

The Effect of Using Multimedia Application in Language Issues to Increase Vocability of Deaf Children Class III SLB B YRTRW Surakarta 2018-2019

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Abstract This research aim to the effect use of application multimedia sign language to enchancement vocabulary deaf children class III SLB B YRTRW Surakarta in year 2018/2019. This research use pre-experimental design have the form of one group pretest-posttest design. Subject in this research such as 7 children deaf class III in SLB B YRTRW Surakarta 2018/2019 that determined use by surfeited sampling. The instrument research use guide oral test with answer the direct question from the question that given by researcher. Data of research analyzed use by Wilcoxon Sign Rank Test. Based on data analysis that was done, the value of $Z_{hitung} = -2,366$ with $asymp.sig.(2-tailed)$ is 0,018 that under significance level ($p < 0,05$). That result show that application multimedia sign language take effect to increase vacobulary deaf children class III in SLB B YRTRW Surakarta in year 2018/2019.

Keywords: application, multimedia, deaf, vocabulary, sign language

1. Research Background

Education is the basic thing that every citizen whether anyone has the right to get formal education at school. Education is also designed / created with the aim of being able to make people who have good, independent, intelligent, creative and innovative ways of thinking, responsible and later from us getting education in schools we are expected to be able to apply it in daily life not only just as a theory. Definition of education, Purwanto (2006: 14) argues, Education is directed at improving the quality of Indonesian people, while the contents of the quality of Indonesian people are human beings who believe and fear the Almighty God, noble character, personality, discipline, hard work, responsibility, independent smart and skilled, and physically and mentally healthy. Article 1 number 20 of the 2003 National Education System Law states that education for students with disabilities or having extraordinary

intelligence is held inclusive of education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have spiritual strength, self-control, personality, intelligence, noble character and skills needed by him, society, nation and state. The explanation is very clear that the main purpose of education is to form better individuals. Further explained in the National Education System Act article 32 paragraph 1 number 20 of 2003 explained that "special education is education for students who have significant difficulties in following the learning process, either because of physical, emotional, mental or social disorders or having special talent.

The essence of children's rights to education is human rights that must be respected, protected, and fulfilled by the state. As mentioned in the National Education System

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Act article 5 paragraph 2 number 20 of 2003, that citizens who have physical, mental, intellectual, and / or social physical disorders have the right to receive special education. It is clear that every child has the same rights in obtaining education including children with special needs.

Children with special needs in Indonesia who receive special program services, one of them is deaf children. Haenudin (2013: 53) explained that deafness is a general term for children who experience loss or lack of hearing ability, so that they experience disruption in carrying out their daily lives and Broadly speaking Deaf is divided into two namely deafness and hearing loss. With these obstacles automatic deaf children have difficulty in receiving information through sound and rely more on visuals in the form of images, videos, writing and sign language. Deaf children also have good visual sensitivity. Deaf children in YRTRW Surakarta SLB B get good and equal education with regular schools and special schools in general and in the Surakarta YRTRW SLB B deaf children like to communicate from the Preparation class to Senior High School. Based on observations at SLB B YRTRW Writing is Surakarta Deaf children in YRTRW Surakarta SLB B often communicate with their peers in their daily lives as well as with their class teachers, the talks will vary but class III children at YRTRW Surakarta SLB B still experience obstacles in using Sign language. Deaf children at SLB B YRTRW still often communicate with schoolmates, teachers, use sign language from their mothers and that makes their interlocutor friends good teachers and his friend is confused and uses per-letter cues to understand it. Deaf children tend to more easily grasp a purpose or explanation through visuals because they are easier to understand through visuals, whether they are images, videos, sign language, rather than just writing that is long and has multiple or multiple meanings. Moreover, the third grade SLB B YRTRW children are on average around 9 years old.

