

Stimulating Children's Multiple Intelligences through Learning with The Concept of Play

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Abstract. Early childhood carries out learning with the concept of playing which is the principle of learning in early childhood and it is mainly facilitated by children's learning programs. Multiple intelligences in early childhood stimulated by fun learning will have a good impact on every intelligence that children have. This research was carried out to stimulate multiple intelligences in children through play activities that were conceptualized according to the criteria for each multiple intelligences in early childhood. The final results of this study were then tested in a regression test to see how much playing activities can stimulate the multiple intelligences that children have. It was found that the multiple intelligences that children have will have different tendencies to be stimulated by the game activities given to children.

Keywords: Children, Multiple Intelligences, Play

1 Introduction

Through fun learning activities, children can develop their intelligence. Early childhood is in a golden age which is usually marked by rapid changes in physical, cognitive, social and emotional development [1]. Early childhood education is education that is conceptualized in fun learning with the principle of learning while playing. Starting from this, learning for early childhood must be considered, so that developmental achievements and learning objectives can be achieved significantly.

Learning used through game activities is a learning process designed so that children actively process information through fun exploration activities. Play activities aim to be able to bring information to children by knowing, understanding various materials with a scientific approach. Learning by conceptualizing games given to children has child-centered characteristics [2], involving skills in the scientific process of constructing concepts, laws, or principles, each of which involves latent cognitive processes [3].

One of the intelligences that has an important role in life is spatial intelligence. Like other intelligences, spatial intelligence needs to get the stimulus and opportunity with the environment to develop. Spatial intelligence can be said to be one of the intelligences that plays an important role in children's daily activities [4]. Spatial intelligence is the ability to think in terms of visual forms such as color, line, space, and shape [5]. The ability to combine imagination and reasoning about the objects around the child. Seen from the point of view of children, they like to play with colored objects and doodle using their visual perception.

Spatial intelligence can be interpreted as an intuition, sense and imaginative ability about shapes and the relationship between forms. Spatial intelligence is an ability for children to recognize and be able to manipulate things related to space in an object and spatial relationships between objects. This intelligence can also be interpreted as the ability to solve problems related to spatial using the perception of two and three dimensional shapes as well as an understanding of the information received and its relationship [6].

Spatial intelligence includes the child's ability to imagine or imagine, present ideas visually and object-oriented that is consistent with the model of intellectual development and early childhood achievement. Some other terms or names for spatial intelligence are visual intelligence, spatial perception ability, logical visual intelligence, spatial ability, and so on [7]. Gardner in this case says that, "spatial intelligence are the capacities to perceive the visual world accurately, ..." It can be concluded broadly that visual-spatial intelligence is the ability to imagine and present forms and spatial arrangements.

Spatial intelligence in the form of children's ability to understand their environment in a precise and accurate visual-spatial angle and can make transformations on these perceptions. In simple terms, this intelligence is the ability to visualize concepts and relationships between concepts that children get from the exploration that children have done [8]. The spatial intelligence possessed by children can represent two different factors, namely one related to the perception of spatial relationships or geometry, and the other with other manipulative visualizations, namely in the form of visualizing changes in position or transformation according to the concept that the child mixes the pattern [9].

Spatial intelligence in children must be developed to prepare children to be able to solve the problems they face at a later stage of development. Spatial intelligence is needed in different jobs or activities and can also be used in different sciences [10]. By increasing children's visual-spatial intelligence, teachers can help children use their imagination and creativity to solve problems that arise in everyday life, help children to generate new ideas, new ideas and encourage children to look bigger and more creative. when looking at things differently.

The concept of learning that is fun and in accordance with the needs of the child will affect how the concept of implementing learning is used. Providing appropriate learning for children can produce good achievements for children. Children will feel comfortable and interpret the learning process provided.

The most important thing in using learning models for children is the aspect of playing in the implementation of learning. Another important component in the learning model is the purpose and assumptions of the use of the learning model and the impact of learning on children in accordance with the lesson plan using the learning model used. The principles of project-based learning are also based on constructive learning theory. Constructive learning is concerned with cultivating children's efforts to construct complex and rich memory representations, which show a strong degree of connection between semantic, episodic, and action knowledge.

