakarta. The data collection technique used in this study is a non-test technique (Anggito & Setiawan, 2018), utilizing a data collection instrument in the form of a validation questionnaire for the application-based digital media product we developed to promote anti-bullying among Generation Z. The questionnaire in this study uses a hierarchical structure based on a Likert scale ranging from 1 to 5, encompassing statements from Very Poor, Poor, Fair, Good, to Very Good (Dwi Agustin & Ambarawati, 2019). Before being used as a data collection tool, the instrument will undergo a validation process. The validity of the instrument we use is ensured through consultation with experts, where each instrument is consulted and validated by competent experts in their respective fields (Amini & Usmeldi, 2022).

Meanwhile, the instruments for each validator and practitioner are adopted from several relevant studies. For validation by media experts, the instruments are adopted from the research by (Perdanasari & Sangka, 2021), which include two assessment aspects: 1) Software, and 2) Visual Communication, covering related indicators. In the validation instrument, material experts and teachers (practitioners) adopt the research by (Ningtyas & Jati, 2018), with assessment aspects consisting of: 1) Learning, and 2) Media Navigation, accompanied by related indicators for each aspect.

The results of the validation process will then be analyzed descriptively and qualitatively using percentages as a form of analysis. Below are the criteria and suitability categories for interactive media derived and adapted from previous research conducted by (Bustanil S et al., 2019). The following table presents the percentage analysis of the feasibility of the application-based learning media.

Table 1. Interactive Media Eligibility Criteria

No	Percentage	Qualification	Decision
1	81 – 100%	Very good	Eligible
2	61 – 80%	Good	
3	41 – 61%	Enough	Eligible with Revision
4	21 – 40%	Deficient	Not Eligible
5	<20%	Very less	

RESULTS & DISCUSSION

Child violence, including "bullying," constitutes a violation of human rights and a global health issue. Bullying is a repetitive negative behavior intended to cause displeasure or pain, perpetrated by one or more individuals directly against someone who is unable to defend themselves (Sabah et al., 2022). Bullying behavior involves continuous intimidation or psychological abuse, forming a pattern of violence executed either physically or verbally. According to V. Tran, Weiss, & Nguyen in their article "Academic achievement, and cyber-bullying and cyber-victimization among middle- and high-school students in Vietnam," published in the International Journal of School & Educational Psychology, "Rates of Internet usage among students have been estimated to be high and consequently, the risk for cyber-bullying and cyber-victimization also may be high." In this digital era, Indonesian teenage students are not exempt from using gadgets and social media, which increases the likelihood of cyberbullying incidents (Fernández-Alfaraz et al., 2023).

This research continues from the previous stage, where the initial needs analysis indicated that the bullying rate among the younger generation, especially Generation Z, remains high. Moreover, there has not been any digital media used to campaign against bullying. In the rapidly evolving digital era, digital media has become an integral part of society, particularly for Generation Z. Information is crucial, especially when individuals make decisions, and digital media serves as an information source in the digital age (Shatri, 2020). Digital media is preferred due to its easy access and various features, enabling faster, broader, and more interactive information dissemination. In practice, digital media has an informative social influence, given that Gen Z is the most educated generation (Sheikh Ismail & Buang, 2019). Generation Z tends to learn to use electronic devices early in life and heavily relies on the internet. Consequently, Gen Z members prefer to seek information online (Fazilla et al., 2022). Therefore, utilizing digital media can be a viable option to promote anti-bullying among Generation Z.

From this preliminary study, the idea emerged to develop an innovative product suitable for use as an anti-bullying campaign medium. In the subsequent stage, media refinement plans were made, resulting in a content structure to be incorporated into the media and a media flow diagram. The goal of this research is to produce digital media used to campaign against bullying for Generation Z. This section presents the results of the product evaluation and development. The testing stage was conducted following research procedures, including validation by media experts, subject matter experts, and subject teachers.

After distributing questionnaires containing items assessing the feasibility of the game-based learning media product to each evaluator, the following are the evaluation results by media experts.

Table 2. Media Expert Validation Results

No	Expert	Percentage	Qualification	Decision
1	Media Expert I	90%	Very good	
2	Media Expert II	88%	Very good	Eligible
3	Media Expert III	86%	Very good	
	Average Media Expert	88%	Very good	

This evaluation is a summary of two aspects: software and visual communication, along with derivative indicators forming the basis of the assessment. Furthermore, the evaluation by media expert II received a percentage score of 88%, also classified as "Very Good." The evaluation by media expert III achieved a percentage score of 86%, which is also categorized as "Very Good."