Vocabulary in sign language is very necessary and very important to be owned and learned by deaf children in early age so that the development of vocabulary and understanding of the vocabulary of sign language does not experience obstacles or lags behind other deaf students as well as those who hear the same age. According to Suyanto (2008: 43) vocabulary or

vocabulary is a collection of words that are owned by a language that gives meaning if we use the language. So from that very difficult later when communicating with peers when deaf children only have a vocabulary of sign language that is very minimal especially sign language is a language used by deaf children in their daily lives in order to be able to support or obtain information clearly and comfortably.

Based on the above problems, it is necessary to develop a strategy for understanding the vocabulary of sign language. By using the sign language multimedia application it is hoped that the multimedia application can help class III children at SLB B YRTRW to increase vocabulary for deaf children. One strategy is that the teacher shows and directs the use of multimedia sign language applications to teach about sign language vocabulary material. This multimedia application can be used for general people and students to be able to learn anything easily. According to Binanto (2010: 3) in digital multimedia books also explained that multimedia can be used in many fields. Multimedia can enter and be a pleasant tool. The multimedia application that will be used by this researcher has a simple display menu and has an interesting content. In addition, this multimedia application also has 3 levels of vocabulary from level 1 to level 3 and each level has different vocabulary levels depending on the level chosen.

Some of the descriptions above explain that researchers want to make research with the title *The Effect of Using Multimedia Applications on Sign Language on Increasing the Vocabulary of Children with Deaf Class III SLB B YRTRW Surakarta in 2018/2019.*

2. Research Methodology

This research was conducted at the YRTRW SLB B Surakarta in February 2019. The design in this study was in the form of one group pretest-posttest design. The subjects in this study were deaf class III SLB B YRTRW Surakarta children in 2018/2019 which amounted to 7 children. Sugiyono (2012: 110) One group Pre Test and Post Test is a technique to determine the effects before and after giving treatment. This study uses a saturated sampling technique sampling technique if all members of the population are used as samples. The

sampling technique in this study uses saturated sampling where the notion of saturated sampling according to Sugiyono (2012: 124) is a sampling technique if all members of the population are used as samples. This is done if the number of the population is relatively small, which is less than 30 people. The data collection technique used in this study was to use a test. The type of test used to measure writing ability is an oral test guided. The validity test technique used in this study is content validity. According to Sukardi (2003: 123) content validity is the degree to which a test measures the scope of the substance to be measured. Content validity is usually determined through the consideration of experts. The validity of the contents of this research instrument will be validated by experts or experts in their fields. Reliability test in this study uses inter-rater reliability. According to Azwar (2013: 91) argues that an instrument is reliable if the results given by the rater are consistent between one rater and the other.

Test instruments in the form of tests were tested on three validators from the fields of construction, multimedia and material. Data analysis in this study used quantitative analysis, namely by non-parametric statistical analysis techniques, signed ranking test analysis (Wilcoxon Sign Rank Test). This data analysis calculation uses the help of the SPSS 22 application.

3. Results And Discussion

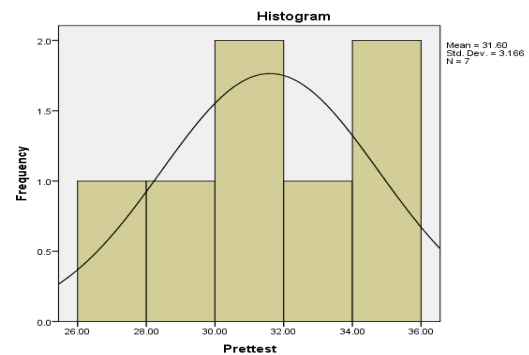
3.1. Results

Before carrying out the treatment, the researcher first carried out the pretest activity to find out the child's initial ability in writing the beginning. Pretest activities have been carried out and Test data values are obtained as follows:

Table 1. Pre-test Value Statistics

Statistics		Pretest
N	Valid	7
	Missing	0
	Mean	31.6000
	Median	30.8000
	Mode	30.80
	Std. Deviation	3.16596
	Minimum	27.50
	Maximum	35.80
	Sum	221.20

