



# Improving the Ability to Recognize Number Symbols Through Concrete Objects in Tunarurungu Elementary Students in SLB A,B,D Negeri Kedungkandang

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## Abstract

This study aims to determine whether there is an increase in the ability to recognize number symbols through concrete objects media in Deaf elementary school students in SLB A,B,D Negeri Kedungkandang. The research method used is class action research with the use of concrete media. Based on the results of the study, it is stated that concrete media using decorative stones can be used to improve the ability to recognize number symbols in deaf children in SLB A,B,D Negeri Kedungkandang. This is evidenced by an increase in the learning outcomes test of the ability to recognize number symbols.

**Keywords:** Deaf, class action research, concrete media

## 1. Introduction

Every child who is born into this world has the right to receive proper education and teaching regardless of their shortcomings. As stipulated in Law No. 20 of 2003 concerning the National Education System article 5 paragraphs (1) and (2) which reads "Every citizen has the same right to obtain a quality education". Thus, every child has the same right to obtain the same education without exception, as well as children who have limitations and deficiencies such as children with special needs. (Hakim, 2016).

Special needs children are children who are delayed (slow) or impaired (retarded), so they are different from normal children their age. (Husna et al., 2019). In simple terms, children with special needs can also be interpreted as children who need special services to be able to carry out daily activities properly. (Khairun Nisa et al., 2018). The differences that occur will significantly affect a child's development, learning or well-being. These conditions can vary from developmental disorders such as autism or tunagrahita, visual impairment, physical motor impairment, and hearing impairment. One of the subjects that will be the core of the discussion is children with hearing impairments or commonly referred to as deaf children.

Deaf children are children who lose the ability to hear this is due to damage to the hearing function either partially or completely, so that it has a complex impact on their lives. (Rahmah, 2018). According to Soewito in the book *Orthopaedagogik*, the definition of deafness is "Someone who experiences severe to total deafness, who cannot capture speech without reading the lips of the interlocutor". Thus, it can be concluded that hearing loss in deaf children refers to a condition of hearing organ dysfunction in children. This condition causes deaf children to experience limitations in responding to the sounds around them. (Haliza et al., 2020). Hearing loss can be categorized based on severity and the extent to which hearing loss

affects a deaf child's sound reception. Children with poor hearing or have not reached 95 dB are called hard of hearing. Whereas Deaf is a child who has a hearing loss of more than 95 dB in a severe level so that his hearing does not function. (Christine, 2016). The characteristics of deaf children are as follows: 1) lack of vocabulary 2) difficulty in understanding long sentences 3) difficulty understanding phrases that contain figurative meanings 4) difficulty in mastering rhythm and language style. (Purbaningrum & Rofiah, 2018).. From the characteristics that appear deafness has a negative impact on academic development, one of which is low learning achievement, this is because children have difficulty understanding language. Which also has an impact on the condition of their learning style. According to Haenudin (2013: 66) states that the low learning achievement of deaf children does not come from their low intellectual abilities, but is caused by their intelligence that does not get the opportunity to develop optimally. Therefore, deaf children need special education services tailored to their needs. Deaf children tend to rely on the senses of sight and touch, so their learning style is slightly different from other normal children. Learning style is a combination of various elements and experiences that are characterized to influence concentration, in its own way and together as a whole (Shinnick & Woo, 2015; Simelane-Mnisi & Mji, 2015). In other words, learning style is an easy and comfortable way for someone to get and digest information. Things that can affect the formation of learning styles are the environment, emotional conditions, sociological conditions, physiological characteristics, and tendencies in processing psychology (Dunn and Burke, 2006). According to Fadillah et.al. (2014: 137) there are three types of learning styles, including: (a) Visual learning style, which uses various forms of graphics as a medium for conveying knowledge information through what students see; (b) Auditory learning style, which relies on students' sense of hearing to be able to understand and remember; (c) Kinesthetic learning style, which is learning based on or through experience through movement and touch by using various models or props.

Based on the results of observations that have been made with a teacher at SLB A, B, D Negeri Kedungkandang Malang City, a problem is found that deaf students in grade VI elementary school have not been able to recognize number symbols. This is evidenced when children work on problems during exams, children still have difficulty answering math questions and are assisted by the teacher. In addition, in learning activities children are less focused and tend to not understand the explanation from the teacher. So that there is no reciprocal relationship between the teacher and the child during the learning process.