The results from all media experts were then analyzed to obtain an average, revealing

a score of 88% as the average result from the three evaluations, which falls into the "Very Good" category and is deemed "Feasible." Therefore, these results indicate that the components comprising the application-based learning media product meet the requirements for learning media from the perspective of media experts.

The next evaluation stage was conducted by content experts, who assessed and measured the quality of the material presented in this application-based learning media. Although it is in the form of a game, the educational elements and timeliness of the material cannot be overlooked. The overall results from the content or material experts' evaluation will be presented in the following table.

Table 3. Material Expert Validation Results

No	Expert	Percentage	Qualification	Decision
1	Material Expert I	85%	Very good	
2	Material Expert II	87%	Very good	Eligible
3.	Material Expert III	89%	Very Good	
	Average Material Expert	87%	Very good	

Table 3 illustrates the evaluation results of the digital media for anti-bullying promotion among Generation Z by three content experts. From the table, it can be identified that this digital media product has received satisfactory evaluation results. The evaluation by content expert I obtained a total percentage of 85%, classified as "Very Good." This evaluation is a summary of two aspects: learning and media navigation, along with derivative indicators forming the basis of the assessment. Furthermore, the evaluation by content expert II received a percentage score of 87%, also classified as "Very Good." Meanwhile, content expert III achieved a total percentage evaluation score of 89%, also categorized as "Very Good."

The average analysis from all expert evaluations revealed a score of 87%, classified as "Very Good" and deemed "Feasible." Therefore, these results indicate that the content components included in this digital media for anti-bullying promotion have successfully met the requirements for learning media from the perspective of content experts.

Having obtained the evaluations and determined that this digital media falls into the feasibility category based on the validation results from media experts and content experts, the next step is the media evaluation by learning practitioners or arts and culture teachers at the junior high school level, specifically SMP Negeri 3 Grogol. Below are the overall results obtained from the evaluations by each subject teacher, visualized in Table 4.

Table 4. Validation Results by Practitioners

No	Practitioners	Percentage	Qualification	Decision
1	Teacher I	88%	Very good	
2	Teacher II	86%	Very good	
3	Teacher III	90%	Very good	Eligible
	Average Score from Teacher	88%	Very good	

Upon reviewing Table 4, it reveals that teacher I achieved an assessment score of 88%, which falls within the 'Very Good' category. Similarly, teacher II obtained an assessment score of 86%, which is also classified as 'Very Good'. Furthermore, teacher III's assessment score of 90% is also categorized as 'Very Good'. After analyzing the results of the three teachers, the average assessment score was calculated, which amounted to 88%, falling within the 'Very Good' qualification and resulting in a decision of 'Eligible'.

Therefore, the information, navigation and content contained in this product are in accordance with the requirements for competence, ease of use, relevance and factual accuracy of the material, so that it does not conflict with the implementation of the national

curriculum and learning. Thus, it can be concluded overall that this application-based learning media product for anti-bullying promotion is considered 'Appropriate' by all validators and practitioners as learning media in junior high schools, and is suitable to be tested on students in research or subsequent stages. Media products that have been validated are shown in Figure 2.
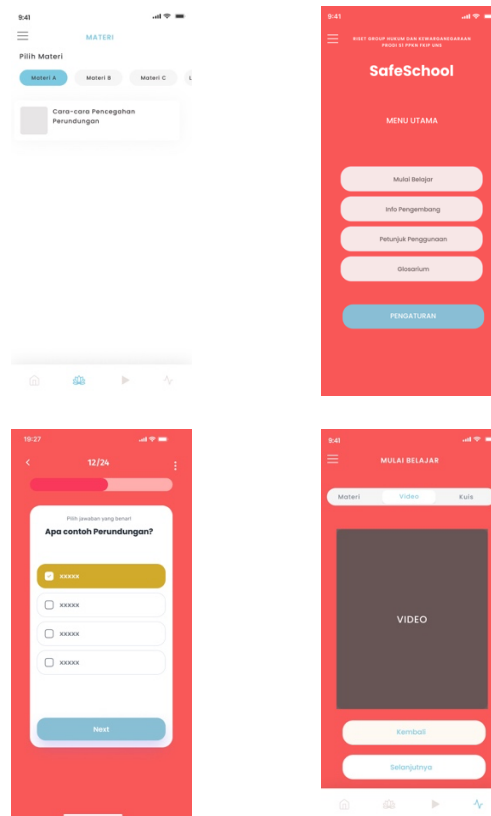
Figure 2. Application product for anti-bullying promotion

