

# The Influence of Learning Media Things Around Children Toward Comparing Ability of Hearing Impairment Students

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## The Influence of Learning Media Things Around Children Toward Comparing Ability of Hearing Impairment Students

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### Abstract

Hearing impairment would have disturbance if the information which the children obtained was in the form of verbalization, because it required listening ability and thinking training. Therefore, hearing impairment children had obstacle in understanding the abstract things, such as mathematics. Hence it needed to develop ability to learning mathematics, one of them was comparing using things around children as learning media because they were easy to find and fast to be recognized so that they could attract the children desire. This research had purpose to describe whether there was influence of using things around children learning media toward comparing ability in learning mathematics of second grade hearing impairment students in Special School Asih Mulya. This research used quantitative approach with pre Experimental kind and one group pretest and posttest design. The independent variable was “learning media things around children” and the dependent variable was “comparing ability”. The subject was second grade hearing impairment students numbering 6 people. The data collection used writing test and the data analysis used sign test. This research result indicated that there was enhancement of average value of comparing ability i.e. pre-test was 33.33 and in post-test the value became 70. Z count value obtained was 2,05 and Z table 5% to two sides test was 1,96 so it could be concluded that  $H_0$  was refused and  $H_a$  was accepted. Based on the explanation above it could be concluded that there was significant influence of using learning media things around children learning media toward comparing ability in learning mathematics of second grade hearing impairment students in Special Schools Asih Mulya Pamekasan.

**Keywords:** *Comparing Ability, Hearing Impairment Students, Learning Media, Things Around Children,*

### Introduction

Basically, each child needs an education because it aims to develop the child’s ability optimally both knowledge, attitude and skill. It also applies to the child with special’s needed such as the deaf child.

On one side, the deaf child has an obstacle in understanding the thing such as abstract’s thing because of the hearing limit, on the other side,

“Mathematic is a field of study which has a higher difficult level because it has an abstract object, built by deductive reasoning that was a concept which had been received as a logic effect from the truth before, so the relation between the concept in mathematic was strong and clear (Depdiknas:2004)”.

“Mathematic is a way to find the answer to face the human problem; a way using an information, using a knowledge about the shape and the size, using a knowledge about

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counting, and the most important is that human thinking about themselves by watching on it, using the relations (According to Paling in Abdurrahman 2012:30)”.

Actually, mathematic is not a new thing for human, because mathematic is learned in our daily life especially at school as a field of study. For a few people especially children, mathematic is a scary lesson. It has been seen from the tense expression of the children when they were facing mathematic lesson (mathematics anxiety).

Many things that can be a reason why the children feel scared to mathematic, there are: first, the first perception of the child who see the mathematic as a difficult lesson, so the child will think that numbers are easy to learn become difficult to understand. Second, mathematic uses the abstract's numbers or unreal so it needs a bit long solution. And third, children don't know why do they have to learn mathematic and use many formulas that make them to be more confused.

As it had been explained in Depdiknas (2004),  
“Mathematic is a field of study which has a higher difficult level because it has an abstract object, built by deductive reasoning that was a concept which had been received as a logic effect from the truth before, so the relation between the concept in mathematic was strong and clear”.

According to Bruner in Sukayati, (2004:1) stated that, 4  
“Students in learning mathematic concept phase, there are three phases: (1) enactive phase, (2) eonic phase and (3) symbolic phase. Enactive phase is a learning phase by manipulating the thing or the object which is concrete, eonic phase is a learning's phase by using the picture and symbolic phase is a learning phase by manipulating an emblem or symbol”.

Same as that thing, Piaget in Sukayati (2004:1) stated that,  
“The level of thinking of the elementary schools child age was still in operational concrete phase which meant to understand a concept, students should be given that connected with a real thing or real occasion that could be accepted in their mind”.

Same as study concept, students who connected with a real thing or real occasion, the using of learning media will make it easier of that learning implementation. With the learning media that is used as a support to explain steps or describe the detail of the learning process. According to Gagne and Briggs (In Arsyad, 2013:4) said that “The learning media includes a tool that is physically used to deliver the content of teaching material”. Meanwhile, Anderson (In Sukiman, 2012:28) explained that “The learning media is a media which is enable the realization of a direct connection between the people's creation of the subject developer and students”. In other words, according to Arsyad (2013:4),

“Media is a the component of learning resources or physical rides that contain an instructional material in students environment that can stimulate students to study”.

