

DESIGNING ENGLISH LEARNING MEDIA FOR THE DEAF STUDENTS BY USING INFORMATION TECHNOLOGY AND COMMUNICATION

¹Fatma Yuniarti, S.Pd., M.Pd., B.I.

²Siswoyo, M.Pd.

³Dian Rakhmawati, S.Pd., M.Pd., B.I.

^{1,2,3}English Department-STKIP Muhammadiyah Pringsewu Lampung

¹yuniarti_fatma@yahoo.com

²Siswoyo.hadie@yahoo.com

³Dyanrakhma@yahoo.co.id

ABSTRACT

Understanding words is one the language components that becoming a problem for students with listening impairment. This difficulty exists because student with listening impairment do have any perception about language. The difficulties of student with listening impairment in understanding words will consequently causing problem for them. The main goal of this research is to develop a media teaching and learning English based on Information Communication and Technology (ICT) and Elearning. Kaymedia.net social network that used exclusively as e-learning tool, toward the ability of listening impairment students in understanding meaning of words. The approach will be used Nonprobability Sampling. A sampling technique that does not pay attention to many variables in sampling. Samples from Nonprobability Sampling are also referred to as research subjects where the results of the tests performed on the sampling have no relationship to the population. The method used in this research is research and development (Research and Development). A research and development approach consisting of ten steps, including: (1) preliminary study and information gathering; (2) planning; (3) hypothetical model development; (4) hypothetical model feasibility test; (5) revisions; (6) limited scale field trials; (7) revision of field trial results; (8) more extensive trials; (9) final model revision; (10) dissemination and socialization.

From the previous description of instructional media application and learning of English based on Communication and Information Communication Network (ICT) and Elearning. Kaymedia.net it can be said that The application of teaching and learning media of English based on can be a fun learning, has a high interactivity elements, causing students to remember more subject matter, and reduce operational costs Usually issued by students to follow the learning, application effective if used exclusively as a learning tool to the ability to hear students' disturbance in understanding the meaning of words, which is used exclusively as a learning tool for the ability to hear students' disturbance in understanding the meaning of words *to students Class XI SMALB Negeri Pringsewu Lampung.*

Keyword: ICT and Elearning. Kaymedia.net social network, Listening Impairment Students, Teaching and Learning English

INTRODUCTION

The Deaf is a person who cannot understand the language of oral conversation. Deafness can occur before and after birth caused by accidents or severe damage to the hearing nerve due to illness or work accident. The deaf people can differ from one person to another, ranging from those who can hear a little until they cannot hear at all.

The deaf people are invisible defects. Often teachers forget that the student is a deaf/deaf person and then treats the deaf student as someone who has no deaf deformities at all. The deaf students often learn on foreign understanding as a result of not optimal learning opportunities. Andreas Dwidjsumarto (in Sutjihati Somantri, 2006: 93) said that a student who has problems with their hearing is called deaf children. Deaf people are divided into two categories, namely, deafness and hearing loss (Soemantri 2006: 97).

From the statement above, it can be said that hearing impaired is a person who loses the ability to hear so that inhibits the process of language information through hearing, whether using or not using hearing aids. While someone who is not listening is someone who usually using hearing aids, the remaining hearing is enough to enable the success of the process of language information through hearing.

The deaf children who are in the process of growth and development experiencing abnormalities or deviations physical, mental, intellectual, social, compared with children his age or age. The limitations of deaf children in the disturbance/damage that makes them have limitations in accessing the sounds/sounds.

Therefore, the learning media in the learning/teaching process for the Children of Special Needs is important so that they can receive and understand the material presented by the teacher. But in utilizing the learning media, we must really pay attention to the type of media used, to fit the needs and characteristics of children with hearing impairment. So that the learning/teaching process can take place well, interesting (not boring) and easy to understand.

