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Analyzing The Influence of Lecturer-Selected Audio on Students' Listening Comprehension in Online Learning Environments at English Education Study Program

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Abstract
One of the learning activities impacted by the transmission of the COVID-19 virus was a listening exercise in a university classroom. Regarding that assertion, listening comprehension requires help from learners' English language components and lecturers' aid. The study's objectives were: 1) to describe the influence of synchronous and asynchronous audio in online learning (Synchronous and Asynchronous in English Education Study Program); 2) to describe students' listening comprehension; and 3) to determine the positive and significant influence of synchronous and asynchronous audio in online learning on student listening comprehension. This study used a quantitative technique using Ex-post Facto research as the design. Purposive sampling was used to choose 32 students from the English Education Study Program in 2018 and 2019. A questionnaire was used to collect data, and the students' listening final grades were evaluated using IBM SPSS 20.0. The findings of this study revealed that: 1) Synchronous and Asynchronous at English Education Study Program was in the medium category, as the highest score was 76; 2) Students' Listening Comprehension was in the "A" category, as the mean score was 82; 3) Synchronous and Asynchronous have a favorable and substantial impact on students' listening comprehension, as evidenced by the coefficient determinant value of 0.267 (26.7%). The findings of this study are intended to be valuable to lecturers, students, and other researchers.

Keywords: *Influence, Synchronous, and Asynchronous, Students' Listening Comprehension.*

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INTRODUCTION

Listening is a talent that may be learned spontaneously without formal training, much as toddlers learn their native languages by listening to conversations. Listening is also essential to learning since it allows a person to receive and process information. However, before students attempt to listen in order to receive, they must first learn to listen. As a result, to become excellent listeners, students must study more.

Listening technologies describe the potential qualities of networks for mediating listening, which can assist understanding and facilitate language development. This section examines a variety of important technologies, explaining them and examining what they listen to in general (Triyanti, 2018). The use of learning media in the learning process has advantages in terms of making learning more appealing and clarifying the subject. Using media in the classroom can increase students' motivation to study English (Oktaviani & Mandasari, 2020).

Learning media should be used now since it is an option that must be used in an era of technology and communication that is rapidly increasing. Furthermore, during the COVID-19 epidemic, the government encouraged the use of online models and apps to meet learning objectives. As a result, learning innovation must continue to grow in the realm of education (Samsul S, 2020). The interaction patterns that occur in class activities have a significant impact on the success of a teaching and learning experience. Online learning environments are classified into three types: synchronous, asynchronous, and hybrid. Synchronous learning allows for real-time interaction, which may be used to mix device learning activities with traditional classroom learning; however, synchronous learning is conducted online with a question-and-answer session option. Because synchronous learning necessitates the concurrent presence of a student-teacher (Ayesha, 2016).

BACKGROUND

Haiyan Xie et al. (2018) published "Analysis of Synchronous and Asynchronous E-Learning Environments". Based on a sample of 38 students, the results reveal that students are more comfortable utilizing asynchronous communication tools than synchronized ones since they can readily access them offline. Additionally, the asynchronous communication is excellent for skeptical and shy students. Furthermore, Jody Oomen (2008), in his paper "Using Asynchronous Audio Communication (AAC) in the Online Classroom: A Comparative Study," found that asynchronous audio communication is one of the most effective learning media for increasing teacher attendance, student involvement, content knowledge, and course satisfaction. Asemota (2015) noted in his work 'Nature, Importance, and Practice of Listening Skill' that audio may be utilized to construct active listening exercises for learners to build listening comprehension skills (in Choo Siang Shian Melor & Md. Yunus, 2016).

Based on the relevance of prior research, the researcher performed a preliminary study in the English Education Study Program at Pattimura University by questioning lecturers in the listening course linked to their preferred audio via online learning. During the Covid-19 epidemic, listening lecturers offered both synchronous and asynchronous online learning. Where is synchronous learning, namely direct audio learning utilizing the Zoom application? In terms of asynchronous learning, audio is distributed via Google Class for each meeting, and students can access it on their own.

Furthermore, based on an informal interview with students who enrolled in listening class during the pandemic, the results showed that students primarily have a positive influence of the lecturer's selected (synchronous and asynchronous) audio on their listening comprehension, in that the use of audio through synchronous and asynchronous differs from the offline class, in which the lecturer plays the audio-only 2-3 times for students to learn.

According to John Field (2009: 37-38). The listening class is centered on the teacher. In terms of procedures under the teacher's supervision. The teacher controls a CD or cassette player, asks pertinent questions, plays back selected portions, and determines how much time is spent on

comprehension questions. Students may be hesitant to contribute because they are unsure whether they fully grasp the audio recording.

