

# THE MODIFIED TRADITIONAL GAME *SONDAH* TO IMPROVE THE NUMERAL INTRODUCTION OF 1 - 20 ON EARLY CHILDHOOD WITH HEARING IMPAIRMENT

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## ABSTRACT

This article is entitled “The Modivicative Traditional Game of *Sondah* to Improve the Numeral Introduction of 1 - 20 on Early Childhood with Hearing Impairment”. This article was compiled to give understanding about learning instruction in introducing number 1-20 for young learners with hearing resistance. As we know that, children love to play, so there is a strong connection between children and play. Therefore, the learning instruction for young learners with hearing resistance is conducted through play. Besides, the instruction should emphasize the visualization aspect and movement because the child who has hearing resistance could not hear the information properly. Therefore, the traditional games, *Sondah*, which is the one of the traditional games that emphasizes movement and visualization is proposed to use. This article aims to discuss the instruction which is implemented to young learners with hearing resistance through play and one of the plays is *Sondah* which is modified.

**Keyword:** young learners with hearing resistance, play, traditional games *Sondah*.

## 1. INTRODUCTION

Education is a conscious and planned effort to create an atmosphere of learning and learning processes that support learners to be able to actively develop the potential that exists within themselves in order to possess spiritual strength, self-control, personality, intelligence, noble character, as well as the skills needed for themselves as well as for the society, nation and state (Act No. 20 , Year 2003). Education enables people to develop the various potential abilities. Not to mention that every citizen of Indonesia, without exception, has the right to education. According to The Constitution Of The Republic Of Indonesia, Article 5; that every citizen has the equal right to obtain the quality education (Clause 1);

citizens with physical, emotional, mental and social disabilities are entitled to the special education (Clause 2); citizens who have the potential of intelligence and special talents are entitled to the special education (Clause 3) (Act No. 20 , Year 2003, on the National Education System).

Children indubitably need education. According to the Act, early childhood are children who are in the age range of 0 to 6 years, whereas according to Bredekamp and Copple in Suryadi (2009); early childhood are children who are in the age range of 0 to 8 years. As we know that early childhood is a fundamental stage in one’s life, this stage is called the golden ages, since it is the very state in

which children are able to grasp various information obtained from the environment, be it the playing or learning environment. Therefore, it is very important to provide various stimuli for children of early age, namely by providing an age-appropriate learning experience in each stage of development, hence they are able to develop a variety of capabilities at the further stage of development.

The provision of various learning stimuli of early childhood should be appropriate and right on target, in other words, that every stimulus given should be in accordance with their developmental stages, for a failure in providing stimulus for children will impact on the further developmental stages. Ornstein and Marcon (1993), states that early childhood failure in learning is a sign of learning failure in the subsequent grades, as well as the learning failures at an early age may constitute an obstacle in learning in the further stages. It is in effect on every child, whether a normal early childhood or a child with special needs.

One kind of children with special needs is one with a hearing impairment or also called a deaf. Deaf children refer to children with impaired hearing function in the range from mild to severe (Blackhurst 1981: 164). Deaf people can be grouped into two types, i.e. the deaf and the hard of hearing, each of which affect the language and speech abilities.

Child development is divided into five aspects of development, i.e. the development of cognitive, physical-motor, social emotional, language and moral values of religion. In terms of cognitive development, deaf children commonly

possess the same potential with normal children (Rahardja, 2006; Fruth in Cano, Arteaga, Collazos et al: 3). That is to say that deaf children are physically similar to the normal children, hence the development of their physical potential can be equated with the normal children. However, their cognitive development is retarded due to the language development that is obstructed, and consequently they are unable to convey information and/or receive information clearly. Language, as we know, is immensely crucial in the development of various developmental aspects. One of which is the cognitive development. There have been several studies on the early childhood cognitive development with hearing impairment, due to the retardment of the language development. They are not able to hear faultlessly; they do not have much clearer and much more information than normal children accordingly (Botting, 2005, Asseur, Langereis, Free et al., 2015).