Some of the learning media functions according to Faiq (2013) are:

“(1) Student centering (2) Waking up the emotion of students (3) Helping students to understand the learning material (4) Helping students to organize the information (5) waking up the study motivation of students (6) Making the learning to be more concrete (7) Solving the limit of space, time and sense power (8) Activating the learning (9) Reducing the learning possibility that always teacher-centered (10) Activating students response”.

The learning media that is used, should be a simple media and known by students. So, it can create the spirit of learning and make it easier to them in understanding the subjects which is taught. In the daily life, there are many objects around the child that can be found and recognized such as things around the school especially in the class. That objects can be school's equipment and the equipment which is in the classroom. That can be

cultivated as a media so researchers deliberately bring it into a mathematic's learning media about comparing.

As we know that things can be a school's equipment such as pencil, book, eraser, and ruler are things that a child use it when they are studying especially in mathematics learning. It same as the equipment in the classroom such as chair, white board, and table are things that is used to support the process of learning in the class. So the privilege by using the learning media of around objects such as school's equipment and classroom's equipment can be expected to attract the child interest because of the media which is used, is easy to find in the daily life.

Understanding to mathematics learning both addition, subtraction, multiplication, and comparing are expected to be more easy to learn by using the object's media around the child such as school's equipment and classroom's equipment especially about comparing like big-small, long-short, and amounts that can be categorized into geometry. It is same as the explanation from Shamsudin (2002:110) who stated that "comparing is to determine characteristics of the similarity or inequality about two or more quantities (amounts) or number". While the intended of geometry is:

"One of mathematics branch which learns about the point, line, plane and the space of objects and their properties, sizes, and the relationship between each other (Alders (1961))".

According to the reason at the top, the research about "The Influence of Using Things Around Children Learning Media Toward Comparing Ability In Learning Mathematics for Deaf Students In Class Ii Slb Asih Mulya Pamekasan" needs to be implemented.

## Literature Review

### A. Definition of Learning Media

Hamidjojo (in Arsyad, 2013: 4) stated that, "Media as all form of intermediaries used by human to delivered ideas, concepts, or opinions thus the ideas, concepts, or opinions can be accepted by recipients".

Media can be classified into 3 types, there are: 1) auditive media which rely on voice capabilities such as radio, cassette recorder, and etc; 2) visual media which rely on sense of sight like pictures, films, paints, and etc; 3) audiovisual media which have both sound and picture concept.

Media can be classified based on the materials, there are: 1) simple media which the materials is easily obtained, the price is cheap, both the way of making and use are easy; 2) complex media which the materials is difficult obtained, the price is expensive, both the way of making and use are difficult.

The learning media that is used, should be a simple media and known by students. So, it can create the spirit of learning and make it easier to them in understanding the subjects which is taught. In the daily life, there are many objects around the child that can be found and recognized such as things around the school especially in the class.

### B. Definition of Mathematic

Paling (in Abdurrahman 2012:30) stated that "Mathematic is a way to find the answer to face the human problem; a way using an information, using a knowledge about the shape and the size, using a knowledge about counting, and the most important is that human thinking about themself by watching on it, using the relations".

Ismail, et al (in Hamzah et al, 2014: 48) stated that, "Mathematic is the knowledge about numbers, connecting between numbers and operational procedure used to solving the numbers problems".

Mathematic is learned in our daily life especially at school as a field of study. For a few people especially children, mathematic is a scary lesson. Many things that can be a reason why the children feel scared to mathematic, there are: first, the first perception of the child who see the mathematic as a difficult lesson, so the child will think that numbers are easy to learn become difficult to understand. Second, mathematic uses the abstract's numbers or unreal so it needs a bit long solution. And third, children don't know why do they have to learn mathematic and use many formulas that make them to be more confused.

As it had been explained in Depdiknas (2004), "Mathematic is a field of study which has a higher difficult level because it has an abstract object, built by deductive reasoning that was a concept which had been received as a logic effect from the truth before, so the relation between the concept in mathematic was strong and clear".

#### C. A Deaf Person

Donald F Moores (in Somad and Hernawati, 1996: 27) state that, "A deaf person is one whose hearing is disabled to exten (usually 70dB ISO grather) that precludes the understanding of speech through the earlone without or with the use of hearing aid. A hard of hearing person is one whose hearing disabled to an exten (usually 35 to 69 dB ISO) that makes difficult but dose not preclude the understanding of speech through the ear alone with out our with a hearing aid".

### Procedure

#### 1. The Research Design

This research is impelemented by using a quantitative approach with pre experimental research type with one group pre-test and post-test design.