Based on these problems, the researcher compiled a research article as an effort to improve the ability to recognize numbers in deaf children in SLB A,B,D Negeri Kedungkandang through concrete objects media using an individualized learning approach. Learning through concrete objects can be used as a method of learning for deaf children to improve their ability to recognize numbers and emphasize learning style tendencies.

## 2. Method

Based on the research focus, the form of this research is classroom action research. Classroom action research is a research activity carried out in the classroom. Classroom action research can be interpreted as a process of studying classroom learning problems through self-reflection to solve problems by analyzing any effects of the treatment given. (Prihantoro & Hidayat, 2019).. According to Fitri Yulianti et al (2012: 21) explained that the purpose of

classroom action research is to solve real problems that are happening in the classroom while looking for scientific answers as to why these events can be solved through actions that will be taken later. The benefits of classroom action research include a. Improving the performance of students in learning and the performance of teachers teaching in schools b. Improving the quality of the learning activity process in the class c. Increasing or improving the quality of the use and utilization of media, tools and other learning resources. d. Improving the quality of procedures and evaluations used for learning. Improving the quality of procedures and evaluations used to measure the process and results of student learning. (Pahleviannur, M. R., Mudrikah, S., Mulyono, H., Bano, V. O., Rizqi, M., Syahrul, M., ... & Aini, K., 2022).. The steps of implementing action research are: a) Planning b) Acting c) Observing d) Reflecting. The class action research in question was carried out to improve the problems of deaf children in recognizing number symbols by providing action in the form of introducing number symbols through concrete media. The advantage of using concrete media in learning is to increase students' interest in understanding the material and provide real experience for learning. The subject of this research is one deaf child (Single Subject Research) with the initials R.

The place of research and data collection was conducted at Sekolah Luar Biasa A,B,D Negeri Kedungkandang located on Jl. Haji Ali Nasrudin, Kedungkandang District, Malang City. While the research implementation time was carried out on May 27-June 6, 2024.

#### Concrete Media

Concrete media is a real object that can be used to channel messages from the sender to the receiver so that it can stimulate the thoughts, feelings, attention and interests of students so that the learning process can be carried out effectively and efficiently. (Nazifah et al., 2013). In addition, concrete object media can be interpreted as a tool (learning media) that functions in the teaching and learning process with the aim of providing direct experience to students by providing models and objects in a real, clear, and able to attract the interest and enthusiasm of students. (Lovita, 2017). Meanwhile, according to Anitah (2008: 1.32) concrete media are visual aids in the learning process that function to provide direct experience to students, namely in the form of models and real objects of an object such as tables, chairs, balls, stones, etc.

Based on some of the descriptions above, it can be concluded that concrete media is anything that is used as an intermediary to channel messages (learning materials) so that it can stimulate all activities such as the interests of the mind, feelings and willingness of students in learning activities to achieve certain learning goals.

#### a. Advantages of Concrete Media

Concrete media has several advantages including:

- 1) Has a high level of objectivity.
- 2) Facilitate interaction with learners through all five senses.
- 3) It has high flexibility which can be used for learning other subjects.
- 4) Able to be manipulated according to needs, conditions, and situations.

#### b. Weaknesses of Concrete Media

Besides having advantages, concrete media also has several disadvantages, namely:

- 1) Concrete media requires a fairly complicated process and preparation

- 2) Sometimes certain ideas, objects, and things are very difficult to manipulate
- 3) Concrete media is sometimes very attractive to students, so a lot of time is taken up not for purposes related to the material.
- 4) In relation to the third point, the potential for noise generated by students will increase.

#### c. Benefits of Concrete Media

According to the opinion of Sudjana and Rivai as quoted by Sundayana (2013: 10) explains that the benefits of concrete media in learning activities are that they can provide real experiences that can foster self-effort activities among students, provide experiences to students about real objects, and help the development of students' learning abilities. (Yuliana & Budianti, 2015). As according to Mulyana Sumantri (2004: 178) in general, concrete media functions as: a) a tool to realize effective teaching and learning conditions. b) an integral part of the overall concept of the teaching situation. c) laying concrete foundations and abstract concepts so as to reduce verbal understanding. d) increase the quality of learning. (Aini & Asran, 2015).

