INTEREST OF DEAF STUDENTS OF SRAGEN REGENCY SPECIAL SCHOOL, INDONESIA IN USING MULTIMEDIA BASED LEARNING MATERIALS

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Abstract:

Deaf students are students who lose the ability to hear. The challenges faced by deaf students at school are the difficulty to obtain learning materials that are suitable with their needs and characteristics. This was a descriptive research, with deaf students on high school level from all Special Schools in Sragen Regency, Central Java as the subjects. Deaf students have unique and different learning styles from the person who has good ability to hear. Technology in education is designed to ease students and teachers in learning and teaching. The use of appropriate learning materials is the basis of the development of education in the future. How far deaf students' interest in multimedia based learning materials is needed to know in order to provide an indicator in the preparation of learning materials that are accessible and meet the characteristics of deaf students. The technology adapted for education will facilitate the delivery of material / knowledge transfer from teacher to student.

Keywords: deaf, interest, multimedia based learning

1. Introduction

Education is an attempt for people to develop his or her potential through learning process. In the learning process, students are given the freedom to determine the learning materials to be studied, the study method and the place to be used for learning activities. Students are the major factor in learning, because the learning indicators will be reached in a good learning process, in other words students do change their behavior after doing the learning. It is very unwise if a learning process is not based on the factor of the students themselves, with the consideration of the student as a distinctive person who has differences from the others in terms of: ability, learning, needs and so on related to the learning process.

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The development of information and communication technologies have a positive impact on the world of education. According to Alfred Bork, education is in a major revolution, a revolution that is not comparable with the invention of printing technology. Multimedia based learning materials is going to become the main way in learning. Almost all of the subject materials presented interactively through the tool that is possessed by all levels of education, the deaf students in special schools are no exception. This is not surprising because in general, the technology has these characteristics: can be accessed by anyone, anytime, visual, and adaptive. Those characteristics have triggered a huge wave of using multimedia based teaching materials in a wide range of purposes, including in the educational activity.

Learning activities can be easily done by students anytime and anywhere. Besides that, learning can also take place in an active and fun atmosphere. Limits of space, distance and time are no longer problems in multimedia based learning, for tlearning materials can be distributed through removable storage media and media player (laptop, VCD player, smartphone, tablet) so that deaf students can learn anywhere and anytime.

The presence of information and communication technology has been considered important, either by pupils, college students, teachers and lecturers, the need for information technology is also predicted to increase in line with their duties and obligations. The development of information and communication technologies that are present in the world of education has formed a new paradigm to students, which can give students the possibility to interact with learning resources widely and modernly, also accessible for their needs and characteristics, so that they can feel the result of the technological civilization.

Accessible multimedia based learning materials are means to study multimedia virtually that can present the responds more realistically to the learning materials given to deaf students. The presentation of multimedia based learning materials can be viewed as an education that optimizes multimedia as a mean to display and manipulate graphic texts and sounds in an integrated display. With a display that can combine various informations and text deliveries, multimedia based learning materials can be designed as an effective media of technology to learn and teach relevant learning materials.

Results of research conducted by Christiana Demaja W. Sahertian explained that learning styles significantly influence the learning outcomes. The effectiveness and efficiency of learning are apparent when oriented to the student or student centered with wide materials enrichment that will increase deaf student's achievement. Given the benefits and importance of multimedia-based learning for deaf students, the authors attempted to survey the interest of deaf students in special schools to use multimedia-based teaching materials. Through this interest surveys can be seen where the desirability of deaf students in learning based on the needs and characteristics of deaf students.

Given the benefits and importance of multimedia based learning for deaf students, the writer attempted to survey the interest of deaf students in special schools in using multimedia based learning materials. The wishes of deaf students in using multimedia based learning materials based on deaf students' needs and characteristics can be observed through this survey of interest.

2. Method

The type of this research was descriptive, the purpose of this research was to reveal the interest of deaf students at special schools in using multimedia based learning materials. Subjects in this research were 25 people consisted of 20 deaf students at high school level and 5 teachers at special schools in the town of Sragen, Central Java Province. At this stage, the activity of the original search to find out the students' interest towards multimedia based learning materials was done and the importance of those learning materials given to deaf students was observed. Some of the data collecting techniques used in this study were:

A. Interview

Interview is a form of direct communication between researchers and deaf students and special schools teacjers. Communication was done by asking questions face-to-face, using oral language and sign language, so that the motion and expressions of respondents, which were the medium pattern, were able to complete the unsaid verbal words. Therefore, the interview did not just capture the understanding or the idea, but it could also capture the feelings, thoughts, emotions, motives of the respective respondents (Gulo, 2001). Contributions resulting from the interviews one of which was the experience in learning that took place at their respective schools all this time.

B. Observation

Observation is a method of data collecting where researchers recorded information as witnessed during the research. Witnessing the learning process at schools of the deaf students.

C. Method of Documentation

The method of documentation in this research is data collecting in which researchers investigated written objects such as books, magazines, documents, regulations, et cetera (Arikunto, 2002: 158). The documented marks from daily tests, semester tests, and final tests. can be accessed from this method of documentation.

