



Communication Patterns of Deaf Students with Hearing Lecturer in the Classroom

Risti Aprilia^{1*} and Fitria Khairum Nisa²

ABSTRACT

Deaf people communicate differently, such as using sign language or writing. This communication style difference becomes a problem when a deaf person is in higher education, where most of the communication is verbal orally. Most deaf students in the university in Indonesia do not have a standardized facility to help them study in class; therefore, each student could have a different communication style during class lectures. This article identifies the classroom communication patterns between deaf students and hearing lecturers. The research's informants are deaf students from three universities in Central Java. The characteristics of the informant are; 1) deaf student, 2) use more than one communication medium, and 3) the communication with the teacher happened in the classroom (offline class). This study uses a qualitative approach with a phenomenological method to understand the phenomenon of deaf students in the classroom—data obtained through in-depth interviews and literature study. The results of this study indicate that deaf students have a variety of communication styles in classrooms, such as a mobile application called Live Transcribe, a note taker, and an interpreter. However, there are still many obstacles, such as the transcripts from the application that are not per the speech, note takers that do not give a piece of comprehensive information, and the limited number of interpreters. Therefore, the students must change the media communication regularly depending on the situation to overcome those problems.

Keywords

Communication in classroom, communication patterns, deaf students, disabilities, hearing lecturer

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INTRODUCTION

According to the Indonesian Dictionary (KBBI – *Kamus Besar Bahasa Indonesia*), tuli (deaf) is being unable to hear (due to hearing damage). Deaf people are individuals who receive a sound intensity of less than 90 dB. According to Lestari (2016), deaf is the condition that a person cannot catch stimuli such as voices and sounds that will be heard by the sense of hearing. Some of the deaf people have physical, intellectual, social, and emotional characteristics such as a hunched body, fast and irregular eye movements, sometimes left-handed, experiences instability in managing emotions, and a feeling of inferiority.

^{1 2} Communication Sciences Department, Tidar University, Jl. Kapten Suparman 39 Magelang, Jawa Tengah

* **Corresponding author:** ristiaprilia03@gmail.com

The communication of a deaf person can be divided into between deaf people and between deaf people and hearing people (Handayani, 2018). Sign language is used when communicating between deaf people. The sign language that is developed in deaf communication with deaf people is a language that is spontaneous and in accordance with the culture they have. Sign language consists of hand movements, gestures, and facial expressions. Meanwhile, communication between deaf people and hearing people usually use verbal and written communication. Verbal communication can be understood by deaf person through reading mouth movements. However, sometimes you experience problems when the person you are talking to has a mouth that is difficult to see, for example, because of the mustache covering the mouth, bad teeth structure, etc. Some of the deaf people also use sign language in the form of the alphabet when communicating with hearing people.

Communication patterns are a form of relationship between two or more people in the process of sending and receiving messages in an appropriate way so that the message can be understood (Lumentut et al., 2017). Meanwhile, according to Effendy (2003), communication patterns consist of communication processes from a psychological and mechanistic perspective. The psychological communication process emphasizes the processes that occur between within the communicator and the communicant. Meanwhile, the communication process in a mechanistic perspective emphasize the process of conveying messages from the communicator to the communicant takes place. Communication processes in this mechanistic perspective are classified into four processes.

1. Primary communication process

The primary communication process is the process of delivering messages using symbols as a medium. Symbols in this process are divided into two, verbal symbols and non-verbal symbols. The verbal symbol is language, including paralinguistic. Meanwhile, the non-verbal symbols is a sign of limbs or body movement, signs with tools and pictures.

2. Secondary communication process

The secondary communication process in the process of delivering messages using media aids as a second communication tool after symbols such as television, radio, cellphone, and newspapers.

3. Linear communication process

The linear communication process is the delivery of messages in a straight or non-reciprocal manner as in newspaper media communication.

4. Circular communication process

The circular communication process is the process of delivering messages with feedback between the communicator and the communicant.

The dialogic ethics was assuming the importance of encounters that can communicative and continuous understand each other, not just understand one person in conversation (Arnett et al., 2009). When they meet, a person will find differences. The relations between dialogic ethics and differences are people can better understand each other and learn about differences that can become conversation. According to Buber, dialogic ethics divides into two concepts, such as the relation between man and things and between man to man. Buber named the concept with *I-It* and *I-Thou* (as cited in Romyaru, 2018).

