

RESEARCH ARTICLE

Designing Boardgame Media for Child Growth Stimulation through Children's Games

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Abstract

Introduction: Educating children requires interesting and safe media. Childhood is a period of growth and development of various aspects which include fine motor, gross motoric, language, and social personal. Social interaction can use technology that is not limited to space and time through gadgets. If there is no control over the use of gadgets, children can become addicted to them, indifferent to those around them, and rarely communicate with people around them. To anticipate this, alternative media that are safer than gadgets is game board. **Methods:** This research method included 2 phases. Phase I was Research & Development model research, Phase II was the implementation of the model using Pre-Experimental Design research that applies non-randomized One-Shot Case Study. Data were collected by using interview, questionnaire and observation. The data was processed using the visual comparison matrix analysis method. An attractive game board must be supported by a good mechanism and visibility. **Results:** Children can grow and develop well if a healthy lifestyle is implanted like healthy food is. The solution to this problem can be achieved by designing educational board games as a medium for learning and playing. The reason is that board games have rules, goals, problems, players, procedures, etc. It can also train psychomotor, emotional, moral, cognitive, artistic, children's language aspects with fun. The board game is expected to make children interact well so that all aspects of a child's development run well.

Keywords: Board games, Stimulation, Types of Children's Games.

Introduction

Children tend to be active and have a great curiosity. The activities they do are very diverse which are usually carried out with a high level of interaction. One of those activities is playing games [1].

Playing is the main activity of children. For them, playing is learning that is important for their cognitive, social and personality development. Children can understand the relationship between themselves and their social environment, learning to get along, understand the rules, and the procedures for association [2]. Previous studies conducted at the Magetan Health Office found that coverage of child development was less than 90%. Moreover, the results of an interview at PAUD (Early Childhood Education and

Development program/pre-school) in District P showed that 54.5% of mothers conducted stimulation as much as they could without stimulation guidelines including asking the children to sing together or ride a bicycle. These activities were not routinely carried out, but they did it in their spare time while watching TV.

Moreover, the research also showed that 45.5% of mothers never conducted stimulation since they did not know how, in which the children developed as they were [3]. The data of TK (Kindergarten) A showed that there were 20% of kindergarten children addicted to gadgets, 50% played gadgets 5-10 minutes without parental supervision, 21% played traditional games, 19% watched TV

and played more often at their home. Interviews were also conducted to 15 mothers showing that 41% of children had never been exposed to board games, 45% had played *Halma* or traditional board games, 8% knew about board games but had never played them, and 6% said that they had never bought toys for their child [4]. Based on the existing problems, this study aims to provide knowledge and instill a healthy lifestyle of children through Board games and make Board games as social interaction media [5].

It is necessary to empower parents, especially mothers, to be able to stimulate their children [6]. The stimulation can be done by playing so that children are more interested, one of which is Board game which is considered as the right choice [7]. One of the impacts of using gadgets on children is that it becomes more difficult to build communication with children, especially at home [8]. They tend to be indifferent and less responsive when parents ask them to talk. Excessive and uncontrolled use of gadgets has a negative impact on psychology and children cannot easily socialize or communicate with people around them [9]. Psychological development of children has to be considered that they can grow naturally and positively.

One of them is through playing. Therefore, it is necessary to design alternative games media with Board games which are no less interesting than gadget [10]. This design is also intended to be able to help children to reduce the intensity of playing gadgets [11]. Board games generally have to be played by more than 1 person to train the psychomotor, cognitive, emotional, moral, art, and language aspects, which cannot be obtained through games in gadgets [12].

Board games have many variations of play rules and various interesting combinations of game elements that are expected to educate children about the dangers of radiation caused by gadgets through this Board game system [13]. The purpose of this study was to design a Board Game Media for Stimulation of Child Growth and Development through Children's Games.

Methods

This study was conducted in two phases. Phase I (one) was intended to identify the needs of Board games for stimulation of child growth and development through children's games using a research & development approach. After that, FGD 1 was held. Phase II (two) was intended to implement the media using Pre-Experimental Design research with the One-Shot Case Study design. Data were collected by using interview, questionnaire and observation. The data was processed using the visual comparison matrix analysis method. An attractive game board must be supported by a good mechanism and visibility.

Results

The results of the study/identification of the needs of Board games as the media of education and play found that the type of Board game that was suitable for kindergarten/pre-school children was modern board games. It was because Board games met the requirements of media experts including having a simple visual communication design and easily understood by the children, having picture illustrations that provided an explanation of the purpose of the game, layout of elements, design that was easily understood, and the typography of letters used that was also easy to read.

Table 1: Results of the Visual Comparison Matrix Analysis of Media Experts

Color	The use of color is good, characterized by the diversity of colors with white on the background. Each color represents the true color of each image.
Illustration	The illustration utilizes 2D cartoon style. Objects depicted are clear and expressive. The illustration is created using digital painting techniques.
Layout	Layout in this game tends to be center but dynamic. Illustration becomes the most prominent object than other objects.
Typography	The fonts used include <i>Cooper Black</i> , <i>Snap ITC</i> , and <i>Comic Sans MS</i> which seem decorative.
Mechanism	The mechanism that stands out is Dice related, since this game is based on the use of several dice. The mechanism is wrapped with dexterity (agility, dexterity, skill) to make this game not only fun, but also can train the agility of players.

Discussion

Based on the observations made by researchers on the results of Board Game assessments conducted at 3 kindergartens/pre-schools, the following results were obtained: 1) According to Child Growth assessment in terms of fine motor aspects, the minimum score was 11 and the maximum score was 15. The average score was 13.17 and SD was 1.436. 2) The results of the Child Growth Assessment of gross motoric aspects obtained a minimum score of 18 and a maximum score of 25. The average score was 22.92 and SD was 2.160.3).

In language aspects, the minimum score was 15 and the maximum score was 20. The average score was 18.17 and SD was 1.341. 4) In social and independence aspects, the minimum score was 17, the maximum score was 20, the average score was 18.75 and the SD was 1.422. 5) From the total score data, the Board game value was 68.29; SD reached 4.288; the minimum score was 59 and the maximum score was 74. Based on the average assessment results above on 24 children playing, it was concluded that the Board game was very good to be used as a medium for playing because it met the aspects of Growth and Development.

Conclusion

Based on the Matrix Analysis of visual comparisons of media experts, it was concluded that:

- Play media of Board games were suitable and necessary for kindergarten/pre-school children since these media fulfilled the media requirements both in terms of learning for children and in terms of visual communication which have an impact on the Child Growth.
- The realization of Board games as the media for playing and learning for kindergarten/pre-school children which could be used to train children to interact with each other by which the social independence of children was formed.
- Board games as play media for children was by research proven effective to be played by kindergarten/pre-school children since all five senses of the child were involved including thinking, following the rules, and socializing. Therefore, Child

Growth which consisted of 4 aspects namely fine motor, gross motor, language, as well as social and independence could be fulfilled.

Suggestion

Board games in a larger size and can be played outdoors/outside the building need to be developed, so that children themselves act as pawns where they will automatically be actively involved physically and psychologically.2) Socialization to the community needs to be done especially for mothers of toddlers to always stimulate their children with board games in order to avoid gadget addiction in children that can cause lack of interaction with the surrounding environment. 3) There needs to be a strong commitment, support and consistency of parents so that the children are interested in playing Board Games rather than gadgets.

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