

# Development of Model Creative Game Through Natural Media

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**Abstract:** The purpose of this study was to develop creative game models with natural media for early childhood. This research uses research and development methods to produce certain products, and test the effectiveness of these products. This research was conducted at the Teratai Kindergarten in Makassar City using a purposive sampling technique. Data collection techniques used were observation, interviews, questionnaires and documentation. Data analysis techniques in the development of product design (prototype) learning models in the form of a descriptive picture and a description of practicality before testing the product. The results showed that the form of creative game design with natural media for early childhood consists of two components, namely the philosophy component of the model including the rationality of the model, objectives, teacher roles and system support while the operational components of the model are detailed in all types of activities with various themes / sub-themes. All activities are packaged with the aim of developing children's creativity.

**Keywords:** model development, creative games, natural materials, early childhood

## I. INTRODUCTION

Education basically has goals and objectives to develop every potential possessed by humans, this is also inseparable from the educational process for children which basically cannot be separated from the environment in which children grow and develop. Education has a very important role in childhood, because the development of personality, mental attitude, and intellectual is formed at an early age. Early education is one of the keys to overcoming the nation's downturn, especially in preparing reliable human resources. Every child has unlimited abilities in learning and can think creatively and productively. Therefore, children need educational programs that are able to unlock hidden potential through meaningful learning as early as possible. If the potential in the child has lost important opportunities and momentum in his life.

Education in kindergarten generally aims to facilitate the growth and development of children optimally and comprehensively according to the norms and values of their lives. To implement this principle, the teacher should act as a facilitator and planner in every learning activity, the teacher must be able to evoke a pleasant and meaningful atmosphere and learning environment in accordance with the needs according to the norms and values of his life. To implement this principle, the teacher should act as a facilitator and planner in every learning activity, the teacher must be able to evoke a pleasant and meaningful atmosphere and learning environment in accordance with the needs of the child's world.

The world of children is the world of play, every time there is an opportunity wherever and whenever playing. Some children lack socialization with their environment, if in their environment, the community lives

individually. In this case, children tend to be selfish, don't want to admit their mistakes, children want to win themselves, and do not want to be defeated by others. As a result, you can't socialize well. According to Capelli (2011), talent is an ability that is something that is "inherent" in a person, taken from birth which is very determined by the environment. Many factors influence children's development and many can be done.

Playing for children is not just playing, but is one part of the learning process. In playing, children can receive a lot of stimulation, besides being able to make themselves happy can also increase children's knowledge. Brown (1995), defining play is a fun activity because it will be younger for the child to absorb the new information that he responds with a positive attitude and without coercion. So that in the process of playing, children learn more through their daily activities.

Playing is an activity that is inherent in the world of children, playing is the nature of children. Broadhead, Howard and Wood (2010) say that play can be seen as a voluntary activity, spontaneous, focusing on the process of giving rewards intrinsically, pleasantly, and flexibly. It can be explained that playing is done on the basis of one's own desires, occurs without prior planning and is unconsciously a positive reinforcement.

Broström (2005), argues that playing is an activity carried out repeatedly for pleasure, without goals or objectives to be achieved. So, a child who is playing means that the child is doing an activity that is fun for him. Free to express his ideas, imagination, and feelings which are sometimes not in harmony with the actual reality. Gauntlett, Ackermann, Whitebread, Wolbers, and Wekstrom, (2010) suggest that the game is something that is used to play, goods or something that is mocked, actions

that are not taken seriously - really, normal. It means that the value of playing in a child's life is so great that the use of playing activities in the implementation of children's activities is an absolute requirement that cannot be ignored because learning for children is playing and playing is learning. Playing is also a demand and need for various dimensions of child development.

Jarvis (2010). States that games are situations or certain conditions when a person seeks pleasure or satisfaction through an activity called play. By playing, it provides an opportunity for children to manipulate, repeat, find themselves, explore, practice and get innumerable concepts and understandings.

Adachi & Willoughby (2013) states that a joyful learning environment can be realized in various forms of games and creative activities. Can present a conducive atmosphere to move children's familiarity with the surrounding environment. In this case, the use of natural media as a tool / game material is very suitable and is expected to provide an opportunity for children to explore the natural surroundings and be more attractive.

The environment around children is one of the learning resources that can be optimized for the achievement of quality learning processes and outcomes for early childhood because children are faced with actual events and conditions. Fuller & Irvine (2010), said that the introduction of the surrounding environment is education as a whole which in principle is to form awareness in early childhood that is made aware of positive relationships between individuals and the surrounding natural environment.