I-It is used when the man wants to build relations with an object. *I-It* makes the man as subject and the things as an object. According to Buber (as cited in Romyaru, 2018), *I-It* relationship is called experiences, because man learn about the benefits of an object. The man can build relations with an object freely, and the object does not have the freedom to set up the man (Hia, 2014). So, *I-It* happen in one way relations. *I-It* does not used to build relation between man to man. If man used *I-It*, it can be objectivity, such as the desire to organize and rule over others (Badewi, 2015).

I-Thou is used when man will build relations with others. According to Buber, when building *I-Thou* relations, man beings equally knowledgeable and does not recognize the strength and weakness of others (as cited in Hia, 2014). According to Buber, *I-Thou* relations is referred to a relationship (as cited in Badewi, 2015).

Inter-human relations occur reciprocally. Reciprocal relations are considered balanced because they impose a fellow man being as a subject (Hia, 2014). But if only one of them asks and the others

does not answer, then this is called an unbalanced relation. The reason is that one of the participant is considered an object.

Based on the different communication methods between deaf and hearing people, the potential of barriers to arise when communicating is very large. A deaf person who has hearing disabilities will find it very difficult even to hear the words of the hearing person. Meanwhile, hearing people who are used to communicating orally will have difficulty understanding the sign language used by deaf people. This barrier arises because of differences in cultures as well as their way of communicating. Barriers also occur when a hearing person calls a deaf person in a far away. Then, to start a conversation between deaf people and hearing people because we need to attract a deaf person, it will be difficult to understand the sound, because the voice of a deaf person is not clear, and there is even no voice.

Just like other citizens, deaf people have the same opportunity to go to school. Most of us can meet a deaf person who goes to Special School (SLB B), starting from kindergarten to senior high school. During the learning process in school, deaf students and hearing teachers will communicate verbally (oral) (Handayani, 2018). The teacher will communicate verbally in simple language, and when the learning is finished, it will communicate again using sign language.

However, many deaf people attend public schools up to the university level. In public schools, a deaf person has to adjust to the applicable basic competencies. Deaf students who choose to go to public school have several reasons, such as parental support and self-will, such as being bored with learning at special school B or wanting to try new things and because of the limited number of special schools in each region (Lestari, 2016).

Wuryanti (2019) mentioned that deaf people encountered barriers such as when learning Indonesian subjects that required retelling and reading poetry with the right intonation. Another barrier is when the teacher explains most of the lessons orally, not so much writing. Another barrier sometimes felt by deaf people when attending public schools is the difficulty of making friends due to language differences.

DeVito (2011) stated that language reflects culture if the greater the cultural differences, the greater the difference in the way of communicating both verbal language and nonverbal cues. This causes a person to have difficulty communicating, such as misuse of words, misunderstanding, and differences in perception. According to Barna and Ruben (as cited in DeVito, 2011), these are unique intercultural communication barriers, namely ignoring differences between a person and groups and groups with different cultural groups, especially values, attitudes and beliefs, ignoring differences in meaning in verbal and nonverbal language, violating cultural customs that have rules communication differs from group to group, assessing differences negatively, and culture shock.

Meanwhile, according to Effendy (2003), communication barriers such as distraction, interest, motivation, and prejudice.

1. **Distraction**
Distractions are divided into mechanical and semantic distractions. Mechanical distraction in the form of interference from communication channels or noises. Meanwhile, semantic distraction is in the form of distraction when interpreting messages and using language.
2. **Interest**
Interests related to someone who pays attention and responds to messages conveyed by communicators based on existing stimuli.
3. **Motivation**
Hidden motivation encourages a person to do something according to the needs and interests of the others, which are contrary to himself.
4. **Prejudice**
Prejudice is a person's objective thinking about something by evaluating something negatively.

The communication barriers between deaf and hearing people continue as long as they interact in a way that is not right for both of them. However, on the other hand, many students have succeeded in continuing their education up to university, even though they are taught by listening lecturers. So it can be concluded that to overcome these obstacles, deaf students and hearing

lecturers already have communication pattern so that they can understand each other, especially in lecture activities in the classroom.

