

Educative Board Game Design as an Anti-Bullying Campaign Media For Children Aged 9-12 Years Old

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ABSTRACT

Bullying cases in educational institutions have shown high numbers each year, with the highest cases in 2023 occurring in elementary schools. This was validated by the 4th-grade homeroom teacher at SDN 119 Cijagra, Mrs. Novriza Puspita Widiyana, S.Pd., who reported at least three bullying cases each month. Based on the characteristics of children aged 9-12, the use of educational toys can be an effective solution as a medium for campaigning anti-bullying values. Board games, which involve experimental learning, direct interaction, and actions that engage children's socio-emotional skills in relation to their environment, can effectively help children aged 9-12 absorb the values being taught through educational play tools. This study aims to design educational toys as a medium for anti-bullying campaigns that support the socio-emotional development of children aged 9-12 by applying the concept of board games. The research is conducted using a qualitative method with a case study approach and the ADDIE design method (Analyze, Design, Development, Implementation, and Evaluation). Data collection techniques used include observation, interviews, documentation, questionnaires, and literature review. This study is expected to serve as an effective and enjoyable campaign medium for children aged 9-12.

KEYWORDS

Bullying, Board Game, Children Aged 9-12 Years Old, Media of Campaign, Social-Emotional

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INTRODUCTION

A child's cognitive abilities are divided into four stages include the sensory stage, the pre-operational stage, the concrete operational stage, and the formal operational stage. At a certain phase, children reach a mature age where they become adept at mastering more specific skills. This typically occurs during the concrete operational stage, when children are between 7 and 12 years old. The child's growth and development are accompanied by the educational exposure they receive, both at home and outside. Education plays a role in shaping the child's character by stimulating the right brain, which includes creativity, emotional intelligence, and morality (Deswanty et al., 2024).

Bullying remains an issue that continues to persist. Various factors contribute to bullying behavior, including social environment disparities, physical aspects, popularity factors, and the desire to harm others. According to the Federation of Indonesian Teachers' Unions, there were 23 reported cases of bullying in educational institutions from January to September 2023. This represents a decrease compared to the highest number of cases recorded in 2022, which amounted to 226 cases. However, in 2023, the highest number of bullying incidents occurred at the elementary school and middle school levels, totaling 25 cases. Based on this data, a preliminary study was conducted at SDN 119 Cijagra, Buah Batu, Bandung. In an interview with Mrs. Novriza Puspita Widiyana, S.Pd., the

fourth-grade homeroom teacher, on Tuesday, November 11, 2023, she revealed that from September to October 2023, there were at least three reported bullying incidents in her class. Given the national phenomenon and the situation at SDN 119 Cijagra, teachers are encouraged to regularly organize and implement a series of anti-bullying campaign activities before the start of each school day. The anti-bullying campaign program implemented by Mrs. Novrizah involves activities such as storytelling, songs, and suggestion boxes. According to her, this method has been quite successful in raising children's awareness and knowledge of anti-bullying values. However, after two months of implementing the anti-bullying campaign program, the students began to experience boredom due to the repetitive nature of the methods.

Through the concrete operational stage, children's thinking and operations are directed toward real-life events, enabling them to perform more complex operations. However, without the support of physical objects, children in this stage may struggle to complete more complex tasks that involve logic (Juwantara, 2019). Therefore, interactive and appropriate learning media are highly needed for children at this stage, learning media can clarify the presentation of messages and the values being taught, thus enhancing the learning process and outcomes (Nurrita, 2018). The media considered suitable for children to enhance the effectiveness of their learning process is through the design of educational toys specifically designed to instill educational values in children (Nurhandayani et al., 2024). Based on this description, this research involves the design of an educational toy in the form of a board game, which engages multiple players and enhances social interaction among children. Board games are considered an effective medium for children aged 9-12, as children in this age group enjoy activities that involve both interaction and fun. The use of board games is seen as having a greater impact on learning outcomes and absorption compared to learning without the use of board games. (Ratminingsih, 2018). The design of a board game as an anti-bullying campaign medium for children aged 9-12 is expected to serve as an engaging and effective tool for instilling anti-bullying values.