**II. METHODS**

This study uses the research and development method. Griliches (1992) defines that the R & D method is the research method used to produce a particular product, and test the effectiveness of the product. This method is needs analysis and to test the effectiveness of products that are longitudinal (gradual). The design model in this study is according to Branch (2009). ADDIE learning (Analysis, Design, Development, Implementation and Evaluation) which is a procedural model that is simple and easy to produce teaching materials. The research steps with the ADDIE design model in this study generally consist of five steps, namely analysis, design development, implementation and evaluation.

This research was conducted at the Teratai Kindergarten in Makassar City. Determination of subjects in this study was conducted using purposive sampling technique. Zhi (2014) stated that purposive sampling is the selection of a group of subjects based on certain characteristics that have characteristics that have been previously known and used to achieve certain goals. The research subjects and data sources / informants in this study were; management of PAUD / head of kindergarten and educators / teachers. All data sources that have been selected are those who are believed to be capable and are trusted sources in providing information and information related to the issue of children's creative play which is the main focus of this research.

Data collection techniques used in this study are observations, observations of this activity are aimed at students and educators who carry out creative learning

games with natural media for early childhood. In carrying out observations, carried out with 1 teacher and 15 students in group B. Observation for teachers aims to see how the learning process and teacher activities while for students aims to observe and monitor every development of children's creativity. Observations made are observing all processes in creative game learning and their achievements in increasing the creativity of students.

Furthermore interviews, interviews are used as data collection techniques in conducting preliminary studies to find the problems studied and know things from the respondents. In carrying out this research, interviews were conducted with question and answer to the teacher to capture information and assessment from the research subject (child) about the content of learning about creative play with natural material media. In addition, this technique is also aimed at teachers, especially those who are subject to product testing in order to get detailed information about creative game learning with natural media. Then the questionnaire is used to obtain information about the teacher's response / response.

**III. RESULTS AND DISCUSSION**

**a. Description of Creative Games with Natural Media for Early Childhood at the Teratai Kindergarten in Makassar City**

The initial step taken by researchers to get an initial picture of the creative game with natural media for early childhood at the Teratai Kindergarten in Makassar City is to conduct a preliminary study in the form of direct observation (observation). Based on the information and the results of observations conducted by the researchers obtained an overview of the creative game with the media of natural ingredients in the Teratai Kindergarten of Makassar City. In this game, children are said to have less creativity as presented in the following Table 1.

**Table 1**  
**Creativity of Group B Ages in Creative Games with Natural Media at the Makassar Lotus Kindergarten**

No	Indicator	Frequency	%
1.	Play bubbles from a mixture of water, soap, salt, sugar, and coloring	3	42,85%
2.	Arranging mango leaves using a stick becomes a crown shape	2	28,57%
3.	Playing wet sand	2	28,57%
<b>Total</b>		<b>7</b>	<b>100%</b>

Based on the table above shows that the ability of children to play bubbles from a mixture of water, soap, salt, sugar, and coloring is only 3 children (42.85%), the ability of children to assemble mango leaves using a stick is a crown of 2 children (28 , 57%), the ability of children to play wet sand is only 2 children (28.57%). Presentation and description of the description of children's learning activities at the Teratai Kindergarten in Makassar City. This directs the teacher and manager in the school to pay attention and strive to develop children's creativity even though there are still many limitations and shortcomings in its implementation. Even though at that age, children have unique creativity.

Children have different talents and speeds and creativity. Therefore, parents and kindergarten teachers

can appreciate the personal uniqueness of each. Parents, teachers, and people close to children should not force children to do the same. Likewise, do not force children to produce the same product, or even force children to have the same interests. So that children's talents and creativity can grow and develop, parents, teachers, and people closest to children must help children to find their talents and creativity.

Follow up of the children's learning outcomes above, the teacher and the manager take concrete steps in improving the existing conditions by first conducting curriculum analysis. This analysis refers to the 2013 curriculum that applies at the Teratai Kindergarten in Makassar City, including analysis of learning for early childhood group B aged 5-6 years. From this analysis we obtained data about the material given to children, both related to the themes and sub themes of learning and the objectives and indicators of learning to be achieved, especially in presenting creative game models with natural media for children.

Based on curriculum analysis of learning devices in the lotus kindergarten in Makassar City, both semester programs (Prosem), Weekly Learning Plans (RPPM), Daily Learning Implementation Plans (RPPH), then obtained things that become the basic reference in conducting game activities in developing children's creativity. The things in question include the themes and sub-themes of learning, learning objectives and learning indicators. The chosen learning themes are "Needs", "Plants" and "Recreation" with diverse sub-themes and conditioned by weekly learning implementation plans.

The learning objectives to be achieved in the implementation of a variety of games are to develop children's creativity while the main activities to be achieved are based on indicators according to the 2013 curriculum content standards in the implementation of creative game models with natural material media, namely: (1) showing explorative activities; (2) making works; and (3) conducting exploration with various media and activities on sand playing activities.

