

The Effect of English Subtitle in English Video on Listening Comprehension

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Abstract

The purpose of this study is to investigate the effect of the use of English subtitles in English videos on listening comprehension of English Education students in Muhammadiyah University of Jember by the year 2024. The research design used is Pre-experimental Design in the form of One-Group Pretest-Posttest Design. The researcher used SPSS 23 version software to facilitate the analysis of the data that was collected. The results obtained showed that there is an increase in the average score from the pre-test to the post-test. In paired-sample T-test, the result is 0.000 (smaller than 0.05). According to the results above, it can be noticed that the using of the same language text (in this case English) can be used as one of the recommendations in learning and teaching listening. However, it is still unclear how good the long-term effects are on learning, in terms of improved listening skills and vocabulary learning.

Introduction

Listening is a key component of verbal communication, which is an interactive process when a person uses both verbal and nonverbal cues to assume the roles of speaker and listener. Listening is one of the most important aspects of communication (Anggia, Gusmiarni, Dharmawan: 2021). Giving listening comprehension priority, particularly in the early phases of teaching and/or learning a second language, provides learners with cognitive advantages, as noted by Vandergrift (2003). Early concentration on listening comprehension offers the benefit of modeling language acquisition after a more realistic method.

A number of experts have put forward a definition of listening comprehension. According to Hamouda (2013) and Rost (2002), listening comprehension is an interactive process in which the listener contributes to the meaning-making process. Through the use of grammatical structures, prior knowledge, stress and intonation, sound discrimination, and other linguistic and non-linguistic cues, listeners were able to understand spoken material. According to Brown and Yule (1983), listening comprehension is the ability to comprehend

what one has heard. If they learn the text by hearing it, they will understand it. Nadig (2013) defines hearing comprehension as all the different processes that go into comprehending and making meaning of spoken language. Language proficiency, awareness of speech sounds, word meanings, and sentence structure are all included in this. As stated by Tyagi (2013) and Gerber and Murphy (2019), there are five phases in the listening process: hearing or receiving, understanding or interpreting, recalling, evaluating, and responding.

Unfortunately, listening skill learning gets less attention when compared to the other three skills. As Brown (1987) observed, the substantial amount of listening comprehension and classroom activities taught in many schools throughout many countries continues to show that listening is considered the slightest critical skill in language teaching. Due to the overemphasis on speaking and lack of listening, many L2 learners have expressed dissatisfaction over their inability to comprehend native speakers and everyday conversations.

These days there are various ways, methods, and also media for learning listening skills. Talking about the media, the types of media that we for the most part recognize on learning listening skills are audio-only media and audio-visual media. Audio-only media can be found on radio and recordings, whereas audio-visual media can be found on video and television. From media such as video and television alone, learners can access the type of content they need, particularly with the ease of accessing information as it is today. There are times when the media mentioned above is attached with text that appears to re-explain what the speakers are saying. That text is called subtitles. Subtitle (or subtitling) is an act of interpretation by displaying text, usually with text displayed at the bottom of the screen, with the aim of duplicating the original discourse exchanged among different speakers and other verbal information conveyed visually (Díaz-Cintas and Remael, 2020). There are several sorts of subtitles which Zanón (2006) divides them into bimodal or intralingual subtitles, standard or interlingual subtitles, and reversed subtitles. Subtitles are expected to assist the audience, in this case learners to understand the content they see and listen to.

Thanks to technology, there are many types of media available today that can be used as tools of learning, both for on their own by students and learning in classroom. Multimedia learning is defined as developing information from verbal and visual information. Some studies said that multimedia learning will work way better if it includes more than one input, for example utilizing audio and visual input or audio and text input at the same time. In any case, different results occur when all three inputs (audio, visual, and text) are utilized at the

same time, displaying the same substance. At least according to Mayer et al. (2001), students who viewed educational animations with simultaneous narration comprehended the content more well without subtitles than with them. In spite of that, verbal redundancy between the audio description and the on-screen content is still useful in circumstances where the learner has the opportunity to process important visual information. Due to the close semantic and phonological match to the audio lesson content, subtitles provide a high level of information. At the same time, video content does not offer literal information like subtitles but is semantically tied to the audio lesson. (Zheng et al. 2021).

Basically, subtitling consists of visual (on-screen content) and verbal (literary representation of dialog) modalities. By including it as an additional source of information, viewers, particularly the ones who need to develop their listening skills, must prioritize the information processing channels (both visual and verbal) required to process this additional information. However, information processing (i.e., cognitive load) may happen as all sources of information within the video with captions compete with one another for working memory resources (Matthew, 2020). Since the listening process goes through stages from hearing, understanding, up to responding, of course during those processes the cognitive work works actively. The impact of including subtitles to a video that contains both audio and visual information depends on the kinds of content shown and the basic learning capacity that learners have before watching the video. The cognitive resources needed to extract and integrate knowledge determine how repeating information affects learning, determined by the cognitive load theory (Adesope & Nesbit, 2012). Hence, learners' comprehension might rely on having the fitting cognitive skills to arrange different sources of information. More particularly, people who are great at switching their attention adaptably between different sources of information and focusing on critical information while suppressing insignificant information are likely to benefit more from multimedia learning. (Miyake et al., 2000). That is why experts have diverse views on how employing subtitles affects cognitive load.

