

THE USE OF INTERACTIVE MULTIMEDIA TO ENHANCE VERBAL ABILITY ON AUTISTIC CHILDREN EXPERIENCED ON SPEECH DELAY IN SLB AUTIS MITRA ANANDA

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Abstract

Autistic students are well-known with their special characteristic that is the ability to speak slower or speech delay. Autistic children will convey their ignorance with incomprehensible diction or indicated by behaviors out as disclosure. It definitely hampers autistic children's communication which affects on some aspects of their life at school or society, especially in socialization. The problem faced by autistic children should be given approaches which then expected will influence their speech barrier till it enhances their verbal communication which impact the process of learning and socialization. The use of appropriate media in learning process will help students to accept the learning material and enhance students' interest toward lesson. Thus, interactive multimedia is considered to be able to enhance verbal ability of autistic students. This research was done in SLB Autis Mitra Ananda Surakarta with the research subject was an autistic student. It was an experimental research with Single Subject Research (SSR) approach and A-B-A design, A was baseline and B was intervention. Technique of collecting data of this research was test which was objective test with comparative data analysis that compared the result baseline and intervention phase. The result of this research indicates that the role of interactive multimedia use is good to enhance autistic students' verbal ability. In term of verbal ability attained by autistic students, there are some aspects follow on its development namely the aspect of increasing concentration ability, rough motor, soft motor, cognitive and then affect on students' socialization ability.

Keywords : Autistic children, verbal, students

INTRODUCTION

Every child needs education. Based on the law no. 20 year 2003 about national education system reveals that education is a conscious effort to create learning atmosphere and learning process so that students actively improve their potential to have power of religious spirituality, self control, personality, intelligence, good character, as well as the skills needed, society, nation, and country.

Education is carried out so that students get some opportunities to improve their potential, by improving their potential students get opportunities to choose greater role in society including special students. It is in accordance with the constitution 1945 article 31 verse 1 which says "every society has

right to get education” and article 31 verse 2 which explains “government efforts and organizes a national education system, regulated by law”

According to law no 20 year 2003 about national education system (Sisdiknas) article 5 verse 2 is explained that every citizen who has physic, mental, intellectual and social disorder has right to get special education. From the law explanation above, it is clear that all citizens either normal or have special need are obligated to get education. People who are classified into special needs is also necessary to get education for their life. In addition, by obtaining education and knowledge helps special children to meet their need as their ability. Special students need special education than normal students.

It is known that every citizen has right to get education so that the inner potential is developed as their ability and interest, including an individual with autistic syndrome. According to Mudjito, et al “autism is a kind of complex development syndrome that covers social interaction disturbance, communication pattern, interest, and limited movement, so that it needs special early treatment which means children should be immediately consulted to pediatrician or brought to institution that has experienced in handling autism” (Mudjito, et al, 2005; 24). Furthermore, Mudjito, et al (2005; 39) explains that autistic students have characteristics which are marked by six disorders or symptoms namely in social interaction, communication (speech, language and communication), interruption in playing, sensory disorder, feeling and emotion disorder, and behavior disorder. “A child with autism is mostly not able to talk, and they are not able to compensate their speaking inability with another language as a sign language, as if a child with autism is able to talk, they are just parroting, or they talk but less meaningful on they are talking about, so that they seem to memorize” (Mudjito, et al, 2005:44). In a seminar which was attended by the writer, Sakinah (March 16th 2016) describes that every autistic child is certain to have inability to communicate, especially in speaking or speech delay. In task development, autistic children do not have attainment to speaking ability. Paul (2007:142) explains that a child with autistic spectrum is started with speech delay and speech development which is significantly lower than other children. About 25 percents autistic children acquire words at 12 till 18 months and they lose or fail to gain more words. When autistic children begin to speak, language aspects including phonology and morphology are loss relatively.

Soetjningsih (143; 1995) asserts that “A child with speech disorder understands all things said to her/him, but they tend to appoint than speaking. The child speaks with words and phrases which are difficult to understand, indeed, to the people they always interact to, so that they are often angry and frustrated since their words are difficult by others.” The American Speech Language Hearing Association (ASHA) in Paul (3; 2007), has defined that speech barrier is a weakness in the understanding and using oral, written and other symbols. These barriers involve forms of languages, content of languages and language function in communication.