In truth, not all aspects of the learning process must be accompanied by instructor directions; there are times when learners require time to think and a peaceful environment to do certain tasks autonomously, such as interpreting audio and performing a task. Teachers might establish this environment by not constantly giving directions or delivering content. This calm may also be achieved with asynchronous e-learning, which does not need professor instructions. In this scenario, media selection is critical since it involves considering instructional material or content and the intended teaching technique, as well as making a basic design decision, namely whether media should be communicated synchronously or asynchronously.

The researcher attempted to learn more about "The Influence of Lecturers' Selected Audio in Online Learning towards Students' Listening Comprehension at Pattimura University Ambon's English Education Study Program."

The research questions of this study are:

1. How is the influence of synchronous and asynchronous audio in online learning?
2.How is students' listening comprehension?
3. Is there any positive influence of synchronous and asynchronous audio in online learning towards students' listening comprehension?

LITERATURE REVIEW

The Nature of Listening Comprehension

According to Field, listening is a talent that will have an influence on the classroom environment in general and pupils in particular (John Field, 2009). Listening is equally essential in foreign language classes. According to Rost, as reported by Nunan (2003), listening is particularly essential in the language since it provides input for pupils (Jack, 2002). According to the description above, pupils who have information from the hearing will prepare themselves before reading or conversing. In other words, listening has become an increasingly important ability in foreign language lessons. Listening allows students to develop knowledge and grasp of the language. Nation and Newton also mentioned that listening is important in early language development (I.S.P Nation & Jonathan, 2009). If students pay attention and listen to the teacher, they might gain knowledge or get a message. So that kids may grasp the language and become good listeners.

Listening is a skill in which pupils pay attention to the most important parts. It is also a method of gathering information from the speaker, who will convey or communicate the information. Listening is a dynamic activity that seeks to comprehend what is heard. This necessitates accepting and comprehending the information entered (input) (Nunan, 2003).

Listening is one method for gathering information. Listening is the process of receiving information that the listener has heard. This indicates that listening is a vital talent for students, especially throughout the teaching and learning process, because it allows them to obtain important information from electronic media or someone else.

According to Richard and Renandya, listening is essential in language learning since it provides the learner with input (2002). As a result, students should improve their listening skills in order to improve their language proficiency. The most important part of understanding is the integration of textual information with prior knowledge of the listener. As a result, this skill assists students in developing their other English skills, such as speaking, writing, and reading.

Listening is an exercise that focuses on the pupils' hearing. It is also a method for obtaining information from the speaker, who will say or communicate the information.

According to Vallet (I.S.P Nation & Jonathan, 2009), the ability to listen requires skills in three areas:

a. Discrimination: Students should be able to tell the difference between two words with similar sounds, such as seat and sit, or beat and bit. Students with a strong understanding of structure and vocabulary will be able to distinguish difficult phonemes.

b. Retention: Students who assign a meaning to a word enhance their retention span.

c. Comprehension: The purpose of the listening test is to assess students' comprehension.

Their level of comprehension will rely on their ability to distinguish phonemes, interpret stress and intonation patterns, and remember what he has heard.

2. Definition of Listening Comprehension

Listening comprehension is one of the most crucial abilities in foreign language acquisition because it allows a person to completely understand what he or she is hearing and then offer relevant feedback. Listening is the most important talent that is constantly and endlessly employed in everyday life. Teachers, on the other hand, rarely pay close attention to listening skills since they practice them (Abbas Pourhossein Gilakjani, 2011).

Furthermore, listening is one of four language macro-skills (the others being reading, speaking, and writing). However, it is critical to recognize that there is no such thing as "listening" in real life. There are various varieties of listening, known as sub-skills. The following three sub-skills of listening are used in language classes:

a. Listen to the point. During this session, students listen to things to obtain a broad understanding of what the speaker is saying. They do not want or need to see every word. For example, listen to an audio recap of the day's news.

b. Listen to specific information. Students listen to objects in order to locate words. Students are aware of their intended discoveries ahead of time. Students can overlook words that do not interest them. For example, listen to weather reports to learn about the weather in a certain area of the city or nation.

c. Pay close attention while listening. This is when pupils pay close attention to every word and strive to comprehend as much information as possible. For example, suppose a pupil listens to the teacher's remarks. More particularly, kids have a harder time listening to English.

Insufficient background knowledge from kids might cause perceptual problems in listening abilities. Furthermore, pupils are typically not prepared to recognize well-known language in related conversations or specific circumstances.