Kinesthetic intelligence or physical intelligence is an intelligence where when using it a person is able or skilled to use his limbs to perform movements such as running, dancing, building things, doing artistic activities, and works of art [11]. In this case, kinesthetic intelligence is defined as a person's ability to use his limbs to move.

Physical-kinesthetic intelligence is the ability to use the whole body to express ideas, feelings, and to use the whole body to express ideas, feelings, and to use the hands to produce or transform something. This intelligence includes specific skills such as coordination, balance, dexterity, strength, flexibility and speed. This intelligence also includes the ability to control body movements and the ability to manipulate objects.

Gardner & Checkly shows that kinesthetic intelligence is the ability to use the hands, fingers, arms, and various other physical activities in solving problems, making things, or in producing products. Examples that appear to be observed are activities that accompany athletes or in performing arts such as dancing or acting [12].

The ability of kinesthetic intelligence rests on a high ability to control body movements and high skills to handle objects. Kinesthetic intelligence enables humans to establish important connections between mind and body, thereby enabling the body to manipulate objects and create movement.

The essence of the definition of kinesthetic intelligence from several experts above is the ability to use the entire body to manipulate objects and create movements that include special skills such as coordination, balance, dexterity, strength, flexibility and speed.

2 Research Methods

Implementation in this research is a form of quantitative research. Children are given learning activities using multiple intelligence-based learning to forty children aged 5 years. In learning activities the teacher carries out learning activities during the research process for children. Observations were made on every response and behavior that emerged from the child which was then adjusted to indicators on spatial intelligence, namely space, color and shape.

The spatial and kinesthetic intelligence possessed by the child is adjusted to indicators based on the child showing and labeling according to the color, shape and direction of the game activity. The child's ability to understand is adjusted when the child is imagining, conceptualizing, solving problems and looking for patterns. The child's ability in imagining is adjusted to the child being able to use the help of pictures in solving problems and the child being able to describe problem solving correctly. Children in conceptualizing are characterized by being able to state concepts visually based on the problem or object that the child explains. Children's ability to solve problems can be characterized by children seeing problems from different perspectives, sparking many ideas, and being included in the child's ability to search for patterns.

Table 1 shows the results of the data on spatial intelligence in terms of color, shape and space. The implementation of learning that is assisted by the use of learning based on multiple intelligences using a scientific approach, in table 1 shows that the R value is 0.843 with an R square of 0.71 indicating that the use of the media has an effect of 71% on children's ability to imagine, conceptualize, solve problems, and search. pattern. The significance value in the ANOVA test in table 1 is 0.000 which indicates that H_0 is rejected, meaning that the use of multiple intelligence-based learning with the use of a scientific approach has an effect on early childhood visual intelligence.

Table 1. Spatial & Kinesthetic Intelligence

R
.843
R Square
.71

3 Discussion

Learning activities carried out by representing multiple intelligences, namely visual spatial and kinesthetic intelligence that children have stimulate children to respond to those from learning activities that children do and are matched with each indicator used. Spatial and kinesthetic intelligence can help children in facilitating children's daily activities. Children can adjust color patterns, spaces and shapes, related to children's activities.

Children's ability to recognize variations in color, shape and space is part of the hallmark of visual intelligence. The ability in intelligence is also supported by other children's developmental achievements. This is an important part of one of the developmental achievements, namely cognitive, language, motor and artistic development in early childhood. This shows that the achievement of spatial intelligence requires appropriate and appropriate stimulation with learning objectives without ignoring the characteristics of intelligence and development. Early childhood whose kinesthetic intelligence stage really needs to be given facilities and activities, requires symbolic and fun learning. This shows that children need scaffolding and facilitators in learning interaction with learning tools that show symbols that can help children to recognize, find and receive information that is useful for children's development achievements.

4 Conclusion

Learning for early childhood is in accordance with the characteristics of learning outcomes, including the development and intelligence of early childhood, making it easier for children to receive information and carry out exploration. It is hoped that the continuation of this research can conduct research on other multiple intelligences, besides seeing the side of the learning style that children have so that they are more in line with the characteristics and needs of children in the learning process.

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