

Mobile Learning as Teaching Aid and Learning Media for Special Teacher of Deaf Students



Elsa Efrina, Zulmiyetri, Grahita Kusumastuti

Abstract: *This study aims to develop learning media android based which can be used by teachers of special schools to teach a special program for deaf children. This research uses a qualitative approach. Data collected by conducting interviews with the teachers about the obstacles, desires and media needs of the teacher in teaching auditory perception and communication programs. While the data for developing the media was conducted through focus group discussion. Data results of the focus group discussion were analyzed in the reduction and concluded to be the basis of the development of the media. Based on the results, it can be concluded that mobile learning is the alternative media to learn and helps teachers in teaching auditory perception and communication programs to deaf children..*

Keywords: *android, assistive technology, auditory perception and communication programs, hearing impairment, mobile learning,*

I. INTRODUCTION

The education of children with special needs is given in the form of academic and non-academic. Non-academic education for children with special needs tailored to the needs and talents of the child's interest. Including children with hearing impairment, special education provides auditory perception and communication programs and vocational skills that interesting by the child. Auditory perception and communication programs is a special program because the needs of children with hearing impairment can be met so that the learning process of other skills can be supported. If deafness is not addressed by a special program then the hearing impairment will harm the hearing ability of the child and the development of communication, literacy and academic achievement [1]

Auditory perception and communication programs can be viewed as a series of exercises structured laid out from simple stages to complex include the exercise of communication and the perception of the sound. The development of communication teaches a child to be able to communicate with other people. The development of sound perception included detection, discrimination, identification, and understanding of speech/verbal expressions. The purpose of

the auditory perception and communication programs is to help the deaf learn to hear, interpret the stimuli of sound to his ear. The perception of sound is the ear's ability to hear a signal then proceed it with understanding the sound and its output is the ability to organize language and producing meaningful sound [2]. Deaf children hear through two requirements that with hearing aids and with training. Auditory perception and communication programs developed to suit the power look of the child and the matrix of the scope of the coaching. Scope of the program is a) the exercise of detection is the ability to respond to the presence or absence of sound, b) discrimination is the ability to perceive similarities and differences between two or more speech stimuli, c) Identification is the ability to label by repeating, pointing to or writing the speech stimulus heard, and d) comprehension is the ability to understand the meaning of speech by answering questions, following directions, paraphrasing, or participating in a conversation [3]

In teaching auditory perception and communication programs, teachers need to understand the concept of each scope that will be taught to the child. The problems that occur in the field is, the lack of reference books teacher about auditory perception and communication programs so that teachers difficulty to teach a special program to the children. Not all teachers have a background in special education, especially deaf, so a reference book is needed in the implementation of the guidelines. Problems regarding the lack of teaching aids is not something new. It is very much synonym to the problems faced by many institutions. This problem is very closely related to the source of money itself that involves the authority as well. This is very worrying as it may drain out the participation of students in learning as it does not give them any impact to learning while causing them to be uninvolved [4]. The lack of teaching aids in school can affect their learning process especially in the knowledge of science. To avoid such issues, the source of money should be increased or teacher can also create their own teaching aids by recycling the old ones [5], [6]

Teaching aid through the learning media that can be used by teachers in the teaching of many materials. Technology is one medium that can be used by teachers in teaching. Mobile learning can be a solution to the problems faced by teachers. Mobile technologies have shown great potential in various educational settings [7]. More than six billion people around the world have access to mobile devices [8]. Mobile technology has benefited through the interactive platform design, integrating learning designed activities [9].

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It is expected that the presence of auditory perception and communication program references through mobile learning, will allow teachers to access concepts of auditory perception and communication programs, how to design learning plans and examples of their implementation through the platform that has been developed.

Based on these explanations, the researchers want to provide the solution of problems faced by teachers, namely the lack of auditory perception and communication program references, and the difficulty of getting auditory perception and communication program reference through the development of mobile learning. Mobile learning will include the provision of information about the concept, examples of lesson plans and examples of their implementation.

II. METHOD

This research used a qualitative approach. Data collected by interview. Data was collected by conducting interviews with special program teachers in ten special schools. The data was collected used an interview instrument regarding the learning media needs of *auditory program*. The results of qualitative data was analyzed by data reduction. Media development data is collected through focus group discussions by special education experts and Android application experts. The results of qualitative data collection are reduced and concluded as an Android learning media model.

