Development of Palventure Board Game Service Media for Improving Attitudes to Antibullying

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A B S T R A C T

Board games provide a safe and controlled simulation of reality, allowing individuals to explore roles and understand the consequences of their behavior. At the same time, the case of bullying, which is quite prevalent in the school environment, is another concern for teachers. The purpose of this research is to produce a board game that is feasible, practical, and effective in improving attitudes towards antibullying.This research was a type of research and development that used the model of Borg and Gall. The effectiveness of the product was tested using a t-test. The results of this study are: (1) products in the form of board game Palventure with components namely the game board, cards, dice, pawns, and tokens where the game mechanics are arranged in a manual; (2) board game Palventure declared very valid with a score of 92% from guidance and counseling service experts and 88% from media experts; and (3) board game PALVENTUREdeclared very practical by guidance and counseling teachers with a score of 83%, (4) board game Palventure is found to be effective in improving attitudes towards antibullying with a P-value of 0.002 (<0.05).

1. Introduction

Rapid modernization has driven significant technological advances, transforming traditional games into electronic ones. Games are interactive tools and achievement-focused activities that involve players and opponents (Crawford, 2003). In addition, other experts consider games to be works of art in which players make decisions to manage their resources using objects within the game to achieve specific goals (Costikyan, 2013). Lisnawati (2021) added that playing online games for less than an hour can help students learn more about technology, become more patient, improve dexterity, learn foreign terms, and even earn money. In addition, playing online games can also improve the brain's ability to analyze and solve problems, as well as encourage creativity and imagination.

Discussing games, learning methods, or services in counseling guidance has also involved or created various types of games to achieve the objectives of learning or the service itself. Games in the world of education are often used as interactive learning tools that can increase student engagement and motivation. These games can be physical, digital, or a combination of both. Through this approach, students learn important concepts in a fun and challenging way, which encourages deeper engagement compared to traditional methods. By assessing how students participate in the game, teachers can provide more targeted feedback by seeing how students apply the knowledge and skills they have learned. The flexibility in game design allows teachers to tailor the content to suit different ability levels, thereby meeting the individual needs of students.

Board games are interactive media that allow players to interact with each other based on predetermined rules. Each player's move can change the situation on the board, with the moves being interrelated. Some relevant studies related to the effectiveness of board games as a medium are the research conducted by Widiyanto & Yunianta (2021). The study concluded that the Titungan board game is valid, practical, and effective in training students' mathematical creative thinking skills. Research by Rosemawati (2021) revealed similar findings, namely that the Reog Kendang board game, as a guidance and counseling medium, is proven to be practicable and theoretically feasible for increasing self-awareness in eighth-grade students, making it suitable for implementation in guidance and counseling services. To achieve effective learning, it is important to create a classroom atmosphere that encourages interaction among students. Aisyah, Armariena, & Marleni (2024) also proved that the Pamacaboga board game is effective in increasing students' interest in learning and also facilitates the memorization of Civics Education material. Based on the validation test results, this board game learning medium was declared feasible for use, with a feasibility percentage of 74% from media experts and 80% from language experts.

One reason why board games are effective is that they encourage students to apply theories or knowledge they have learned in a game context that closely resembles real-life situations. This helps transform abstract learning into concrete experiences, which in turn improves understanding. Students must make decisions, face the consequences of their choices, and modify their strategies. This develops analytical thinking and problem-solving skills that are essential for academic success. Aisyah, et al. (2024) saying that board games are effective as a learning medium. Students show increased enthusiasm and enjoyment in learning thanks to the attractive media display, concise presentation accompanied by pictures, and group game format. In addition, board games often teach collaboration and effective communication. When students play in groups, they need to negotiate, cooperate, and share ideas to achieve common goals. This not only helps them develop social skills, but also increases their emotional engagement with the subject matter, which can have a positive impact on their motivation to learn and their attitude towards learning itself.

Although it has been proven that board games have a significant impact on learning outcomes, the reality on the ground shows that many schools in Indonesia still experience limitations or a lack of innovation in the media they use. The use of

service media is crucial in the guidance and counseling process in schools, as it plays a major role in facilitating student understanding. These services can be provided in various formats, such as individual, group, or classroom settings.

