

DEVELOPMENT OF THE CUBE UP GAMES TO STIMULATE EMOTIONAL SOCIAL OF 5-6 YEARS CHILDREN

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Abstract: This research aims to produce a Cube Up game that is suitable for stimulating social-emotional children aged 5-6 years. This research was conducted in five kindergartens used Research and Development design. The research and development model used is Borg & Gall which has been modified by researchers. The results of validation game experts get a percentage of 87.50%, 89.42% social-emotional experts, 96.25% education practitioners, and field trials. get a percentage of 89.01%. The average results of expert validation data and fields trials get a percentage of 90.03%. The data showed that the Cube Up game is very suitable to be used to stimulate social-emotional children aged 5-6 years.

Keywords: cube up game, stimulating, social-emotional.

INTRODUCTION

Social and emotional are two inseparable aspects of early childhood development. The social sphere will affect a person's emotions and vice versa, emotions will affect the social environment. Nurmalitasari (2015) explains that social development is the development of children's behavior to adjust to the rules in the community. The closest people around this social environment will influence someone's personality. (Riana, 2007) states that emotions are the body's external activities, both in the form of pleasant or unpleasant reactions to an event or certain mental condition. This shows that emotions consist of 2 types, namely positive emotions and negative emotions. These emotions will later affect the social environment. Based on some of the experts above, it can be concluded that social-emotional is a positive or negative feeling or behavior that comes from within oneself that influences and is influenced by the social environment.

Children who are at the end of early childhood should have been given stimulations that are useful for emotional social development. This is emphasized by (Ananda & Fadhilaturrani, 2018) which states that social emotion is very necessary for team or group learning because children relate to peers so that children must control their emotions to create a conducive climate for learning. Games as one of the best stimulations are activities that can improve children's abilities and are done with pleasure. Games are also useful to help the growth and development of children including physical, intellectual, and social aspects (Pramono, 2013). Games according to (Fadhilah, 2017) must have clear goals, be carried out freely, prioritize processes, not results, pay attention to safety, and are fun and enjoyable.

Based on the needs analysis conducted through interviews with the group B class guardians in TK IT Ulil Albab and TK Muslimat NU IX, games that can stimulate children's social-emotional well-being are very much needed. The play method which is always applied in PAUD makes children will learn something more easily. However, the existing game has been more stimulating of the child's motor language, cognitive, and physical development. The activities and methods provided to stimulate a child's social-emotional wellbeing have not varied.

Based on the theories and phenomena explained above, games that can stimulate a child's social-emotional well-being are still not much developed, and a game that can stimulate a child's social-emotional stimulation is needed. The product developed as an alternative to solving the problem above is the Cube Up game to stimulate the emotional social of children aged 5-6 years. Cube Up game is a modification of the snake and ladder game. (Nugrahani, 2007) has researched snakes and ladders games. The results of Nugrahani's research (2007) show that the quality of student learning after using snake ladder learning media has increased with a percentage of 18.8%.

Cube Up game is a type of cooperative game that consists of 2-dimensional and 3-dimensional media. Nugroho (2013) has conducted experimental research on cooperative games to motivate students to participate in learning. The results of an experimental study conducted by (Nugroho, 2013) showed that the value of $t_{count} > t_{table}$ with $t_{count} = 9.091$ and $t_{table} = 1.697$. Furthermore, Snaislus & Maresha (2012) has conducted quantitative research on the effectiveness of cooperative play in improving the social skills of early childhood. Results Data analysis conducted by (Snaislus & Maresha, 2012) in the experimental group obtained a mean rank pretest of 7.50 while posttest of 21.50. The results of research conducted by Nugroho (2013) and (Snaislus & Maresha, 2012) prove that cooperative games can increase learning motivation and are effective for developing social-emotional early childhood.

