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# The Influence of Learning Period to the Development of Children's Multiple Intelligences

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**Abstract**—Children are the most beautiful and priceless gift; hence early education is imperative to maximize their future well-being. However, the low public awareness about early childhood education slows down the rate of success of educational programs administered. The purpose of this study is to find out the correlation between the periods of early childhood education with the rate of success of the development of children's multiple intelligences. Quantitative approach was used in this study. Students from 30 kindergartens' Aisiyah in Padang City were involved in this study. The data were taken 10% from the whole random sample that involved children living in between city centers and suburbs, and in the suburbs. The data were collected, summed up, and converted. The data were subsequently processed using a regression formula. The result showed that there is no partially significant influence between early childhood education to the multiple intelligences, but together both are of significant influence. The conclusion of this study is that the period of early childhood education is one of contributing factors to the development of multiple intelligences.

**Keywords**—Early Childhood Education, Multiple Intelligences

## I. INTRODUCTION

There are three common educational institutions namely school, society and families, each of which essentially complements another in order to improve the quality of human resources. In this regard, Kamil states that each is interrelated and required to pursue educational goals such as (1) meeting one's learning needs and (2) developing integrated lifelong education together to help the community in choosing institutions and methods that best suit one's needs [1].

Early childhood education development (henceforth ECED) is one of the programs devoted to help children build on and expand their strengths; this stage of education has a direct effect on the adult they will become. Early childhood education phase essentially includes: kindergarten (TK-Taman Kanak-Kanak), child care (Taman Pendidikan Anak-Anak-TPA), and preschool (Kelompok Bermain-KB), among many others. Sujiono states that children's education as part of lifelong learning takes place in both formal and non-formal learning activities and is, in actuality, a lifelong process. It is imperative, therefore, that early childhood educators and parents build a strong academic foundation to allow children to build on and expand their strengths for their future well-being [2].

Accordingly, Early Childhood Education is one of the government's initiatives dedicated to children of early years, prioritizing those from birth to age 6, in an effort to improve children's overall development—both physically and mentally—and their readiness for further education (Indonesian Law No. 20/2003; Law on National Education System Number No. 137/2014).

As a period in which a child goes through the most rapid phase of growth and development, many believe that early childhood education is critical in preparing the children's future as the country's next generation. Early childhood, particularly in the early years, is a phase that determines children's further development. Education goes a long way, therefore investing in education through the implementation of policies and programs that prioritize integrated early years education in hopes that the children's future be filled with the best opportunities is one of the ways

with which we can improve our country (Directorate of Early Childhood Education, Ministry of Education and Culture, 2002).

In response to the policy, it is of importance that early childhood education requires serious attention. Recent research has shown that children experience a rapid intellectual development in the early years of childhood, in which half of a person's intelligence potential is developed by age four (Directorate of Early Childhood Education, MONE 2002). Since early childhood education can have a lasting effect on a child's intellectual capacity, the 1991 World Declaration on Education for All, it has been established that education should be accessible for all ages, including those in their early years. Furthermore, Dakar Framework for Action in 2000 has mandated that all countries should include attention to health and quality of education of children in their early years, especially those in poor communities.

The sustainability of early childhood education institutions is inseparable from collaborative approach between family, community and government. A solid cooperation from all elements is required to accomplish the objectives. Ki Hajar Dewantara, states that education is a shared responsibility between family, community, and government—a concept that is now known as Tri Pusat Pendidikan [3]. The emphasis was also placed in the family as the first and main educational institution; parents and family members share the same responsibilities in providing the best education during the early years of childhood.

However, there are serious challenges concerning the sustainability of the early childhood education today. There is still a persisting barrier that hinders all children from getting basic education. To accelerate the implementation of early childhood education, therefore, the government through the Directorate of Early Childhood has expanded early childhood programs to remote areas by cooperating with non-governmental organizations [4]. The Directorate ECED provides financial aid, training and supervision to ECED teachers and managers.

Both financial aid and ECED teacher training projects have improved the quality of early childhood education. For example, many new non-formal ECED institutions have been established. Based on the records obtained from the local Learning Activity Center (Sanggar Kegiatan Belajar-SKB), there are currently 200 educational institutions with 200 teaching staffs in Padang. The teacher training programs have also encouraged the community to work as ECED teachers, however the training programs which include BCCT-oriented approach and character-based holistic approach are considered insufficient to support teachers in effort to develop multiple intelligences of children in early childhood. Many factors are believed to affect the development

of children's intelligence. However, due to the fact that the current ECED programs mainly focus on children aged 5-6 years, we have not yet seen a satisfactory result. Theoretically, all aspects of children's intellectual intelligence have to be developed thoroughly [5].

Many factors can affect the level of multiple intelligence development of early childhood such as heredity, talent, interest, parental education background, number of family members, duration of breastfeeding, duration of early childhood education, and affection from members of family.

## II. METHOD

This correlational research applied quantitative approach. The achievement of the development of early childhood is the dependent variable and the independent variable is the period of the individuals' early childhood education. By using this type of research, the researcher seeks to find out whether the independent variable truly affects the dependent variable, either partially or simultaneously.

