DEVELOPMENT OF SOCIAL MEDIA LEARNING ENGLISH VOCABULARY THROUGH SIGN LANGUAGE FOR THE DEAF STUDENTS

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Abstract: *This research examines the development of social media for learning English vocabulary using sign language as a learning method for deaf students. With the advancement of technology and the incorporation of social media into the learning process, this study investigates how to use Instagram social media effectively to improve English vocabulary comprehension for students with deaf students using the Analysis, Design, Development, Implementation, and Evaluation (ADDIE) development model procedure. The research targets are seven deaf students from SLB Negeri 02 Jakarta. Through the development of social media learning English vocabulary through sign language, students can learn English vocabulary by learning alphabets, names, numbers, and day names more easily. The results of this study show that learning videos developed through social media, particularly on Instagram, are beneficial for deaf students who grasp foreign language learning materials, especially sign language using American Sign Language (ASL). The reviewers also gave the learning videos a feasibility evaluation, and they were pronounced appropriate for learning. As for the results of student tests, it is shown that the names and days show that the results of student test answers are all correct. However, in the number section, only three errors were found, and then in the alphabetical section, there were five errors. Developing technology-based learning media with microlearning methods, primarily through Instagram, can help deaf students learn English. This opens opportunities for developing more exciting and relevant learning content to facilitate English learning for students with special needs.*

Keywords: *Microlearning, Learning Videos, Deaf students*

INTRODUCTION

Learning a language is fundamental for humans to be able to communicate. Especially in this era of globalization, learning international languages such as English is needed for communication and information

with international parties because English is essential to facing various challenges in this modern era (Mika & Mardiana, 2023). English has been taught to kids since elementary school to educate them on how to use foreign languages (Pangestika, et al., 2017). This research is concerned with the social, scholastic, economic, cultural, physical, and psychological development of individuals to produce citizens who can contribute to society.

There are numerous facilities or instruments to utilize English in this current period. One of them is that the information on social media today frequently employs English. The use of technology could be the one to assist teaching and learning, also to facilitate and produce educational material (Palupi & Mayuni, 2023). However, there are still many people who struggle to acquire English, particularly those who are deaf or hard of hearing. (Adi et al., 2017). Deaf people are people who have difficulties hearing as well as speaking, and they are thus considered silent. (Rahmah, 2018). This causes their inability to learn materials related to listening skills. Therefore, a new and effective learning media is needed to overcome the problems experienced by people who are deaf or hard of hearing. One alternative is to create technology-based learning media based on media often used by deaf people daily, such as using sign language to communicate.

Based on data from the Coordinating Ministry for Human Development and Culture of the Republic of Indonesia (2023), it is stated that 22.97 million people have disabilities. Data from Statistics of Special Schools (2022-2023) states that the number of people with disabilities, especially people who are deaf or hard of hearing, is 27,401 people.

The close relationship between language and technology requires every aspect of life to make changes, including education. This needs to be done to utilize technology, especially social media, in conducting learning activities, one of which is to increase vocabulary knowledge in English for people who are deaf or have deaf students. To enhance communicative competence, educators require exciting, creative, and effective learning strategies and media that may assist educators in achieving the targeted competency of learning, one of which is by using social media as a microlearning-based learning medium.

Currently, the microlearning method is considered more effective to be used as a learning media. According to Chaeruman in article Chapter 4 Techniques for Conducting Internet-Based Information Searches (Information Retrieval System), Microlearning must be presented in the form of videos, texts, articles, modules, or learning using games that are easily accessible and ready whenever needed, specifically for videos of at least no more than 10 minutes duration, and content must be sorted based on quality, relevance, usefulness, and accuracy (Safii, 2023). Microlearning is one of the learning approaches that may be applied in practice. Microlearning is a learning method that is presented in the form of small fragments of learning units (bite-sized) that are short and focus on one learning topic (Marti & Ariani, 2023). Instagram, for example, may be utilized as microlearning learning material.

The usage of ordinary language is one of the most crucial components of learning English that students must acquire to communicate effectively in everyday situations. Good learning contains exciting content and fun activities and can allow students to use their abilities (Palupi, 2017). The use of microlearning can facilitate deaf people in learning English. This method can foster learning motivation for people who are deaf or hard of hearing. By completing the smallest piece of subject matter, people who are deaf or hard of hearing will feel motivated to move on to the next piece of material and continue to improve their English language skills.