3. The Factors Influencing Students Listening Comprehension

There are several elements that might impact hearing. According to Brown (2003), the listening process involves eight factors:

a. Clustering: In spoken language, due to limited memory and our desire to group words.

b. Redundancy: In a spoken language like speech, we constantly see terms like repetition, elaboration, and "I mean" insertion. This repetition can assist the listener in processing meaning by offering more information.

c. Reduced forms: The spoken language has several reduced versions. Could this be a phonological form, similar to "Djeeyet?" Have you eaten? Alternatively, morphological forms

such as "I'll" from I will. It is highly impacting and causes major hearing difficulties, particularly for students.
d. Performance Variables: Except for planned speech, spoken language is characterized by doubts, pauses, and corrections.
e. Everyday Language: Students sometimes struggle to link colloquial languages like idioms and slang in speech, including monologues and dialogues.
f. Rate of Delivery: Languages that are presented swiftly will be difficult for students to grasp. As a result, the number and length of pauses used by the speaker are more important, as is the clarity of the information presented.
g. Stress, Rhythm, and Intonation: When spoken language has stress, rhythm, and intonation, we can grasp it more quickly. We can tell if it's a question or emphasis.
h. Interaction: Learning to listen involves learning to provide feedback. Students should realize that a good listener in a discussion is also a good responder. Teachers must use effective ways to ensure that students or listeners grasp the topic before they can provide active feedback.

Teaching Media

Media is defined as the medium by which teachers and students communicate in order to get material. Teachers can easily convey content that is also simple for pupils to comprehend via media. When communication between instructor and student is limited, the teacher must work hard to improve communication skills, such as selecting an appropriate medium. The generic term "media" refers to the ability to record, store, conserve, recreate, and convey events or things. The prior objective of media is to facilitate the instructional communication process to attain the desired outcome (Sinta, 2020).

The general purpose of instructional media is as follows (Sinta, 2020):
a. To simplify the topic so that pupils can understand the explanation.
b. To overcome the limitations of time and perception.
c. To get the students' attention so they can follow the lecture.
d. To boost student morale.
e. To empower pupils to study independently depending on their abilities and intentions.
f. To allow for direct connection between pupils and the environment.
h. To draw parallels between experience and students' perceptions of receiving a message.

Media has several functions; media function focuses on two stages: assessing function based on media and usefulness. According to Sinta (2020), there are five types of media analysis functions: a. Learning through instructional media; b.Semantic functions; c. Manipulative functions; d. Psychological functions; e. Socio-cultural functions. Based on the limitations stated above, teaching media may be described as something that can be utilized to transmit a message (material) from the sender (teacher) to the receiver (students). This study focuses on teaching media using audio.

Online Learning (E-learning)

E-Learning Information Systems are exercises delivered by computer (CD-ROM, MP3, PDA, etc.). However, using the internet as a medium is often more profitable due to its greater reach. Of course, there are already a number of educational institutions that use the internet as an e-learning medium. E-Learning is a constantly evolving process in teaching and learning activities (Valentina, 2014). E-Learning is the use of internet technology to deliver a worldwide set of solutions for improving knowledge and performance. E-learning is a type of educational

activity that makes use of electronic media or information technology. E-Learning is a web-based learning technique that is utilized in both traditional and virtual classrooms.

E-learning is defined as a form of learning offered electronically using resources such as web conferencing, web-based tutorials, message boards, online exams, and others. So, e-learning is a new learning approach that may be accepted in the form of CD-ROM, MP3, and PDAs, as well as using the internet as a connecting medium to reach a large number of people. Valentine (2014).

1. Types of E-Learning

Synchronous Training and Asynchronous Training are two types of e-learning that are often employed nowadays. The following are examples of e-learning and its comprehension.

a. Synchronous Training. According to Rosen (2009: 255), synchronous training is online learning that is completed concurrently by a student and a teacher using the same technology. Synchronous Training is an e-learning strategy in which students and instructors meet at a set time.

b. Asynchronous training. According to Rosen (2009: 223), asynchronous training is online learning in which all learning is already available on the e-learning website, the timing is determined based on your choices, and you are self-guided. So, Asynchronous Training is an e-learning strategy in which students have access to e-learning information at any time.

The teacher offers the asynchronous approach without a set timeline, utilizing communication technologies such as e-mail, discussion forums, and web 2.0 tools. Despite the limitations of the relatively new synchronous web-conferencing capabilities, research indicate that the lack or presence of synchronous or live contact influences student perception, motivation, interaction, and sense of participation.

Audio

Audio is one of the audible props. Audio is derived from the term audible, which signifies that this speech may be heard naturally by the human ear. Cassette recorders and audio dishes are examples of audio devices that rely only on sound. This material is appropriate for individuals who are deaf or have hearing loss. Audio is the message to be transmitted poured into auditory symbols, both spoken and nonverbal (Winarto et al, 2020).

2. Benefits of Audio

Using audio or radio media as learning material will provide educators with various advantages. The usage of audio teaching materials in learning activities is mostly employed in: (Winarto et al, 2020).

a. Teaching music literature (poetry reading) and documentation exercises.
b. Foreign language instruction, either audio or video.
c. Teaching through radio or educational radio.
d. Study packages for numerous sorts of content that are available.
e. Students might develop their interpretation skills in a certain field of study.