The relationship between learners' listening comprehension and the English subtitles on English-speaking videos has been the subject of varying studies in the past. Some researchers found that subtitles can be beneficial when used. One study conducted in 2016 by Saed, Yazdani, and Askary supports this assertion. After studying ten students at Chabahar Maritime University, they discovered that the pupils benefited from having English subtitles. This is a result of their already strong vocabulary and listening abilities. Similar findings from research done in 2021 by Anggia, Gusmiarni, and Dharmawan

indicated that high school pupils can comprehend some, but not all, of the content of English-language movies when they have English subtitles. Metruk (2018) found, however, that there was little difference in the outcomes between using (in both English and Slovak) and not using subtitles, indicating that learners' listening comprehension was not significantly affected by using or not using subtitles. At the time, Metruk had examined 30 students enrolled in the Teaching of English Language and Literature study program at a university in Slovakia.

Method

This study uses quantitative methodologies in an experimental design. In order to test a hypothesis about causality, experimental research compares two groups on a single outcome measure (Marczyk, et al. 2010). The independent variable in this study is English subtitles, whereas the dependent variable is students' listening comprehension. As for the research design used is Pre-experimental Design in the form of One-Group Pretest-Posttest Design. This design was chosen in order to determine the difference in the results of the test scores of the respondents before and after treatment in the same group.

The research's population is all active English language education students at the Muhammadiyah University of Jember by the year 2024. To minimize the total amount of responses, a sample that is needed as representative of the population. Purposive sampling is the method used for sampling, considering that each responder has had adequate listening abilities in the past. Thus, by 2024, active English language learners at Muhammadiyah University of Jember who have completed and passed the following courses—basic listening, literal listening comprehension, and inferential hearing comprehension—will make up the sample for this study. With this consideration, fourth semester students will be respondents in this study.

The participants were selected according to specific standards: they must be enrolled in and successfully complete specific courses in English education. Each participant would receive the treatment and test twice, and they would be placed in a single group. The participants would first watch a video without subtitles that lasts four to five minutes. The video would be played twice. Afterwards, the participants would complete an assessment. The participants would watch a different video with English subtitles following a short break. As before, the second video would be played twice before completing an assessment.

The test technique is a data collection technique done by giving a set of questions or tasks and other tools to the subject whose information is needed. Collecting data using test techniques can be called measurement. There are two different test types used in this study. The first is an objective test in the form of multiple choice questions and a subjective test in the form of short explanation questions. Multiple-choice questions are designed to facilitate respondent answering by having them match provided information with available response possibilities. Short answer questions are kind of questions that meant to measure students' comprehension or knowledge of facts. Because each respondent is required to answer the questions in their own words and because short answer questions encourage respondents to evaluate the responses they believe to be accurate, this style of question is used. The keywords given in the answer will determine whether the response is deemed correct or wrong.

Data analysis is the process of analyzing and interpreting numerical data. Inferential statistics are the kind of statistics used in this research. The listening test result is determined using statistical analysis. The researcher used SPSS 23 version software to facilitate the analysis of the data that was collected.

Findings and Discussion

Pre-test and Post-test Result

A pre-test was conducted to determine the basic state of students' listening comprehension before they began receiving treatment from the researcher, and a post-test was performed to measure the respondents' level of listening comprehension after treatment. Before calculating the average score, first calculate the number of scores for both types of questions, multiple choice and short explanation questions, to see how significant the changes experienced by respondents after being given treatment. The calculating the difference in the number of scores respondents got. Both pre-test and post-test each respondent was given 10 multiple choice questions and 5 short explanation questions. The results obtained was 14 respondents or about 70% of total respondents have their score increased,; 5 respondents or about 25% have neither increased nor decreased, and only one respondent or about 5% has the score decreased. The lowest score in the pre-test is 0 while the highest score is 65. As for the post-test, the lowest score is 20 and the highest one is 70. For mean score, the mean score in pre-test is 32.75. This shows that the listening comprehension of the respondents before being treated is quite low. Meanwhile, the mean score of post-test is 46.00. It shows that there was increased compared to before treatment.

Test of Normality

Before calculating the t-test, a normality test is used to figure out whether or not the data collected through the pre- and post-tests have a normal distribution. The pre-test and post-test data were analyzed using the Shapiro-Wilk test because there were fewer than 50 samples in this study. To test the null hypothesis, the data were compared using asymp.sig at a level of significance of 0.05. If the significance is higher than 0.05, the null hypothesis (H_0) is accepted, which means that the data are normally distributed. If, on the other hand, the significance is less than 0.05, the null hypothesis (H_0) is rejected, suggesting that the data are not regularly distributed.