The deaf Children have limitations in speaking and listening, learning media suitable for the Deaf Children is visual media and how to explain it with lip language/lip motion. Examples of learning media that can be used for children with hearing impairment are as follows:

1. Visual Stimulation Media
2. An articulation mirror, used to develop visual feedback by viewing/controlling the student's own self-articulation organs, or by equating the movement/position of the organ of articulation itself with the position of the teacher's articulation organs.
3. Original or artificial objects.
4. Pictures, either loose pictures or collective images.
5. Pair the word.
6. Images with writing, etc.
7. Auditory Stimulation Media.
8. Speech Trainer, which is an electronic tool to train children talk with the auditory sensory barrier.
9. Musical instruments, such as: drum, gong, flute, piano/organ/harmonica, tambourine, trumpet, and so on.

10. Tape recorder to listen to sound recordings of background sounds, such as: the roar of a car, the roar of a motor, the sound of a car horn or a motor, a dog bark and so on.
11. Various other sound sources, among others: Sound of nature: the wind roar, splashing rain water, the sound of lightning, etc.

Noteworthy of the deafness is the barrier of data communicates, while communication is very important in everyday life. The fact that a deaf child cannot hear makes it difficult to understand the language spoken by others, and because they cannot understand the language orally they cannot talk if they are not trained to speak.

Speech in children with hearing impairment is a characteristic that makes it different from normal children. What can enable a deaf child to speak and is a fundamental factor is the introduction to what might enable learning to speak from the people around him. They must understand the language spoken by others. They also know that talking is a very useful thing in life even if it takes a lot of practice for a long time. For that educators need to give understanding to parents that children deaf need to understand the language before they learn to speak.

Normal-hearing children understand the language through his hearing in months before they start talking. People who hear it takes time to understand other people's talk. Moreover, children with hearing impaired to understand the language does not surf child hearing, and to understand the talk must go through certain stages of exercise.

Due to lack of hearing function, the deaf students divert his observation to the eyes, and then the deaf child is referred to as "A Gold People". Through the eyes of the deaf child understands oral or spoken language, in addition to seeing the movements and facial expressions of the other person's eyes hearing the deaf is also used to read the lip motion of the person who speaks. In children hearing it is not very important, but in children with hearing impaired to understand language is very important. For that reason, deaf children need more time. How much time does a deaf child need to learn to understand the language of others and to learn to speak. This is dependent on the ability of each individual as well as the help of the people around them.

The development of Information and Communication Technology (ICT) or Information and Communication Technology (ICT) in the last few decades runs very fast in line with the development of telecommunication technology, including computer networks. Various technologies and supporting applications have also been developed as an effort to support and facilitate human and organizational life activities, including teaching and learning activities in education. In dealing with the development and progress of Information and Communication Technology (ICT), the teachers are required to master Information and Communication Technology (ICT) in order to develop learning materials based on Information and Communication Technology (ICT) and utilizing Information and Communication Technology (ICT) As a medium of learning. The goal is to provide students with wider ease and opportunities.

The presence and advancement of Information and Communication Technology (ICT) in the current era of global communications has provided opportunities and expansion of interaction between teachers/experts and students, among students, between students and learning

resources can occur anytime and anywhere without being limited by space and time. In addition, with the help of Information and Communication Technology (ICT) the process of delivering and presenting learning materials and ideas can become more interesting and fun. On the other hand, the presence of Information and Communication Technology (ICT) as a new technology challenges lecturers and teachers to master it so they can choose and utilize Information and Communication Technology (ICT) effectively and efficiently in the learning process they manage. In this case, the professionalism of a teacher includes not only the ability to teach students, but also the ability to manage information and the environment (which includes learning places, methods, media, appraisal system, and facilities and infrastructure) to facilitate student learning activities so that it becomes easier. Since the development of science and technology, especially Information and Communication Technology (ICT), has enriched the resources and instructional media in various forms such as textbooks, modules, OHP transparencies, PowerPoint slides, pictures/photos, animations, movies/videos, Television, radio broadcasts, hypertext, Web pages, computer-assisted learning programs, and learning support software applications, then a professional teacher must be able to select, develop and utilize various types of learning media by utilizing the sophistication of Information and Communication Technology (ICT).