To get effective communication, effort are needed to overcome communication barriers. In overcoming communication barriers, there is a theory of uncertainty and anxiety management by Gudykunst. Littlejohn and Foss (2009) mention that when we meet strangers, we have desire to reduce uncertainty by getting to know other people. Griffin (2012) mentioned that the goal of the theory of managing uncertainty is effective communication rather than closeness or relationship satisfaction. Tubbs and Moss (as cited in Rakhmat, 2018) stated that effective communication leads to five things: understanding, pleasure, influence on attitudes, better relationships, and actions.

Effective communication and the uncertainty and anxiety theory will be able to form a common meaning between the communicator and the communicant. The management of uncertainty and anxiety relates to all communication patterns that affect a person's behavior while communicating with others (Littlejohn & Foss, 2009).

Morissan (2013) argues that uncertainty and anxiety in communication will be processed based on the cultural backgrounds of each person involved. A person will try to reduce uncertainty and anxiety by identifying himself strongly through culture to feel confident when communicating with other people or groups. If a person feels that they cannot manage uncertainty and anxiety, they will choose to avoid communication.

Meanwhile, according to Bevee and Thill (as cited in Dewi, 2007), how to overcome obstacles and improve communication to be effective are as follows maintain an open communication climate, determined to uphold communication ethics, understand the difficulties of intercultural communication, use a receiver-centered approach to communication, use technology wisely and responsibility to acquire and share, and create and process messages effectively and efficiently.

Therefore, this study aims to see what kinds of communication patterns are carried out between deaf students and hearing lecturers during the teaching and learning process in the classroom. Researchers also want to see what kinds of barriers are faced and how to deal with these barriers.

METHOD

This study used a qualitative approach with a phenomenological study research strategy. Researchers analyzed communication patterns between deaf students and hearing lecturers in the classroom. Researchers will focus on how to communicate, communication barriers, and how to overcome communication barriers experienced by deaf students and hearing lecturers when communicating in the class. The research strategy with phenomenological studies will assist the researcher in describing the communication patterns that form between them. Data collection techniques were obtained from primary and secondary sources through in-depth interviews and literature studies. Informants of this study were deaf students at three universities in Central Java and Yogyakarta such as Universitas Muhammadiyah Magelang, Universitas Negeri Sebelas Maret, and Universitas Islam Negeri Sunan Kalijaga.

Interviews were assisted by local interpreters and via chat applications. Meanwhile, a literature study is assisted by using previous research in the form of journals. The unit of analysis in this study includes communication patterns, communication barriers, and overcoming communication barriers. The unit response in this study is deaf students who use more than one media to communicate in the classroom with hearing lecturers. After the data was collected, transcription and coding were carried out. At the coding stage, the researcher systematically collects similar facts. This activity is for distinguishing data that needs to be analyzed or ignored. The next stage in coding is determining the categorization to obtain details of the facts that have been analyzed. Next, the researcher draws general conclusions after the stages of collecting similar facts and categorization. Then, the researcher will be able to make a narrative of the analysis that will be linked to the theories and concepts.

FINDINGS AND DISCUSSION

Communication Patterns Between Hearing Lecturer and Deaf Student

The communication patterns proposed by Effendy (2003) consisted of primary, secondary, linear, and circular communication processes. The communication process between deaf students and lecturers is carried out both consciously and unconsciously. Based on the data obtained through interviews with the four informants, the communication process for deaf lecturers and students is included in the communication process in primary, secondary, and circular ways. Researchers did not find linear or one-way communication processes when they saw the research results.

Primary Communication Process

In the classroom, the communication process is primarily characterized by using symbols as the main means of conveying messages. These symbols are divided into verbal and non-verbal symbols. Based on the results of the study, the verbal symbols contained in the communication between deaf students and lecturers are language and paralanguage. The use of verbal language is shown when the lecturer delivers material and answers student questions using Indonesian and English. Meanwhile, the paralanguage includes the clarity of the lecturer's vocals when speaking. The clarity of the lecturer's vocals can be seen from how the mouth movements can be seen and interpreted by deaf students as a whole.

Meanwhile, non-verbal symbols consist of the use of signs, tool, and pictures to deliver messages. Based on the reasearch results, signs are more widely used than tools and images. Signs such as body movements, facial expressions, and eye gaze are relatively more widely used by deaf students to communicate both with lecturers and other students. However, the use of these signs is only used by deaf students in certain situations, such as informant 2, who used signs to make a presentation when he got the last turn.

