Challenges of Deaf Students in Online Learning at Universities

Imam Yuwono[1], Mirnawati[2], Dewi Ekasari Kusumastuti[3], Tenty Jahrina Ramli[4]

[1] Special Education, Lambung Mangkurat University, Banjarmasin, Indonesia; imam.plb@ulm.ac.id
[2] Special Education, Lambung Mangkurat University, Banjarmasin, Indonesia; mirnawati.plb@ulm.ac.id
[3] Special Education, Lambung Mangkurat University, Banjarmasin, Indonesia; dewi.kusumastuti@ulm.ac.id
[4] Special Education, Lambung Mangkurat University, Banjarmasin, Indonesia; tentyjahrina@gmail.com

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ABSTRACT

This study describes the challenges faced by deaf students in online learning, focusing on three aspects: internet access and use of media, volunteer assistance, and interaction in online learning. This study uses a qualitative approach with a descriptive method. Sources of data in this study were deaf students and volunteers. Data collection techniques using interviews and observation. Data were analyzed using Miles and Huberman's interactive data analysis model, which consisted of data reduction, presentation, and conclusion drawing. The results of the study describe that 1) deaf students have problems with internet networks and quotas so that they are not optimal in attending lectures, besides that deaf students also experience problems in using learning media used in lectures, for example, in using zoom, and e-learning SIMARI, students Deaf people still have difficulty using some of the features contained in e-learning. 2) volunteers who are tasked with assisting deaf students are active students. The practice of mentoring is not optimal because volunteers also learn from their homes. In addition, the distance between the houses of deaf students and volunteers is quite far, and some are even in different cities. This will further hinder the process of assistance. 3) the lack of assistance by volunteers also has an impact on the interaction of deaf students with lecturers and deaf students with regular students during online learning. This is because not all lecturers can communicate using sign language

Corresponding Author:
Imam Yuwono
Special Education, Lambung Mangkurat University, Banjarmasin, Indonesia; imam.plb@ulm.ac.id

1. INTRODUCTION

At the end of 2019, Indonesia experienced a disease outbreak pandemic. This pandemic is caused by the coronavirus, also known as Covid-19. Since this virus has been endemic in Indonesia. One policy issued by the government is the practice of online learning. Online learning is considered a solution to

overcome difficulties indirect learning with the existence of social distancing rules considering the problems of time, location, distance, and cost that are currently the problem (Kusuma & Hamidah, 2020). In line with the research results of Mukhtar, Javed, Arooj, & Sethi (2020), which explained that online learning provides space for continuous learning practices. But this, of course, must pay attention to several things such as; technological establishment, accessibility, cost, and public literacy (Mukhtar, Javed, Arooj, & Sethi, 2020).

Online lectures are one of the supporters of face-to-face lectures held by each institution. Universities that carry out online lectures, students have many ways when attend lectures, anytime and anywhere (Eom & Ashill, 2016). All online lecture activities such as assignments, material delivery, quizzes, and attendance can also be done online. All lecturers prepare lecture materials online so that students can listen and see the delivery of material from teachers using laptops or cellphones. Online lectures are used to support face-to-face lectures using advances in various technologies to improve quality and quantity (Stack, 2015).

Online learning is a must at every level of education, without exception at universities. The existence of online learning is the center of student learning activities. Students have many ways when attend lectures, anytime and anywhere. All online lecture activities such as assignments, delivery of material, quizzes, and attendance can also be done online (Arkorful & Abaidoo, 2015; Dumford & Miller, 2018). All lecturers prepare lecture materials online so that students can listen and see the delivery of material from the teacher using a laptop or cellphone (Alshamrani, 2019; Xia, 2015).

The practice of online learning does not require the presence of students in class. However, students are given the freedom to access it anytime and anywhere. This applies in general, without exception for students with special needs. In this study, students with special needs refer to students who are deaf. If examined practically, the interaction between educators and students occurs when there is a conversation. On the other hand, if the conversation does not occur, it means that the interaction is getting blocked (Malik & Rana, 2020; Vonderwell, Liang, & Alderman, 2007). Therefore, to work around this online learning practices, deaf students will be accompanied by volunteers.