#### Data and Resources of Research Data

##### a. Research Location

This research is located at SLB Asih Mulya Pamekasan where is on KH. Hasan Shinhaji Street No. 111.

##### b. Research Subject

The subject of this research is students class II at SLB Asih Mulya Pamekasan which contain 6 deaf students.

#### 2. The Data CollectionTechnique

In this research, the data collection techniques which are used, are:

##### a. Test Method

"Test is a whole of questions or excercises and other tools that are used to measure the skill, the knowledge of intelligence, the ability or the talent which is owned by the child" (Arikunto 2006:150).

The test which is used in this research is a writing test and a deeds test. The writing test which is impelemented in pretest question, and post-test, is to know the cognitive ability or students study result before and after the using of object learning media around the child such as school's equipment and classroom's equipment. While deeds test is used for when the learning process or treatment happens is when the using of object learning media around the child such as shcool's equipment and classroom's class.

##### b. Observation Method

In this research using participant's observation, that the researcher involves directly and full as long as giving treatment and learning's process

### Findings/Analysis

According to the result of data analysis, the  $Z_h (2,05) > Z_{table} (1,96)$  so null hypothesis ( $H_0$ ) is denied and working hypothesis ( $H_a$ ) is accepted. If  $H_a$  is accepted, there will be an impact of the using of the object learning media around the child to the ability of comparing in mathematics learning for deaf students class II SLB Asih Mulya Pamekasan. The data of study's result of the ability of comparing in mathematics learning for deaf students before and after using the object learning media around the child has a different value on the test which is given.

The result's data of the ability of deaf students class II SLB Asih Mulya Pamekasan from the first pretest before giving the treatment was 33,33. That average happened because the deaf child had a difficulty of comparing in mathematics learning that was caused by an obstacle which was owned the deaf child in understanding things such as abstract thing because of the limit in hearing. On the other side,

“Mathematic is a field of study which has a higher difficult level because it has an abstract object, built by deductive reasoning that was a concept which had been received as a logic effect from the truth before, so the relation between the concept in mathematic was strong and clear (Depdiknas:2004)”.

That limitation in understanding abstract things causes the deaf child gives priority by using visual sense to get the information. Just like the explanation from Somad and Hernawati (1996:28) that

“Because of less of hearing function, the deaf child distracts their vision to the eye, through the eye, the deaf child can understand the spoken language or oral language”.

Because of that, one of ways that is used to optimalize the comparing's ability is using the object learning media around the child which is concrete. It is one way with Piaget in Sukayati (2004:1) stated that

“The level of thinking of the elementary schools child age was still in operational concrete phase which meanted to understand a concept, students should be given that connected with a real thing or real occasion that could be accepted in their mind”

In the treatment activity using the object learning media around can push students to be more active in learning activity. It is supported by Faiq's opinion (2013) who stated functions of learning media are

“(1) Student centering (2) Waking up the emotion of students (3) Helping students to understand the learning material (4) Helping students to organize the information (5) waking up the study motivation of students (6) Making the learning to be more concrete (7) Solving the limit of space, time and sense power (8) Activating the learning (9) Reducing the learning possibility that always teacher-centered (10) Activating students response”.

The object of learning media around the child which is used, is school equipment's object such as pencil, book, eraser, and ruler also classroom equipments such as chair, white board, and table that is always seen in students' daily life in school's environment. So, the using of the object learning media around aims to increase the interest and the ability of students in mathematics learning especially comparing that the ability can be optimalized as well. It is cleared by Arsyad (2013:4),

“Media is a the component of learning resources or physical rides that contain an instructional material in students environment that can stimulate students to study”.

In the implementation of using the object learning media around was started with setting up student's seat into two lines which contains 3 students in each line so students able to see and focus to the fron when the researcher is explaining. Next is setting up the room with objects which are used such as chair, table and white board that is placed in such way so

students can use it easily. For another objects such as pencil, book, eraser, and ruler are using objects which is brought by students and its already in the classroom. The using of those objects as a media was supported by Arsyad's opinion (2013:9) who stated,

“The display here contains a meaning that everything is still in abstract then it is concreted by using a tool so it can be reached with the simple mind and it can be seen, viewed and felt”.

Next, the first thing to that the researcher do is provoking students knowledge by asking a few questions about comparing. After knowing each students ability. After that, doing a treatment which is a direct practice by using existing objects such as a pencil. The researcher takes a few of pencils randomly and divide it into two pieces then comparing the “a lot-a few” pencil with using a sign  $>$ ,  $<$ , and  $=$ , it also applies to an object which is same as a ruler, book and eraser. The learning about comparing many objects is done at first and second meeting.

