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The Effects of Video-Based Teaching Materials on Students' Listening Ability

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Abstract: Finding appropriate teaching materials for listening subjects is not an easy task for lecturers. Therefore, creating video-based teaching materials is one of the solutions. However, the effectiveness of this product is still unknown. This quasi-experimental research aims to determine the effects of using video-based teaching materials on the listening ability of first-semester English students. Samples were taken using the cluster sampling technique, two classes out of 3 existing classes. The control class was treated using only audio media, while the experimental class was treated with audio-visual (video) media. The treatment was conducted for 14 meetings for each class, starting with giving the pre-test and ending with giving the post-test. The results of independent sample t-test calculations revealed that there was no significant difference in the learning outcomes between the control and experimental classes. This is evidenced by the sig. (2-tailed) value, namely 0.855>0.05. However, the range of the pre-test and post-test results between the control and experimental classes is different. The score range for the control class was 17.22, while the score range for the experimental class was 33.05. This shows that the use of video in the experimental class had a higher effect on improving students' listening skills than in the control class, which was only taught with audio materials.

Keywords: audio-visual, experiment, listening

Introduction

Listening is one of the compulsory subjects in the English study program curriculum of the Faculty of Teacher Training and Education at one of the public universities in Indonesia. This course is one of the most important courses, and it is taught in three semesters. In the first semester, students must take the Listening for General Purposes course. In the second semester, the course they must take is Listening for Professional Context. Meanwhile, in the third semester, the listening course taught is Listening for Academic Context. The level of listening ability in these three types of courses is the same, namely at the intermediate level. The difference is in the topic for each type of listening course given.

For Listening for General Purposes subject, the topics given are related to everyday life, such as food and drink, education, leisure time, and money. For the Listening for Professional

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Context subject, the topics given are related to the official contexts, such as anchor, news, debate, and speech, while the topics for Listening for Academic Context subject are related to Listening for TOEFL and IELTS.

Based on the researchers' experience when teaching listening for the Listening for General Purposes course, even though the topics are closely related to everyday life, students' ability to understand listening was still very low. The low achievement in the Listening for General Purposes course can be attributed to various factors, one of which is the use of teaching materials. In the process of teaching listening, instructors typically use teaching materials from books and internet sources. However, there are no standardized and adequate teaching materials that can serve as references for instructors teaching this course. Based on the researchers' experience and that of colleagues who also teach listening, they often struggle to find appropriate teaching materials, especially those aligned with the curriculum. Moreover, the teaching materials are often provided in audio format only.

Based on the explanation above, the researchers have developed instructional materials for Listening for General Purposes based on videos through research conducted previously. However, the effectiveness of the instructional materials developed by the researchers has not been tested. The development research conducted previously only reached the expert validation stage. In addition, although some theories suggest that the presence of visuals can help learners understand what they are listening to and the presence of visual elements while listening provides a context that is not only linguistic but also non-linguistic, which is expected to help students better understand what they are listening (Brame, 2016), it is not known whether the use of video (audio-visual) in the context of Listening for General Purposes can improve students' ability to comprehend everyday English. Therefore, the researchers considered that it was important to find out the effects of using videos to improve students' listening ability.

English Listening Instruction

Listening is one of the most common activities performed by humans. According to Nicholas and Steven (cited in Bagheri & Bahadori, 2014), adults spend 45% of their time in communication listening, 30% speaking, 16% reading, and 9% writing. The importance of listening skills is also emphasized by (Vandergrift (2007, p.1), who states that "listening comprehension lies at the heart of language learning."

Even though it is an important skill for humans to acquire, the teaching of listening is still often neglected. Maftoon et al. (2016) and Vandergrift & Goh (2012) argued that listening instruction in many English classes did not run well. Many teachers do not understand the processes of second/foreign listening and the strategies for teaching listening, which can improve students' listening skills (Graham et al., 2014; Hustarna et al., 2022; Vandergrift & Goh, 2012). Besides, some view listening as a passive skill where students just receive inputs and process the inputs to understand them. Nevertheless, it is not a passive skill. According to Vandergrift (2012), listening is a complex process that involves the active engagement of the human brain in interpreting what is heard based on existing knowledge. In the context of listening in English as a foreign language, the process becomes more challenging because listeners not only have to focus on the sounds they hear but also on unfamiliar words they have never heard or understood before. In other words, listening is a sequence of processes, starting from identifying sounds, making interpretations, utilizing the results of interpretation, and the process of storage, as well as connecting the results of interpretation with overall knowledge and experience.

