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THE STUDY OF VISUAL MEDIA USE ON DEAF CHILDREN IN SCIENCE LEARNING

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Abstract:
This study aims to: (1) describe the implementation of science teaching deaf children in class XI, and (2) describe and analyze the use of visual media in science teaching deaf children in class XI. This study used a qualitative descriptive method. Source of research data are teachers, students and principals. The technique of collecting data used was interviews, documentation and observation. SLB research sites in Sukoharjo district, which includes SLB ABCD YSD Polokarto, SLB Hamongputro Jombor B-C, B-C SLB YPALB Langenharjo and SLB ABC Tawangsari. The data were analyzed through data reduction, data display and draw conclusions. Conclusions are presented in the form of narrative text form field notes. The results showed that (1) the implementation of science teaching deaf children in class XI SLB Sukoharjo still using conventional methods with students to make a note of the material presented (2) the use of visual media in science teaching deaf children in class XI SLB Sukoharjo regency is still minimal because it only uses media images and text books provided in the school.

Keywords: visual media, learning IPA, deaf children

1. Introduction

Learning is an apprehending activity that inflicts to interaction between student and teacher mentors who teach. In an effort, children with special needs are not easy. Because children with special needs have a different character and specific needs for each individual. Special needs children are unique individuals. According Cahya (2013:

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5), children with special needs is a child whose education requires a specific service, as opposed to children in general.

Education is one of the most important aspects in the development of the nation. History shows that the key to successful development of the advanced countries is the availability of well-educated population in the number of types and levels are adequate. Implementation of quality education is making national life as enshrined in the Constitution - 1945 Article 31, Paragraph 1 means that without exception every citizen is entitled to a quality education, including children or learners with special needs. Implementation of quality education is seen in the learning process. Education for children with special needs in question is an appropriate education to the needs of each child with special needs. Education is not in accordance with the characteristics and needs of students cannot produce quality human resources. Although children are getting an education is a child with special needs, the expected results as well as results of normal children's education is the quality of human resources in accordance with the level of specialization.

One type of children with special needs is the deaf children. On the face of deaf children together with normal children, they have no defects in the limbs as well as blind children and children with physical disabilities. Now we know or be aware of when we hold someone deaf communication. According Cahya (2013: 11), the deaf are children who have lost all or most of the power so that the hearing impaired to communicate verbally. Limitations physically possessed deaf children (the organ of hearing) affects also other factors such as mental, social and intellectual. Therefore, a deaf child needs more help than the normal children. One form of such assistance is the provision of education and proper guidance for deaf children because every human being has the same right to learn, receive guidance and instruction.

Basically, the learning process requires teachers to control students' learning activities. This is one of the responsibilities of teachers in the learning process, namely designing and implementing the learning process in a way that students can achieve the goals that have been set. The professionalism of teachers in the spoken language is the main asset that should be owned by teachers during the learning process, so that the students can follow the learning easy, fun and understand the material being taught teachers.

But in fact, if in the delivery of learning materials is used only spoken language, it would appear some problems. These issues can arise from self-protégé, especially children with special needs such as children with hearing impairment. A common problem faced by a deaf child is less able to understand the things that are abstract and verbal, whereas in the learning process verbal / oral is preferred for the delivery of material. Delivery of material that only uses the ability of oral / verbal with deaf

children will lead to misconceptions (misconceptions) on learning the materials. Similarly, the delivery of abstract things, will lead to a deaf child to be confused because they have no idea about the material presented. Therefore, we need real tools that can allow children to understand the content of the material presented by the teacher.

Science is a natural learning concept and has a very broad relationship with human life. Learning science is closely related to the real world in daily life. Students can connect materials science lessons learned with concern or problem in daily life. The purpose of learning science between public schools and special schools alike as well as the scope of the material being studied. The difference lies in the material sub SLB simpler than public schools. The science equation learning objectives cannot be concluded that the process of learning science is occurring in both the same school. Given the background of learners, SLB is a child with special needs who require assistance in the learning process because of their lack of resources and especially deaf children who have limitations in communication and hearing.