The Cube Up game has the following specifications: (1) Consists of printouts of Cube Up banners, dice, gaco, picture cards, cubes, rectangular prisms, and picture cards. (2) Game activities having game steps are expected to help the child to be disciplined in following the rules in the game. (3) The activity of arranging cubes in groups is expected to help children build cooperation and help one another. (4) Game activities are carried out with children lined up like trains and turns in playing are expected to make children patiently waiting for their turn to play. (5) The activity of rolling the dice is expected to be easy and interesting for children. (6) The activity of taking the cube and giving it in a relay by flanking the two index fingers to the cube and whispering the number of dice is expected to make the child care and want to help a friend. (7) Guess the picture activity is expected to make children socialize through communication.

The purpose of this research and development is to produce Cube Up game products that are suitable for stimulating the emotional social of children aged 5-6 years. The feasibility can be

seen through the results of the validation of game experts, emotional social experts, education practitioners, and field trials. The social-emotional aspects that can be stimulated through the Cube Up game are feelings of pleasure, patience, obeying the rules, and cooperation.

METHOD

Research and Development (Research and Development) is used to develop an existing product by perfecting it to obtain a new product that is different from the previous product. (Sugiyono, 2015) states that research and development in the field of education are still low, even though many specific products in the field of education need to be produced through research and development. The research and development model used is Borg & Gall which has been modified by researchers.

Researchers carry out research and development steps only to the seventh stage, namely the improvement of the final product. The research and development steps used include (1) Research and data collection, which includes measuring needs, literature studies, and preliminary field research. (2) Planning, which is the result of a literature study, measurement of data collection needs, and research on a small scale (Sukmadinata, 2013). At this planning stage, the researcher prepares a game product design. (3) Development of product drafts, namely the results of research, data collection, and planning. These results are in the form of game products which are then validated by experts. (4) Initial field trials were conducted with small groups in IT Ulil Albab Kindergarten with 10 subjects. (5) Revise the results of the trial, namely the results of the evaluation and input from the initial field trial by improving the product on the part that is still less effective. (6) Large group trials were conducted at TK IT Ulil Albab, TK Tunas Madani, TK Sunan Giri, TK Muslimat NU IX, and TK Samudera Islam with subjects 81 children in group B (5-6 years). (7) Completion of the final product is carried out after a revision of the large group trial.

The subjects of this development research trial were: (a) small group trials were conducted on 10 children in group B IT Ulil Albab kindergarten who were 5-6 years old. (b) large group trials were conducted on 81 group B children aged 5-6 years at IT Ulil Albab Kindergarten, Tunas Madani Kindergarten, Sunan Giri Kindergarten, Muslimat NU IX Kindergarten, and Islam Samudera Kindergarten. Field trials were conducted at the five kindergartens based on observations made by researchers. Activities provided to stimulate the emotional social of children in the five kindergartens are not yet diverse. The types of data obtained in this research are qualitative and quantitative. Qualitative data is data obtained from expert advice and evaluation, interviews, and observations made at the initial stage of the study. Quantitative data were obtained from instrument data scores from validators and observation sheets.

Data collection instruments used in this research development in the form of validation questionnaires and observation sheets. The validation questionnaire is a product assessment about the feasibility of the Cube Up game to stimulate the emotional social of early childhood group B (5-6 years) conducted by experts. The data analysis technique was carried out qualitatively and quantitatively. Qualitative data were obtained to find out needs analysis, conditions on the ground, advice from experts. Quantitative data were obtained to determine the feasibility of the game from the scores and field test results obtained. The formula for processing data in the form of descriptive percentages according to (Sudijono, 2009) is as follows:

$$P = \frac{\sum X}{\sum Xi} \times 100\%$$

Explanation:

P : Percentage

$\sum X$: The total number of respondents' answers in one item

$\sum Xi$: The ideal number of overall scores in an item

After getting the results of the data processed using the formula above, the data obtained are matched with the eligibility criteria presented in table 1 as follows.

