

# Design of Integrated Learning Environment Based on Multiple Intelligence for Early Childhood Education

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**Abstract:** The study aims to develop an integrated learning environment design based on multiple intelligence for early childhood. Especially children aged 4 to 6 years. The research approach uses research and development through two stages. The first step is to develop multiple intelligence instruments needed to support the design of integrated learning environment based on multiple intelligence. The second stage, designing the design of integrated learning environment based on multiple intelligence based on the development stage. The study was conducted in West Java Indonesia. Through literature study and observation to early childhood education institute produced a picture of integrated learning environment design with learning process that can be used early child educator to optimize children's multiple intelligences.

## 1 INTRODUCTION

Early childhood is in the sensitive period. The child begins to accept the development efforts of all potentials. Sensitive period is the period of maturation of physical and psychic functions that are ready to respond to the stimulation provided by the environment. This period is the time to lay the first foundation in developing the physical, cognitive, linguistic, emotional, social, self-concept, discipline, self-reliance, artistic, moral, and religious values.

Multiple intelligence assumption in children appears based on the paradigm that every child has a potential genius. Every child is born with certain ability. Children have admiration, curiosity, spontaneity, vitality, flexibility, and much more fun for him. Early childhood will be directly controlled complex system of symbols, brilliant brain, personality and acceleration sensitive to any stimulus. It is the obligations of parents at home and teachers at school to maintain the intelligence of each child from an early age. The natural genius of the child should be nurtured and nurtured optimally with the guidance of parents and teachers and the provision of a conducive learning environment to optimize the child's plural intelligence.

The Multiple Intelligence Theory was first published in Dr. Howard Gardener, *Frames of Mind*

in 1983. His theory shows that intelligence is not a unit which can be measured by IQ test. Instead, he claims that humans have at least eight kinds of intelligence, namely; musical intelligence, visual intelligence, verbal intelligence, logical intelligence, body intelligence, interpersonal intelligence, intrapersonal intelligence and naturalistic intelligence (Gardner, 2004).

The rate of adoption of this theory in early childhood education increases because of the fact that there are different dimensions of intelligence and emphasizes that intelligence is a viable trait. Gardner states that every child does not have the same interests or talents and does not learn the same way and emphasizes that each child can learn differently (Gardner 2004) Gardner asserts that one cannot speak of one kind of intelligence alone in individuals, because there is more than one field of intelligence.

Learning environment where the individual interrelated has an impact on the intelligence of children. Another factor that affects the development of children's intelligence in addition to the inheritance of their parents is the factor of the learning environment. Children need a learning environment equipped with rich stimulants to use their inherited mental potential and develop their skills. In accordance with the theory of multiple intelligences, the field of intelligence can be enhanced through

appropriate environments and opportunities, not only through natural capacity (Armstrong, 2000; Gardner, 2004).

The importance of providing a conducive learning environment for early childhood can stimulate and develop the potential of the child, especially the potential of multiple intelligences owned by each different child so that by developing the design of the indoor learning setting the indoor outdoor playground can enhance the potential of multiple intelligences owned by each child.

The research findings Afoma R. Okudo Christy Omotuyole, (2014) illustrate that the pre-school learning environment should provide rich learning nutrition for preschool children so that the development of child language and overall child development and learning style strategies are provided for children should be very different from adults.

The study aims to develop the concept and structuring of integrated learning environment based on multiple intelligences to develop the potential of multiple intelligence of early childhood. The resulting product is a set design of integrated learning environment based on multiple intelligences to maximize the potential of multiple intelligence in early childhood.

## 2 LITERATURE REVIEW

Each child is sensitive to receive any stimulus, as long as the psychic and physical functions are ready to respond to any stimulus provided by the environment. Environment as the main element of giving some stimulus needs to be taken seriously. Special planning and selection is required to provide an appropriate and needed environment for children. The accuracy of the environment provided will have no effect on the processes and outcomes of children's behavior, either directly or indirectly. A learning environment that is able to develop a variety of child development optimally if designed nicely and well.

Learning environment is one of the key success factors in building children's ability and behavior and developing the potential of multiple children's intelligence. The implication is that the environment for children should be given priority, especially if the environment is a learning environment.