Vandergrift and Goh's view (2012) on listening is supported by other scholars. Graham and Santos (2015), Rost (2011), and Wilson (2008) also considered listening as an active skill involving four types of processing (neurological, linguistic, semantic, and pragmatic), which are integrated and complementary to each other.

In the process of teaching and learning listening, teachers are required to understand the L2 listening processes and be able to teach them well to help students to be better listeners. One of these is using appropriate media to teach listening. Some previous studies found that the most commonly used media is audio (radio/tape, CD) (Ampa, 2015; Chen & Chen, 2021; Maftoon et al., 2016). However, using audio only in teaching listening is considered boring as it does not provide students with the real context of the text (Ampa, 2015). He recommended that teachers use interactive media, such as videos, which provide students with visuals to accompany the audio. In addition, Harmer (2001) stated that there are several benefits to using video in the teaching and learning process. Video can help learners understand what they are learning because the visual elements enable learners to understand the context of what they are listening to. Learners can see how the language is actually used because visualization in the video can depict real situations and how spoken language is supported by body language, which illustrates the complete use of the language. In addition, learners can simultaneously learn about the culture of the people using the language, such as clothing, eating habits, location/situation, etc. The use of video can also increase learners' motivation to actively engage in the learning process (Ljubojevic et al., 2014).

Method

This research was designed using an experimental research design, specifically quasi-experimental. The research sample consists of first-semester students enrolled in the Listening for General Purposes course. The sample selection was done through purposive cluster sampling. The research instrument consists of test questions (pre-test and post-test). The data for this research is sourced from the results of pre-tests, post-tests, and unstructured observation results obtained from both classes (control class and treatment class). The test questions are in the form of questions with short answers, with a total of 34 questions from 5 videos. The topics are related to everyday life, including food and drink, education, money, hotel, and family. The data is analyzed quantitatively using parametric statistical calculations. The calculations are used to assess the difference between the class taught using audio-visual and the class taught using audio only, using the gain test (difference), which is the difference between the pre-test and post-test. The statistical technique used in this research is the t-test, with an initial check for normality and homogeneity. The hypothesis testing in this research uses a one-tailed t-test. The testing criteria for the hypothesis are that the hypothesis will be accepted if the calculated t-value > the table t-value.

Results and Discussion

Before conducting the research, the researchers first tried out questions used for the pre-test and post-test to test the validity and reliability of the test. The questions were tested on a group of first-semester students who were not part of the research sample. Out of 50 questions, 34 questions were found to be valid (calculated r < table r at a significance level of 0.5%). The reliability test conducted using SPSS 16.0 resulted in a reliability value of 0.904. Since the calculated r-value > table r-value (0.423), it can be concluded that the test created is reliable.

After obtaining the results of the tryout, the research started with the administration of the pre-test to both classes (the control class and the treatment class). The pre-test was given to both classes in the first session of the class before the treatment for twelve meetings was carried out. Next, the control class was taught using audio only, while the treatment class was taught using audio-visual materials. After the learning process took place over 12 sessions, the researcher administered the post-test. The pre-test and post-test results for both classes can be seen in the table below.

Table 1. The pre-test and post-test results for both classes

No.	Control class		Experimental class	
	Pre-test	Post-test	Pre-test	Post - Test
1	59	72	39	68
2	56	83	71	90
3	60	86	13	32
4	38	68	36	61
5	33	70	65	84
6	73	80	51	81
7	55	70	48	74
8	78	92	31	83
9	60	70	36	87
10	35	53	55	90
11	60	72	63	96
12	63	71	28	75
13	47	71	51	75
14	73	85	35	84
15	56	68	41	60
16	75	82	21	80
17	44	68	50	77
18	63	77	23	55
Average	**57**	**74**	**42**	**75**

The result of data processing using paired sample t-tests for the experimental class is as follows.