The use of computer technology has contributed greatly to the learning process, one of which is by clarifying and facilitating such diverse material and providing concrete examples. In another sense the computer can be utilized as a medium of learning. Benefits of computers for educational purposes according to Arsyad (2002: 15), there are:

1. Computers can accommodate students who are slow to receive lessons as they can provide a more affective climate in a more individualized, never forgetful, never bored, very patient way of executing the instructions the program wants to use.
2. Computers can stimulate students to do the exercises, perform laboratory activities or simulations, because the availability of animated graphics, color, and music that add realism.
3. Control is in the hands of students so that the rate of student learning can be adjusted to the level of mastery. In other words the computer can interact with students individually for example by asking and assessing answers.
4. The ability to record student activities during the use of the teaching program provides a better opportunity for individual learning and the development of each student can always be monitored.
5. Can connect with, and control other equipment such as compact disc, video and others with control program from computer. Based on the characteristics and benefits of the computer can be expressed the advantages of computer media. By using multimedia technology, various existing conventional media can be integrated into one type of interactive media, such as text media (whiteboard), audio, video, which if separated will require more media. Interactive Multimedia Technology enables users to browse teaching materials, according to their knowledge capabilities and backgrounds, while making users more comfortable in studying media content, over

and over again. Simulation and visualization is a special function owned by Interactive Multimedia, so with animation technology, computer simulation and visualization will get more real information from abstract information. In some curriculum requires a complex, abstract, dynamic and microscopic process, so that by simulating and visualizing the learner will be able to develop the mental model in its cognitive aspect.

By using the teaching media and learning English based on Communication and Information Communication Network (ICT) and Elearning.Kaymedia.net this can also bridge the problem of limited ability of students' absorption and limited ability of a teacher in teaching and learning process in class, to understand and give treatment According to individual student characteristics.

During this learning is constrained because the number of students who follow the class does not match the number of adequate computer in school. This makes the learning is not optimal, because the data and information delivered to students is not maximal. In this case, some cases are noteworthy. Is the presence of some "slow" students. "A slow student does not mean he is stupid, he or she may be intelligent but just a little slow in accepting direction," "This is where the role of teaching and learning media based on the Communication and Information Communication Network (ICT) and Elearning.Kaymedia.net Exclusively as a learning tool for the ability to hear the disturbance of students is expected to be able to understand the meaning of words to students deaf, because learning style is just a technical problem", By developing teaching media and learning English based Communication Network Information and Communication (ICT) and Elearning.Kaymedia .net is used exclusively as a learning tool for the ability to hear students' disturbances in understanding the meaning of words to deaf students. In addition to having a number of advantages of Information Communication and Communication Network (ICT) and Elearning.Kaymedia.net as a means of interactive communication also has several weaknesses. The first weakness is that students are required to access learning by using internet network, such as WiFi, WLAN and so on.

This means Web-based learning (E-Learning) Web-based learning is a learning activity that uses media sites (websites) that can be accessed through the Internet network. Web-based learning or also known as web based learning is one type of electronic learning (e-learning). Association of American Society for Training and Development (ASTD) (2009), said that e-learning is a process and activity of web based learning, computer based learning, Virtual classes (virtual classrooms) and/or digital classes (digital classrooms). The materials in the event are mostly delivered through internet, intranet, video or audio tapes, satellite broadcasting, interactive telecommunication and CDROOM. This definition also states that the definition of e-learning can vary.

According to Michael (2013: 28) the Characteristics of e-learning are as follows:

1. Interactivity (interactivity), the availability of more communication channels, either directly (synchronous), such as chat or messenger or indirect (asynchronous), such as forums, mailing lists or guest books.