The microlearning system must be used to produce more engaging learning and teaching activities, particularly in language learning. Thus, the authors use one application for microlearning, namely Instagram. The use of microlearning in the development of English vocabulary learning content is intended to aid deaf persons in learning English. Therefore, researchers are trying to develop learning media for deaf students to improve their abilities, particularly in English. The problems that need to be addressed are as follows:

1. How to overcome difficulties in learning a foreign language using ASL sign language for deaf people?
2. How effective is the use of learning videos as a learning medium, especially for deaf people?

LITERATURE REVIEW

Microlearning

Microlearning linguistically means learning something that is done on a small scale. Micro, which has a short or small meaning, refers to the form or concept of the material delivered in the learning method. Experts understand the concept of microlearning. Microlearning is a short, independent, and informal learning experience (Allela, 2021). Microlearning is one of the proper learning methods for students who are not interested in spending time attending classes but prefer to immediately use or apply the skills acquired (Buhu & Buhu, 2019).

In addition, concerning the concept of microlearning aimed at addressing various challenges, such as the increasing needs of learners and the acceleration of technology and training that cannot be matched, it is greatly beneficial for individuals who need easy access to information and answers quickly anytime and anywhere. This refers to the reason microlearning is particularly useful in education. Microlearning can contain learning that is easier to understand and remember for a long time. Microlearning can solve education as technology develops (AlShehri, 2021).

Platforms Used for Learning Media

Instagram (Reels)

Instagram is a platform for sharing images and videos. Instagram offers a variety of features, including filters, snapgrams, IGTV, and the newly added Instagram Reels. Instagram has developed a creative environment for users to create and share short videos with others, called Instagram Reels. This feature offers creative options, allowing users to make the best videos possible. Instagram Reels is a quick and straightforward approach to engaging audiences and communicating the video's message. The authors anticipate that Instagram reel videos of 15 to 60 seconds will allow students to learn new material quickly (Saputri et al., 2021).

The advantages of the Instagram Reels feature are its exciting and diverse tools and support as a learning medium for literature and non-literature. In addition, in English Language Study FKIP UIA, stated that Instagram is a suitable media to learning English (Pertami, et al., 2023). Students' utilization of the Instagram reel feature can help them explore IT skills by using this feature as a learning tool (Sari, 2021).

English Vocabulary

Language is a means of communication, lexical knowledge or language vocabulary knowledge becomes the main thing in language learning. According to Schmitt, cited in the article Student Strategies in Learning English Vocabulary, lexical knowledge is central to communicative competence and second language acquisition. Vocabulary learning is essential because vocabulary learning is only done in the classroom with practice outside the classroom (Holidazia & Rodliyah, 2020). The vocabulary contained in English is not much different from Indonesian, namely Nouns, Verbs, Adjectives, and others. However, in the research conducted this time, the learning content to be produced is in the form of microlearning videos about alphabets, names, numbers, and dates of birth so that the level of material provided is still about general knowledge.

Deaf

According to Wasita, cited from the article Development of Indonesian Sign Language (*Bahasa Isyarat Indonesia: Bisindo*) Learning Videos for Deaf students in Extraordinary Elementary Schools, deafness is a term for people who are less able or have difficulty hearing from mild to severe (Anugerah et al., 2020). Although people who are deaf or hard of hearing have average intelligence, deaf learning is still different from other normal children. The hearing loss that deaf people have results in communication with others often misperceived, especially if learning uses verbal. Although deaf children have been given a hearing aid, deaf children still need special education services (Asrori, 2020).

The characteristics of people who are deaf or hard of hearing in general, quoted from the book Educational Psychology Multidisciplinary Approach (Asrori 2020), are:

1. Unable to hear

2. Language development that is postponed or occurs later than expected.
3. Frequently employ gestures as a means of communication.
4. The individual exhibits less responsiveness while engaged in conversation and their speech is characterized by unclear articulation.
5. Unusual/monotonous vocal timbre
6. Regularly inclines head when attempting to perceive sound
7. Considerable focus on vibration
8. There is a discharge of pus from the ear.
9. An organic anomaly is present in the ear.