Test of Normality

		Kolmogorov-Smirnov			Saphiro-Wilk		
		Statistics	df	Sig	Statistics	Df	Sig
Hasil	Pre-test	.171	20	.127	.946	20	.316
	Post-test	.145	20	.200	.930	20	.156

Based on the table above, the sig. of pre-test is 0.316 and the result if post-test is 0.156 which both are more than 0.05. Therefore, it can be indicated that at the 95% confidence level both pre-test and post-test are normal distribution.

Homogeneity test

Homogeneity test is used to determine whether the variance of both samples is homogeneous or not. It is homogeneous if the significance $> (0,05)$, that means the data is homogeneous, whereas if the significance $< (0,05)$ it is not homogeneous. The result of variance test as follows:

Test of Homogeneity of Variances

		Levant Statistic	df1	df2	Sig.
Hasil	Besed on Mean	.483	1	38	.512
	Based on Median	.654	1	38	.424
	Based on Median and with adjusted df	.654	1	35.485	.524
	Based on trimmed mean	.483	1	38	.491

Based on the table of homogeneity of variances above, the result is 0.512 which is $> (0,05)$. That means this data is homogenous.

Paired Sample T-test for Hypothesis Testing

The paired sample t-test is part of a comparative hypothesis test or comparison test which aims to determine the difference in the averages of two related samples. The requirement for carrying out this test is that the data must be normally distributed. In this research, paired sample t-test is used because there are two interconnected data, namely data before treatment (pre-test) and data after treatment (post-test). If the significant value in the (Sig. 2-tailed) $> (0,05)$, the null hypothesis (H_0) means that the use of English subtitles in English videos has no significant effect on listening comprehension is accepted and the alternative hypothesis (H_a) is rejected. Whereas, if the (Sig. 2-tailed) $< (0,05)$, the alternative hypothesis (H_a) means that the use of English subtitles in English videos has significant effect on listening comprehension is accepted and the null hypothesis (H_0) is rejected. The result of t-test as follows:

Paired Simple Test

	Paired Differences					t	df	Sig. (2-tailed)
				95% Confidence Interval of the Difference				
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1 Pre-test Post-test	-13.250	12.904	2.885	-19.289	-7.211	-4.592	19	.000

From the table above, the Sig value. (2-tailed) obtained is 0.000 which is a value is smaller than 0,05. With this, it means that the null hypothesis is rejected and the alternative hypothesis is accepted.

After analyzing the data, the results obtained showed that there is an increase in the average score from the pre-test to the post-test. For the normality test, it shows that the data is normally distributed. As well as the homogeneity test result shows that the data is homogeneous. In paired-sample T-test, the result is 0.000 (smaller than 0.05) which means that there is a significant effect between the use of English subtitles and students' listening comprehension.

From the results presented above, it can be said that the use of English subtitles while watching English speaking videos has an effect on students' listening comprehension. This is in line with the results found by Saed, Yazdani, and Askary (2016) in their study. Although in this study the respective scores obtained by students were quite low both in pre-test and post-test, at least there was an improvement experienced by many students on their post-test scores. About understanding the content, the results are more or less the same as those found by Anggia, Gusmiarni, and Dharmawan (2021). As stated before, there are five stages of listening process starts from hearing or receiving, understanding or interpreting, recalling, evaluating, up to responding (Tyagi, 2013; Gerber and Murphy, 2019) and though in this study the listening process was not clearly shown, the answers given by the students in a series of tests show the results they get from the process. With subtitles, the understanding gained from the content in the video becomes better. Even so, there is a little note that the consensus of the research conducted on the usefulness of subtitles for listening comprehension is that 'L2 subtitles facilitate comprehension', but it is still unclear how good the long-term effects are on learning, in terms of improved listening skills and vocabulary learning (Vandergift, 2011).

Conclusions

Based on the hypothesis and the research result, it can be concluded that there is a significant effect of using English subtitles in English videos on listening comprehension of English Education students in Muhammadiyah University of Jember. In this study, it can be noticed that the use of subtitles can assist students in understanding the context of the video. It is likely that the students' listening comprehension is not too bad and their comprehension becomes better with subtitles. Considering the result above, some suggestions are given to the listening lecturer and the further researcher. According to the results above, the use of the same language text (in this case English) can be used as one of the recommendations in learning and teaching listening. It can be used to help understand the context of the video if there are students who do not understand what the speaker is talking about. Other researchers in the future can use this research as a reference in conducting research with relevant themes whether it is about subtitles, listening comprehension, or both. And because in this study there was only one sample group, it is hoped that in the next study there will be a control group as a comparison.

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