The purpose of audio media is to teach all actions for skill development, particularly those involving listening abilities. An achievable talent in the use of audio media, including:

a. Focusing attention and maintaining attention.
b. Follow directions.
c. Practicing analytical power.
d. Sorting out relevant information or ideas and information irrelevant.
e. Summarize, restate, or recall information.

Empirical Review

Philip Ice et al (2015) mentioned that using asynchronous audio feedback to improve teaching presence and students' sense of community. This study demonstrated that asynchronous audio feedback outperformed asynchronous text-only feedback. Audio feedback can be linked to emotions of greater participation and improved learning community relationships. Based on these data, there was reason to think that, even though some students found audio feedback to be more time-consuming, they preferred it because they felt it provided more value.

The article "Analysis of Synchronous and Asynchronous E-Learning Environments" by Haiyan Xie et al (2018). Based on a sample of 38 students, the results reveal that students are more comfortable utilizing asynchronous communication tools than synchronized ones since they can readily access them offline. Asynchronous mode is especially advantageous for uncertain and timid students.

Jody Oomen's (2008) research, titled "Using Asynchronous Audio Communication (AAC) in the Online Classroom: A Comparative Study," found that asynchronous audio communication is an effective learning media that can increase teacher attendance, student involvement, content knowledge, and course satisfaction. This study discovered that AAC increases students' knowledge of course content, and 82.4% (n = 106) considered it improved the teacher-student interaction. As a result, this study found that Asynchronous Audio Communication can boost students' emotions, improve their perceived grasp of the course, and help them maintain their level of engagement.

According to Mohamadkhani, Farohi, and Farokhi (2013), audio files have been demonstrated to improve listening comprehension in high school pupils in Iran, as well as help with word pronunciation. Asemota (2015) noted in his study 'Nature, Importance, and Practice of Listening Skill' that audio may be utilized to construct active listening exercises for learners to improve their listening comprehension abilities.

Conceptual Framework

Listening is a talent that may be learned spontaneously without formal training, much as toddlers learn their native languages by listening to conversations. Listening is also essential for learning since it allows people to receive and absorb information. However, before students attempt to listen in order to receive, they must first learn to listen. As a result, students must study more diligently in order to become excellent listeners (Choo Siang Shian Melor & Md. Yunus, 2016).

The lecturer's audio selection is critical in selecting the suitable audio resources for online listening learning. Learning media in the learning process provides benefits such as making learning more appealing, clarifying learning information, and increasing the variety of learning approaches. Using media in teaching helps boost students' enthusiasm to learn English. Furthermore, the COVID-19 pandemic emphasizes the importance of using online models and applications to meet learning objectives.

According to Rosen (2009: 255), synchronous training is online learning that occurs simultaneously with a student and an instructor using the same method. Synchronous Training is an e-learning strategy in which students and instructors meet at a set time. Rosen (2009: 223) defines asynchronous training as online learning in which all learning is already available on the e-learning website, the timing is determined based on your choices, and the learning is self-

guided. So, Asynchronous Training is an e-learning strategy in which students have access to e-learning information at any time.

Audio online is used in listening online learning classes. Audio is one of the audible props. Audio is derived from the term audible, which signifies that this speech may be heard naturally by the human ear. Finally, the researcher examines students' listening comprehension. The researcher aims to discover how the audio picked by lecturers affects students' listening comprehension. In relation to the above statement, the researcher decides to perform a study that focuses on the impact of lecturers' selected audio in online learning on students' listening comprehension at Pattimura University Ambon's English Education Program.

METHODOLOGY

Research Design

The data was collected via quantitative research. Sugiyono (2018:15) defines quantitative research methods as follows: "Quantitative methods can be defined as research methods that are based on the philosophy of positivism, used to research a specific population or sample, data collection using research instruments, and quantitative or statistical data analysis, with the aim of describing and testing established hypotheses.

This research will be conducted in English Education Study Program at Pattimura University. It is located in Campus B FKIP, Pattimura University in Nusaniwe Regency, Ambon City. The population of this study involves students in the English Education Study Program who participated in an online listening class, which had 95 students in 2018 and 130 in 2019.

According to Sugiyono (2018:131), the research sample is representative of the population in terms of size and features. When a population is huge, researchers may not be able to collect all of the data, thus samples from that population can be used. Thus, Keywords might indicate that the sample is a subset and/or representative of the quantity and attributes being studied. Arikunto (2010) states that if the study population is smaller than 100, the population becomes the sample. Nonetheless, if the population exceeds 100, the researcher can collect a sample of 10 to 15%, 20 to 25%, or more. The sample for this study is 25% of the overall population, which is 32 pupils.