In previous research written by (Widyasari, et al., 2021) are focused on the design of a board game that incorporated anti-bullying materials, applied within a structured play concept created by the researcher for elementary school children, and included visualizations of each game element. While the research contributed to the development of an educational toys board game, there were several aspects that could still be explored. This exploration represents the gap between the current research and the previous study, specifically the approach to the age group of 9-12 years, which has distinct characteristics compared to elementary school children in general, and which was developed in a board game system adapted from Monopoly. Furthermore, this study also takes into account the interactive value and active involvement of children by formulating a game concept suited to the characteristics of children aged 9-12 and adjusting it to field conditions at the research location. In this research, exploration of the presentation of the board game also considers the effectiveness of each game element, as well as the use of safe and comfortable materials. By considering these aspects, the design of the anti-bullying board game focuses on children aged 9-12, providing a more specific contribution.

METHOD

In writing the design of an anti-bullying board game for children aged 9-12, a qualitative research method with a case study approach is applied. The presentation covers various aspects of individuals, groups, organizations, systems, and social contexts. The data analysis technique used is the descriptive analysis model, which involves identifying phenomena, issues, research potential, and supporting data (Pambudi et al., 2024).

1. Data Collection Techniques

- a. **Participant Observation:** In participant observation, the researcher takes part in the activities being studied or observed. The observation is conducted at SDN 119 Cijagra, Jl. Situ Lembang No.1, Kabupaten Bandung, involving children aged 9-12 years.
- b. **Semi-Structured Interviews:** Semi-structured interviews are conducted in a more flexible manner, allowing respondents to express their opinions and ideas freely. The interviews were

conducted with the principal of SDN 119 Cijagra, Mrs. Ida Wardatin, S.Pd.; the fourth-grade homeroom teacher, Mrs. Novriza Puspita Widiyana, S.Pd.; a psychologist, Mrs. Tiara Delia Madyani, Sp.si., M.Psi.; and a product design expert, Mrs. Difiyatul Isna Alvionita, S.Ds.

- c. **Literature Review:** The literature review technique involves the process of collecting bibliographic data, reading, noting, and analyzing data.

2. Design Method

The design in this research uses the Research and Development (R&D) methodology, employing the ADDIE model (Analyze, Design, Development, Implement, and Evaluate). ADDIE is an instructional design model centered on individuals or groups that utilizes human knowledge and learning. Instructional design is considered more effective for creating long-term value in the learning environment (Hidayat & Nizar, 2021)

RESULT AND DISCUSSION

SDN 119 Cijagra is located at Jl. Situ Lembang No. 1, Kec. Lengkong. With more than 336 students, this indicates the complexity of the environment at SDN 119 Cijagra. According to an interview with the principal, Mrs. Ida Wardatin, S.Pd., on Tuesday, November 11, 2023, the current curriculum is the Merdeka Belajar curriculum, which places a greater emphasis on character education compared to the previous curriculum. According to Mrs. Novriza Puspita Widiyana, S.Pd., the fourth-grade homeroom teacher, bullying behavior occurs every year at SDN 119 Cijagra, even on a monthly basis. The most recent records show that between September and October 2023, there were already three reports of bullying incidents in her class. As a homeroom teacher, Mrs. Novriza has implemented three anti-bullying campaign methods in her class: storytelling, anti-bullying songs, and suggestion boxes. Over two months of practicing this anti-bullying campaign, it was found that while the methods were somewhat effective, the children began to experience boredom with the repetitive nature of the methods without new media. Therefore, there is a need for the design of an educational toys as a new medium for the anti-bullying campaign, accompanied by an appropriate educational approach, to ensure that children receive stimuli that match their growth and development (Azhar et al., 2023). To ensure that the design of the educational toys facilitates effective learning goals and activities, it is important to design the educational toys in accordance with the developmental characteristics of children aged 9-12 years. As a campaign medium, the educational toys needs to be specifically designed to meet the needs of the values to be instilled, thereby providing a good solution (Wardani et al., 2024).

The application of the ADDIE design methodology in the development of an anti-bullying board game can guide the development process effectively. The application of the ADDIE method is presented in the following table.