The subjects of this study were students of a kindergarten named Aisyiyah Bustanul Athfal (locally known as TK ABA) who enrolled in 2015/2016. In total, there were 1050 students from 30 institutions located across sub-districts in Padang. Using cluster random sampling method, the researcher took sample from students across kindergartens located in the area of downtown, between the city center and the suburbs, and the suburbs. The data were then collected, summarized, and converted. The data that cover the number of family members and early childhood education were converted into digits before being processed with statistical formula so that all the scores of variables  $x$  and  $y$  are equal to other variables.

## III. DISCUSSION

In studying the sample, the correlation of the variables of early childhood education ( $X$ ) and multiple intelligences ( $Y$ ) subsequently results in  $r = 0.182$ . This value indicates a relationship but not of significance, meaning that more frequent children actively engage with other people in ECED institutions the higher the level of achievement of the development. The contributions of  $X$  to  $Y$  scored =  $(0.182) 2 \times 100\% = 3.31\%$ . Based on the table, the coefficient ( $a$ ) obtained sig value of 0.035. If a two-fold test is carried out and the value of  $\alpha$  is 0.025, it turns out that the value of  $0.035 > 0.025$ , in which  $H_0$  is accepted and  $H_a$  is rejected. This demonstrates that ECED does not partially affect children's multiple intelligences. This can be interpreted that non-formal teaching activities by parents affect children's intelligence more compared to formal teaching ones.

Using regression formula, furthermore, the result shows that there is no direct influence between ECED period and multiple intelligences in early childhood.

One thing to note is that family-focused early interventions and appropriate pre-school stimulus contribute more in developing children's intelligent capacity, despite children's early enrollment to child care or other ECED services. Scientific evidence has proved that if the brain fails to receive the appropriate stimulation during this critical period, it will pose a challenge for the brain to rewire itself afterwards—in this context, this wired connection allows children the ability to make logical reasoning and to promptly understand and learn things. Gardner reinforces this notion, stating that intelligence is the ability to work and solve issues in their routine life [6]. In this strand, Sujiono defines intelligence as a collective skill that can be improved [2], whereas Reber, suggests that it refers to individuals' psychophysical capability to adjust to their surrounding environment. Many studies suggest both genetic and environmental factors contribute to a person's level of intelligence [7]. A child's environment and parenting, among others, has proven to play a key role to intelligence. Similarly, it will be uncalled for to dismiss the influence of biological factors such as one's brain structure and functionality and possibly genetic factors. It is very unlikely, therefore, to rule out any of these factors for both are equally profound to the development of children's intelligence development.

In general, people display different talents and strengths in different areas of intelligence, many of them in the form of symbols such as languages, images, maps, music, and numbers. In fact, people draw on variety combinations of intelligences to be able to realize their full potential [8]. For example, to become a reliable violinist, one not only needs to have some musical skills but also kinesthetic and interpersonal intelligence. Kinesthetic intelligence allows a person to practice music continuously, whereas interpersonal skills enable them to appreciate others in the same area of expertise and to establish communication with others. Gardner, believes that every human being has multiple intelligences [9]. Multiple intelligences are what make people unique; in actuality, Gardner, argues that these intelligences help people learn, understand, and finally appreciate others. These intelligences are essentially divided into nine broad categories as follows: 1) word smart (linguistic intelligence); 2) logic smart (mathematical logic intelligence); 3) body smart (physical intelligence); 4) picture smart (spatial visual intelligence); 5) smart self (intrapersonal intelligence); 6) people smart (interpersonal intelligence); 7) music smart (musical intelligence); 8) Nature Smart (naturalist intelligence); and 9) existential smart (existential intelligence) [10]. Nurani further explains that multiple intelligences are influenced by the period of early childhood education.

Some recent research shows that there is a correlation between children's multiple intelligences and the amount of time spent in early childhood education. This result is concurrent with the existing theories of appropriate stimulus postulated by experts in which educational stimulus from an early age goes hand in hand with a child's level of achievement [11].

Educational stimulus from learning activities influences the development of children. As mentioned before, the longer time spent in an educational institution, the more children get educational stimulation. This begins from the factor of trying to do a child by imitating the adults around him. If the child responds to the recurring stimulus and repeats the behavior, it will become automatic with each repetition and form a habit [12]. It is believed, therefore, reinforcement that encourages this repetition is one of the methods to develop children's multiple intelligences.

To accomplish the objectives, it is imperative that parents fulfill the needs of the children to keep them healthy. Children require protection from accidents and diseases, affection from members of family, adequate and nutritional food, proper housing and clothing, access to fresh air and enough sunlight; play, skills and habits training for everyday life. Sudarna, asserts that children also need the feelings of being loved, the sense of belonging, strong interpersonal relationships with family members, prevention from mental illness, sense of responsibility, and opportunities to receive education and help others [13]. Parents must actively engage by providing and supervising required facilities to ensure children's health, growth, and development.

#### IV. CONCLUSIONS

Generally, the variable X influences the development of multiple intelligence during children's early years. The period of study during one's childhood contributes to the development of multiple intelligences, meaning that the earlier children receive education, the bigger the opportunity is to develop multiple intelligences.

Given the fact that ECED is one of contributing factors to the children's future success in the future, the obligation to ensure the fulfillment of children's rights that include their aforementioned basic needs and early access to education extends to the community and all levels of government. There are many ways to build healthy early child development, one of them is to form their habit through educational television shows that reinforce good and necessary values to children.

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