The results of this research indicate that application-based anti-bullying promotional digital media is considered suitable for integration into learning activities, which is based on validation from experts and teachers. Through a rigorous validation process conducted by education experts and experienced teachers, the suitability of this digital media in enhancing student engagement and learning outcomes has been proven (Anastasiadis et al., 2018; Batsila, 2020). Expert validation ensures that the educational content and application design align with curriculum goals and pedagogical principles, while teacher validation provides insights into the practicality and relevance of integrating this application into classroom teaching. This validation serves as evidence of the potential of application-based digital media as a valuable educational tool that can effectively complement traditional teaching methods and meet the diverse learning preferences of students in the digital era (Nisiotis, 2021; Emerson et al., 2020).

In recent years, there has been an increase in research highlighting the successful implementation of digital media in junior high school learning (Qian & Clark, 2016). Several relevant studies have revealed that before digital media is applied in the learning process, it needs to be validated by experts and practitioners (Komalasari, 2020). The goal is to ensure that the developed product can facilitate students in achieving their learning

objectives. As a result, the benefits of using digital media in learning are truly felt by students and can serve as a stimulus to enhance their skills, motivation, and even academic performance (Zaheer et al., 2018; Setyaedhi et al., 2023). The interactive and immersive nature of digital media not only captures students' interest but also stimulates many essential skills.

Recently, there has been a significant increase in interest in utilizing digital media as an educational approach to enhance student engagement and improve learning outcomes across various educational settings (Wardoyo et al., 2020). Digital media involves incorporating interactive elements, such as videos, animations, simulations, and quizzes, into the learning context to motivate and incentivize desired learning behaviors (Aries et al., 2020). Extensive research conducted by (Palaniappan & Noor, 2022) has provided evidence of the positive impact of digital media-based learning environments on student motivation, participation, and knowledge retention. By integrating interactive and multimodal elements, digital media leverages students' intrinsic motivation, fostering a sense of autonomy and mastery over their learning journey. The use of digital media-based learning activities has been shown to enhance students' sense of competence, autonomy, and relatedness, ultimately increasing engagement and success in academic endeavors (Legaki et al., 2020; Sailer & Homner, 2020). These results highlight the effectiveness of digital media in promoting active learning and creating a conducive learning environment that supports student progress.

Discussions surrounding the implementation of digital media in junior high school learning have highlighted the potential benefits of integrating digital components into the academic curriculum (Tong et al., 2022; Gao et al., 2020). Research has shown that digital media can enhance student engagement, motivation, and knowledge retention by providing interactive and immersive learning experiences that cater to various learning styles (Putra et al., 2019). By incorporating interactive techniques, such as rewards and progress tracking, educators can incentivize students to actively participate in their educational journey. Additionally, by leveraging the intrinsic motivational aspects of digital media, teachers can create highly interactive and immersive learning experiences that resonate with today's tech-savvy students. As technology continues to evolve, digital media offers exciting opportunities to transform traditional classroom teaching and empower students to embrace lifelong learning in the modern era.

CONCLUSION

The research successfully addressed the established objective of developing a digital media product suitable for use by teachers to minimize bullying among students during learning activities. In general, the validation of application-based digital media as an effective pedagogical tool for junior high school students demonstrates its potential to innovate education. By fusing digital interactivity with educational content, it fosters dynamic learning experiences that promote deeper comprehension, critical thinking, and skill development across a broad range of topics. Its scalability and accessibility empower educators to deliver personalized instruction, enabling learning anytime and anywhere. Moving forward, app-based digital media holds great promise to revolutionize conventional classroom practices and equip students with the competencies needed to thrive in the digital age.

Additionally, conducting research on the impact of digital media use on critical thinking, problem solving, and overall academic achievement can provide a comprehensive understanding of the outcomes associated with these initiatives. Comparative studies that compare traditional teaching methods with digital media-based learning approaches can

also provide valuable insights into the effectiveness of integrating digital media into lower secondary school curricula, which should be a priority for future researchers.

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