The concept of a learning environment comes from the word "environment" and "learning." Learning environment is a place or atmosphere that affects the process of changing human behavior. Human beings are children as subjects residing in the

environment changes generated from the environment can be perceived and relatively permanent. The stronger the influence of the environment, the change that will occur on the subject under study is expected to be higher as well. This is the magnitude of the environmental impact on the child's learning behavior, so it would be very wise, if a teacher displays the role of the environment for the development and growth of individuals, especially children (Mariyana, et al. 2010)

A true learning environment is able to develop various dimensions of children development optimally. Finally it can be concluded that the environment is one of the key determinants of success in building the ability and behavior of children. The implication is that the provision of the environment for children should be given priority, especially if the environment is a learning environment.

The indoor environment is very important for children. It should be familiar and entertaining, reducing the transition from home care to the early setting of the year. This may involve completing the physical environment with soft furnishings, a small room and a quiet space. The best setting facilitates the transition by serving all children, (Beckley, 2012). The outdoor learning playground environment that lets also be one that encourages curiosity, investigation and exploration, has a number of sensual experiences for children to encourage them to use all their senses, which is safe (Johnston 2005) in (Beckley, 2012).

Outdoor activities are an integral part of children's education programs. For Froebel in (Mariyana, et al. 2010) the children's playground is "natural". Children keep the gardens, build dams, raise animals, and play games. Generally they do it outdoors or in outdoor space. In addition to children love the free air and its wide area, the outdoor activities also provide more facilities that can be utilized by children to help its development.

Through outdoor activities all parts of child development can be improved. This happens because outdoor activities involve multiple aspects of child development. Outdoor activity is more instrumental in integrating the sensory and various potentials of the child. This includes physical development, social skills and cultural knowledge, as well as emotional and intellectual development.

The concept of Multiple Intelligences is a term in the study of intelligence initiated by an American education expert named Howard Gardner. There is a wide variety of translations of this Multiple Intelligences, some translating with double intelligence, complex intelligences and plural

intelligence. In this paper the term used is multiple intelligences.

Gardner (2004) says that "Intelligence is the ability to solve problem, or to create products, that are valued within one or more cultural". He thinks that one's intelligence is not measured by standard psychological tests, but can be seen from one's own problem solving habit and one's habit of creating new products that have a cultural value (creativity). Gardner (2004) identifies nine intelligences and believes that they are independent of each other and function in their own terms as separate systems: linguistic, musical, mathematical-logical, visual-spatial, bodily kinaesthetic, intrapersonal, interpersonal, naturalist, and existentialist.

Developing a profile from one's plural intelligence is not simple. Again, no test (intelligence) can determine the potential and quality of one's intelligences. Standardized tests, as Howard Gardner (2004) often points out, measure only a fraction of the overall spectrum of abilities. The realistic way of assessment of the performance of the person in the various contexts of the best type of task and activity to assess or find out one's plural intelligence is through an experiences where it is associated with one intelligence with another. Surely it takes a long time to examine it.

Although it is true that every child can have all the intelligence and be able to develop it to a high enough level, the children seem to show what Howard Garner (2004) mentions as a tendency toward certain intelligences at a very young age. By the time they

enroll school, they may have determined ways of learning that are more aligned with some of their intelligence than others.

### 3 METHOD

The approach used in this research is development research as it aims to develop an integrated indoor and outdoor playground learning environment design that can maximize the potential of multiple intelligence in early childhood.

Model development activities used a qualitative approach with the steps of: (1) formulating a plan for the development of indoor and outdoor environment design that can increase the intelligence potential of multiple early childhood intelligence; (2) Develop an initial indoor outdoor design that enhances the intelligence potential of multiple intelligences, including model form, setting, implementation, and evaluation of indoor outdoor design that has been developed.

### 4 RESULTS AND DISCUSSION

To design the indoor and outdoor learning environment settings to increase the potential of multiple intelligence of early childhood can be seen in the following figure:



Figure 1: Design of integrated learning environment.