The final results after the researchers conducted observations and reviews of the curriculum in the Teratai Kindergarten in Makassar City, the researchers designed a game activity in order to provide experience and stimulate children to develop personal satisfaction and can help children explore and understand the various dimensions of play and interaction roles and help children describe self-awareness in reality. Before further designing the game model, the researcher traced and outlined the views of experts on the importance of creativity for early childhood with the simplest possible discussion.

#### **b. Overview of the Results of the Literature Study on the Role of Creative Games with Natural Media for Early Childhood**

After conducting a study and review of the literature regarding creative play with natural material media and theories about creativity, the researchers chose game activities to be developed in the hope that creativity in early childhood could develop. The results of the study of creative games especially in child development can be described separately.

According to Edwards and Brooker (2010) the game is a self-chosen activity and takes place unconsciously. Moyles, Adams, and Musgrove, (2002) added that the game is a self-chosen activity without coercion, without being pressured by a sense of responsibility. Edwards and Brooker (2010) defining games is something that is exciting and fun. The game has no extrinsic goals, subjective children's motivation and has no practical purpose. The game is spontaneous and voluntary, freely chosen by players. The player includes the active involvement of the player.

Based on the definition of the creative game above, the collaboration of the word creative game with natural material media is very supportive in its implementation. Both lead to increased aspects of child development. Creative games are a solution to overcome children's learning saturation. Students' learning saturation results in low children's learning achievement and children's talents who have high creativity will go down and be hidden. Children feel learning as something unpleasant. Children prefer playing rather than learning. Creative games make children feel unaware that they are learning. They think this is a game, not learning.

#### **c. The Level of Need for the Development of Creative Games with Natural Media for Early Childhood at the Teratai Kindergarten in Makassar City**

The results of the observation of learning activities so far and the study of the concept of creative games are important matters for children in supporting the ability of children to be creative. Therefore, researchers consider it necessary to examine and describe the extent of the need for the development of children's creativity through the game model. The next step that researchers do is analyze what is the needs of teachers and children in relation to creative game models. To find out this, the researchers identified the initial conditions of teachers and children in the Teratai Kindergarten of Makassar City in learning creative game models with natural media.

Need analysis of creative game models with natural material media can be elaborated, namely analysis of teacher needs and based on data collection techniques that researchers do, data is obtained as a material for creative game activities with natural material media is an important material for children because every child has nothing in common with side of his creativity. Therefore, the teacher needs to provide an initial understanding of the basic concepts of creative play with natural material media. Furthermore, the teacher wants learning activities in creative game models with natural material media that were previously taught to children, can have better children's understanding and creativity to develop than before.

Philosophy Components of Creative Game Models with Natural Material Media in the Development of Early Childhood Creativity in the Lotus Kindergarten of Makassar City, namely rationality, in Guilford (1950), creativity means creativity. Creativity is the ability to create or create something new. Creativity involves the process of thinking rationally, feeling, sensing and realizing. There are several views in understanding creativity, namely: (1) creativity is seen as a quality or personal trait; (2) creativity seen as a result is a result that

is new or different; and (3) creativity as a process is an act of producing ideas or objects in the shape of a newly generated circuit.

A creative child will have a high imagination. A game will give children to be creative thinking, acting, and having imagination and imagination that will help the child's creativity process. The existence of imagination training will provide children's creativity sensitivity. The purpose of creative games in learning has a purpose as the basis for choosing this method. According to Rowe (1986). teaching with the game of creativity can create a good, interesting and quality teaching system so that student learning motivation increases. Creative games aim to provide personal satisfaction and can help children explore and understand various dimensions and roles of interaction and help children draw self-awareness in reality.

Presentation of the game model as an effort to develop the creativity of early childhood is expected to provide important benefits for achieving the goal of implementing creative game models with natural material media that researchers carry out, among others: (a) training children's concentration, (b) teaching faster, (c) overcoming time constraints, (d) overcoming space limitations, (e) overcoming language limitations, (f) arousing human emotions, (g) increasing understanding, (h) increasing children's memories, and (i) increasing teaching freshness. Furthermore, the role of the teacher of game model learning in the development of children's creativity in its presentation requires the role of the teacher in choosing and determining the game tool so that it can be said "easy to difficult.

The thing that must be considered by the teacher in choosing and determining the game tool is that the teacher must first be clever to choose and be selective and consider the stages of the child's overall development, which both teachers must be smart in choosing the right tools and materials for playing activities so that the use can be effective and efficient. the teacher needs to think about the varied game tools that the four teachers must also consider the game tools that can be used inside or outside the room and use them varied so that the child's ability to develop optimally in the fifth chooses educational games so that the child develops the ability of the sixth child to choose the right game tool that can encourage children to channel their ideas.