2. Independency (independence), flexibility in the aspects of providing time, place, teachers and teaching materials. This makes learning more student-centered learning.
3. Accessibility (Accessibility), learning resources are more easily accessed through distribution on the Internet network with wider access than the distribution of conventional learning resources.
4. Enrichment, learning activities, presentation of learning materials and training materials for enrichment, enables the use of information technology tools such as streaming video, simulation, and animation. In e-learning the ability of students to take learning materials is no longer dependent on teachers/instructors, because students construct their own knowledge through teaching materials delivered through the website interface. E-learning can also be applied in conventional education and distance learning. Web based learning is one form of e-learning that the material (content) and how send (delivery method) via the internet (web). Web-based learning often has benefits for learners, when properly designed and precise, then web-based learning can be a fun learning, has a high element of interactivity, causing students to remember more subject matter, as well as reduce operational costs that are usually issued By students to follow the lesson.

Web-based learning provides flexibility for learning accessory activities. Delivery of course material no longer depends on physical media such as printed books or CD-ROOM. Learning materials in the form of digital data that can be decoded through electronic devices, such as computers, smart phone, or other electronic devices.

In addition there are other advantages of web-based learning. Rusman (2011: 41) suggests some advantages of web-based learning as follows:

1. Allow anyone wherever, whenever, to learn anything.
2. Learners can learn in accordance with the characteristics and steps themselves, because web-based learning makes learning become individual.
3. Ability to create links (links), so that learners can access information from various sources, both within and outside the learning environment.
4. Very potential as a learning resource for learners who do not have enough time to learn.
5. Can encourage learners to be more active and independent in learning.
6. Provide additional learning resources that can be used to enrich learning materials.
7. Provide a search engine that can be used to find the information needed.
8. The content and subject matter can be updated easily.

In addition to some of these advantages, web-based learning also has a weakness, namely the lack of direct interaction between students and teachers caused by many technical factors. Some of the shortcomings of web-based learning are:

1. The success of web-based learning is highly dependent on students' self-reliance and motivation,
2. Access to follow learning by using the web is often a problem for learners.

3. Learners can quickly get bored and bored if they cannot access the information, due to inadequate adequate equipment and sufficient bandwidth.
4. It takes a guide for learners to search for relevant information, because the information contained on the web is very diverse.
5. By using web-based learning, learners sometimes feel isolated, especially if there are limitations in communication facilities.

From the advantages and advantages of learning by using the medium of teaching and learning of English based Communication and Information Communication Network (ICT) and Elearning.Kaymedia.net which is used exclusively as a learning tool to the ability to hear students' disturbance in understanding the meaning of the words of students independently Can determine when to learn. If they cannot be present in the classroom, due to illness for example, they can still see some of the material left behind that is provided face-to-face by accessing them online, so they can still stay actively involved and not miss the material from their friends. This Communication and Information Communication Network (ICT) and Elearning.Kaymedia.net is very useful for students because this teaching design offers the convenience of learning provided online and face to face. When students lack understanding of a subject matter, they can discuss it directly in the classroom or online.

RESEARCH METHOD

Research method used in this research is research and development that is research used to produce certain product, and test the effectiveness of the product. The main objective of this research is to develop the teaching and learning media of English based on Communication and Information Communication Network (ICT) and Elearning.Kaymedia.net which is used exclusively as a learning tool for the ability to listen to students' disturbance in understanding the meaning of words to the students XI SMALB Negeri Pringsewu Lampung.

RESEARCH STAGES

The development model used in developing this instructional design is ADDIE (Analysis, Design, Development, Implementation, and Evaluation). The development model can be described as the following diagram:

Procedure of development that will be done in research and development model in this research is as follows:

1. ANALYSIS

During the analysis, the designer identifies learning problems, goals and objectives, student needs, existing knowledge, and other relevant characteristics. The analysis also considers the learning environment, constraints, and material choices.