Sugiyono (2018:133) defines the sampling technique as follows: "Sampling technique is a sampling technique." Various sampling strategies are used to determine the sample that will be utilized in the research. The sample approach utilized in this study is non-probability sampling. Sugiyono (2018:136) defines non-probability sampling as "a sampling technique that does not provide equal opportunities/opportunities for each element or member of the population to be selected as a sample." Purposive sampling was utilized in this investigation instead of probability sampling. Purposive sampling is a sample approach with certain requirements (Sugiyono, 2018:138).

Technique of Data Collection

In this study, the researcher will be used two instruments which are questionnaire and final score:

a. Questionnaire

According to Sugiyono (2013: 187-196), a questionnaire is a data-gathering tool in which respondents are given a series of questions and written statements to answer. The questionnaire in this study will ask how lecturers' selected (synchronous and asynchronous) audio in online learning affects students' listening comprehension. The questionnaire will utilize a Likert scale.

b. Final Score

The ultimate score in this study will be the students' final listening comprehension grade in the listening class. The final score for listening comprehension is computed using Arikunto's (2009:245) assessment standards. They are as follows.

Table 3.1. Classification of the Students' Listening comprehension

Value	Grade	Category
80-100	A	Excellent
66-79	B	Good
56-65	C	Sufficient
40-55	D	Fairly Sufficient
<39	E	Poor

Validity and Reliability of the Questionnaire

The validity of these instruments is crucial since it determines if they can assist the researcher in collecting data to answer research questions. A trial will be done to ensure the validity of these tools. The goal of this study requires evidence to ensure that the questionnaire employed in this research is appropriate, intelligible, and capable of producing the intended outcome. Hale in Aritonang (2020) argued that the Correlation approach may be used to demonstrate validity when the scores of two independent categories measuring the same content or ability are connected. Thus, the correlation between the total score of each category in the questionnaire was determined using SPSS (20.0 version). Pearson's product moment formula will be utilized.

The SPSS program was utilized in this section to assess the validity of the questionnaire in this analysis. There are two criterion for determining the validity of test items: if the rvalue is more than rtable with a significance level of 0.05, the instrument employed is valid; if the rvalue is less than rtable, the instrument is invalid. There were 32 respondents in this study, and the research employed a significance threshold of 0.05, thus the rtable result is 0.349 (see appendix 1). The validity test revealed that all of the items were legitimate (see Appendix 2).

No.	Item	Significance	r Hitung	r Tabel	Valid
1	Item 1	0.000	0.752	0.349	Valid
2	Item 2	0.000	0.784	0.349	Valid
3	Item 3	0.000	0.784	0.349	Valid
4	Item 4	0.000	0.752	0.349	Valid
5	Item 5	0,000	0.760	0.349	Valid
6	Item 6	0.000	0.682	0.349	Valid
7	Item 7	0.000	0.667	0.349	Valid
8	Item 8	0.000	0.667	0.349	Valid
9	Item 9	0.000	0.608	0.349	Valid
10	Item 10	0.000	0.747	0.349	Valid
11	Item 11	0.000	0.728	0.349	Valid
12	Item 12	0.000	0.752	0.349	Valid
13	Item 13	0.000	0.784	0.349	Valid
14	Item 14	0.000	0.728	0.349	Valid
15	Item 15	0.000	0.624	0.349	Valid
16	Item 16	0.000	0.747	0.349	Valid
17	Item 17	0.000	0.760	0.349	Valid
18	Item 18	0.000	0.621	0.349	Valid
19	Item 19	0.000	0.682	0.349	Valid
20	Item 20	0.000	0.747	0.349	Valid

2. Reliability Analysis

The final phase in the field test for a standardized instrument was to assess dependability. According to Field (2017), dependability is the instrument's consistent performance. The Alpha Cronbach formula was used to assess the questionnaire's consistency. According to Gliem in Aritonang (2020), the Alpha Cronbach formula provides a simple and brief indication of the instrument's reliability after only one trial administration.

The reliability test evaluates the item's consistency when used repeatedly during another cycle. The reliability of test items is determined by two parameters: if alpha cronbach is greater than rtable at a level of significance of 0.05, the instrument is reliable. If it is less, it indicates that the instrument is not dependable for usage. The result calculation of questionnaire reliability using IMB SPSS version 25 is presented below (see appendix 3):

Table 3.2. Reliability Statistics

Cronbach's Alpha	N of Items
0.787	21

In this study, the rtable was 0.349 and the alpha cronbach was 0.929. In conclusion, alpha cronbach is more than rtable with the significance is 0.05 (0.929 > 0.349) means that the questionnaire was reliable.

Technique of Data Analysis

According to Sugiyono (2018:226), data analysis refers to "activities after data from all respondents or other data is collected." Data analysis activities include grouping data based on variables and types of respondents, tabulating data based on variables from respondents, presenting all data for each variable studied, conducting calculations to answer the problem formulation, and performing calculations for the hypotheses proposed.