Table 1. Eligibility Level Criteria

Category	Percentage	Qualification
A. (Score 4)	85,01% - 100%	Very valid, or can be used without revision
B. (Score 3)	70,01% - 85%	Quite valid, or can be used but needs minor revisions
C. (Score 2)	50,01% - 70%	Invalid, it is recommended not to use it because it needs a major revision
D. (Score 1)	01% - 50%	Invalid, may not be used

Source: (Akbar, 2013)

RESULT AND DISCUSSION

Based on data collection from a trial study on the development of the Cube Up game to stimulate the emotional social of children aged 5-6 years, the average percentage of the overall data obtained by 90.03%. These results fall into the category of the percentage of eligibility of 85.01% -100%. The conclusion from the average results of the overall data is that the Cube Up game is very valid and can be used without revision. The game expert evaluation data was conducted by six experts, namely two early childhood games, two early childhood emotional social experts, and two education practitioners. Quantitative data obtained from early childhood game experts obtained an average percentage of 87.50%, emotional social material experts of early childhood obtained an average percentage of 89.42%, and education practitioners obtained an average percentage of 96, 25%.

The results of the average validation data of early childhood game experts, social-emotional experts of early childhood, and education practitioners get a percentage of 91.05%.

These results fall into the category of the percentage of eligibility of 85.01% -100%. The conclusion from the average results of expert validation is that the Cube Up game is very valid to use. Quantitative data obtained from large group trials get an average percentage of 89.01%. These results fall into the category of the percentage of eligibility of 85.01% -100%. The conclusion from the results of the average large group trial that is the Cube Up game is very valid to use.

Qualitative data in the form of advice from emotional social experts is to provide rewards after the game. Improvements made by researchers based on these suggestions are giving rewards in the form of star stickers. The star sticker is given to the group that wins the game. Suggestions from game experts are to make commands on the numbers traversed to deepen communication. The next improvement that the researchers made was providing picture cards for recreational areas to increase communication between children. The child is asked to mention the characteristics of the picture provided and other children guess the picture.

Quantitative data of early childhood social-emotional experts obtained an average percentage of 89.42%, the Cube Up Game Result was declared safe with a percentage of 100%, easy with a percentage of 87.5%, attractive with a percentage of 87.5%, and able to bring up enthusiasm in children with a percentage of 87.5% by expert social-emotional material early childhood. This is in line with the statement of (Fadhilah, 2017) the principle of the game is to have a clear goal, to be carried out freely, to prioritize the process, not to the results, pay attention to safety, as well as to be enjoyable and enjoyable. The Cube Up game has proven to attract the attention of children because children are very enthusiastic when playing and safe because it is made of smooth and not sharp material.

The Cube Up game aims to stimulate the emotional social of children aged 5-6 years. Stimulated social-emotional abilities in this game are feeling happy with indicators enthusiastic about playing the game, patience with indicators waiting in their turn to play, obeying rules with indicators of discipline in following rules in the game, and collaboration with indicators of caring and willing to help. Children aged 5-6 years have begun to be able to play cooperatively. Partern (in Pramono, 2015) states that playing cooperative is playing together to do a joint project that has an element of winning and losing. The Cube Up game has been stated to stimulate children to be cooperative in games with a percentage of 100%. The cooperative attitude shown by children in the game can be seen from the child willing to work together to do a cube relay and help friends who have difficulty guessing the picture.

Santrock (2012) states that emotional development in early childhood makes them try to understand the emotional reactions of others and control their own emotions. When children can control their emotions well, children will be able to learn to be patient in waiting for their turn. The Cube Up game has been stated to stimulate children to stand in line waiting for their turn to play

with a percentage of 87.5%. Wiyani (2014) states that children aged 5-6 years already understand the rules, both in the school environment and at home. Therefore, the Cube Up Game has been stated to be able to stimulate children to discipline to follow the rules in the game with a percentage of 87.5%.