For the deaf students, science is a lesson that is quite difficult to understand because science has special characteristics that natural phenomena are factual (factual) either the fact or event and a causal relationship. In this case the children with hearing difficulties in connecting a causal event. In addition, students with hearing impairment also have limitations in language and vocabulary of object poverty, whereas in science learning languages are quite complicated reading and also objects that may not have been known by deaf children. So in science learning, teachers need to create an effective learning and fun to optimize children's learning, one of which involved a variety of learning resources are instructional tools in teaching science. Teachers are required to be able to use media that has provided the school in an effort to achieve the expected learning (Arsyad, 2010: 2)

The media are all shapes and channels used to deliver the message or information (AECT, 1977 in Arsyad, 2010:3). Buckingham (2008:3) says *"a medium is something we use when we want to communicate with people indirectly, rather than in person or by face to face contact"*. It means the media is something that we use when we want to communicate with people directly, rather than the contact directly. Understanding media also conveyed by Sartika (2013:38) which says that the media is a tool that can help the process of teaching and learning that serves to clarify the meaning of the message so that the purpose of teaching and learning can be achieved perfectly. According to Musfiqon (2012:28) says that the media is a learning tool that serves to explain a portion of the overall difficult learning program described verbally. Based on some of the definitions above it can be concluded that the media learning are tools that are used as instruments of learning activities in a message.

Learning is an apprehending process that involves multiple components influence each other to achieve a goal of learning, one of which is the media. So the role of instructional media becomes very important in the delivery of the content of the material. The use of instructional media in teaching and learning can generate new passions and interests, raise motivation and stimulation of learning activities, and even bring psychological effects on students (Arsyad, 2010: 15). So the role of the media to be important in learning as tools to convey the message what is taught teachers to students.

Learning will be more effective if the objects and events that become learning materials can be visualized in the actual state of resembling a realistic, though does not mean that the media must always take after of the actual circumstances. It is intended that the media can be given for real in the form of pictures objects similar to the originals or miniatures.

Many types of media can be used in learning. Each medium has its own distinctive learning. In addition, the appropriateness of the use of media of instruction was made part of the abilities and skills of teachers in understanding the characteristics of the children his protégé. One of the media types of learning that can be used is a visual media. This media can be used for deaf children's learning process. This visual media can facilitate understanding and strengthens memory. Besides visual media can also foster interest in children and can give you the relationship between the content of the material to the real world (Arsyad, 2010:91).

The effectiveness of the use of visual media in learning the science is inseparable from understanding the teacher against the diversity and the characteristics of the medium used. Selection and use of these media should be adapted to the learning objectives or competencies to be achieved. So the need for further review in the use of visual media selected as media learning science on deaf children in grades XI to instill an understanding of material science was taught.

2. Research Methodology

This research uses qualitative descriptive method. According to Bogdan and Taylor (Moleong, 2010-12:4), qualitative method is a procedure that produces research descriptive data in the form of the written word or spoken of people and behavior that can be observed. Implementation of the research done at SLB Sukoharjo Regency consisting of SLB, SLB YSD ABCD Polokarto B-C Hamongputro Jombor bus station, SLB YPALB Langenharjo B-C and SLB ABC Tawangsari.

Data sources the study categorized into two primary sources and secondary sources. Primary sources i.e. the source of the data obtained from the examined. In this

study, the primary sources of data retrieved from a classroom teacher of Class XI and deaf students of class XI, to filter out data about deaf child science learning using visual media. The secondary source is the source of the data obtained from outside the target of research. In this research, secondary data sources can be obtained from the head of SLB Sukoharjo Regency

Data collection techniques used researchers are interviewing, observation and documentation. Data analysis in this research is by the process of searching for and compiling systematic data obtained from field notes, interviews and documentation by way of organizing the data into categories, choose which are important and which will be studied, and make conclusions so easily understood by oneself as well as others (Sugiyono, 2010).

3. Results

3.1 Implementation Of Study IPA Deaf Student In XI Grade

Based on the results of interviews and observations conducted at SLB ABCD YSD Polokarto, B-C Hamongputro Jombor bus station, SLB YPALB Langenharjo B-C and SLB ABC Tawangsari note that activities in science learning especially for Class XI still refers to KTSP curriculum is modified. The curriculum is not pure because it given that the student that is in the SLB experiencing barriers in some aspects and each child has characteristics and different learning needs.

The headmaster suggested that the parties hold a classroom management namely the SLB are classical and individually. The management class in classical done in class together with a teacher. While individually implemented classroom management on each individual student's needs and characteristics of the disabilities of each child. Each teacher makes RPP are classical, yet in its application in the RPP learning adapted a conditionally according to the characteristics of each child.