Olweus (1993) defines bullying as a specific form of aggression involving physical attacks or threats against weaker and defenseless individuals, with the aim of creating fear and resentment over a sustained period of time. The phenomenon of bullying in schools is a crucial issue that has a widespread and negative impact on students' psychosocial adjustment, academic achievement, and physical health. The lack of intensity in current anti-bullying programs and educators who underestimate the severity of bullying and its long-term impact on victims are problems. In addition, little emphasis is placed on understanding the research basis on children who engage in bullying.

In addition, based on preliminary studies through interviews with one of the guidance and counseling teachers at SMP Negeri 5 Yogyakarta, it was revealed that the implementation of classical or group guidance services has optimized various digital media such as Microsoft PowerPoint, Kahoot, and Quizeez, as well as handouts. However, the use of physical game media has not been introduced to students in the context of guidance and counseling. This study also identified that verbal bullying, particularly in the form of teasing between students involving parents, has not been a major focus of attention for teachers. Nevertheless, the school has shown openness to the development of innovative physical game media to improve students' understanding of bullying issues in the school environment.

Therefore, based on the above background, the researcher plans to develop a more efficient and effective (innovative) service tool in the form of a board game to raise awareness about bullying. The question in this study is what kind of service tool will the researcher develop? Or what kind of board game will be designed? These questions will be discussed in this study, titled "Development of PALVENTUREBoard Game Service Media to Improve Attitudes towards Anti-Bullying".

2. Methodology

This study is a research and development study using the Borg and Gall model. The subjects in the limited trial were 15 students and 1 guidance and counseling teacher. The next trial was a large-scale trial involving 94 students and 2 guidance and counseling teachers. The instrument used to measure the anti-bullying cycle was a scale developed by the researcher, who selected three expert validators and declared it valid based on an Aiken V index of 1. The reliability of the scale obtained a Cronbach's alpha value of 0.674. The product passed the guidance and counseling service feasibility test by two validators, the media feasibility test by two validators, and the practicality test by three guidance and counseling teachers. The effectiveness of the product was tested using a t-test.

3.   Results and Discussion

Result

Preliminary Study

Based on the results of the preliminary study, there is a need to develop interactive, enjoyable media that can instill values indirectly but deeply; an educational game approach. The development of the board game will focus on adopting a common game type, namely Ludo. This board game will be developed according to the suggestions and requirements conveyed by guidance and counseling teachers regarding the form of the product, rules of play, content, and so on. In addition, this study will also discuss how the media can function as a means of conveying anti-bullying messages in a more interesting and sustainable manner. Well-prepared tables and or figures must be of significant feature of this section, because they convey the major observations to readers. Any information provided in tables and figures should no longer be repeated in the text, but the text should focus on the importance of the principal findings of the study. In general, journal papers will contain three-seven figures and tables. The same data can not be presented in the form of tables and figures. The results of the study are discussed to address the problem formulated, objectives and research hypotheses. It is highly suggested that discussion be focused on the why and how of the research findings and to extend to which the research findings can be applied to other relevant problems.

Planning

The initial product development was designed to represent the aspects to be measured, in this case attitudes towards anti-bullying and the need for visual standards and product sizes. This board game-based service medium is called Palventure.

Early Product Development

1. Game Board

In board games, the game board is the main component that serves as the center of activity during gameplay. The board is usually a flat surface that is visually designed to depict the game environment, paths, areas, or specific areas directly related to the mechanics and objectives of the game. The image can be seen in Figure.1.

Figure 1. Game board

The material for this game board is made of 45x45 cm ECO 280 banner material and is designed using Adobe Illustrator.

2. Cards

In board games, cards are small sheet-shaped components that serve as aids in the game. There are 6 types of cards: question cards, challenge cards, special cards, penalty cards, attack cards, and information cards. The cards measure 6x9 cm, are made of 310gsm art cartoon paper, and are laminated on both sides. The image of this card can be seen in Figure 2.

Figure 2. Card used in the game

3. Dice

Dice are used as a random element in board games, namely to determine a player's move based on chance. This makes the game more dynamic and challenging. The Dice are made of plastic.

4. Pawn

In board games, pawns are physical components that represent a player's position or identity on the game board. During the game, pawns are used to indicate a player's position, movement, or status. Pawns are made of resin with a diameter of 1.5 cm and a height of 3 cm.