From these data we can conclude that the initial ability of deaf class III children is still low with an average value of 31.60 and a middle value of 30.80 and for emergent values that is 30.80, the standard is 3,16596, the lowest value is 27.50 and the highest value is 35.80. The pre-test value data can be presented in the form of histograms, namely:



Picture 1. Pretest Value Histogram

Subjects were given treatment after the pretest using multimedia sign language applications. The next step is post-test activities. The post-test activity aims to determine the effect of using multimedia applications on sign language to increase vocabulary of Surakarta SLB B YRTRW class III deaf children in 2018/2019 after the treatment. The data obtained from the post-test activities are as follows:

Table 2. Post-test Value Statistics

Statistics		Posttest
N	Valid	7
	Missing	0
	Mean	70.9286
	Median	67.5000
	Mode	56.60 ^a
	Std. Deviation	13.83519
	Minimum	56.60
	Maximum	95.00
	Sum	496.50

Berdasarkan data deskriptif nilai *posttest* yang diperoleh siswa tunarungu kelas III pada kosakata bahasa isyarat dasar menunjukkan rata-rata siswa (*mean*) sebesar 70,92 dengan nilai tertinggi 95 dan nilai terendah 56,60, sedangkan nilai tengah (*median*) sebesar 67,50 dengan simpangan baku (*standar deviation*) sebesar 13,83. Dari data tersebut kemudian dapat disajikan dalam distribusi frekuensi penilaian sebagai berikut:

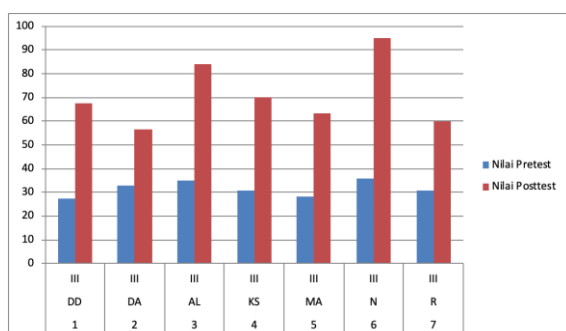
Table 3. Comparison of Pre-test and Posttest Values
Test Statistics^a

	<i>Posttest – Pretest</i>
Z	-2,366 ^b
Asymp. Sig. (2tailed)	,018

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

Based on these data, it can be presented a histogram graph of increasing the value of basic sign language vocabulary before and after treatment (treatment) is as follows:



Graph 1. Histogram value of the pretest and posttest

Next is the statistical test results data from the Wilcoxon Sign Rank Test analysis using the SPSS 22 application. The results are as follows:

The table shows the value of the Wilcoxon Signed Ranks Test (Z) of -2,366 and Asymp. Sig. (2-tailed) = 0.018 with a significance level (α) of 0.05. Asymp Value. Sig. (2-tailed) = 0,000 $<$ α = 0.05 then H_0 is rejected and H_a is accepted. So it can be concluded that the use of multimedia application of sign language influences the increase in sign language vocabulary of class III deaf students in the SLB B YRTRW Surakarta 2018/2019 academic year.

3.2 Discussion

The vocabulary of children with low hearing impairment makes it difficult for children to communicate and get information either visually or in writing. Like the opinion expressed by Keraf (2008: 64) that vocabulary must continue to be reproduced and expanded, first in accordance with the demands of an increasingly mature age who want to know all things. Deaf children who have below average vocabulary skills making learning or communicating capacity of deaf children is also limited.

According to Widia (2013: 131) Mastery of important vocabulary is mastered by everyone, because it is a tool to communicate in expressing thoughts, feelings, knowledge, and experiences gained. And no less important, vocabulary mastery is used to respond to questions, answer questions from other people's ideas.

Based on the two opinions above, it can be concluded that students' vocabulary skills must be increased because it greatly influences the knowledge and communication of the deaf child. According to Haenudin (2013: 66) deaf children understand something more than what they see, not from what they hear. Through the use of the multimedia application Jakarta Sign Language sign language (JAKSL) can add to the basic sign language vocabulary and the potential that exists in him in communicating can be further developed to support the future of the deaf child. Based on the facts or conditions in the field, there is a conformity with the existing opinions. This can be seen from the condition of deaf class III children in Surakarta YRTRW SLB B who experience obstacles or lack of basic sign language vocabulary.