Master Class XI has been implementing learning systematically in accordance with the syllabus and the RPP made and do some changes because of tailored to academic acceptance and ability of each student. So the target to be achieved and are already specified in the syllabus and RPP often miss the mark. The teacher is still the dominant method using lectures in delivering science learning and provide written notes for students. Other methods are also applied is the method demonstrations and faqs. This method is only rarely performed.

At the moment of learning science, students cannot concentrate fully, easily switch their attention, often looking to the right and to the left because of lack of understanding of the information provided in the ongoing process of learning science and sometimes other friends to talk. This is one of the causes of less understanding

student in materials science lessons. Such conditions are caused by the disinterest of students in their lessons, students feel bored with the learning process.

The evaluation conducted more emphasis on evaluation of the semester in the form of the results of the activities of the midterm and semester exams. As for the evaluation process is rarely done because the teacher is more focused in the pursuit of learning material which is quite a lot and value a good semester evaluation. The evaluation of this semester is a written report about the child's learning success rate given to the parent, so that parents can know the extent to which the development of learning his son during the school day.

3.2 The use of visual media in deaf children science learning in class XI at SLB Sukoharjo Regency

The results of observation, interview and documentation conducted showed that in the process of science learning, learning media use still hasn't been fullest because of lack of school-owned media and the willingness of teachers in search of other media besides belonging to the school. Teachers use only simple learning media owned by the school alone. Whereas the use of the media during the learning process is very important because it will make students more enthusiastic in learning. When there is no media to suit the material and is not owned by the school, the teacher only conveys the material with the methods lectures and write them on the board and then the students take copious notes. So that the child becomes passive and any information received often have misconceptions (misconception). This is because students cannot imagine material presented because of limited knowledge and vocabulary which have especially for things that are abstract.

As for science learning media use, many more teachers using simple visual media in the form of science text book and good image visualization image is printed or drawn directly on the board. The use of this simple visual media because the two media is easily obtained and can be customized with themes or learning objectives are being carried out. Based on the results of interviews with teachers and students in mind that students are more enthusiastic when teachers use an image rather than text book because it is difficult to understand long sentences students that are in the text book.

4. Discussion

Deaf children according to Sartika (1995:11) are individuals who have obstacles in aural permanent either permanent or not. According to Cahya (2013:11), deaf children who are losing all or part of the event was so disrupted power to communicate verbally. While according to Haenudin (2013:53) suggests that children who are deaf children

experience loss or less capable that he experienced a disturbance in the exercise of his daily life. So that, the notion of a third above it can be concluded that the deaf child is a child who lost her hearing power (total) in whole or in part, so it requires special education guidance for overcoming these obstacles.

Every deaf child needs to gain learning to suit his needs. A common problem faced by deaf students are less able to understand things that are abstract and verbal. But in the process of learning skills in understanding verbal Language and abstract is very important, because any submission material definitely used verbal Language and also abstract things unavoidable. Another problem experienced by deaf children is lack of vocabulary items owned by deaf children. The limitations that are what causes the deaf child's difficulty in accepting mainly learning the lessons of science.

In science learning there are many new objects that vocabulary is not owned by deaf students, the vocabulary is sometimes a difficult language understood by students. With a lack of understanding in the learning object vocabulary science will hinder students in receiving science subject matter. As revealed by Sungmin Im and Ok-Ja Kim (2014) which mentions that "*it is well recognized that for all students to experience success in science education, literacy needs to be considered as a crucial factor when setting educational goals among students with limited language proficiency".* To achieve success in the science learning objectives required an important factor, namely the linguistic or literacy. But the main problem is the linguistic study of deaf students. Based on the above, efforts are required to overcome limitations in the language/communication of deaf children so that they can receive the science learning with success. In addition to the language factor, there is another factor that causes deaf children should be learning in accordance with their needs, namely physical factor, intelligence, personality, emotional and social.

Therefore, the deaf child's learning be challenged because it cannot be done easily just like a normal child. As expressed by El-Zraigat and Smadi (2012) that *"educating students who are deaf and hard-of-hearing is challenging. These challenges included a lack of remedial and educational programs, insufficient teachers, unequipped schools, and a lack of instructional and assessment tool ".* Educating deaf students and with hear impairment is a challenge. These challenges include the remedial programs and education programs that are less, the teachers have not enough ability, inadequate equipment and a lack of assessment and learning tools.