Sign-Language

Sign language is a form of communication that makes use of body language, such as facial and hand motions. Sign language has many different varieties, depending on the country. This is because each country's sign language has a different meaning or is not the same. Sign language also has an icon on each word so that the words applied in one country cannot be equated with other countries. In this research, the learning content will only focus on American Sign Language (ASL) because the learning model that researchers will use focuses on developing English vocabulary content on social media. Therefore, the sign language used is American Sign Language (ASL). ASL is a sign language used to communicate English with an American accent using body sign language (Valli & Lucas, 2000). It should be noted that many people have often used English for deaf children's communication through ASL (Chamberlain & Mayberry, 2000; Geers & Schick, 1988; Mayberry, 1989; Padden, 2000), even in America since elementary school has been made the goal to be able to learn English with ASL (Humphries & MacDougall, 2000).

METHOD

Type of Research

This research is a type of development research using the Analysis, Design, Development, Implementation, and Evaluation (ADDIE) development model procedure. The ADDIE model for designing learning systems ADDIE has been developed (Dick, W. and Carey, L., 1996). Development of the research is oriented towards product development where the development process is described as rationally as possible and structured continuously. The materials developed are English vocabulary materials through sign language for people who are deaf or hard of hearing.

Population and Sample

Seven SLB Negeri 02 Jakarta students were the target of population. The students who participate as observers are three guys and four girls. They are all between the ages of 12 and 14.

This study's sample data is material with the topic of alphabets, names, numbers, and dates of birth, with the goal of using this content to teach English to hard of hearing students. They may utilize this video to learn English and grasp these concepts.

Research Methods

This study uses the research and development method. The research and development method is a research method used to produce certain products and evaluate the effectiveness of the products that have been produced, while the definition of research and development methods, according to (Gay, 1990), is an attempt to create an effective product that will be utilized as learning resources and learning methodologies rather than to test the theory. According to these two definitions, research and development is a process for developing and testing educational goods. The ADDIE uses as the step of implementing the research and development method which first is analysis, design, development, implementation and evaluation.

Data Collection Techniques

The data collection technique used to collect data in this study is that the researcher conducts an exploration stage by investigating and analyzing several sources, namely vocabulary materials in English for the deaf students and consulting with the reviewers. This stage consists of the phases of need analysis, literature study, theory development and the characteristics of people who are deaf or hard of hearing.

1. Needs Analysis
   The Needs Analysis was conducted by collecting all information to find the needs of deaf students in knowing vocabulary in English. Data was taken through observations made at the SLB Negeri 02 Jakarta school, then interviews with several students were conducted.
2. Literature Study
   Literature study is the first step in the data collection method. Literature study is a data collection method directed to the search for data and information through documents, both written documents, photographs, images, and electronic documents that can support the writing process. Research results will also be more credible if supported by photographs or existing academic and artistic papers (Sugiyono, 2005). A literature study can affect the credibility of the results of the research conducted.
3. The Use of Theory

The use of theory stage is done by collecting concepts used to develop vocabulary materials in English for people who are having hard of hearing. The material to be learned by deaf children is divided into 4 parts consisting of:

a. Alphabet letters
   This is the initial basis for learning vocabulary material because deaf students will learn the letters of the alphabet found in American Sign Language (ASL).
b. Name
   The second material to be learned is names. The deaf students will learn to convey their name using ASL sign language.
c. Numbers
   The next material is numbers. This material is important material to learn so that the deaf students know how to say numbers with ASL sign language.
d. Names of the Day
   The last thing deaf students will learn is the day. This is learned so the deaf child can say the names of the days.

RESULTS

Analysis

The researcher has conducted a study involving two deaf students, V and L, aged 12 and 13, from SLB Negeri 02 Jakarta, grade seven. Both students have the same classification of deafness, which is severe, and in the process of filling out the questionnaire, both students were accompanied by an accompanying teacher. The researcher could only involve two participants in observing their needs due to the limited number of assistants available at the school.

Figure 1. First Observation to SLB Negeri 02 Jakarta

From the results of the questionnaire that the researcher gave to the two students, the researcher obtained relevant information regarding the use of social media in English learning. Both students currently learn English directly from their teachers, with the support of learning videos and

teaching aids. They also use online platforms, including the WhatsApp application.