2. DESIGN

By designing the model design format and discussing with English teacher SMALB Negeri Pringsewu Lampung and consult with experts to make the resulting model feasible to be used to research subject.

3. DEVELOPMENT

Conducted based on analysis of preliminary study results and previous research theoretical study which subsequently used to develop hypothetical model of learning on the ability to hear students' disturbance in understanding the meaning of words to students of class XI SMALB Negeri Pringsewu.

4. IMPLEMENTATION

During the execution, the plan was used to obtain the product in the form of application-based learning model of Communication Communication and Information Network (ICT) and Elearning.Kaymedia.net which is used exclusively as a learning tool for the ability to listen to students' disturbances in understanding the meaning of words to students of class XI SMALB Negeri Pringsewu Lampung.

5. EVALUATION

This stage consists of (1) formative and (2) summative evaluation. Formative evaluation is present at each stage of the ADDIE process. The summative evaluation consists of tests designed for items related to the criteria and providing feedback opportunities from users. Revised results of a limited trial should be done. By revising the hypothetical model derived from the input to re-construct related to the material construct and implementation of the application model based on the Communication and Information Communication Network (ICT) and Elearning.Kaymedia.net which is used exclusively as a learning tool for the ability to hear students' disturbance in understanding The meaning of words to students of class XI SMALB Negeri Pringsewu Lampung.

Location, Population, and Sample Research

Place or location of research conducted at SMALB Negeri Pringsewu Lampung. The population in this study were all students of the class of Deaf XI SMALB Negeri Pringsewu Lampung academic year 2016/2017 which has 1 class with 4 students.

The sampling technique used in this research is the simple technique of Saturation is the technique of determining the sample when all members of the population are used as a sample. This is often done when the population is relatively small, less than 30 people, or research that wants to make generalizations with a very small error (Sugiyono, 2011: 68). While for this research sample is student of Deafness of class XI SMALB Negeri Lampung academic year 2016/2017 which identified have low listening ability. In determining the sample of research, the thing done is to identify students who have low listening ability in schools through research instruments that have been judgment by experts.

Research Variables and Operational Definition of Variables

In this study there are two variables, namely the independent variable and the dependent variable. The independent variables in this research is the application of Communication and Information Communication Network (ICT) and Elearning.Kaymedia.net, while the dependent variable in this research is students of Class XI SMALB Negeri Lampung Year 2016/2017 which identified have low listening ability.

Development of Research Instrument

The data collected in this study is data about learning to the ability to hear the hearing impaired students in understanding the meaning of words in the school environment SMALB Pringsewu Lampung developed by the researchers themselves based on the study of the theory of hearing impairment, the explanation that exist on aspects and indicators mentioned above, The researcher compiled the lattice of the questionnaire's ability to hear the deaf students in understanding the meaning of words in the school environment SMUNB Negeri Pringsewu Lampung as the basis for preparing the statement items in accordance with the explanation of meaning on each indicator in question

DATA COLLECTION TECHNIQUE

Data collection techniques used in the form of a questionnaire, as an instrument of case identification in the form of checklist list in the answer column that aims to respondents can easily fill in the answer in accordance with the answer choice. At the same time, the questionnaire identification of students' hearing impairment ability in the school students of SMALB Negeri Pringsewu serves as a data collector (pre-test) before being given the use of Information Communication and Communication (ICT) and Elearning.Kaymedia .net data (post-test) after giving the treatment.

Data Analysis Technique

Data on English learning problem based on Communication and Information Communication Network (ICT) and Elearning.Kaymedia.net which is used exclusively as a learning tool for the ability to listen to students' disturbance in understanding the meaning of words to students of class XI SMALB Negeri Pringsewu Lampung which is analyzed with Using the NonProbably simple Saturation approach is the technique of determining the sample when all members of the population are used as a sample. Data analysis technique used is by using t test or t-test. This t-test is a test of average difference that is commonly done by researchers who intend to examine the effectiveness of a treatment in changing a behavior by comparing the state before the condition after the treatment is given (Furgon, 2009: 174).