Table 1. Application ADDIE Design Method

No	ADDIE	Application
1	<i>Analyze</i>	<ul style="list-style-type: none"> a. Problem and Needs Analysis: Conducted for the research target, which is children aged 9-12 years, at SDN 119 Cijagra. b. Analysis of Similar Products: Includes aspects such as user, color, material, dimensions, appearance, purpose, operation, shortcomings, and advantages.
2	<i>Design</i>	The design of an anti-bullying board game was carried out as a campaign medium for children aged 9-12 years.
3	<i>Development</i>	The board game is designed by adapting and developing monopoly through several aspects, including the game objectives, game board, game pieces, tokens, and activity cards.
4	<i>Implement</i>	<ul style="list-style-type: none"> a. Prototype: Implementation of the design and development of the board game before moving into large-scale production.

		b. Visual Design: The objectives and theme of the game are presented in the visual design of the educational toys to ensure that the design goals are effectively communicated.
5	<i>Evaluate</i>	The effectiveness of the anti-bullying board game is evaluated by subject matter experts, product design experts, child psychologists, and through field testing with children aged 9-12 years at SDN 119 Cijagra.

Through the development process using the ADDIE method, the general and specific concepts are formulated based on analysis aspects including user, material, color, dimensions, appearance, purpose, and operation. These aspects are adapted from (Bahri & Haswanto, 2020). The general and specific concepts are presented in the following table.

Table 2. General and Specific concepts

Aspect Design	General Concept	Specific Concept
User	Children aged 9-12 years old.	Children aged 9-12 years, both female and male.
Material	Safe and comfortable for use by children aged 9-12 years.	The material meets the Indonesian National Standards (SNI), as specified in SNI ISO 8124-3:2010, ensuring that the toys uses non-toxic, lightweight, safe materials that are suitable for the activities.
Color	The choice of colors is used as a guiding tool for children in operating the APE and functions as a depiction of the atmosphere.	The colors applied to the cards and game pieces are soft hues with contrasting color combinations.
Dimensions	Consistent with the average size of similar board game products.	Based on the analysis of similar products, the dimensions of the game board are 40 cm x 40 cm.
Appearance	The shape of the toys is designed to include compartments for storing game elements.	The toys is designed with compartments that facilitate the organization of game elements. The visuals on the cards and game pieces are presented in alignment with the values that are intended to be conveyed.
Purpose	Anti-bullying campaign medium for children aged 9-12 years.	Through several stages of character development: knowing, acting, and habit.(Veonalita, 2023). Each stage of implementation is presented in the elements of the anti-bullying board game through activity cards.
Operation	The operation of the toys is adapted from Monopoly, incorporating anti-bullying values.	Players will move through game pieces with different functions, such as pillar pieces that can be bought and sold using kindness tokens, anti-bullying pieces containing information about anti-bullying values, action pieces with question cards that need to be answered, and chance pieces with surprise cards. Each game piece provides rewards or penalties based on the answers or decisions made by the players.

Based on the development using the ADDIE method, presented with general and specific concepts, the visual concept for the design of the anti-bullying board game for children aged 9-12 years is formulated, as shown in the table below.

Table 3. Visual Concept of Board Game

Visual Concept	Description
Shape	<ul style="list-style-type: none"> a. The main casing of the product is square-shaped with rounded corners. The casing is also equipped with storage compartments to facilitate the organization of board game elements. b. The game board is designed to be mounted on the top of the casing, making it easier to play and more effective in organizing the game after use. c. Activity cards are shaped like rectangles with rounded and smooth edges in accordance with SNI ISO 8124-1:2010 standards. d. The tokens are designed to represent various physical forms of children.
Dimension	<ul style="list-style-type: none"> a. Based on the analysis of similar products according to Indonesian National Standards (SNI) for children's toys, the length x width x height of the toys, when the compartments are closed, does not exceed 40 cm x 40 cm x 13 cm. b. According to the compartment size, the cards do not exceed the dimensions of 10 cm x 6 cm. c. The dimensions of the tokens and pieces do not have a length or width smaller than a diameter of 3 cm, for safety reasons.
Material	<ul style="list-style-type: none"> a. The main casing and compartments are made of pine wood with a non-toxic finish. b. The activity cards are printed on 360 gsm art paper.
Proportion	<ul style="list-style-type: none"> a. The main casing is designed with the game board on top and internal compartments used for storing game components. b. The card components have the same size and shape. c. The tokens and pieces have relatively similar sizes to each other, despite having different shapes.