Based on related reserach conducted by Ariej and Rahardjo (2019), lecturers nts. In accordance with the results of the study, the reseracher found that verbal and linguistic languages are more likely to be used bu lecturers to communicate in class, such as in Indonesian and English, which require oral communication with clear pronunciation of vowels.

Non-verbal symbols consisting of signs, tools, and pictures are relatively more widely used by deaf students to communicate with lecturers. The signs used by deaf students to communicate consisted of hand signs, body movements, facial expressions, and eye gaze with different intensities. Researchers assessed that the intensity of using hand signals and eye gaze was mostly used by deaf students in class, because considering that informants rarely communicate using body movements and facil expressions during class. The hand gestures used by deaf students were like writing the alphabet on their hands to facilitate communication. Meanwhile, deaf students use eye gaze to see the words spoken by the lecturer while explaining the material in class.

Through the explanation above, the communication process between deaf students and lecturers is primarily influenced by symbols such as verbal and non-verbal symbols. The use of verbal symbols is used by lecturer to communicate with deaf students. Meanwhile, the use of the non-verbal symbol is used by deaf students to communicate with lecturers.

Secondary Communication Process

The communication process between deaf students and lecturers is done secondarily way, meaning that there are media to transmit messages. Media to support the communication process between students and lecturers are mobile applications, notetakers, and interpreters. Some of the mobile applications used to communicate are Transcribe and WhatsApp. Transcribe is a mobile application that converting audio to text, and WhatsApp is a chat application. Both Transcribe and WhatsApp require an internet connection. Transcribe and WhatsApp were used by all of the informants to ask questions about subjects and assignments that had not been understood, to contact lecturers, or it could be for final assignment guidance.

Notetakers and interpreters are also media that support the communication process between deaf students and lecturers. Notetaker is responsible for converting the lecturers oral messages into manually typed/ written text. Meanwhile, the translator is in charge of translating the teacher's oral message into sign language and vice versa. However, the use of media was only used in certain situations.

Secondary communication, according to Effendy (2003), is done by using the media to transmit messages. Mulyana (2015) argues that the media or channel is a tool to convey messages from

communicators to message recipients. Based on the research results, the tools or media used to transmit messages consist of mobile applications, notetakers, and translators. The use of each medium depends on the choice of each informant and can vary. All these media are tools to support the secondary communication process between deaf students and lecturers.

Circular Communication Process

The circular communication process is related to two-way communication, such as when in the classroom between deaf students and lecturers, there is mutual communication. When the lecturer explained the material in the form of theory and practice, the form of feedback received was questions from deaf students. Then, the feedback that deaf students will receive is the answers to their questions.

This research found that circular communication between deaf students and lecturers is relatively longer than when the lecturer communicates with listening to students. This is because both deaf students and lecturers need to adjust the question and answer process based on the methods and tools used to convey messages. In addition, if either the student is deaf or the lecturer does not understand the questions or answers, it is necessary to do repetition in order to understand the message content fully.

Communication as an interaction involves delivering verbal and nonverbal messages accompanied by feedback (Mulyana, 2015). Based on the results of the study, the researcher found that the circular communication process between deaf students and lecturers was marked by the process of providing feedback, which lasted relatively longer because it needed adjustments and needed to be done repeatedly so that the message content was conveyed.

Communication Barriers Between Hearing Lecturer and Deaf Student

Based on the interview with the four informant, the researcher obtained various data from the answers of the four informant. The various answer from informant is related to the education background, communication experience while in the classroom when communicating with lectures, and institution of the informant. Communication barrier, as presented by Effendy (2003) consists of communication barriers consisting of interference, interests, hidden motivation, and prejudice.

Based on the experiences of respondents when communicating with lecturers, there are communication barriers in the form of distraction and interests. Meanwhile, communication barriers to hidden motivation and prejudice were not experienced by all informant. This is because the informant does not force other people to help themselves, and also, the informant does not have a prejudice against other people and the environment.

Communication Barrier: Distraction

Distractions in communication barriers, according to Effendy (2003) are divided into mechanical and semantic distraction. Mechanical faults consist of channel disturbances and noise. In mechanical distraction, informant said that it happened when they are with a notetaker. Notetaker is someone who takes notes for deaf students based on what the lecture says. The notetaker often had difficulty listening to the voice of the lecturer. This is because the classroom atmosphere is noisy. Informant feel this then affects the next written by notetakers. Another mechanical distraction happens when deaf students have to come alone because notetakers and interpreters are unable to attend. During the class, lecturers tend to use verbal language.