FINDINGS

The role and function of Communication and Information Communication Network (ICT) and Elearning.Kaymedia.net which is used exclusively as a learning tool for the ability to hear students' disturbance in understanding the meaning of words to students of class XI SMALB Negeri Pringsewu Lampung are:

1. Elearning.Kaymedia.net can accommodate students who are slow to receive lessons because it can provide a more affective climate in a more individualized way, never forget, never bored, very patient in carrying out instructions as desired program used.
2. Elearning.Kaymedia.net can stimulate students to do the exercises, perform laboratory activities or simulations, because the availability of animated graphics, color, and music that add realism.

3. Control is in the hands of students so that the rate of student learning can be adjusted with the level of mastery. In other words Elearning.Kaymedia.net can interact with students individually for example by asking and assessing answers and discussions.
4. The ability to record student activities during the use of the Elearning.Kaymedia.net teaching program provides a better opportunity for individual learning and the development of each student can always be monitored.
5. Can connect with, and control other equipment such as compact disc, video and others with control program from

CONCLUSION

From the previous description of instructional media application and learning of English based on Communication and Information Communication Network (ICT) and Elearning.Kaymedia.net which is used exclusively as a learning tool for the ability to hear students' disturbance in understanding the meaning of words to students Class XI SMALB Negeri Pringsewu Lampung can be concluded as follows:

1. An application has been made of instructional media and learning of English based on Communication and Information Communication Network (ICT) and Elearning.Kaymedia.net which is used exclusively as a learning tool for the ability to hear students' disturbance in understanding the meaning of words to students of class XI SMALB Negeri Pringsewu Lampung consisting of materials, mentioning their own names, addressing home addresses, answering questions about friend names, answering questions about a friend's home address, applying the use of the word "he" to appoint a male friend, applying the use of the word "she" "To appoint a girl friend, to a simple conversation about introductions, and to be equipped with practice questions and quizzes.
2. The application of teaching and learning media of English based on Communication and Information Communication Network (ICT) and Elearning.Kaymedia.net as one of the different learning media from the existing media. This application is a web-based learning which is a learning activity that used media sites (websites) that can be accessed through the Internet network. Web-based learning or also known as web based learning is one type of electronic learning (e-learning). Which means web-based learning often has benefits for learners, if designed well and precisely, then web-based learning can be a fun learning, has a high interactivity elements, causing students to remember more subject matter, and reduce operational costs Usually issued by students to follow the learning.
3. The application of teaching and learning media of English based on Communication and Information Communication Network (ICT) and Elearning.Kaymedia.net make lessons more interactive. So making this aplikasisi effective if used exclusively as a learning tool to the ability to hear students' disturbance in understanding the meaning of words to students of class XI SMALB Negeri Pringsewu Lampung. This can be because every person anywhere, anytime, to learn anything, Learners can learn according to the characteristics and steps themselves, because web-based learning or Elearning.Kaymedia.net is able to make the learning becomes individual. In addition, the ability to create links

(links), so that learners can access information from various sources, both within and outside the learning environment. Very potential as a learning resource for learners who do not have enough time to learn. Can encourage learners to be more active and independent in learning. Provide additional learning resources that can be used to enrich learning materials. Provide search engines that can be used to find the information needed. This can be seen from the presentation of student grade increase which previously 5 increased to 7.5