The result of survey in preliminary study was conducted in Mitra Ananda autistic school Karanganyar by interviewing the teacher with IK as the initial, clarifies that teaching and learning process given by the teacher is conventional. Teacher only explains, writes in the board, and then students do teacher’s instruction. In effort to enhance the verbal ability of autistic students, the teacher only applies ABA approach (Applied Behavior Analyst) that teacher are not all equipped with the training or workshop about ABA approach so that teachers’ understanding are not adequate. In addition, the minimum use of instructional media affects on the lack of students’ interest so that students’ interest decreases. Instructional media utilizing computer particularly is not given to students intensively and not scheduled. Teacher’s ability in operating computer is lack, which is inversely related to facilities and infrastructure not adequate learning media with computer. From the data obtained from students daily report shows that children speaking ability are not significantly developed, indeed it is not consistence in maintaining speaking ability attained by students. From the data, students’ verbal development is increasing and decreasing in certain condition. According IK, the students experience a descent in verbal ability due to the lack of habitual and unavailable instruction media which affects on verbal ability of autistic students, so that students are bored in the classroom activity since they only do teachers’ instruction who teaches conventionally. It affects on students’

communication and social aspect. For example, autistic students who have speech delay, but have normal intelligent and are actually able to socialize will be hampered to communicate with his interlocutor. Especially, if the other person is a normal child who has no barriers in communication. Autistic children will reveal what they know with the style of speech that is not understood by the listener or indicated by behaviors out as disclosure. It certainly impedes autistic children communication which will have an impact on some aspects of the next life at school and in the community, especially in terms of socialization. It is possibility that autistic children will be isolated by the environment and considered that they are incapable and even society assumes that autistic children have a bottleneck in the psyche.

The problems faced by autistic children should be given some approaches which then be expected influencing their speaking barriers so that it enhances their verbal ability that affects on their learning process and socialization. Stackhouse (179; 2007) clarifies that the incapability of autistic verbal development influences children not to be ready in using communication language offered by school. Stackhouse also adds that children with speaking barrier do not represent the words clearly on their lexical storage system so that they can miss the important information in the classroom.

It is consistent with Paul (142; 007) opinion which explains about autistic problem especially on verbal communication. We can see clearly in this criterion, the barriers refer social function, the communications and delays or irregularities in the initial involvement in communicating and playing. Soetjiningsih (144: 1995) adds that "Children with verbal barriers generally suffer from social relationships and diagnosed as pervasive developmental disorder. They have a bit of peers and never want to learn the rules of the game from their peers".

It is demanded for teacher to find out the solution in solving the problem of autistic students with speech delay. Teacher has an important role in learning process so that he must master the teaching material, learning strategy and be able to develop teaching methods in accordance with the topics being taught and also the use of appropriate media and in accordance with the material being delivered. According to Law No. 14 Year 2005 on Teachers and Lecturers Article 1: "Teachers are professional educators with the primary task to educate, teach, guide, direct, train, assess, and evaluate students on early childhood education, formal education, elementary, and secondary "(Mustah, 2011; 3). The use of appropriate media in the learning process will help the students to receive the material and increase the interest of students to the lesson. The use of instructional media will also help teachers to facilitate in delivering the material to the students. This is similar to Hamalik (1989: 124) opinion that defines "Education media is as a means, a tool or process used / taken to deliver the message, which takes place in the educational process".

According to Anitah (3; 2008) "Instructional media is any person, materials, tools, or events that can create conditions that allows the learner receives the knowledge, skills and attitudes". The lack of proper media selection will lead to children's boredom, especially in autistic children which require appropriate learning media to help the learning process run properly and fun. For this research, the researcher chooses the Interactive Multimedia in her research. Mulyanta (1; 2009) describes the "Interactive multimedia is the use of a computer, to combine text, graphics, audio, moving images (video and animation) into a single entity with a link and the right tools to enable multimedia users to do navigation, interaction, and communication ". In line with Mulyanta, Binanto (2; 2010) also proposes definition of interactive multimedia as a medium where users can control what and when multimedia elements will be transmitted or displayed.

Media in form interactive media is adequate to increase learners' interest in learning. In relevant research journal which is done by Karen Marrison entitles "*Implementation of Assistive Computer Technology: A Model for School Systems*" Karen explains "*The benefits of computer technology have transformed the academic experience for students with learning problems. The potential of assistive computer technology (ACT) to address educational needs for students with learning problems is well documented*". It means that "the benefit of computer technology can change students' academic experiences with learning problem. Computer technology potency helps to fulfill education need for students with learning problem will be properly documented "(Morrison; 2007;

83). Thus, the researcher is interested to use interactive multimedia to increase autistic students' interest in learning and sound sensors to detect an increase in verbal ability. The use of multimedia in early reading is expected to attract autistic students' interest so that researcher can measure the verbal ability later.

RESEARCH METHODOLOGY

The research method is a method or technical performed in the research process as an effort in the field of science that is run to get the facts and principles patiently, carefully and systematically to realize the truth (Mardalis, 1989: 24). According Rosnow and Rosenthal in Sunanto (2005: 56) experimental research design can be broadly divided into two designs namely group design and a single-subject design. Design group focused on data derived from a group of individuals, whereas single-subject design focused on individual data as a research subject.