### 3. Results and Discussion

#### 3.1 Result

Researchers made initial observations to find out the initial state of R's ability to recognize numbers before carrying out class action research. Based on the data obtained during the observation, R's ability to recognize number symbols has not yet reached the success indicator. So that the right effort to improve the ability to recognize number symbols in R is in the form of concrete media. Concrete media in this study is a learning method using objects in the form of decorative stones. The activities carried out are divided into two, namely sorting the number symbols /

matching the same number symbols correctly and matching many decorative stones with the appropriate number symbols.

##### Implementation

##### Action I

The implementation of action I was carried out for 3 meetings which were divided into, 2 meetings to carry out the action and one meeting to conduct a post-action test. Action I was carried out from May 27 - May 29, 2024 with a time allocation of 30 minutes.

- In the first meeting, children were introduced to the sequence of number symbols from 1-10. Then the children were asked to sort the number symbols by picking up decorative stones. Example: "R take 1 stone (the researcher helps by showing one 2

fingers and pointing to the number symbol 1 on the number card) and so on until it forms a number sequence of 1-10.

- The second meeting the children were guided to sort the numbers that the researcher pointed to randomly. Example: the researcher points to the number symbols 3,5,7 on the number card, then the child is asked to take the decorative stone according to the number symbol that has been pointed out by the researcher.

- At the end of the meeting, the children were asked to match the same number symbols, sort the number symbols and match many decorative stones with the number symbols, the teacher gave rewards to the children after doing these activities correctly.

Observation of action I, in the initial activity, R was able to do the apperception given by the researcher in the form of activities to sort the number symbols and was able to do the activities modeled by the researcher and actively participate in learning activities.

Post-action test I was conducted after the action was completed. The test questions were prepared based on the material that had been given during the action in the form of matching the symbols of numbers 1-10.

Based on the results of reflection on action I, from the learning outcomes test that has been carried out, it can be seen that there is an increase in the ability to recognize number symbols after the child is given action in the form of applying concrete media. However, in the implementation of action I there are still obstacles.

#### Action II

The implementation of action II was carried out for 3 meetings which were divided into, 2 meetings to carry out the action and one meeting to conduct a post-action test. Action II was carried out from June 3 - June 5, 2024 with a time allocation of 30 minutes.

- The first meeting R was guided to sort the number symbols as exemplified by the researcher, namely by taking decorative stones and then making a number sequence, for example sorting the number symbols from random number symbols 1, 3, 5.

- In the second meeting, R was guided to sequence random number symbols using number cards. Examples of number symbols used were 3, 7, 5. "Look at the number 3! (while showing the number symbol 3), this is the number 7 (while showing the number symbol 7), and so on. Then R was asked to sort the number symbols from smallest to largest.

- The final meeting R was asked to reorder the number symbols using decorative stones independently without assistance. The researcher gave a reward in the form of a high five.

Observation of action II, R's ability to recognize number symbols has improved. This is shown when the child does some practice questions about making the sequence of number symbols 1-10 is good when compared to action I. As for the material of matching number symbols with a number of objects, the child tends not to have difficulties. As for the material of matching number symbols with many objects, children tend not to experience difficulties. Children can do the apperception given by the teacher, which is in the form of repeating the material of sorting the number symbols.

#### **4. Conclusion**

Based on the results of the study, it can be concluded that concrete media using decorative stones can be used to improve the ability to recognize number symbols in deaf children in SLB A,B,D Negeri Kedungkandang. This is evidenced by an increase in the test of learning outcomes in the ability to recognize the symbol of the number. The child has recognized the number symbols, as evidenced by the child's ability to sort the number symbols 1-10 and match many decorative stones with the number symbols 1-10 without the help of researchers.

In the initial implementation of the action, children can do activities such as matching the same number symbols, sorting number symbols and matching

many decorative stones with number symbols. In addition, children are able to do activities in accordance with what is exemplified by the researcher to make a sequence of number symbols 1-10 using decorative stones. At the end of the activity, children received a

reward in the form of saying "good / smart" and were invited to high-five by the teacher when they were able to complete the activity correctly.

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