III. RESULT AND DISCUSSION

A. The needs of the teacher against the auditory perception and communication programs' learning media.

Based on the result of the interview with the ten teachers of the special school for children with hearing impairment, it is known that teachers have the barriers and expectations in the implementation of the auditory perception and communication programs. Barriers experienced by teachers, are:

- The lack of supporting facilities such as 1) lack of classroom 2) lack of supported facilities of auditory and speech training program such as a mirror, audiometer, speech trainer, spatel, etc.
- Barriers that are owned by the students, such as students not using hearing aids. Besides, the presence of students who rarely come to the school makes the program can not be given to the maximum
- The program is not to be compiled according to the curriculum
- The lack of reference in preparing programs and execution of easily accessible programs.
- The lack of information about the auditory and speech training program for the teacher.

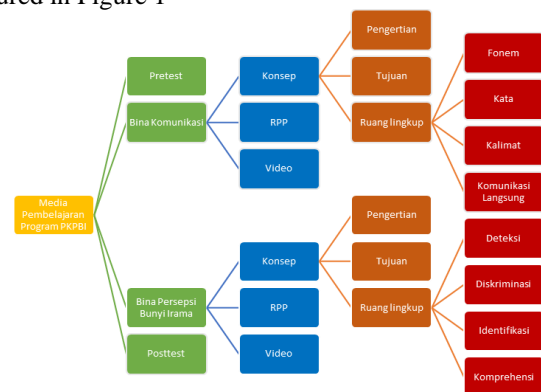
B. The availability of teachers with an educational background of the deaf is not adequate.

While the teachers' need in the implementation of the auditory and communication programs, are:

- The provision of the facilities that can be assisted by the government, because the tool of auditory and speech training program is quite expensive.
- The availability of module or other references that can help the teacher in drawing up the program correctly. It can help teachers who did not initially have the educational background of children with hearing impairment
- The availability of seminars, workshops about auditory and speech training program so that teacher can understand more concepts and how to implement auditory and speech training program in class
- Support of parents to motivate the children to go to school regularly.

C. The development of mobile learning model based on Android

Based on the results, researchers focus on the perceived obstacles of teachers, namely the lack of information and resources about auditory perception and communication program and teachers' need in modules that provide examples of the auditory perception and communication program implementation. Therefore, the researchers developed a module that can be accessed in a smartphone to answer the needs of the teacher. The Model developed includes the concepts regarding the auditory perception and communication program, program planning and examples of its implementation. The flowchart of development media, figured in Figure 1



g 1. Flowchart of Learning Media model

Mobile learning model begins with the division of the sub-aspects discussed are development communication and auditory perception development. Each sub-aspect begins with a pretest and concludes with a posttest. Parts of the pretest and posttest are intended to simultaneously measure the effectiveness of mobile learning. After doing the pretest, the user can enter the main menu of concept and study of Development Communication and auditory perception. After studying the concept, the user is given examples of lesson plans of auditory perception and communication programs according to the scope. The learning design will be completed with examples of their implementation in the video section. Each scope is given a single video example of its implementation. Posttest is the last part of mobile learning. The development of a learning tool is expected to be one of the solutions that can be used by teachers in teaching.



The use of learning aid can enhance the effectiveness of teaching and learning, increase knowledge and skills and should complement the teaching method which constantly changes over time [10]. Through the learning media, teachers can be assisted in carrying out the program and devise the right program.

Part of the concept helps teachers to be able to better understand the intent and purpose of a special program especially for teachers who do not have a background in special education. Part of the lesson plan can help teachers to design a special program that will be provided following the results of the assessment of the student. On the part of the video, the teacher presented some examples of the implementation of the special program auditory perception and communication programs, so easier for the teachers in understanding the implementation of auditory perception and communication programs

The strength of the learning media can be used by teachers as a teaching aid and can be used parents as a learning media in auditory perception and communication programs. The participation of parents in educational programs of children with special needs is an important thing that should be done [11]. Parents should respect, understand, and appreciate their children in school. The decision-making process of education for children with disabilities to optimize their potential. Both parents and professionals, teachers, can benefit from increased interaction and education about how to create a successful cooperation [12]–[15]. Then, parents have to trust the capacity of schools to understand and educate their children effectively with special needs [16]. So, the knowledge and skills obtained by children in the school will survive and well-controlled if they can also train them at home or outside the school environment with the help and guidance of their parents.

IV. CONCLUSION

Based on the results and discussion, it can be concluded that one of the problems experienced by teachers in the implementation of auditory perception and communication programs is a reference regarding the concept and how to implement the auditory perception and communication programs for children with hearing impairment. So the developing of learning media and also a teaching aid that can be used by teachers and parents in implementing the auditory perception and communication programs which is easily accessible via smartphone, and can be used in the setting of the school or at home by parents

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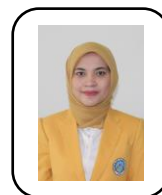
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