Besides notetakers, all of the informant also use a mobile application to help their communication process, which is called Transcribe. However, the deaf students often encounter obstacles in using that application. The application works by transcript the lecturer's audio into text and vice versa that depends on the distance and volume of the audio. When the classroom atmosphere is not conductive, or there is noise such as the voices of other students who are also speaking, the audio from the lecturer who does not use a microphone which is converted into text cannot be detected.

Mechanical distraction experienced by deaf students was related to sounds, either intentional or unintentional that was made by the environment surround. The sound that often occur, usually from vehicles, voices of other students in the classroom, voices of other students outside the classroom, and the sound of falling objects, make the message translation process disturbed. Although deaf students cannot hear the sounds and voices that exist, this affects the results of the

notetaker writing and the transcript from the application. Therefore, deaf students often do not understand what is written.

Second is a semantic distraction, which is interference when interpreting messages and the use of language often occurs during lectures. When understanding the theoretical material with Power Point, informant said the lecturer explained more with verbal language than written. This made it difficult to understand the explanation. This has happened to informant 1 and 2. Informants are more able to receive material through practice. Informants explained that they could see and understand through formulas written by lecturers. Meanwhile, if the theory is they will only accept the conclusions written by the notetakers. In contrast to informant 1 and 3, respondents 3 actually experienced barriers when taking practical courses. If that day, the informant comes to class with an interpreter, sometimes the interpreter does not understand the language and terms used by the lecturer. This causes the translator not to know what to sign the terms to informant 3.

Deaf students experience another semantic barriers, reading lip movements. As stated by informant 4, the informant had difficulty reading the lecturer's mouth movements, understanding foreign words, or words that read the same when a deaf student read the lecturer's mouth. Some factors that affect the ability of deaf students to read lecturer's mouth movements are age, articulation, and the physical condition of the lecturer. Then also, the pronunciation of several letters was considered by deaf students to read the same when using the lip-reading technique. For example is the word "sabuk" which reads as "cabuk", making deaf students do not understand the lectures' conversation.

Also, when deaf students were using the Transcribe, semantic barriers also occurred. When lecturer uses other languages, for example English to explain the subject, the application was often can not detect the sound. Besides that, according to informant 1, this application relies on signal strength. A strong signal can make incoming text quickly if the signal is not strong then the message will be late.

Most of semantic distraction experienced by deaf students is the usage of language for daily communication, which affects the meaning of messages. All of the informants said that they were more comfortable to using Indonesian Sign Language (Bisindo) for daily communication rather than oral communication. This is also mentioned in research conducted by Gumelar et al., (2018) the researcher explained that a deaf person uses Bisindo because it is learned naturally by deaf person like a regional language and will vary in each region.

In contrast to the use of Bisindo by deaf students, lecturers in class always use verbal language orally. The oral communication used by lecturers is often confusing for deaf students, because they have limited vocabulary. In addition, related to oral communication by the lecturer, some factors make it hard to understand. Such as older lecturers with unclear articulation and also lecturers who were covered in mustaches or poor teeth structure, all of them make deaf students difficult to understand.

Besides sign and oral communication, language is also a barrier. Some lecturer mixes national and international language to talk in the class. They used Indonesian and sometimes English. The local and foreign languages are used for daily communication in the classroom raises a lack of understanding. When deaf students use the applications, different language will not transcribed. Meanwhile, when deaf students try to read lectures mouth, they may not understand the local and foreign language that is produced. This is because deaf students are used to communicating in the national language, Indonesian. Based on related research by Ariej and Rahardjo (2019), deaf students also experience obstacles in language diversity such as foreign languages, namely English, to communicate.

Communication Barrier: Interest

Communication barriers in the form of interests related to the attention of deaf students to messages conveyed based on existing stimuli. Barriers of interest occur when deaf students have to attend class without a notetaker or interpreter. At some universities, interpreters are volunteers from the same university. So that, when they have conflicting schedules, it requires deaf students to come to class without a notetaker or interpreter. Then when deaf students came with a notetaker, the notetaker would manually type the lecturer's voice into text. Some informants also experience obstacles when they come with a notetaker. Informant 1 and 2 felt that what the notetaker typed

was the essence of the lecturer's explanation. Deaf students feel it is unfair when hearing friends can listen and know the lecturers' explanations in full, while deaf students only know the main idea and conclusions. Then, the informant felt that the notetaker took too long when typing the lecturer's explanation, so that it was often left behind. Based on the research of Wasito et al., (2012), which states that a deaf person needs special guidance teachers, adequate learning facilities such as hearing aids, and infrastructure that supports the movement of a deaf person. However, in some universities, there are still no notetakers and interpreters provided specifically to help deaf students during their lectures in class.