This research applied experimental research in the form of Single Subject Research (SSR). According to Tawney and Gas in Soendari (2010) "Single Subject Research is a research being done to determine how much influence a treatment given to one subject or more repeatedly within a certain time".

Characteristics of experimental single case according Sunanto (2005: 57) consists of three kinds of measurements on the dependent variable repeatedly, experimental and control groups in the same individual as well as allowing for one or more individuals. This study used current methods of experimental form of Single Subject Research (SSR) with the design AB, where A as phase baseline (baseline) and B as the intervention phase (treatment), which meant that the ability of early childhood before intervention was held, and the ability of children when intervention. This study was a quantitative study with experimental method. The Measurements were done before and after treatment were given.

The subject was a minor autistic student who had speech delay class D in SLB Autis Mitra Ananda with SLB Autis Mitra Ananada Karanganyar as the place of research. The independent variable in this study was interactive multimedia and the dependent variable was the verbal ability. Technique of collecting data used in this research was test. The researcher used subjective test as a form of test method. Subjective test is a test that the scoring is both affected by the test taker answers or responses and also affected by the subjectivity of the corrector (Widoyoko; 2012; 57).

This research used construction validity. A test was said to have construction validity if the test items built the test measured every aspect of thinking as mentioned in the Special Instructional Objectives. In other words, if the test items measured aspects of thinking as it was consistent with aspects of thinking which became the instructional goals. As well as the content validity, construction validity could be determined by detailing and a pair each item with every aspect of Instructional Objectives. Its work was based on logic, not experience.

The Validation in this study involved experts: linguists (content) and measurement expert / psychometrics in special education (construct). According to Sunanto (2005: 96) "It is the last stage before drawing any conclusions." This study used a comparative descriptive data analysis technique which compared the results on the baseline and intervention phases with descriptions and then clarified into graphic form.

DISCUSSION

The result of baseline and intervention on every subject shows that the difference of achievement test. In baseline phase utilizes traditional/ lecturing model and intervention phase uses interactive multimedia which shows the increasing of test result on students' verbal ability.

The following table explains the comparison test score on students' verbal ability of class D SLB Autis Mitra Ananda Karanganyar in baseline and intervention phase.

Tabel 1.

Section	MA	
	A	B
1	35	60
2	40	70
3	50	75
4	45	90
Average	42	73
	,2	,75

The finding shows that the use of interactive multimedia influences in increasing verbal ability for autistic students in SLB Autis Mitra Ananda Karanganyar.

It is in line with the theory discussed in pervious chapter. It is proven on the statement asserted by some experts in accordance with the condition of subject of the research.

As explained by Mudjito et al (2005; 39) autistic children have some characteristics signed by six disorders or symptoms namely in social interaction, communication (speaking, language, and communication), playing disorder, sensory disorder, disorder of feelings and emotions, behavioral disorder. "Children with autistic disorder are mostly not able to talk, and they are not able to compensate their speaking inability with other languages such as sign language, even if there is a child with the autistic disorder can talk, they just parroting, or they talk but are less able to have meaning of what they say so it seems just memorizing" (Mudjito, dkk, 2005; 44). At the seminar which was attended by the author, Sukinah (16 March 2016) explains that each autistic child is ascertained to have inability to communicate, especially in speaking or speech delay. In the development task, autistic child does not have attainment in their speaking ability. Paul (142; 2007) describes a child with spectrum autism starts speech delay and their speech development is significantly lower than other children. Approximately 25% of children with autism can derive the word from age 12 to 18 months and they loss or fail to gain a better word. When children with autism begin to speak, aspects of the language including phonology and morphology miss relatively. It is equal to the characteristic of MA verbal ability who always gets value below the average of their friends before the treatment done by the researcher. This is due to the characteristics of students who tend to be easily distracted and disrupt the learning process so that they are difficult to concentrate in practicing their verbal ability. Knowing the importance of verbal skills to autistic children, the increase in verbal skills should be implemented using appropriate learning media in accordance with the characteristics of autistic students.

The finding of research demonstrates that the use of instructional media can enhance students' verbal ability. In this case, students' verbal ability increases after being given treatment using interactive multimedia. Bastable (1997; 197) describes "verbal ability is the ability to learn to speak using sentences and various words, the way to speak, early reading and consistency in doing spelling and grammar test. Children should have these abilities; they can communicate with other people. Verbal ability is a skill that should be taught to students since elementary school, since verbal ability is a capital to communicate and socialize to other people.