Figure 1 above is the design of integrated learning environment. The 8m x 8m stage house-shaped class, with traditional green concept, uses natural light, and has a partially open space. Various teaching-learning activities related to the method of multiple intelligences can be done, one of them by making a class display by students using materials from scrap materials.

The school library is one of the facilities that can stimulate and improve the abilities associated with linguistic intelligence, through a variety of fun learning activities, one of them through story telling or reading a book, the child is trained to be a good listener, and able to mimic or explain what they hear.

ICT and Audio Visual Room is one facility that is able to stimulate and improve the ability related to logical intelligence and Visual intelligence. Kids can watch a variety of movies and multimedia games, which can stimulate creativity and add science in a fun way, such as the introduction of science through animated films or learning about computer functions through Games.

Green lab is a garden or natural laboratory where students learn and explore and interact with nature directly, through various fun learning activities such as learning to grow crops, make compost and others. Various activities in Green lab can stimulate children especially at 4 to 6 years old, to improve the ability to recognize and classify and describe the various features that exist in the environment

A to Z garden is a garden-shaped facility with a collection of different plants that represent alphabet letters ranging from A to Z as the letter A is represented by Apple plants and J is represented by Orange plants and so on.

Recycle garden and Workshop is a workshop facility to process or recycle used goods into various handicrafts, in this Recycle Garden, children do various activities to make handicrafts from used goods and train Visual intelligence.

Amphitheatre is a facility where children learn various performing arts, begin to sing, play drama, read poetry, and become a facility to show skill in public. This performing arts activities can give positive value to the development of early childhood, in addition to give a happy feeling, excitement and calm can also be used as an alternative media to instill the values of characters that can build a better child's personality in the future.

Outbound and Playground are facilities to train mental and body as well as a means of playing. Outbound activity is very important to be applied to early childhood, in addition to reduce the saturation in everyday learning that is in the classroom, this

activity can also make the healthy body, because this activity requires participants to be active and in a playful, happy and fun, so the effect to physical and mental will be more felt, that is positive effect.

The relationship between intelligence and teaching and learning should be the basic element in generating ways to optimize the higher academic potential of children, the success of learners and lifelong learning (Özdemir, Güneysu and Tekkaya, 2006)

The findings of Yalda Delgoshaei, Neda Delavari (2012) applying the Multiple Intelligence approach in the classroom as an educational method resulted in improvements in the five domains of cognitive development of pre-school children with 99% significance.

There are many advantages to using Multiple Intelligences in the process of mentoring learning: the mentoring process becomes more personal, the early teachers become more aware of their intellectual competence; they also become better observers of their students and thus able to personalize the teaching and learning process. (Roxana, Sorina Constantinescu, 2013).

## 5 CONCLUSIONS

From the results of the study, it can be concluded that a conducive learning environment has a significant impact on the level of achievement of early childhood learning development. There are many ways to create a conducive learning environment for the potential of multiple intelligence of children to be improved and optimized through an integrated learning environment with basic concepts in early childhood learning. As far as doing so, a philosophy which is its foundation is that young children are those who are served and given an atmosphere that enables them to grow and develop optimally. Children are not printed or forced into something that does not match their particular abilities and interests.

The conclusion of the research shows that the formulation and the design and definition of an indoor and outdoor playground learning setting design that can increase the potential of multiple intelligence of early childhood is an integrated learning environment setting that was created to support the improvement of the potential of multiple intelligence of early childhood. Integrated indoor and outdoor playground setting design guidelines that can enhance the potential for multiple early childhood intelligence is a plan that is deliberately formulated to guide the learning process in order to support the improvement of complex child intelligences.

Multiple intelligence theory is not only present to develop the potential of early childhood, but multiple intelligence will adjust to the ability of children so that the potential of children will be developed through the maximum learning process by integrating an integrated learning environment with the themes of early childhood learning.

The design of learning environment settings integrated with the learning process in children is expected to increase the children's potential of multiple intelligence through the integration of themes in the learning objectives of early childhood. Indirectly the purpose of early childhood education has the same concept with the multiple intelligence concept of so that the learning process will be easy to develop by understanding and integrating the concepts of both.

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