From the results of the research, we know that SLB in Sukoharjo Regency have not been fullest learning in deaf children, as science in the delivery of the material is still dominated by the method of lectures. Teachers explain the material and students recorded material written on the Board. Maybe students can read the material well but students do not understand the material they write. The explanation by the method gives very little understanding of lecture material on students and even cause

misunderstanding concepts (misconception) because the accepted students are different from what the teacher explained.

The results showed several times that teachers need to apply another method in analytical study method demonstrations and question and answer method, but this method is still insufficient because not all material can be applied using this method. In addition, students also rarely ask when asked to ask questions. Based on the foregoing, it is necessary to other alternative in the hang of deaf children to science materials, namely by using the media of instruction.

Media serves as a learning tool can help the process of teaching and learning and to clarify the meaning of the message, so that it can contribute to achieve the goal of learning better and perfect (Kustandi and Sutjipto, 2011:9). According to Musfiqon (2012:28) the media is a learning tool that serves to explain a portion of the overall difficult learning program described verbally. So the use of these learning media will greatly assist in science learning deaf children.

From the research, the teachers of the four special schools in Sukoharjo have used the medium of learning. The use of instructional media is confined to the media that a school is textbook science and visualization of images. Based on observations, it is known that the presence of textbooks science was minimal, where one school only has two textbooks. One science textbooks used by teachers as a learning guide and the other is in the library. The lack of availability of textbooks science it causes the students did not have textbooks to take home for self-learning so that students' prior knowledge in the subject matter taught was very minimal and did not even exist. For students to learn at home and remember the material taught by teacher gives notes on the blackboard for students recorded and read at home.

Characteristics of science text books belonging to the school any less appropriate if applied to deaf children because the language used in the book the text is too long and difficult to be understood by deaf children a minimal vocabulary and limited communication skills/language. So in writing down and explain materials science teachers still have to simplify the sentence in order to be easily understood by deaf children.

Fourth SLB also used media image to give to students of a certain material. The image used in the form of images prints or drawn on the Board. When teachers use this image media, students look began to enthusiastically take notice. This shows that the use of the media can raise the interest of students in learning. Capability and precision in the selection of the media for each material is very necessary so that students can be more familiar with the materials described.

For children in need of special education, learning media use is an important component of the educational system of the host. Learning media is right for the

children in need special (ABK) is a media that has been modified in accordance with the level of needs of learners because not all media are in the community may be used in learning children in need special. Learning media mismatch with the level of needs of special children's causes in need in need special (ABK) has not motivated at the same time developing the attitude and ability of the child's personality, talents, mental abilities to reach their optimum potential.

Sartika (2013:42), suggested that the deaf children with disabilities in speaking and hearing, so a suitable learning media for deaf children are visual media and how to explain it with the language of the lips/lips. There are many visual media that can be used in science learning. Based on research results, SLB in Sukoharjo Regency has been using some simple visual media namely science text books and pictures. This means the use of the media used, Sukoharjo Regency SLB teachers were in accordance with the needs of deaf children.

The selection of visual media is caused due to the sense of sight is the sense that remains the biggest influence and in receiving other senses than learning. The teaching tools can they see can help them in assimilating information. It is this visual media for deaf children can be integrated a traditional learning i.e. face-to-face learning in class, as well as ICT-aided learning and e-learning.

The same thing about deaf children who are visual learners is delivered by Kuntze, Golos and Enns (2014) which States that *"in deaf education the fact that deaf children are by nature visually oriented has been historically to be marginalized in favor of focusing on a lack of auditory access"*.

Based on the results of data analysis and discussion of the research know that the use of visual media in deaf children science learning very precisely done because according to the needs and characteristics of the deaf child's limitations in language and hear.

5. Conclusion

Based on the result of study concluded that:

1. Science learning conducted for deaf children have been customized and attentive to the needs and characteristics of the deaf child's just still not maximized in the delivery of the material which uses a method of lectures and media limited.
2. The visual media choice that is used in deaf children science learning is apt because according to the needs and characteristics of the deaf child's limitations in language and hear.

6. Suggestion

It needs to make the media of science learning alternative compatible with the needs and characteristics of the deaf child.

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