The result of the observation at first treatment, students' average is still in the phase of knowing the material so they always hard to pay attention the material that is delivered by the reseacher. In the learning process, students are active enough whether asking the question or answering the question which is given. From that learning process, students were not independent enough when they were doing the test because they keep asking what is the meaning of it to the reseacher. So the result that was given, it showed that students are not good enough to overcome the learning material that was delivered.

Next on the second treatment, students started to pay attention to the material that was delivered by the research passionately. In the learning process, students are quiet active whether asking or answering the question which was given because the material which is teached, is same as before eventhough it has been modiflicated a little bit so they couldn't be bored. After giving a treatment, the reseacher will give a test that they have to do it and they are quiet able to do it independently. For the result, it was increasing from before so it can be proved that students are able to overcome the material as well.

For the third meeting, the reseacher do a treatment about long-short thing using a pencil and a ruler. At this meeting, the reseacher and students do the comparing a long-short thing simply by using a pencil and a ruler that has different size of length so it will be easier to them to understand the long-short. The observation's result on the third treatment, shows that is an attention to the material which is delivered, is very good because students seem like the material. So, students are really active in asking and answering the questions. And, from the tests' result, which is given, shows an enchancement so it can be said that students overcome the learning material that is given.

It also applies to the fourth meeting that do the treatment about big-small thing using an eraser, a book, a table, chair, and white board which has a different size. The observation's result on the fourth treatment, is same as the last treatment before. The attention to the material which is delivered, is very good because students seem like the material. So, students are really active to ask and answer the question. And, from the result, it can be said that students overcome the learning mateial which is given.

For the fifth and sixth meeting are the meeting where the learnings from first meeting to fourth meeting are repeated in one discussion. It is about comparing many things, comparing a long-short thing and comparing a big-small thing. The observation's result on the fifth and sixth treatment, students were really pay attention to the material which was given because it was repeated from the last material before. In the learning process, students are really active to answer the question. So, when they were doing the test, they were able to do it independently. From the tests' result, it can be seen that students can overcome the material that was teached, very well.

In this research, it shows that the ability of comparing many things, a long-short thing and a big-small thing, has been increased a bit where the child was able to do the comparison with a little help. The increasing of the ability of comparing in this research can't be separated from the treatment of repeated action and using of the object learning media around that have the characteristic of visualization that is easy to find and recognize so it will be easy for the researcher to attract students' attention.

It is also supported by Lungit Satyajati's (2013) research which showed that there was a significant impact to students class II B's achievement at the mathematics' subject by using the concrete of object's media.

The deaf child has a trouble in understanding the abstract thing because of the limit of hearing especially in mathematics' subject which is hard to understand such as mathematics' concept, hard to do the higher mathematics' concept, the study's interest is lower and the result for mathematics is also lower. So, the deaf child has a lower achievement than the normal child. It is exactly preventing the development of child's cognitive especially in mathematics and of course in comparing. By using the object learning media around, it can teach the child about comparing by using visualization the concrete thing so that "abstract" mathematics can be understood by the child and the repeated material also can optimize the ability of comparing that is owned by child. Because the media, according to Hamidjojo (In Arsyada, 2013:4) that, "A media is a whole intermediate form that is used by the human to deliver or spread an idea, thought, or opinion so that idea, thought, or opinion which is shown, can reach the intended recipient".

So, the using of learning media as a support in learning process is precisely used especially in mathematics learning which needs a media to be a place to concretize the existing material. As a media that is easy to find and recognize for the child in around the school's environment, it can be changed with another media as long as it suitable with the child's characteristic.

According to the statement at the top, it can be concluded that there is a significant impact from using the object learning media around the child of the ability of comparing in mathematics learning for deaf students Class II at SLB Asih Mulya Pamekasan

### **Recommendation**

According to the research of the impact of using the object learning media around the child to the ability of comparing in mathematics learning, it can be suggested that :

1. For Teachers

It can be expected for the teacher to be more creative in using the object learning media around the child to train the ability of comparing many things, a long-short thing, and a big-small thing.

2. For Parents

For parents, it will be better if you want to continue about the material that has given at the school so the ability of comparing especially comparing many things, a long-short thing, and a big-small thing can increase significantly.

3. For Next Reseacher

This research's result can be used to be a reference material of using the object learning media around the child with more big research's scale and different subject of the research.



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