Creative game models with natural material media in the development of creativity in early childhood at the Teratai Kindergarten in Makassar, namely the game model developed is a game model using natural media and children are involved as executors of the game. This model will stimulate children's creativity by using their own ideas or ideas. The next activity is to design creative game models with natural material media by compiling the achievement indicators used. The model of the game carried out consists of various types of games which include: (1) playing bubbles from a mixture of water, soap, sugar, salt and food coloring; (2) make crown shapes from mango and stick leaves; and (3) playing sand.

The mastery stage of the learning activities material with the game model is carried out by an exercise process based on the syntax / stages of implementation and in each activity carried out observations and at the end of the activity are carried out measurements to determine the

changes achieved from each activity given to the child. Based on a series of activities carried out in learning with game models, the purpose of all these activities is to develop the creativity of early childhood. Indicators of achievement in the implementation of creative game models are the same for each activity. Similarly, the method and time used in each activity are the same, namely the method of performance with a duration of 35 minutes and presented at the core activities as contained in the learning plan. The things that differentiate in each activity are themes and sub-themes. The scenario of learning activities is a description of the syntax / stages of the game model implementation.

The following is an operational description / implementation of game model learning in developing children's creativity. The first one plays bubbles from a mixture of water, soap, sugar, salt and food coloring. The learning theme chosen in this game is the theme of the need with the water subtheme. In this activity, the level of achievement to develop children's creativity through cognitive aspects is to do a simple experiment. The indicator shows activities that are exploratory and probing (such as: what happens when water is spilled).

The way to learn in playing bubbles is: (1) showing and mentioning the tools and materials prepared by the teacher, (2) mentioning the names of tools and materials, (3) mentioning and explaining the games to be performed, and (4) giving examples of ways playing bubbles by blowing, namely: (a) distributing plastic cups and dish soap, (b) mixing water, sugar, salt, and food coloring, (c) distributing the blower, and (d) the circle of stalks being gently blown.

#### **d. Level of Content Validity and Practicality of Creative Games with Natural Material Media in the Development of Early Childhood Creativity at Teratai Kindergarten in Makassar City**

Efforts to get the results of creative game model research with natural material media in developing the creativity of early childhood that have been designed, then tested the content validity and practicality is to test the content validity of creative game models with media of natural materials in order to develop early childhood creativity before being used in activities learning, must have valid qualifications. Ideally, a learning developer with a game model needs to do a re-examination of experts (validators) regarding the accuracy of the content, learning material, conformity with learning objectives, physical design, etc. to obtain a good evaluation by the validator. The validation process is expected to provide a valid or very valid assessment of the creative game model design with natural material media so that it can be used for the learning process in the nuances of play. If learning a creative game model with natural material media is not yet valid, then validation will continue until a valid assessment is obtained.

The process of the validation series in this study was carried out simultaneously with the validator who had recommendations and was able to provide input / suggestions to improve the design of creative game models with prepared natural media. Suggestions from the validator will be used as material to revise the creative game model with natural material media being developed.

Validators in this case provide an assessment to determine whether the creative game development model with the developed natural media and the existing learning tools is said to be valid so that it can be used as a learning model oriented to the development of children's creativity.

This validation activity also produces an assessment of the practicality of the development model of creative games with natural material media which aims to determine whether this creative game model is practically used for learning. Creative game models with natural material media are said to be practical if the validator states that the model is feasible to use without revisions or slight revisions. Revision of the design of the creative game development model with natural material media based on the suggestions given by the validator when validation is carried out so that it can produce creative game models with appropriate natural material media in the learning process. Experiments of creative game models with natural material media that have been carried out by researchers, obtained data about teacher responses to children's creativity development learning through game models and data in the form of child learning developments that have been carried out by group B children at the Teratai Kindergarten in Makassar City.

#### IV. CONCLUSION

Based on various approaches in the development of this model, it can be concluded that the form of creative game design with natural media for early childhood consists of two components namely the model philosophy component including the rationality of the model, objectives, teacher roles and system support while the operational components of the model are detailed in all types of activities with various themes / sub-themes. All activities are packaged with the aim of developing children's creativity.

The level of content validity and practicality of creative games with natural material media for early childhood at Teratai Kindergarten in Makassar City shows that the validator ratings of all devices presented can be declared valid for use and game models with natural media in developing children's creativity have met the practical criteria. The next researcher is expected to be able to conduct research not only to examine aspects of the

development of creativity but also to conduct research on other aspects of development such as social emotional development and this research can be followed up because it has not arrived at the evaluation stage of the development results.

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