Table 2. Paired Samples Statistics of the Experimental class

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRETEST	42.0556	18	15.96493	3.76297
	POSTTEST	75.1111	18	15.42682	3.63614

The data above shows that the average Pre-test score is 42.0556 and the average Post-test score is 75.1111, with a sample size of 18 individuals. Additionally, the paired sample correlation yielded a value of 0.003, indicating a relationship between the Pre-test and Post-test scores.

The paired sample t-test results reveal that the Significance value (2-tailed) is 0.000, which is smaller than 0.05. This suggests a significant difference between the Listening learning outcomes of the Pre-test and Post-test. Therefore, it can be concluded that the use of audio-visual teaching methods can enhance students' listening skills. As a result, the Null Hypothesis is rejected, and the Alternative Hypothesis (H1) is accepted.

Furthermore, the result of data processing using paired sample t-tests for the control class is presented below.

Table 3. Paired Samples Statistics for the Control Class

			Mean	N	Std. Deviation	Std. Error Mean
Pair 1	pre-test		57.1111	18	13.45095	3.17042
	post-test		74.3333	18	9.07485	2.13896

The data above reveals that the average pre-test score is 57.111 and the average post-test score is 74.333, with a sample size of 18 individuals. Additionally, the paired sample correlation yielded a value of 0.00, indicating a relationship between the pre-test and post-test scores.

Regarding the difference in independent sample t-test results between the control class and the experimental class, it is found that the significance value (2-tailed) is 0.855, which is greater than 0.05. This suggests that there is no significant difference in the learning outcomes between the classes using audio-visual and audio media.

The data analysis of both classes indicates that the pre-test results in the control class and the experimental class show different listening abilities. Students in the control class had better listening abilities compared to students in the experimental class. However, the final results from both classes were nearly the same, with the experimental class even having a slightly better score (75). In other words, by the end of this research study, the students in the experimental class had listening abilities almost on par with those in the control class.

In the control class, students were taught using only audio media, while the experimental class was taught using audio-visual media. Even though the final results appeared similar, the use of audio-visual media significantly influenced the improvement in post-test scores. The average pre-test score of 42 increased to 75 in the experimental class, resulting in a 33-point improvement. Meanwhile, in the control class, the improvement was only 17 points.

Data from the observation also revealed that in terms of motivation, students in the experimental class also showed more enthusiasm when learning with videos. Students in the experimental class seemed to be more serious and focused during the learning process, as they could listen attentively while paying attention to the audio-visual (video) presented. In contrast, students in the control class, who were taught using only audio, often appeared distracted and less focused while working on the worksheet during listening activities.

In terms of motivation, students in the experimental class also showed more enthusiasm when learning with videos. They were more active in asking and answering questions both before and after the video presentation. This finding corroborates Chan et al.'s study (2014), which found that their research participants preferred to have videos rather than audio-only. The positive outcomes of using audio-visual media align with some previous studies (Alivi & Suharyono, 2016; Chen & Chen, 2021; Chen et al., 2020; Hamdan, 2015; Polat & Erişti, 2019; Qomariyah et al., 2021). Video can help learners understand what they are learning because visual content can provide context for what is being heard. Learners can see how the language is used in real-life situations, with the visuals portraying actual scenarios, body language, and cultural aspects, such as clothing, eating habits, and settings. The use of video can also enhance learners' motivation, actively involving them in the learning process, as supported by research conducted by Hsin and Cigas (2013) that the use of video can enhance student motivation and learning enthusiasm. The increase of student engagement in the learning process ultimately leads to better learning outcomes, as also supported by the research conducted by Bravo et al. (2011). In the same vein as the two previous studies, Ljubojevic et al. (2014) argued that video could increase learner participation in the learning process, make them more focused, improve

their understanding of the content, and boost their confidence in answering questions. Ultimately, video aids in more efficient learning.

Conclusion

Based on the data analysis from both classes, it can be concluded that using audio-visual media positively impacts the listening abilities of first-semester students. Although the final results show that the post-test scores in both classes are nearly the same, it is essential to compare initial learning outcomes with the final results. The pre-test scores in the control class were higher than those in the experimental class. However, the post-test results revealed that the average score of students in the experimental class was higher than that of students in the control class. Besides improving listening skills, the use of audio-visual media also enhances students' engagement and motivation during listening activities.

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