There were two types of data that will be analyzed: questionnaire data and student final grades. There are two statistical analyses in this study: (1) synchronous and asynchronous audio online learning, and (2) listening comprehension grade.

1. Analysis of Questionnaire

To determine the category of synchronous and asynchronous audio online learning, the mean score were computed through descriptive statistic. Researcher used fourth scale which is : 4 = Strongly agree, 3 = Agree, 2 = Disagree, 1 = Strongly disagree.

2. Analysis of Listening Comprehension

32 respondents' listening comprehension grades were evaluated based on their listening comprehension scores. The lowest score would be 0 and the greatest would be 100, depending on their grades in Listening Class as assigned by the lecturer. More exactly, the student's grades were transformed into criteria from Pattimura University, as shown in the table below:

Table 3.4. Category of Students Listening Comprehension

Interval Class	Category
85 – 100	A / Excellent
70 – 84	B / Good
55 – 69	C / Fair
40 – 54	D / Poor
<39	E / Very Poor

3. Normality Test

In this study, the normality test was performed to assess if the gathered data from Creswell (2012) shows that the distribution of data (normal or not) determines which statistical test would be employed in examining the connection hypothesis. In the SPSS program, the researcher employed the I-sample Kolmogorof-Smirnov method. If the p-value was more than 0.05, it was considered normal, and vice versa.

4. Linearity Test

The linearity test determines whether or not the data from a test is linear. When the p-value is greater than 0.05, the data is categorized as linear, indicating that two variables are linear. SPSS was used to perform a linearity test.

5. Correlation Analysis

In this study, the data was analyzed by using Pearson Product Moment Correlation (SPPS) as follows:

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n(\sum x^2) - (\sum x)^2]\,[n(\sum y^2) - (\sum y)^2]}}$$

Where:

r = Coefficient correlation between x and y

n = Number of Respondent

x = Synchronous and asynchronous

y = Students' listening comprehension

3.7.6. Regression Analysis

After determining the association between synchronous and asynchronous effects on student listening comprehension, the researcher performed regression analysis to determine if synchronous and asynchronous affects student listening comprehension in the English Education Study Program. Furthermore, descriptive analysis was done to determine why there is a connection and effect between two variables.

FINDINGS

As previously stated, the sample was drawn from second-semester English Education Study Program students in 2018 and 2019 who had passed Professional Listening and Academic Listening classes, totaling 131 individuals. The sample for this study was 25% of the overall population, or 32 students, whose final scores were assessed to see if Synchronous and Asynchronous had a positive and substantial effect on their students' listening comprehension in the English Education Study Program.

This chapter reviewed and explained the results of synchronous and asynchronous audio in an online learning questionnaire analysis, as well as the results of students' Listening Comprehension grades. To determine if Synchronous and Asynchronous have a good and significant impact on their students' listening comprehension. The whole data is as follows:

1. The Result of Questionnaire Analysis

The data is collected using a Synchronous and Asynchronous audio Questionnaire. The surveys have 32 items, each with four alternatives on a range of 4 to 1: 4 (strongly agree), 3 (agree), 2 (disagree), and 1 (strongly disagree). Furthermore, the results were interpreted in terms of frequency using the criteria provided by Molyneux and Macintyre (2001), using an average calculation. The following list was used to determine synchronous and asynchronous.

Table 4.1. The table of Synchronous and Asynchronous

No.	Item	Frequency			
		Strongly agree (4)	Agree (3)	Disagree (2)	Strongly disagree (1)
1	Item 1	16 (50.0%)	14 (43.8%)	2 (6.3%)	-
2	Item 2	16 (50.0%)	16 (50.0%)	-	-
3	Item 3	16 (50.0%)	16 (50.0%)	-	-
4	Item 4	16 (50.0%)	14 (43.8%)	2 (6.3%)	-
5	Item 5	14 (43.8%)	15 (46.9%)	3 (9.4%)	-
6	Item 6	15 (46.9%)	14 (43.8%)	3 (9.4%)	-
7	Item 7	-	28 (87.5%)	4 (12.5%)	-
8	Item 8	-	28 (87.5%)	4 (12.5%)	-
9	Item 9	16 (50.0%)	16 (50.0%)	-	-
10	Item 10	15 (46.9%)	17 (53.1%)	-	-
11	Item 11	17 (53.1%)	12 (37.5%)	3 (9.4%)	-
12	Item 12	16 (50.0%)	14 (43.8%)	2 (6.3%)	-
13	Item 13	16 (50.0%)	16 (50.0%)	-	-
14	Item 14	17 (53.1%)	12 (37.5%)	3 (9.4%)	-
15	Item 15	2 (6.3%)	26 (81.3%)	4 (12.5%)	-
16	Item 16	15 (46.9%)	17 (53.1%)	-	-
17	Item 17	14 (43.8%)	15 (46.9%)	3 (9.4%)	-
18	Item 18	2 (6.3%)	27 (84.4%)	3 (9.4%)	-
19	Item 19	15 (46.9%)	16 (50.0%)	1 (3.1%)	-
20	Item 20	15 (46.9%)	17 (53.1%)	-	-

According to the tables above, the majority of students pick Agree, with the maximum score for Agree being 28 (87.5%) and disagree being 4 (12.5%).