In order to avoid failure, the learning provided to deaf children should be absolutely clear, since they do not possess good language ability. The proper teaching of deaf children is the visualization (audio-visual) emphasized learning, hence it will be easier for them to comprehend the subject matter. Giraud & Lee, 2007, Giraud, Graham, Truy, Frackowiak, 2001 in Gori, Chilossi & Burr, 2017; Cano, Arteaga, Collazos et al., P.4 assert that the construction of learning that can be administered for children with hearing impairment is through other sensing functions, i.e. through visual audio sensing.

## **2. EARLY CHILDHOOD WITH HEARING IMPAIRMENT**

## 2. 1 Cognitive Development

The cognitive development aspects refer to the development of intelligence ability. Piaget explains that cognitive development refers to the activities of children in adapting and interpreting objects and events in their environment (Desmita, 2007). Furthermore, Piaget divides the development of the child into several stages. One of which is the early childhood in the range of 2 to 7 years. It is called the stage of concrete pre-operational development, in which pre-operational ideas at current time - which includes the transition from the use of primitive symbols – are evolving towards the more advanced ideas (Santrock in Desmita, 2007). In this pre-operational stage, they begin to be able to present the world in words and images showing the increase of symbolic thinking beyond the link between sensory information and physical action (Desmita, 2007: 47).

Meanwhile Dworetzky suggests a theory that cognitive ability is the ability to remember, observe and observe (Dworetzky in Sujiono, 2007: 75). Moreover, Thurstone (in Sujiono, 2007: 1-7) argues that cognition is the manifestation of primary ability, including language skills, recalling, reasoning or logical thinking, spatial comprehension, number comprehension, utilization of words and to quickly and meticulously observe. Based on the theory above, one of the areas of cognitive development that can be performed by children is the ability to reason or remember such as numbers or total of numbers, etc.

## 2.2 Mathematics for Early Childhood with Hearing Impairment

The learning of number recognition can also be applied to children with hearing impairment, given that the cognitive abilities of deaf children are basically can be equated with normal children. As has been expressed by Sujiono (2007: 2.9) that simple mathematical learning can be given to early childhood in the age range between 4 to 5 years, for example by mentioning numbers, calculating the order of numbers and mastery of small amounts of objects (Soemanto in Sujiono, 2007, Aulia&Komariah, 2016). In terms of the number recognition requirement in children, it is something that necessarily administrated. As we know that we always encounter the process of counting in everyday life, children must possess the sufficient numeral knowledge accordingly. Research suggested how important it is to introduce mathematical concepts to children. One of them is the opinion expressed by Clemens (2011: 2), that by facilitating the learning of mathematics during the ages of three to five years it will affect the next stages of the lives of children. Moreover, there is also some evidence that generally the progress of deaf students in mathematics is strongly influenced by the quality of mathematics teaching they received (Allen, 1990; Nunes, 2004; Nunes& Moreno, 2002; Pagliaro 1998 in Nunes&Zarafaty, 2004). The findings of several researches suggested quite clearly that introducing the concept of mathematics from an early age will deliver a positive impact on the further development stages in the lives of children.

Moreover, the teaching strategy will determine the learning outcomes given to the children. Teachers should have an appropriate learning strategies in the development of the introduction of

numbers learning for children. The expected results will successfully achieve by means of these strategies. The importance of having an appropriate learning strategy is to achieve success, from the process to the results obtained by the students. The research conducted by Papert (in Greness, 2004), suggested that a good mathematical learning environment will improve the good mathematical ability in early childhood. Furthermore, the social environment participation is capable to develop or stimulate the mathematical ability of early childhood. The results of the several studies have revealed that through enjoyable learning and the participation of teachers in providing appropriate learning strategies for children, the result expected will then be achieved. Hence, a teacher must have specific strategies in each learning activity, so that the learning will become meaningful for the students.