The latest English teaching materials they learn are about the alphabet and how to express feelings, which they get from the textbooks provided by the school. In addition, both use devices such as laptops and smartphones. Although they have access to these devices, their ability to access information using technology such as computers and the internet still needs to be improved.

Although both students have social media accounts, they currently do not utilize them for English learning. Instagram is the social media platform frequently used by V, while L uses Instagram and YouTube. However, the researcher also identified some barriers they experience in utilizing social media, including limited social media accounts specifically for people who are having hard of hearing, lack of appropriate content, constraints in device use, internet network issues, and barriers such as lack of interest, limited mobile/computer facilities for learning, and limited internet access costs which V specifically faces.

Their school, SLB 02 Negeri Jakarta, has provided support by providing ICT facilities, regulations on the use of ICT, and digital training for students. In addition, both students' families also play a significant role by providing cell phones, internet access, and assistance in using digital technology devices. All these supports are expected to help students utilize social media more effectively in English learning in the future.

Design

The researcher created a video script for microlearning English learning at SLB Negeri 02 Jakarta. The teaching materials determined to be the topic of the video refer to the needs analysis obtained through observation, namely numbers, alphabet, days, names based on the alphabet, and names based on the unique names of the students.

Figure 2. Designing for Learning Videos

Figure 3. Designing Learning Videos

Development

The researchers developed videos for microlearning English learning at SLB Negeri 02 Jakarta, dividing each topic into numerous videos and producing 60-second videos for each video. The following is a detailed explanation of the video division:

1. Numbers (1 Video)
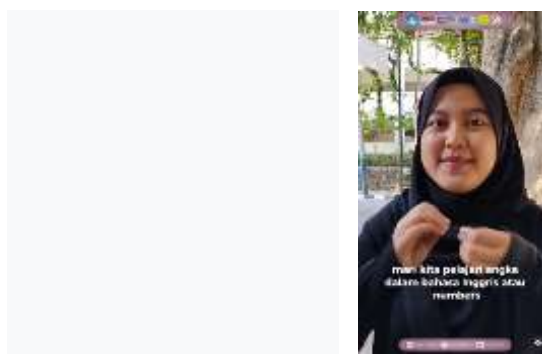

Figure 4. Thumbnail for Learning Videos

Figure 5. Numbers Video
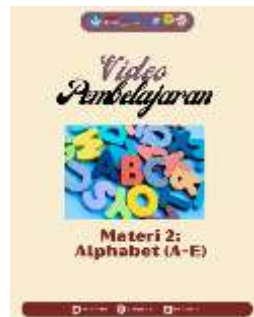
2. Alphabet (5 Video)

Figure 6. Thumbnail for Learning Videos

Figure 7. Thumbnail for Learning Videos

3. Name of Days (2 Video)

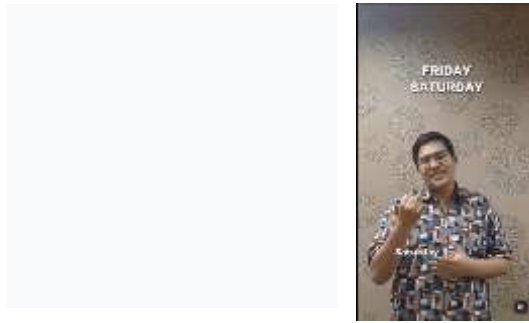
Figure 8. Thumbnail for Name of Days

Figure 9. Name of Days Videos

4. Name Based on Alphabet (1 Video)

Figure 10. Thumbnail for Name Based on Alphabet

Figure 11. Name Based on Uniqueness of the deaf students

5. Name Based on Uniqueness of deaf students (1 Video)

Figure 12. Thumbnail for Name Based on Uniqueness of deaf students

Figure 13. Name Based on Uniqueness of deaf students

Implementation

The researcher implemented the microlearning video for the students of SLB Negeri 02 Jakarta. Students of class 7B SLB 02 Negeri Jakarta were divided into two groups, watched the microlearning English learning video, and then worked on the questions. Based on the implementation of the learning video at SLB Negeri 02 Jakarta school, the results obtained are as follows:

1. Numbers
   From the results of the work of all students, there are some mistakes but only a few, such as six wrong three, five wrong one and six wrong two. This happened only to 2 students who needed clarification in that section, but the rest of the other answers were correct.
2. Alphabet
   1. Student A made two errors, identifying the letter 'N' as the letter 'A', and identifying the letter 'K' incorrectly.
   2. Student B made no mistakes, showing a good understanding of the material.
   3. Student C made no mistakes, showing a good understanding of the material.
   4. Student D made 2 errors in interpreting the letter 'E' and identifying the letter 'K' as 'V'.
3. Names of days.
   The result of working on the problem is that all students answered correctly without errors. This was because this was the first time this material was presented in the lesson. The questions related to the material were not randomized, meaning they appeared in the same order as in the material presented.
4. Alphabetical names and unique Deaf names
   In this session, students are shown a video of how to say their name in ASL and then try to demonstrate. The result of this implementation is that they can spell their names using ASL correctly.

Figure 14. Implementation Learning Videos for Students

Figure 15. The Implementation from The Students

Figure 16. Implementation Learning Videos to Students

Evaluation

Three reviewers guided the evaluation stage. The following are the revaluation results from the reviewers:

Overall evaluation of the learning video:

1. The text in the learning video is relevant to the learning objectives and can stimulate students' interest.
2. The use of font type and font size is considered appropriate, providing an easy-to-read and attractive text display.
3. In terms of visual appearance, the learning video is clear, with appropriate colors and an appropriate image layout.
4. The visual design provides an engaging visual experience for students.

Some of the shortcomings include:

1. The language in the subtitles is too difficult for children with deaf students.
2. Regarding visual appearance, the learning video is relevant to the learning objectives. However, there are recommendations to clarify the speech and design the background with darker and plain colors so that students' focus is more on the learning material.
3. The learning video should also be free from bias and ensure the text is accompanied by how to read in English.

All three reviewers stated that the learning video created and implemented by the researcher was appropriate for English language learning, especially for people who are deaf. There is a comment from the SLB Negeri 02 Jakarta homeroom teacher who said, "The learning videos are good and useful to help deaf students in learning English, but there needs to be more, among others:

1. Writing text on how to read in English.
2. The background is made with dark and plain colors.
3. The viewer wears dark plain clothes.
4. The speech is clarified.
5. The text is included in the space.

Figure 17. Reviewer Evaluating the Learning Videos

As the results of this, it shows that utilizing microlearning techniques and Instagram as a platform, the creation of technology-driven educational materials can effectively facilitate English language acquisition for deaf pupils. This creates possibilities for creating more stimulating and pertinent educational material to aid in the acquisition of English for children with special needs. For example, the utilization of video-based learning, augmented reality, and other assistive technologies has been discovered to enhance the understanding and memory of language among individuals who are deaf (Martin & Cox, 2023).

CONCLUSION

The implementation of microlearning videos in teaching English to deaf students at SLB Negeri 02 Jakarta has demonstrated that the incorporation of ASL (American Sign Language) can effectively address challenges encountered in acquiring a foreign language. The findings suggest that although there were some small inaccuracies in certain domains, such as numerical and alphabetical aspects, most students demonstrated a proficient comprehension and accurate application of the content. ASL, when integrated into structured microlearning video formats, offers a clear and easily understandable approach for deaf students to acquire a foreign language. This enhances their capacity to comprehend and remember innovative ideas. Moreover, the utilization of instructional films has demonstrated to be a successful teaching resource for students with deaf students. The students' performance demonstrates that the movies were highly effective at instructing topics such as the names of days and spelling names in ASL, as evidenced by their exceptional accuracy and comprehension. The efficacy of these movies can be ascribed to their visual and repeated characteristics, which effectively respond to the educational requirements of deaf pupils, enhancing their understanding and memory of the offered content.

Further research should prioritize evaluating the enduring acquisition of foreign language proficiency acquired by ASL-based microlearning videos. Conducting research in various educational environments and with greater sample sizes would provide a more comprehensive insight into their efficacy. An analysis of ASL-based videos in comparison to other instructional techniques can determine the most effective strategies for educating deaf students. In addition, the exploration of modern technologies such as virtual and augmented reality has the potential to enhance the process of learning. Customized educational experiences and evaluating the influence on other disciplines would be highly beneficial. Collecting input from educators and learners can enhance the efficacy of these instructional resources.

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