REFERENCES

- _____. (2006). *Keterampilan Kompensatoris Bagi Anak Dengan Gangguan Penglihatan (Tunanetra) dan Gangguan Pendengaran (Tunarungu)*. Jakarta: Direktorat Pembinaan Sekolah Luar Biasa.
- _____. (2004). *Statistik Nonparametris untuk Penelitian*. Bandung: Alfabeta.
- _____. 2011. *Model-model Pembelajaran*. Jakarta: Rajawali Pers
- Abdurrahman, Mulyono. 1999. *Pendidikan Bagi Anak Berkesulitan Belajar*. Jakarta: Rineka Cipta.
- Allen, Michael. 2013. *Michael Allen's Guide to E-learning*. Canada: John Wiley & Sons.
- Arikunto, S. (2003). *Dasar-dasar Evaluasi Pendidikan*. Jakarta: Bumi Aksara.
- Arsyad, A. 2002. *Media Pembelajaran, Edisi 1*. Jakarta: PT. Raja Grafindo Persada
- Bunawan, L. dan Yuwati, SC. (2000). *Penguasaan Bahasa Anak Tunarungu*. Jakarta: Yayasan Santi Rarna.
- Delphie, Bandi. 2006. *Pembelajaran Anak Berkebutuhan Khusus*. Bandung: Refika Aditama.
- Depdiknas. (2006). *Standar Kompetensi dan Kompetensi Dasar*. Jakarta: BNSP.
- Hallahan, P.D. dan Kauffman, M.J. (1991). *Exceptional Children (Introduction to Special Education), Fifth Edition*. University of Virginia: Prentice-Hall International, Inc.
- <http://misspeanut25.blogspot.co.id/2014/10/makalah-strategi-pembelajaran-bagi-anak.html>
- <http://nanaplb11.blogspot.co.id/2013/01/strategi-pembelajaran-anak-berkebutuhan.html>
- <http://www.scribd.com/doc/33212130/Peranan-Pendidikan-Teknologi-Informasi-Dan-Komunikasi-Bagi-Penderita-Tunanetra#scribd>
- <https://labpuguh.wordpress.com/2014/12/19/implementasi-multimedia-pembelajaran-di-sekolah-luar-biasa/>
- Keraf, G. (1984). *Tata Bahasa Indonesia*. Jakarta: Nusa Indah.
- Miarso, Y. (2004). *Menyemai Benih Teknologi Pendidikan*. Jakarta: Kencana Prenada Media Group.
- Mulyana, D. (2007). *Ilmu Komunikasi*. Bandung: Remaja Rosda Karya.
- Rusman, Kurniawan .2011. *Pembelajaran Berbasis Teknologi, Informasi dan Komunikasi*. Jakarta: PT Raja Grafindo Persada
- Rusman, Kurniawan .2011. *Pembelajaran Berbasis Teknologi, Informasi dan Komunikasi*. Jakarta: PT Raja Grafindo Persada
- Rusman, Kurniawan. 2011. *Model-Model Pembelajaran*. Jakarta: Rajawali Pers
- Sadjaah, E. (2003). *Pendidikan Bahasa bagi Anak Gangguan Pendengaran Alam Keluarga*. Bandung: San Grafika.
- Soemantri, T.Sujihati . 2006. *Psikologi Anak Luar Biasa*. Bandung: Refika Aditama.
- Soemantri, T.Sujihati . 2006. *Psikologi Anak Luar Biasa*. Bandung: Refika Aditama.

- Somad, P. dan Herawati, T. (1996). *Ortopedagogik Anak Tunarungu. Proyek Pendidikan Tenaga Guru*. Depdikbud, Dikti.
- Somad, P. dan Tarsidi, D. (2008). *Dampak Ketunarunguan Terhadap Perkembangan Individu*. (Online). Tersedia: <http://permanarian16.blogspot.com/2008/03/dampak-ketunarunguan-terhadap.html>
- Sudjana, N. dan Rivai, A. (2007). *Media Pengajaran*. Bandung: Sinar Baru Algresindo.
- Sugiyono. (2010). *Metode Penelitian Kuantitatif, Kualitatif dan R & D*. Bandung: Alfabeta.
- Yuniarti, Fatma. 2017. *Pemanfaatan Elearning*. Kaymedia.net