### **2.3 Learning and Playing for Early Childhood with Hearing Impairment**

To improve the learning process for their students, teachers can develop the done-through-play learning strategy. Because the learning and learning process for children cannot be separated from playing. As Piaget pointed out in Abidin (2009), play is a major assimilation activity, in which children can integrate the realities they experienced into the mental structures, so as they are practically able to generate the new ideas and construct meaning into their experiences. The play also constitutes the central to all children's activities (Kurniati, 2010). Al-Ghazali asserts that playing can affect the development and growth of children, both physically and psychologically, and the

development of intelligence (Al-Ghazali in Abidin, 2009). Vygotsky in Kurniati (2016) explains that playing is able to improve reasoning and memory in children. Vygotsky's idea of play is that playing can establish a zone of proximal development (ZPD) or optimal development area in children (Abidin, 2009). Based on these ideas, playing obviously has a very important role for the child. Children can develop various abilities through the play. They can develop all the potential they possess as optimal as possible. By playing the child is able to solve problems, to interact with the social environment, so that the potentials that exist in him can develop.

The one of learning strategies for improving the recognition of numbers in deaf children through fun games is through the modified traditional game of *Sondah*. *Sondah* game is one of the traditional games originating from West Java. The game focuses on physical activities. The procedures performed in the game *sondah* itself is very unique, because it is done in groups. Each child take turns throwing an object in the game columns that have been provided, then they jump using one foot toward the column which containing the thrown object.

In order to introduce the number to children, the game is modified. On each column in the game is written numbers. Then each child throws an object in the provided column. Each child jumps on a pre-set throw column while carrying the number of objects based on the number written in that column.

Through this modified game, children can clearly perceive the shape of

each number written on each column. Moreover, in this game each child carries the number of objects based on the number chosen, so that they can directly know the sum of each number on the box to which they are headed. Through this modified game children get the sensation of playing in real terms. Thus, the main purpose of this game – i.e. to introduce numbers – can be delivered in a more fun way.

This modified game of *sondah* was designed to be as attractive as possible, so the children feel more at play rather than learning. Therefore, the learning subject materials will be more easily absorbed. As we know the learning process in children should be done through play indeed, so that children do not get bored easily. Through play, learning will also be more meaningful for children.

The modified traditional game of *sondah* also has more emphasis on the physical- motoric and visual aspects. As Montessori has pointed out in Hainstock (1999), that freedom in learning environments that have been engineered in learning activities is necessary. Learning activities need to be done through movement, because the movement will affect one's intellectual function. From the exposure above, it is quite clear that learning through the movement will further enhance one's intellectual ability.

Based on the explanation previously described, it is obvious that performing the learning activities through play is something that must be done on children, including children with hearing impairment. Moreover, the modified traditional game of *sondah* can develop the recognition of numbers ability in children.

This has been corroborated in the results of several studies, including the research on the modified traditional game of *sondah* to develop the ability to count in early childhood that gives significant results to the development of cognitive-mathematics, and the result is that children are able to recognize numbers and symbols of numbers (Aulia&Komariah, 2016). The research on the modified traditional game of *sondah* which has been performed in children with hearing impairment (deaf) to improve the ability of alveolar dental letters is proven to increase the alveolar dental ability (Sari, 2015).

According to the several theories and the findings of several research described above, the modified traditional game of *sondah* can improve the ability of numbers recognition in early childhood with hearing impairment. It is because the game gives more emphasis on the physical-motor and visual aspects. Such learning activities are needed by children with hearing impairment, since learning activities for deaf children cannot be performed verbally.

### 3. CONCLUSION

Deaf children have the equal rights in education like normal children. Broadly speaking, the deaf children are indifferent to the normal children. The only difference is they lack hearing. However, in terms of cognitive development, they have the same ability. Hence, the learning materials development can be equated with normal children which assign more emphasizes on the motor and visual aspects, since both of these aspects are the excellences of deaf children. One of the important learning activities to be mastered by children is

the knowledge of numbers, because it is related to their life in the future. In everyday life, people will always meet the numbers. Therefore, the recognition of numbers is necessary.

The appropriate learning to introduce numbers towards children with hearing impairment is immensely required, i.e. learning through play activities. Playing is one of the fun rides for children, children can develop their potential through it. One of them is the modified traditional game of *sondah*. Through this game the children can easily recognize the number. Because of its direct learning characteristics, the learning will become more meaningful to them. This idea is in line with the theories that have been previously described and based on the results of research.

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