Cube Up game has several tools or media in it. The media is the print out of the Cube Up banner, 2 dice, 2 gaco, 30 cubes, 1 rectangular prism, a drawing card, and a teacher's manual. (Kustiawan, 2015) states that good media is a media that is safe, by the goals, develops children's potential, is neat, beautiful, attractive and the children's creativity, strong, and enduring. Early childhood game experts claim that the Cube Up banner print out has a percentage of the attractiveness of 75% and security of 100%, dice has a percentage of the attractiveness of 87.5% and security of 100%, gaco has a percentage of the attractiveness of 87.5% and security of 100%, as well as cubes and rectangular prisms have an attractiveness percentage of 75% and safety of 87.5%. Cube Up has been declared easy to play with a percentage of 87.5%, easy to get material in the media of the game with a percentage of 75%, easy to make a game with a percentage of 87.5%, and easy to use media in the game with a percentage of 100%. Also, the game Cube Up has been declared by the stages of child development with a percentage of 75% and efficient in durability with a percentage of 100% and ease of storage of 87.5% by early childhood game experts.

Cube Up games have been stated to motivate children to participate in learning activities with a percentage of 87.5%. Merrel et al (2008) states that emotional social learning is fundamental to children's emotional development for health, ethical development, citizenship, academic learning, and self-motivation. Good learning for children is through play. Play makes children learn something more easily because it is done with pleasure.

A small group trial of the Cube Up game was conducted on 10 children with four boys and six girls in IT Ulil Albab Kindergarten. The results of small group trial data on the development of the Cube Up game related to safety, convenience, and attractiveness gained a percentage of 94.6%. Emotional social aspects in the game Cube Up obtained a percentage of 86%. Through these percentages, the average percentage of 90.3% was obtained. The data refers to the category of eligibility percentage 85.01% -100% which means the Cube Up game is very valid and can be used. The results of small group trials have a game step that needs to be revised. Researchers initially use a drawing card when the child walks the gaco, but the child sometimes also uses a drawing card when arranging cubes. Researchers apply the rule that children use picture cards when moving gaco or putting together cubes.

Large group trials of the Cube Up game were conducted on a total of 81 children with 30 boys and 51 girls in IT Ulil Albab Kindergarten, Tunas Madani Kindergarten, Muslimat NU IX Kindergarten, Islam Samudera Kindergarten, and Sunan Giri Kindergarten. The results of the

average percentage of large group trials related to security, convenience, and interestingness of the game Cube Up obtained an average percentage of 94.07%. The results of the average percentage of large group trials related to social-emotional aspects of the game Cube Up obtained a percentage of 83.95%. The final results of the average trial data for large groups get a percentage of 89.01%. These results fall into the category of the percentage of eligibility of 85.01% -100%. The conclusion from the average results of the large group trial data that the Cube Up game is very valid and can be used without revision.

CONCLUSION

The results of expert validation and field testing of the Cube Up game obtained an average percentage of 90.03%. From these results, the Cube Up game has been declared to be very valid and appropriate to be used to stimulate the emotional social of children aged 5-6 years according to early childhood game experts, early emotional social material experts, educational practitioners or users, and children. Although overall the Cube Up game has been declared to be very valid and worth using, some experts provide comments and suggestions for improvements and revisions to the game. Improvements and revisions are to provide rewards in the game and add challenges to each number the child passes.

Improvements were made by researchers after getting expert advice and conducting small group trials. Improvements made by researchers based on expert advice is to provide rewards in the form of star stickers and add challenges to each number that children pass in the form of cards for children to guess pictures to communicate. Improvements to the small group trial that is using a picture card every child stepping gaco and when compiling the cube.

The Cube Up game development product is a modification of the ladder snake game and has advantages that can be used as an alternative way to stimulate children's emotional social, namely: (1) The learning media in the Cube Up game is colorful and has images that attract the attention of children. (2) Each group member has the role of working together in the game so that the child does not fight over the game. (3) The Cube Up game can help stimulate the emotional social of children aged 5-6 years.

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