Minimum	Maximum	Mean	Std. Deviation
51	76	66.41	7.573

According to the statistics above, students' listening comprehension average is 66.41, lowest grade is 51, highest grade is 76, and standard deviation is 7.753.

2. The Result of Students’ Listening Comprehension Analysis

Based on the Students' Listening Comprehension score, 40 respondents were surveyed about their Students' Listening Comprehension. The lowest score would be 0 and the greatest would be 100, depending on their individual grades in Listening Class as assigned by the lecturer. More exactly, the students' grades were transformed into criteria from Pattimura University, as shown in the table below:

Table 4.2. The table of Students’ Students’ Listening Comprehension score

Score Interval	Frequency	Percentage	Category
85 – 100	23	71.9%	A / Excellent
70 – 84	7	21.9%	B / Good
55 – 69	2	6.3%	C / Fair
40 – 54	0	0.0%	D / Poor
<39	0	0.0%	E / Very Poor

Based on the descriptive data on students' Students' Listening Comprehension variable, 23 students (71.5%) were classified as having A Students' Listening Comprehension. Meanwhile, 7 students, or 21.5%, were in the B category of kids' listening comprehension, while 2 students, or 6.3%, were in the C category. Thus, students in the English Education Study Program, Listening Class, scored significantly higher in the A category of listening comprehension in the final grade (see Appendix 5).

3. The Influence of Synchronous and Asynchronous toward Students' Listening Comprehension

Prior to computing the data, the researcher developed the following hypothesis for this study:

1. Formulate an alternative hypothesis (Ha): Synchronous and Asynchronous (X) have a positive and substantial impact on students' listening comprehension (Y).
2. Formulate the null hypothesis (Ho): Synchronous and Asynchronous (X) have no positive or substantial impact on students' listening comprehension (Y).

A. Normality Test

Before testing the hypothesis, the prerequisite test must be performed to determine the data distribution. Thus, in this study, the data were evaluated using the normalcy test. The normalcy test was calculated using the Kolmogorov-Smirnov test (also known as the Lilliefors test) in IBM SPSS version 20.0 (see appendix 6). The results were presented in the table below.

Table 4.3. The result of Normality Testing of Synchronous and Asynchronous and Students' Listening Comprehension

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		32
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	5.56588710
Most Extreme Differences	Absolute	.149
	Positive	.128
	Negative	-.149
Test Statistic		.149
Asymp. Sig. (2-tailed)		.025[c]

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

The outcome of the normality test indicates that the significant value is 0.025. The result indicates that the significant value is more than the 5% error level, or that it is greater than 0.05 (0.025>0.05). We may infer that all of the data were regularly distributed.

B. Linearity Test

The linearity test determines if the data from the test was linear or not. When the p-value is greater than 0.05, the data is categorized as linear, indicating that two variables are linear. The SPSS program was used to conduct a linearity test (see Appendix 7).

Table 4.4. The Result of Linearity Test

According to the results of the linearity test, the significant value of the departure from linearity is 0.10 > 0.05, implying that there is a linear relationship between the Synchronous and Asynchronous (X) variable and Students' Listening Comprehension (Y) variable.

C. Pearson Product Moment Analysis

The following table displays the results of Pearson Product Moment correlation analysis with the variables X (synchronous and asynchronous) and Y (students' listening comprehension):

Table 4.5. The correlation between Synchronous and Asynchronous and Students' Listening Comprehension

Based on the output above, the following conclusion may be reached (see appendix 8): A significance level of 0.000 (<) less than 0.05 indicates a significant link between synchronous and asynchronous listening comprehension among students. Second, a Pearson Product Moment association value of 0.657 indicates a substantial association between synchronous and asynchronous learning and students' listening comprehension. Consider the table below:

Table 4.6. Interpretation of Product Moment Score

Coefficient of Correlation	Interpretation
0.00 – 0.20	The Correlation is Neglected
0.21 – 0.40	The Correlation is Weak
0.41 – 0.60	The Correlation is Moderate
0.61 – 0.80	The Correlation is Strong
0.81 – 1.00	The Correlation is Very Strong

(Sugiyono, 2018)

According to the table interpretation above, the correlation coefficient is 0.657. It signifies that the coefficient connection is strong. The correlation test results reveal a significant value of 0.00 < 0.05, indicating a link between the Synchronous and Asynchronous (X) variable and Students' Listening Comprehension (Y). Furthermore, Pearson Correlation demonstrates that the association between variables X and Y is positive and has a high level of correlation.