Overcome Communication Barriers

According to the theory by Gudykunst that in order to achieve effective communication, people need to manage uncertainty and anxiety so that communication runs effectively, which according to Tubbs and Moss (as cited in Rakhmat, 2018) creates understanding, enjoyment, influence on attitudes, better relationships, and actions. Also, according to Bevee and Thill (as cited in Dewi, 2007) there are ways to overcome communication barriers so that communication becomes effective, such as maintaining an open communication climate, being determined to uphold communication ethics, understanding intercultural communication difficulties, using a recipient-centered communication approach, using technology wisely and responsibly, and creating and process messages effectively and efficiently.

Based on the explanation above, the results of the interview found that the methods deaf students did to overcome communication barriers are by understanding intercultural communication difficulties, using technology wisely and responsibly to obtain and share, create and process messages effectively and efficiently, and avoid communication.

Understanding

Effective communication is related to how deaf students and lecturers are able to understand the message. Deaf students try to form the same understanding of the messages conveyed and received. To be able to understand deaf students will provide choices of what media will be used to communicate. As was done by informant 4, when communicating with listening to friends, they will provide choices with verbal or text communication. If the interlocutor chooses verbal, but it is felt that they do not find the same message, it will switch to text.

Then, informant 2 and 4 also said that when they do not come with a notetaker or interpreter in class, they will adjust to reading mouth movements. If deaf students do not understand theoretical or practical courses, they will ask the lecturer either with the help of friends or applications (*Transcribe*). Meanwhile, to understand the explanation of the assignment, informant also sometimes asked friends or class leaders about what assignments were given.

The process of giving questions in the class is done via text on a cellphone or manual writing. Then the text will be read by their classmates. Next, the lecturer will answer orally, and that will be transcribed by the same classmate. However, if the lecturer does not understand the questions from deaf students, the deaf students will repeatedly explain the questions to the lecturer. On the other hand, if a deaf student has difficulty understanding the explanation of the question, the lecturer will explain it repeatedly and in easy to understand words.

According to Rakhmat (2018), understanding is careful acceptance of the content of the stimulus as intended by the communicator. The point is that both deaf students and lecturers need to understand each other's message. Based on the informants' answers, deaf students and lecturers try to understand each other's message by repeating questions and answers so that there is no error in the meaning of the message.

Understand the Difficulties of Intercultural Communication

The difficulty of intercultural communication experienced by deaf students and lecturers is the use of verbal and nonverbal language used. As explained by informant 4, teachers who have an interest in learning sign language will be taught by informant 4 about sign language. Then, the teacher will communicate in sign language when to the informant. The lecturer also often helps deaf students to communicate and ensure that the informant understands the explanation of the teaching theory and practice.

DeVito (2011) stated that to achieve effective intercultural communication requires us to be aware of the differences between ourselves and others. This is related to lecturers trying to understand deaf students who are unable to hear voices by trying to learn sign language to communicate. Lecturers are also empathetic by making efforts so that deaf students understand what is being said, both theory and practice.

Use Technology Wisely and Responsibly to Acquire and Share

All informants use mobile applications to help them communicate with the lectures in the classroom. The applications used by the four informants, such as Transcribe and WhatsApp. Some of the informants use the applications as primary media, while the others use the application when notetakers and interpreters are unable to attend. Informant 2 and 4 said that they used WhatsApp to contact lecturers outside the classroom. Especially for informant 4, who was working on the final project, carrying out the guidance, will use the WhatsApp application. Meanwhile, Transcribe is used to communicate in the classroom by converting audio to text and vice versa. According to informant 2, this application is used when communicating with old lecturers. However, if they still do not understand, the informants will ask to use WhatsApp in short sentences. Meanwhile, when informant 1 using Transcribe he sit in the front row to avoid noises.