In this research, the researcher focuses on students' verbal ability. Teaching using interactive media affects in enhancing students' verbal ability, it can be seen from the test score in intervention phase which is better than test sore in baseline phase which the teaching does not use interactive multimedia. It is proven by the use of interactive multimedia in practicing students' ability attract their attention, students are able to see and listen in direct since multimedia presents moving pictures and sound, which seemed to invite. It is in line with Wibawa and Mukti (2001: 35-73) opinion which conveys the use of multimedia in form of audio visual is more effective than visual media only. Their ability will rise if visual message media is fitted by moving characteristic. This media is not able to convey complicated messages, but more realistic. The Research on teaching reading which is done by

the researcher uses interactive multimedia, which are the use of multimedia in teaching to enhance students' verbal ability. The media is presented in fun way in order students are not easily bored and able to focus and concentrate in learning process, so that it enhances students verbal ability which is explained in previous chapter.

The result of this research is the same as other researches. It is proven by the enhancement of students' verbal ability who have problems in learning the same media as the media used by researchers.

The research was done by Karen Morrisson. According to Karen (2007; 83) which is taken from the previous study summarizes that the benefits of computer technology can change academic experience for students with learning problems. Computer technology potential helps to fulfill education need for students with learning problem which will be documented well. It is in accordance with the result of study which is done by the researcher where computer technology used in this study as interactive media can enhance students' verbal ability as the characteristic of autistic students. This study is said to have same result since the media used is using the same media in the form of audio-visual computer accordance with the characteristics of autistic children who have problems in concentrations that affect verbal ability.

The results of the study are compared to the facts in the field. It is in line with the results of students' work given by the researchers who shows improvement after a given intervention.

In this research, the use of interactive multimedia is effective to enhance students' verbal ability. Its effectiveness is known when students practice directly so that their attention focuses in teaching and learning activity. It is also explained clearly in previous study, through learning result with intervention interactive use, students' verbal ability are better than baseline method use. Based on the result of the research and baseline and intervention, it can be summarized that interactive multimedia affects verbal ability on autistic students who has have speech delay in SLB Mitra Ananda Karanganyar.

The finding of the research is the same as the fact in the field. It is potential to the effect of interactive multimedia in students' verbal ability. Instead of affecting on students' verbal ability, the use of interactive multimedia also affects on students' quality during learning activity. Firstly, before using interactive multimedia in teaching students are less eager to follow the learning process but after the use of interactive multimedia students eager to follow learning and students' sense of curiosity and adherence increase. So, besides students' verbal ability improved, affective and cognitive children are also getting better. This is in accordance with the opinion of Purwodarminto in ardiansyah ([http:// papers. Blogspot.com/2011/10/pengertian-prestasi-belajar.](http://papers.Blogspot.com/2011/10/pengertian-prestasi-belajar)) Who argued learning achievement is the result attained (carried out/ done) by the students. So achievement is a term used to indicate a level of success of a thing, which is caused by something that has been done.

The researcher finds out some obstacles in the process of research, as students have autism syndrome which are possible for students to rebel often. This is reflected in the learning process which is carried out prior the use of interactive multimedia that students very often have tantrums, since they refuse to receive the instruction. Secondly, students' concentration is very less. Researcher is difficult in dealing with student attitudes when learning takes place. Besides, the researcher is difficult to teach by using interactive multimedia on a computer. This is due to the lack of learning given by teacher who uses the computer media. Students are still difficult in placing the cursor. The minimum of computers in the schools also affects students' ability to operate computers. Supposedly the introduction of IT or Information Technology is given to students early so students are able to use IT which gives a lot of learning now.

To overcome some of these difficulties, researcher proposes several ways to deal with, comprising: a). Teacher gives lessons to students individually in one room without other students who are able bother students' concentration and emotional. b). Students should be given game or coloring lessons often so that students do not get bored with the lesson given. c). Learning Computer Technology or IT is given to students early so students can recognize the technology especially computer technology, so that students do not get any difficulties to place the cursor.

The result of this research shows that the role of interactive multimedia use is effective to enhance verbal ability for autistic students. In verbal ability attained by autistic students, there are some aspects following their development, namely the increasing aspect of concentration ability, rough motor, soft motor, cognitive and then affect on students' ability to socialize. Based on the data collection, data analysis was done by researcher, so it can be concluded that the use interactive multimedia influences on the improvement of verbal communication of autistic students who experience speech delay class D-I SLB Autis Mitra Ananda Karanganyar.

CONCLUSION

Dealing the conclusion above, the researcher proposes some recommendation as follows: a).For headmaster, headmaster can facilitate by organizing socialization toward teachers in SLB Autis Mitra Ananda Karanganyar by inviting some experts mastering interactive multimedia in teaching and learning process which deals with the enhancement of students' verbal ability.b).For teachers, Interactive multimedia is expected to be used in some lessons with some application in line with teacher and students creativity. Besides, the introduction of IT is given to students in early age so that students can follow the globalization era.c).For students, Students are expected to pay attention more on the lesson in order to avoid chaos in the process of teaching and learning using interactive multimedia.

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