Multimedia based learning material is a combination of several types of media; text, graphic, sound, animation, and video in one computer application (program), which has three levels, namely the technical level related to technical tools, the semiotic level related to the form of representation (ie. text, images / graphics); this form of representation can be considered as types of sign and the sensory level related to sensory channel level whose function is to receive signs (Mayer, 2009).

In this research, product specifications in multimedia based learning materials are as follows:

Video / animation illustration

Subtitle

Sound

Indonesian Sign Language (BISINDO)

Traditional text books are still being used in conventional learning in which deaf students are less able to understand the information presented in textbooks. Students are also having difficulties studying at home because they need to remember the moments when teachers teach through memories in their brains. It's extremely difficult to do given deaf students have limitations in abstract thinking and developing the information, which need imagination. Therefore, the researchers created a learning material that can accommodate the needs of deaf students through multimedia based learning materials. The learning material is a conversion of textbook materials into a digital multimedia based learning materials. The specification of this learning materials is combining the elements of voice, video / animation, illustration, subtitles, and Indonesian sign language (BISINDO). Sound elements are still needed to accommodate deaf students who still have minimum ability to hear. The use of sound in these materials is aided with headphones. This learning material can be played or used in smartphones, tablets, and computers, so that deaf students can learn anywhere and anytime. The learning materials are also easy to distribute to students or other users and not easily damaged due to its digital form.

On the analysis stage, identification of deaf students' interest in using learning materials that are suitable with the needs and characters of the students in learning process were carried out. This identification is still referring to the curriculum used in special schools by considering students' behavior and characteristics. This is done to determine the students' condition while responding to a multimedia based learning materials used by the teacher during the lesson. Based on this, it will answer the product specifications of learning materials expected for deaf students related to the attractiveness of the appearance, ease of use, ease of access to computers, supporting software, the material in accordance with the study needs and easy to understand (equipped with simulations, animations, audio, sign language video), so that the product specifications of the developed learning materials sourced from the wishes of direct users / deaf students.

3. Discussion and Result

The results from analysis of the responses of the students shows that multimedia based learning materials can attract the interest and attention of students, as well as easier for students to understand the material when the do an independent study. From an interview with a teacher, it is apparent that the teacher has positive feedback about the use of multimedia based interactive learning materials as an assisting tool for teachers in teaching, because deaf students have limitations in using only plain text books. They can absorb information from reading, seeing, hearing (if deaf students still have residual hearing). The difficulties experienced by using only textbooks as learning materials, among others, are that there are abstract words or terms that was difficult to be understood by deaf children, conventional learning materials made the students have no spirit in understanding the content of the subject materials as it is unattractively presented.

The use of learning materials with element of multimedia that are appropriate with students' characteristics makes students do not feel easily bored during the learning process and attracts students to stay focused when learning. This multimedia based learning materials aims to facilitate students in independent study, as well as in attracting more students to study.

There are some things that the students liked in using the multimedia based learning materials, among others:

1. This multimedia based learning materials can be used by students at anytime, including at home, so that they can study in longer period and repeat materials without the limitations of teachers and time.
2. These learning materials can present a simulation from a difficult and expensive trial, even from certain experiments that would be impossible to do, at lower cost.
3. Can eliminate misconceptions because students can compare their thoughts with the incorrect ones using simulations that he saw and did.
4. The use of multimedia learning materials is helping students with abstract materials, so that students capture the subject materials more quickly.

The results from interviews with classroom teachers revealed that the use of multimedia based learning materials also have an effect on students' achievement. According to Bloom, one of the humanistic figures, mentioned that learning achievement is changes in behavior that includes three domains called Taxonomy. Three domains in Bloom's Taxonomy are as follows:

a) Cognitive Domain, consists of six levels: Knowledge, Comprehension, Application, Analysis, Synthesis, Evaluation
b) Psychomotor Domain, consists of five levels: Impersonation, Use, Accuracy, Coupling, Naturalization
c) Affective Domain, consists of five levels: Introduction, Response, Respect, Organization, Practice

These results of students' achievements are also relevant to the curriculum objectives that is used by the students in special schools, which is to increase the ability of attitude, knowledge, and skills. Budiningsih (2005) Increased students' motivation is the strength, the driving force, or a willingness and strong will tool builder in students for studying actively, creatively, effectively, innovatively, and agreeably in order to change behavior, in the cognitive, affective, and psychomotor domains. Hanafi (2009) The use of multimedia based learning materials indirectly also increase students' motivation in terms of intrinsic and extrinsic. Intrinsic motivation of deaf students comes naturally from the students themselves as a form of awareness to grow and progress. Extrinsic motivation is caused by the students' external factors, such as the counseling from the teacher, gift giving, a satisfactory mark, etc. Besides that, students responses also indicate that the multimedia based learning materials has an attractive appearance, easy to use and enable them to understand the lessons more easily, so that it can be said that this medium can help the learning process and accommodate the wishes of deaf students.

4. Conclusion

Multimedia based learning materials have a positive impact on students in special schools. Students have a high interest in multimedia based learning materials. Digital based learning materials is a challenge for the future that has to be prepared in the world of education. Education for deaf students have to adapt the technology to facilitate learning for students and facilitate teachers in presenting the subject materials. Learning can be done more actively and effectively by using multimedia based learning materials compared with ordinary textbooks. The use of technology in education for deaf students needs to be familiarized to provide better education services that best fit the characteristics and abilities of deaf students.

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