Based on the visual concept in the table above, the educational board game is designed with adaptations from Monopoly to incorporate anti-bullying values. By instilling these values and providing positive reinforcement, the child's need for good responses and treatment can foster principles of receiving and giving (Novita, 2024). Based on the visual aspects described, it is determined that the main body of the anti-bullying board game consists of three parts: the compartment cover which also functions as the game board, the main casing, and the storage compartments for the elements of the anti-bullying board game. The visual concept is presented through 7 alternative sketches, shown below:

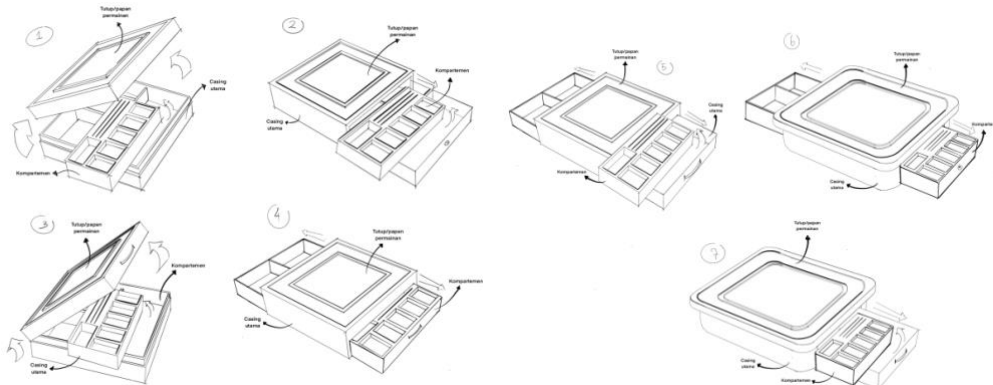


Figure 1. Alternative Sktech of Board Game Anti-Bullying
 (Personal Document, 2024)

Next, the alternative sketches are evaluated for design suitability based on the composition of shape, dimensions, and proportions (Bahri & Haswanto, 2020). The selection of sketches is carried out using a Likert scale, with weighting conducted by product design experts. The highest score was given to Alternative Sketch 2, categorized as feasible. Subsequently, the development of Alternative Sketch 2 was formulated into the final design:



Figure 2. Final Design Board Game Anti-bullying
(Personal Document, 2024)

The image above displays the game board consisting of 28 pieces, which are adapted in layout and gameplay system from Monopoly. Each piece serves its specific function, adapted from the research on nutritional board games by (Rizkha & Anggapuspa, 2022). Based on the visual concept in Table 4, the implementation of the game elements is presented below as follows:

1) Token



Figur 3. Token Illustration
(Personal Document, 2024)

The tokens are designed with visuals of two boys and two girls, featuring different skin tones, hairstyles, and clothing styles to introduce diversity to children. The tokens are made with dimensions of 6 cm x 3 cm and a thickness of 3 mm.

2) Activity Cards



Figure 4. Activity Cards Illustration
(Personal Document, 2024)

The activity cards contain anti-bullying values appropriate for children aged 9-12 years. They are printed with dimensions of 6 cm x 10 cm on art carton paper with rounded corners.

CONCLUSIONS

Based on national phenomena, such as the annual occurrence of bullying cases validated by the situation at SDN 119 Cijagra, where bullying cases are reported each year, the repetitive application of anti-bullying campaign methods without an educational game tool has led to children's boredom, resulting in ineffective absorption of anti-bullying values. The design of this board game represents an innovative educational tool that can assist in the anti-bullying campaign process. This board game is designed with a group play system familiar to children, involving social interaction between children and their peers, children and teachers, and children and parents. The game system is adapted from the Monopoly board game, consisting of game pieces, 4 tokens, 4 types of activity cards, kindness tokens, a spinner board, and pillars of kindness.

Based on the data analysis and the design concept of the anti-bullying board game for children aged 9-12 years, several recommendations for improving the design in future research include: 1) Making the content more varied and tiered based on different types of bullying, 2) Making the dimensions and modularity of the main casing more compact for easier mobilization during the operation of the APE, 3) Creating a more uniform visual design by featuring a main character that could serve as a mascot or brand identity for the APE, and 4) Developing the game system to achieve greater complexity for children aged 9-12 years.

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