5. Tokens

In board games, reward tokens are tokens given to players as prizes or rewards for certain achievements they make during the game. These tokens have a value or positive effect that can be exchanged for small prizes after the game ends. The tokens are made of plastic and measure 19x2 mm. As explained earlier, there is a guidebook that serves as a tool for playing the Palventure board game in a classroom setting. In addition, various types of cards are stored in a box to protect them from damage, and all Palventure board game components, along with the guidebook, are packed in another rectangular box. The following are the results of the development of the guidebook and box (Figure 3).

Figure 3. Guided Book

A board game guide is a book or document that provides detailed information on how to play a board game. It is crucial for players to know the objective of the game, the rules, and how the game works as a whole. The paper used to make the guidebook is A5-sized HVS paper. The guidebook design was created using the Canva application. In board games, a card box is a special container used to store and organize game cards. All game components, including the game board, cards, pawns, tokens, dice, instruction manual, and other elements, are stored in a packaging box. In addition to serving as a storage container, this box also functions as a visual representation of the game's theme and identity. The packaging box is made of 1.5 mm E-flute corrugated cardboard and measures 22x14x6 cm. The image of this packaging box can be seen in Figure 4.

Figure 4. Packaging box

Initial Product Validity Results

Instrument validity testing was conducted using Aiken's V formula, whereby of the 20 items developed, 18 items obtained a V value of 1.00 and 2 items obtained V values of 0.75 and 0.83. Based on Aiken's content validity coefficient table with a rater of 3 and a rating scale of 1-5, the minimum acceptable V threshold is 0.92. Thus, 18 items were declared valid and 2 items were declared invalid.

The score obtained in the service validity test was 92% or in the 'Very Good' category. This shows that the Palventure board game is 'Very Good' as a service medium in guidance and classical learning. The validation score by media experts for the Palventure board game was 88% or in the 'Very Good' category. Meanwhile, the media validation for the guidebook itself obtained a score of 87% or in the 'Very Appropriate' category. Material validity testing was conducted to evaluate the appropriateness and suitability of an item from the aspect of content or substance. The material expert validation score obtained was 81%, which is in the 'Very Appropriate' category.

Product Trial Results

1. Limited trial

The analysis results show that from the data of 15 respondents, 11 respondents gave a rating of "Very Good" and 4 respondents gave a rating of "Good." The total student response validation score was 0.74 or 74%, which falls into the "Good" category. Meanwhile, the results of the practitioner validity test showed a validation score of 0.67 or 67%, indicating that the product is in the 'Acceptable' category in practical terms.

2. Extensive testing

The analysis results show that out of 94 respondents who filled out the questionnaire, 65 respondents gave a score in the 'Very Good' category. Meanwhile, the other 29 respondents gave scores in the 'Good' category. The score for the responses was 80.20% or in the 'Very Good' category. Meanwhile, the

validation by two practitioners or guidance and counseling practitioners was 82% or in the 'Very Good' category.

3. Effectiveness test

From the data processing, a significance value of 0.002 (<0.05) was obtained. Therefore, based on the decision-making criteria, it can be concluded that there is a significant difference in the attitudes towards anti-bullying among students who participated and did not participate in classical guidance with the Palventure board game. Thus, H1 is accepted and H0 is rejected.

Discussion

This development study discusses two variables, namely board game service media and students' attitudes towards anti-bullying. After going through limited testing, field testing, and operational testing, it was found that there were many inputs, suggestions, and criticisms of the Palventure product, resulting in improved assessments from revision to revision.

Using the Borg and Gall model, product development began with preliminary studies and data collection. The techniques used in this stage were interviews, observation, and literature study. Interviews were conducted at one school, namely SMP Negeri 5 Yogyakarta, where it was found that in the implementation of classical or group guidance services, although various digital media such as Microsoft PowerPoint, Kahoot, and Quizeez, as well as handouts of materials had been widely used, the use of physical game media had never been introduced at the school. Meanwhile, the results of observations at SMP Negeri 5 Yogyakarta showed that conventional or traditional teaching and learning methods were still very dominant. Although there were occasional attempts by teachers to adopt technology or innovative approaches, teaching methods in the classroom tended not to change much.

Planning is the second stage in this research, where based on problem analysis and input from various parties, it is necessary to develop interactive and enjoyable service media that are also capable of instilling values indirectly but deeply. One example of an approach that can be used is educational games such as board games. Board games have proven to be an interesting and efficient way for adults to acquire new knowledge. (Mangundjaya, Wicaksana & Ersya, 2022).