Based on related research conducted by Setyawan et al., (2019) an application was created that was able to help the daily activities of a deaf person because it was able to learn hand language in many languages, know sign language easily, and interpret sign language through applications. This research is related to overcome communication barriers by using technology, according to Effendy (2003). Through this application, deaf students have other options besides using Transcribe and WhatsApp to communicate with lecturers.

Create and Process Messages effectively and Efficiently

In order to get effective communication, deaf students need help to translate and deliver messages, such as using a mobile applications. Informant 3 mentioned that in order for the learning process to run smoothly, the informant needed a notetaker to help translate the lecturer's explanation. Meanwhile, informant 1 felt that he was better able to understand the explanation of the mobile application because it did not bother the notetaker and the translator. Meanwhile, informant 2 chose to sit in the front when there was a translator so that the delivery of the material could be maximized.

Based on related research by Lintang Sari (2014), not all of the deaf students have adequate written language skills as a provision for lecture activities. To create effective communication, deaf students need writing a provisions so that they are rich in vocabulary. The ability to write will also greatly help deaf students when they are hampered by absence of notetakers, interpreters, even when the mobile application is not functioning optimally.

Avoiding Communication

When communicating using a mobile applications, other deaf students still do not find clarity and found it difficult to communicate, so they will choose to avoid conversations with lecturers. If there is difficulty communicating with the lecturer, deaf students will ask for help from their classmates or the class leader. When friends only explain the point or say that the informant does not need to know, the informant chooses not to communicate with that friend anymore. However, informant also avoided asking questions because they were following their friends, thinking that the most important thing is to do the assignments.

Based on the theory of managing uncertainty and anxiety presented by Gudykunst, a person who feels that he cannot manage uncertainty and anxiety will choose to avoid communication. West and Turner (2012) stated that interpersonal communication related to listening skills, nonverbal response signs, and the same language is used to reduce uncertainty. However, because deaf students have difficulty listening to lecturers plus the as well as different languages, the level of uncertainty and anxiety increases. Thus, deaf students and lecturers chose to avoid communication. According the dialogic ethics of Buber theory, there are two concepts to build relations, such as *I-It* and *I-Thou*. These two concepts show a different attitude to communicate between man and things and between man to man.

Based on the study result, the communication pattern formed between the deaf students and hearing lecturers is in accordance with the theory of Dialogic Ethics by Buber. Every human being has a relation with an object or living things. *I-it* explains the relationship between human and things, while *I-Thou* explains the relationship between human and each other. The communication pattern that occurs between the deaf students and lecturers shows how the relationship between them. The relationships between people it is necessary to have a meeting whose purpose is to understand each other and learn about the differences that exist. When the way deaf students communicate is different from listening lecturers, there is an adjustment that happens so that the relationship remains formed and runs well. Among them use applications, note takers and translators, so that both can communicate well and occur reciprocally. Thus, in accordance with Buber's theory, there is a balance between the two, in which the two impose human beings as fellow subjects because there is reciprocity in communicating and connecting.

CONCLUSION

Based on the results and discussion of this study, it was concluded that deaf students and hearing lecturers often encountered various communication barriers in the form of disturbances and interests during communication, so that communication was not effective. In order for communication to run effectively, there are a number of efforts taken by deaf students and lecturers such as with understanding, understanding the difficulties of intercultural communication, using technology, creating and processing messages effectively and efficiently, and if communication is still not effective enough to overcome communication barriers, a communication pattern is formed. In the communication pattern between deaf students and lecturers, there is a two-way communication process in which there is the use of symbols and media to support communication. Some of the media to communicate are mobile applications, notetakers, and interpreters. Through research, it is known, that deaf students when communicating with hearing lecturers try harder than hearing students in the classroom. Then it is also known, that there are still very few hearing lecturers who can use sign language, making deaf students have to use various communication media depending on the situation and conditions. Based on this research, the researcher hoped that this research help and benefit students with disabilities in the field of education. Considering that education is one of the significant needs and rights of every citizen, especially deaf students.

Based on the results of the analysis on the communication patterns between deaf students and hearing lecturers, this study suggested for universities in Indonesia to provide facilities for students with special needs, especially deaf students, as in this study. Some of the tools that can be considered include providing sign language interpreters, notetakers, and maximizing the use of mobile applications. This is so that communication between deaf students and hearing lecturers can run more effectively. Furthermore, this research can also be developed by looking at other points of view, such as the impact of ongoing communication patterns on the understanding of deaf students in the classroom, etc.

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