Judging from the obstacles experienced by deaf children, the use of the Jakarta Sign Language (JAKSL) sign language multimedia application is one way of learning that can be applied to deaf children to increase the vocabulary of class III deaf children, especially about basic sign language. As the opinion expressed by Parmadi, Widiyanto & Astuti, (2015) by using media accompanied by images / visuals, it will be easier for deaf children to master vocabulary. Multimedia applications of sign language can be developed when learning activities, so students will be more motivated to learn basic sign language vocabulary. This is also supported by the results of Putra's (2015)

research using Adobe Flash-based multimedia making the motivation of deaf children to increase when learning about vocabulary. The teacher in this case is a person who is responsible for teaching children to be able to know the basic sign language vocabulary so that children do not experience obstacles later when communicating with other people and teachers can also utilize various multimedia applications to improve sign language vocabulary skills of class III deaf children. According to Parmadi, Widiyanto & Astuti, (2015) by using media accompanied by images / visuals, it will be easier for deaf children to master vocabulary. The statement is reinforced by the opinion of Keraf (2008: 67-71) how to expand vocabulary, among others by: 1) Learning process, 2) Context, 3) Dictionary, Dictionary synonyms, analyze words. The results of Putra's study (2015) conducted at ABCD Tunas Pembangunan SLB which aimed to determine whether the vocabulary mastery ability for deaf children could increase through the use of Adobe Flash-based interactive multimedia showed that the ability to master vocabulary through the Adobe Flash-based multimedia method for deaf children increased. From the various opinions, it can be concluded that the use of multimedia sign language applications can be used to increase the vocabulary of basic sign language for deaf children because in this study, the process can provide children's understanding of vocabulary by using the Jakarta Sign Language multimedia language application which emphasizes visual.

The strength of this research is that the use of multimedia sign language applications can easily make children understand and enthusiastic about the basic sign language vocabulary material that will be taught and in the process of pretest, treatment and postures can run smoothly and proven to increase the vocabulary of sign language. This is supported by the results of Putra's research (2015) which uses multimedia methods based on Adobe Flash for deaf children to increase vocabulary, this has been shown to increase by using multimedia based on Adobe Flash.

Based on the discussion and the results of the research described above, it can be said that the use of multimedia sign language applications for YRTRW SLB class III deaf children is proven to provide convenience and improvement in learning basic sign language

vocabulary material. Thus it is proven to have a significant influence between before and after treatment. So that it can be concluded that the use of multimedia application of sign language influences the increase in basic signaling vocabulary of SLB B YRTRW Surakarta class III students in the academic year 2018/2019.

4. Conclusion

Based on the results of the discussion of the results of the research that has been conducted, it can be concluded that the use of multi-media sign language language influences the increase in vocabulary of deaf class III Surakarta BYBTRW children in 2018/2019

5. Suggestions

Regarding the results of research and reality in the field, the authors provide the following suggestions:

1. For Students

Students are expected to practice vigorously to increase the vocabulary of sign language, so that the vocabulary of students' basic sign language increases.
2. For Teachers
 - a. Teachers can use their own multimedia sign language application to improve basic sign language vocabulary for deaf students.
 - b. Teachers when using a sign language multimedia application should pay attention to the level the difficulty is at every level in the sign language multimedia application.
3. For Other Researchers
 - a. The subjects in this study were limited to 7 deaf children. Of course, due to the limitations of this subject, researchers recommend taking far more samples so that measurements of the effect of the use of multimedia applications on sign language to improve basic sign language vocabulary can be tested for the quality of measurement to make it better.
 - b. Other researchers who will conduct research using multimedia application of sign language should in teaching and treatment must display the multimedia application of sign

language using a projector so that later all deaf students can see the sign language movement, images and oral very clearly because if they only use mobile phones to gesture, images and oral are less obvious.

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