The next stage is initial product development. At this stage, the board game is designed from concept to product. In addition, the board game is also printed for the first time as material for experts to assess its feasibility. The product is tested in terms of media, service, and practicality. Meanwhile, additional feasibility tests on the guidebook assess aspects related to media and material..

After developing the product in the initial stage, product validation was carried out by experts. First, scale validity was conducted, where 2 items were eliminated from the 20 items tested for validity, leaving 18 valid items. The scale reliability obtained

a value of 0.674 on Cronbach's Alpha. This somewhat risky reliability value may be due to the small sample size of only 30 students. As for other feasibility tests, the Palventure board game received a score of 92% from service experts and 88% from media experts. The guidebook used as a tool in the implementation of services received a score of 85% from material experts and 89% from media experts. All validity scores obtained in this initial development stage were in the "Highly Feasible" category. The advantage of the Palventure board game lies in its concept, which is commonly played by many people. However, there are slight modifications to suit the needs of students, in this case to improve their attitude towards anti-bullying. Board games can increase students' enjoyment of learning, which ultimately has a positive impact on increasing their active participation.
(Purwidiantoro & Hadi, 2020).

Next, limited trials were conducted after the product was revised based on input and suggestions from the previous stage. This study involved 15 students and 1 teacher in product feasibility testing. The results of the analysis showed that of the 15 respondents, 11 respondents gave a rating of 'Very Good' and 4 respondents gave a rating of 'Good'. The total student response validation score was 0.74 or 74%, which falls into the "Good" category. Meanwhile, in practical terms, the product received a score of 64%, which also falls into the "Good" category. Furthermore, in this limited trial, the product's effectiveness was also tested for the first time. The result was a significance value of 0.000 (<0.05). So, based on the decision-making criteria, it can be said that there was a significant difference in students' attitudes towards anti-bullying before and after participating in classical guidance services using the Palventure board game. Thus, H1 was accepted and H0 was rejected.

After testing the product on a small scale, it was then tested more widely in three schools. These were SMP Negeri 8 Yogyakarta with 30 students, SMP Negeri 5 Yogyakarta with 32 students, and SMP Negeri 2 Yogyakarta with 32 students. Meanwhile, the practicality test involved two practitioners. The results of the field trial showed that the respondents gave a score of 80.2% or a rating of "Very Good." Meanwhile, practitioner II gave a score of 0.86 and practitioner III gave a score of 0.94, which were both in the "Very Good" category. The final results from both product practitioners obtained a score of 82% and again fell into the 'Very Good' category. Meanwhile, the product effectiveness test obtained a significance score of 0.002 (<0.05). Therefore, based on the decision-making criteria, it can be said that there is a significant difference in students' attitudes towards anti-bullying before and after undergoing classical guidance services using board games.

Rachmasari & Setiawam (2024) nd cognitive learning outcomes.. Gani (2022) menyebutkan bahwa *board game* dapat digunakan sebagai media pembelajaran mentioned that board games can be used as a learning medium for self-reflection. Board games in the context of learning have been proven to be effective in increasing student interest and motivation, which indirectly confirms their entertainment value (Sakti & Kartiani, 2023). Lingkungan yang mengajarkan nilai-nilai menghormati sesama, solidaritas, kerja sama akan melahirkan individu dengan kepedulian terhadap sesama (Denham, Mortari, & Silva, 2021). An environment

that teaches values of respect for others, solidarity, and cooperation will produce individuals who care for others (Smith, & Sharp, 1994).

4.   Conclusion

The product is a board game called Palventure, consisting of a game board, cards, dice, pawns, and tokens, with the game mechanics outlined in a instruction manual. This board game can be used to improve students' attitudes towards anti-bullying in schools.The Palventure board game, which is the product developed in this study, is expected to be utilized as much as possible by educators in schools, especially by guidance counselors. Such developments are expected to meet more of the developmental needs of students and strengthen the role of guidance and counseling services in building the character and social competencies needed in today's multicultural and digital society. Palventure as an alternative medium can support the achievement of classical or group guidance service objectives to improve students' attitudes towards anti-bullying, which serves as a means of preventing bullying that often occurs in school environments. To make anti-bullying attitudes stronger and more sustainable, it is recommended that this board game not only be used for playing, but also for discussion, reflection, and follow-up.

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