The limitations of deaf students in undergoing online learning can be viewed from various countries. One of them is research conducted by Aljedaani, W., Aljedaani, M., AlOmar, E. A., Mkaouer, M. W., Ludi, S., & Khalaf, Y. B. (2021), explaining that technological developments used by the community are in fact not friendly to students. with special needs (deaf). Deaf students cannot take advantage of online learning with zoom or google meet. This is because the ability to capture information is focused on sign language, not spoken language (Aljedaani, Aljedaani, AIOmar, Mkaouer, Ludi, & Khalaf et al., 2021).

Meanwhile, as a form of comparative research proposed by McKeown, C., & McKeown, J. (2019), focuses on how online learning problems for deaf students are also faced with accessibility in learning management systems. The fact that the system is established is not able to accommodate the entire student population. There are still deaf students who live in areas far from urban reach. This is in line with research where domicile is a barrier to online learning for deaf students (McKeown & McKeown, 2019). Therefore, based on the research results of Yoon & Kim (2011) that online learning has the potential for deaf students to dig deeper into information. This is because lecturers will allow students to learn independently through case studies, and facts uploaded online. Through online learning, lecturers will adjust the environment and learning resources that are conducive for deaf students (Batanero, De-Marcos, Holvikivi, Hilera, & Oton, 2019). This study aims to describe the challenges faced by deaf students in online learning. This challenge generally covers three things, namely, internet access, volunteer assistance, and interaction in learning. Thus, this research is expected to be able to bridge the ideal online learning practice by considering the needs of deaf students. This is because the limitations possessed by students are something that cannot be avoided in the context of online learning practices.

2. METHODS

This study uses a qualitative approach with a descriptive method. The selection of this method is based on the suitability of the data based on online learning that occurs through the SIMARI ULM page (Fossey, Harvey, Mcdermott, & Davidson, 2002; Merriam, 2002). The research was conducted during the even semesters of 2021-2022 in the Special Education Study Program. Research subjects include deaf students, volunteers, and lecturers in study programs. The data collection technique was carried out with in-depth interviews (Parker, 2004). Based on the stages of collecting interview data, there were five deaf students, three volunteers, and two lecturers. Then to add clarity to the data, this research is supported by the results of learning documentation at SIMARI and several relevant studies (Anderson, 2010; Jackson, Drummond, & Camara, 2007). It is intended to provide a complete description of the data. Miles and Huberman's Interactive Data Analysis Model consists of reducing interview data, presenting data in the form of descriptions, and drawing conclusions (Qu & Dumay, 2011; Sandelowski, 2004).

3. FINDINGS AND DISCUSSION

At the practical level, the online learning system is assisted by several applications, such as; YouTube, Google Classroom, Google Meet, Edmundo, and Zoom. Theoretically, a learning system is said to be online if learning is under direct control from other tools with an integrated system. Its use is available immediately or in real-time, connected to an operating system, and functional or serving. During the implementation of online learning, students have the flexibility of time to study. Students can study flexibly anytime and anywhere without being limited by space and time. Students can also interact with lecturers simultaneously through video calls or live chat. Online learning gives lecturers the freedom to choose the application used. However, based on interviews with R1, lecturers prefer to teach with the zoom application. Lecturers feel that they get a direct response from students who are studying (Interview, November 2021). In this discussion, three aspects will be presented that become challenges in online learning, especially for deaf students. The presentation is as follows:

3.1. Internet Access

Internet network constraints and quota limitations are common problems that most students experience during the implementation of online learning. Internet access is a major obstacle in online learning because, as researchers know, online learning is another term for online learning, which means that during its implementation it requires a good internet network connection. Based on the results of an interview with R2, a deaf student who lives outside the city of Banjarmasin:

Internet accessibility in the Regency area is unstable. This results in the learning videos being inaccessible. In addition, if you use the zoom application, it is often found that the account has to be thrown out of the discussion forum (Interview, November 2021).

Complaints about unstable internet access seem to have become a problem in various regions in Indonesia. As if we compare the results of the research presented by Wahyuningsih (2021), many students are constrained in receiving learning materials due to the unstable internet network so what is conveyed by the teacher is not conveyed optimally. In addition, students from underprivileged families have problems in procuring credit/internet packages/quotas to take part in online learning online (Wahyuningsih, 2021).

Internet access has become a polemic because the implementation of online learning requires a large enough internet and the cost of purchasing a quota is quite expensive. This is coupled with the difficulty of signal carrying capacity or internet network connectivity which is often disrupted due to the students' residences in remote areas and far from cellular signal coverage so that the weak signal obtained by students has an impact on online learning which is less than optimal (Mansyur, 2020; Rahayu & Haq, 2021). Therefore, the carrying capacity of the network is often disrupted so that when conducting face-to-face virtual learning cannot be carried out optimally.