D. Regression Analysis

The coefficient determination, also known as R2, is an essential output of the regression. It is used to determine how much connection fluctuation X (synchronous and asynchronous) may directly explain the variation of variable Y (students' listening comprehension). In other words, the determination coefficient assesses the extent to which synchronous and asynchronous audio learning impact the rise and fall of students' listening comprehension. The results of the determination coefficient analysis may be seen in the table below:

Table 4.7. The Output of Regression Analysis ANOVAa

Model Sum of Squares Df Mean Square F Sig.

1	1.434	10.923
28	.140	
29		

1 Regression 1.434 .003[b] Residual 3.933

Total 5.367

a. Dependent Variable: Students' Listening Comprehension

b. Predictors: (Constant), Synchronous and Asynchronous

The value of F count = 10.923 with a significance level of 0.003 < 0.05 indicates that the Synchronous and Asynchronous (X) variables have an influence on Students' Listening Comprehension (Y).

Table 4.8. Model Summary

Explain the correlation/connection (R) value of 0.517, as seen in Table 4.8 above. The coefficient of determination (R Square) for this output is 0.267, indicating that the synchronous and asynchronous (X) variables have a 26.7% effect on students' listening comprehension (Y). So, based on the value, Synchronous and Asynchronous have a 26.7% effect on Students'

Listening Comprehension, while the remaining 73.3% is influenced by other factors not investigated in this study (see Appendix 9).

DISCUSSION

Based on the analytical results, the data was evaluated and discussed in depth in line with the study's research question and objectives. The data was obtained using questionnaires and listening grades, and it was processed with IBM SPSS version 20. The findings revealed that Synchronous and Asynchronous had a favorable and substantial link with students' listening comprehension. Furthermore, the findings demonstrated that both synchronous and asynchronous methods had a good and substantial impact on students' listening comprehension.

To assess Synchronous and Asynchronous, the researcher delivered online questionnaires to 32 respondents, who were 2018 and 2019 English Education Study Program students who had completed Professional and Academic Listening classes. To assess students' listening comprehension, the researcher assessed their final grades from Professional and Academic Listening class courses using descriptive statistics. The findings indicated that 23 students, or 71.5%, were in the "A" category of students Listening Comprehension. Meanwhile, 7 or 21.5% of the students were in the B group, while 2 or 6.3% were in the C category. There were no students in the "D" and "E" categories since the frequency was zero (0%). According to this result, the average listening comprehension score of students in the English Education Study program in 2018 and 2019 was 85 - 100, placing them in the "A" category.

The impact of synchronous and asynchronous on students' listening comprehension is calculated using correlation and the coefficient of determination. The computation revealed a high association between Synchronous and Asynchronous and Students' Listening Comprehension. Furthermore, the data indicated r=0.657, a positive result with a significance level of 0.000, indicating that there is a "Strong" association between synchronous and asynchronous and students' listening comprehension. Finally, the coefficient of determination is 0.267, indicating that the synchronous and asynchronous audio (X) variables have a 26.7% effect on students' listening comprehension (Y). So, based on the value, Synchronous and Asynchronous have a 26.7% effect on students' listening comprehension, whereas 73.3% is influenced by other variables.

CONCLUSION AND SUGGESTION

Conclusion

Based on the findings of data analysis and discussion, this study has various points. First, the results of Synchronous and Asynchronous show that the average of synchronous and asynchronous were 66.41. Second, according to the results of descriptive data on Students' Listening Comprehension, students were classified as A. Thus, 23 students (71.5% of those enrolled in the English Education Study Program) are classified as having A Students' Listening Comprehension. Third, Synchronous and Asynchronous have a favorable and substantial impact on students' listening comprehension. The correlation coefficient (R) is 0.657. The coefficient of determination (R Square) is 0.267, indicating that the Synchronous and Asynchronous (X) variables impact Students' Listening Comprehension (Y) variables by 43.2%. So, based on the value, the effect of Synchronous and Asynchronous on Students' Listening Comprehension is 26.7%, whereas 73.3% is influenced by other factors not investigated in this study.

Suggestion

Based on the foregoing conclusion, the writer suggests the following:

1. The researcher suggests that students continue to improve their listening skills through online learning. As a result, it will contribute positively to their final mark for listening.
2. Not only for students, but also for lecturers, to stimulate and provide a creative model in online learning classes. The instructor should make some attempts to enhance students' enthusiasm for online learning. The instructor could also use some listening skills that are appropriate for pupils in this epidemic period.
3. The researcher would want to encourage other researchers to undertake similar studies on other linguistic skills in language learning (speaking, listening, and writing). Its goal is to assist researchers and readers in developing a comprehensive picture of synchronous and asynchronous approaches to students' listening comprehension.

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