Based on the observations made on November 18, 2021, online learning for deaf students requires the availability of teaching media. Teaching media is used to support the implementation of online learning for deaf students. This is because, with the existence of learning media that supports the learning process for deaf students, it will undoubtedly be easier to achieve the objectives of a lesson that the lecturer will carry out. Based on the results of an interview with R3, a lecturer that:

Currently, the provision of teaching media is still limited to making PowerPoint. So students still have limitations in understanding the meaning of the material because it is still general. However, as an educator, I sometimes add articles related to teaching materials so that deaf students can catch the implied intent of the PowerPoint (Interview, December 2021).

Based on the interview above, it can be understood that the provision of complete teaching media takes time. So, this must continue to be improved both at the level of study programs, faculties, and universities. The documentation during online learning for deaf students can be seen as follows:
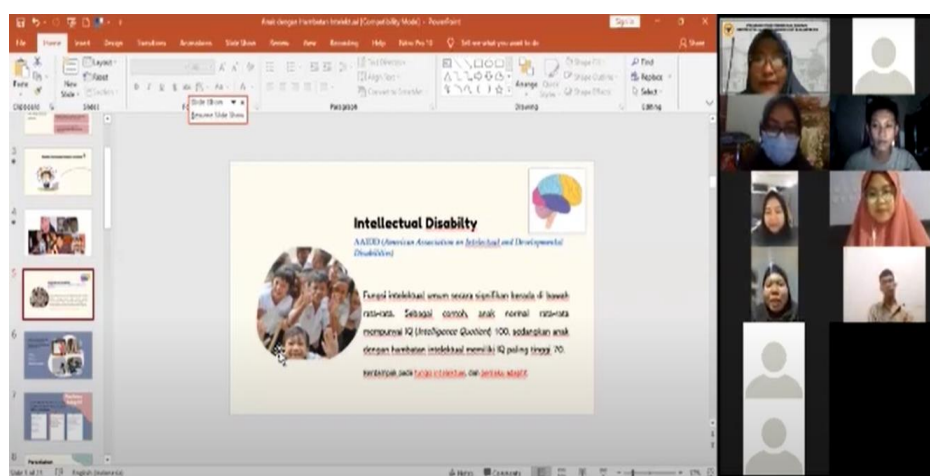

Figure 1 Online learning for deaf students

Source; Research Documentation (2021)

However, in terms of facilities and infrastructure in online learning for deaf students based on observations in October 2021, it is pretty good. This is indicated by the ownership of laptops and cellphones that can support online learning. In terms of application, factually, there are still some deaf students who are still having difficulties because they do not fully understand how to use media in the implementation of online learning, and there are some deaf students who feel that the media used is still not accessible for use by deaf students. In addition, there are several obstacles experienced in online learning, namely the lack of mastery of technology; online learning systems use digital platforms by changing the concept of education to be better, more effective, and more fun with notes that are adjusted to the abilities of each student (Shepherd & Alpert, 2015).

Therefore, the implementation of online learning must be accessible for deaf students and provide digital academic experiences and teaching technology-based learning for students to bridge the gap in the education system (Counselman Carpenter, Meltzer, & Marquart, 2020; Long, Marchetti, & Fasse, 2011). The condition of the house that does not provide a quiet or conducive space for learning makes the implementation of learning hampered because the noise from family members or the community around the house causes students to be less focused on the learning process carried out using online media platforms (Suryaman, Cahyono, Muliansyah, Bustani, Suryani, Fahlevi, & Munthe, 2020). The ability of students to master technology is one of the significant influences on the success of online learning, especially for deaf students, because online learning usually uses several applications such as e-learning Simari, zoom, google meet, what's up, and others. The results showed that some deaf students still had difficulties because they did not understand how to use the learning application. Some

of the perceived difficulties include their difficulty in understanding the features contained in the application.

3.2. *Assistance by Volunteer*

Material content is another essential thing that must be considered in its creation and presentation during online learning so that deaf students easily understand it. The material content presented by lecturers in online learning is still complex for deaf students to understand, both in material content and delivery. This is because there are still terms that deaf students do not understand. Based on the results of interviews with R4:

> *Deaf students also have difficulty when a lecturer explains or gives assignments in scientific terms or in a high-level language that has never been heard or understood by deaf students. Because at the beginning of the lecture or during face-to-face lectures, deaf students get help from a hearing friend (volunteer) to understand new terms (Interview, November 2021).*

The need for more attention to the content of the material presented in online learning to make it easier for deaf students to understand the subject matter is essential. Because by providing short, explicit, and simple material, will make it easier for deaf students to understand the content of the material and make it easier to achieve learning objectives. The interview results with R4 volunteers have a vital role in learning because they help explain the scientific terms carefully in each lesson.

> *The role of volunteers who assist deaf students in face-to-face learning activities is not carried out optimally in online learning. In practice, online learning is done at home, while the distance between volunteers and deaf students is far from home. In addition, volunteers also have various lecture activities whose schedules are pretty tight, so it is impossible to coordinate and provide online assistance to deaf students. Based on the results of interviews with R5, a volunteer:*
>
> *The problem of distance from home and incompatibility of class schedules made me unable to take up the role as a volunteer fully. However, even at certain moments, if there is a moment for group discussion on the weekend, I will try to help deaf students join the discussion.*

Based on the interviews above, it can be interpreted that deaf students need access to sign language interpreters as access for deaf students to obtain optimal information during lectures. The role of volunteers to provide accessibility as sign language interpreters (JBI) when delivering material during the implementation of online learning helps deaf students make it easier for them to understand what the lecturer has said about the material (Caupayan & Pogoy, 2021; Rouf, 2020). It is stated that one of the accessibility that must be prepared during the implementation of online learning is the existence of a Sign Language Interpreter (JBI), which makes it easier for deaf students to understand the material that has been delivered by the lecturer.

3.3. *Interaction in the Implementation of Online Learning*

The meaning of interaction in learning is related to two-way communication between educators and students. In the context of the communication experience, deaf students in online learning give positive reactions to asking questions. Even though the question was only asked via live chat on Zoom. However, it is undeniable that the student is confused when the lecturer expects feedback. Deaf students also face problems interacting during the online learning process, both with lecturers and regular students. The interaction between Deaf students and lecturers is a little different than learning that is carried out face-to-face directly. According to R1 at interview, November 2021;

> *Independence in online learning for deaf students cannot be interpreted as absolute independence. Both lecturers and students have limitations that make communication on Zoom stiff. This becomes a dilemma for online learning when faced with students with special needs.*

When lecturers deliver learning material offline, and deaf students have difficulty accessing or understanding the material presented by the lecturer, the related lecturer or classmate can help. Still, it is not easy for the lecturer or classmate to do it when learning online. Deaf students have difficulty

interacting with lecturers because deaf students do not understand what is conveyed by the lecturer, including the lack of accessibility provided by the lecturer during delivering learning materials, so deaf students do not understand what is conveyed by the lecturer (Ávila Caica, 2011).

For Deaf students, problems related to exposure and interaction in learning activities, lecturers use the lecture method during Video Conferences without any description text (subtitles) and sign language interpreters, making it difficult for Deaf Students to follow and understand the material presented online learning (Sari, 2020; Slike, Bernab, Kline, Rebilas, & Bosch, 2008). The interaction between deaf students and regular students is also constrained because there are still many regular students who have not mastered sign language, so it is difficult for regular students to communicate with deaf students. Smooth communication in online learning interactions can also improve social relations and build friendships between students.

4. CONCLUSION

Online learning is the implementation of education in teaching and learning activities through social networks without direct face-to-face meetings. All forms of material from lecturers are also distributed online to students. The online learning system has its challenges; of course, it is challenging for both a lecturer and a student. On a practical level, online learning can make it easier but also provides challenges, especially for deaf students. Implementing online learning specifically for deaf students is still experiencing several obstacles. These obstacles include three things, namely, internet access, assistance from volunteers, and interaction during learning. This obstacle makes it difficult for students to accept and understand the lecture material. They are considering that in the practice of higher education at universities, deaf students are a minority group that must be facilitated equitably. Therefore, to help receive lecture materials during online learning, it increases stability in the form of stable internet facilities, free-of-charge quotas, availability of volunteers, and the selection of friendly learning models for students with disabilities. This research is expected to provide input for further research to explore what solution steps can be taken by the government so that deaf students can participate in online learning effectively.

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