COMPARING THE EFFECTIVENESS OF AUDIO AND VIDEO MATERIALS IN LISTENING COMPREHENSION

Trianawaty[5](trianawaty@ukwms.ac.id)

ABSTRACT

The main purpose of this study was to compare the effectiveness of audio and video materials in students' listening comprehension. There were two groups of undergraduate students majoring in English who took part in this research. Each of the group consisted of 17 students. Group A was the group of students who were taught using audio-only materials, while Group B was the group of students who were taught using video materials. The data were collected by giving students the same set of questions in the pretest and posttest. The data were then analyzed using t-test formula. Based on the result, it was found that the gained score of the students taught using video was higher than that of the students taught using audio-only materials. However, the finding of this research also showed that there was no significant difference between teaching students using audio and video in listening. It can be seen from the result of t_o *to be 0.67 and the result of* t_{table} *was 2.03 with the degree of freedom of 32. Based on*

[5] *Author is a lecturer of English Department Widya Mandala Catholic University Surabaya*

the result, the study concluded that the t_o was lower than t_{table} which meant that the Null Hypothesis (H_o) was accepted while the Alternative Hypothesis (H_a) was rejected. Therefore, it was implied that there was no significant difference between the students' results of pre- and post-listening tests after getting different methods (video- and audio-based course).

***Keywords**: listening comprehension, audio materials, video materials*

1. Introduction

As one of the major languages of spoken academic discourse, English is widely used in international conferences and seminars worldwide (Long and Richards, 1994). However, it is not easy for EFL learners to comprehend spoken English because their first language dominates most of their communications. Secondly, they only learn how to listen to spoken English through formal instructions in the classroom and they are not exposed to English outside the context of a formal study. Learners usually find a number of difficulties especially in listening because they have very limited vocabularies; they are unfamiliar with the topics and accents, and many others. Being one of the four language skills in English, listening plays "a vital role in the language acquisition process" (Brett, 1997, p. 39). It is also without a doubt that listening is considered to be "the most fundamental skill"

(Oxford, 1993, p. 205). Therefore, listening becomes one of the main subjects which has to be learned by English Department students worldwide.

Many research studies have been done to identify ways to improve EFL students' listening comprehension. However, there are still a lot of confusions on how to suitably teach listening. Many theories suggest that the use of authentic videos and audios are necessary. Feak and Salehzadeh (2001) have indicated that "video in any kind of listening assessment, whether placement or otherwise, remains largely unexplored and is not well understood" (2001, p. 481). In teaching EFL, videos are additionally used for developing listening skills. There are many resources available in the internet that language teachers can easily find. The biggest source of videos on the internet which language teachers can use is YouTube. These kinds of videos are used widely by language teachers because the videos include both audio and visual information (Canning-Wilson, 2000). Additionally, "video offers foreign and second language learners a chance to improve their ability to understand comprehensible input" (Canning-Wilson, 2000, Conclusion section, para. 1).

This study focuses on the role of videos on EFL students listening comprehension. In particular, the study aims to find out

whether the use of videos in the classroom could affect the students' listening ability. The research question is written as follows:

Is there any significant difference between the students' results of pre- and post-listening tests after getting different teaching methods (video- and audio-based course)?

The hypotheses of this study are constructed as follows:

Null Hypothesis (Ho): There is no significant difference between the students' results of pre- and post- listening tests after getting a different teaching method.

Alternative Hypothesis (Ha): There is a significant difference between the students' result of pre- and post- listening tests after getting a different teaching method.

2. Literature Review

a. The Nature of Listening

Listening is one of the English language skills which focus on the receptive skills of the learners. Rost (2011, p. 9) defines listening in terms of overlapping types of processing: neurological processing, linguistic processing, semantic processing, and pragmatic processing. Listening is more than simply taking in the words of another person. It requires the students to empty their hearts and minds of personal agendas in order to connect. Thus, listening is a process where learners need to integrate both linguistic and non-linguistic skills.

b. Listening Process

Listening is a complex process which requires several stages to comprehend the meaning of spoken language. There are two different processes of listening based on Nation (2009); bottom-up and top-down process.

Bottom-up process is when the listeners assemble the message piece by piece from the parts to the whole. Meanwhile, top-down process involves the listeners in going from the whole to the parts. In other words, the listeners try to predict what the message will contain and use it to confirm the message.

c. Strategies in Teaching Listening

Vandergriftt (1999) considered listening as a complex and active process whereby listeners need to discriminate various elements of vocabulary and grammatical structures, sounds, as well as stress and intonation. He mentioned that listening involves the gathering of all the mentioned elements and interpreting them within an immediate and large sociocultural context of utterance. Nowadays, listening assessment is sometimes accompanied with a video material which is also recognized as a new media input method (Armium & Rahmatian, 2011). The use of video is believed to be one of the ways to help the

students improve their listening comprehension. There are some studies done to find out the effectiveness of using video for teaching listening. Mirvan (2013) confirmed that the use of video in the classroom has given a big impact to the students in terms of motivation and participation due to the real life situation portrayed in the video use. Martinez (2010), Khoshsima and Izadi (2014), and Woottipong (2014) also mentioned that there were positive reactions from the students who felt that they were more interested in learning the language from videos. This is due to the fact that video provides more interactive visual for the students to learn than audio-only materials. They also revealed that the students' performances were better by using video than using audio only. Memarzadeh and Shariati (2015) also showed a significant difference in the students' score for the groups using video media as a listening assessment method.

However, there are also some studies that prove that there is no significant difference of the students' listening comprehension either by using video or audio only media. Gruba (1993) found there is no significant difference between video and audio-only groups in terms of performance. Moreover, Bejar, Douglas, Jamieson, Nissan, and Turner (2000) and Ockey (2007) showed that the use of video in the classroom did not help much with students' comprehension. Ockey (2007) and

Batty (2015) added that only half of the test takers found that the visual was helpful, whereby the rest found the visual as a distraction.

3. Methodology

The design used for this study is an experimental research by using a quantitative approach. Hamdi (2009, p. 8) stated that quantitative research is a research method that uses numerical data and the data analysis data uses statistics. The purpose of this kind of research is to determine cause and effect relationships. According to Arikunto (2006, p. 310), an experimental research has a purpose to investigate whether there is an effect on something that is treated as the subjects of the research.

There were two groups of undergraduate students from an English department. The students were in their second semester and were taking Listening I subject as one of the requirements in that semester. In total, there were actually 38 participants from both groups. However, at the end there were only 34 participants who joined the pretest and posttest. Group A, which had 17 students, was the audio group and Group B, 17 students, was the video group.

In the first meeting, the students were given a pretest which had two types of questions and media. The use of pretest was to measure the students' abilities before they got the treatment from the teacher. Both

groups were given the same test. The first type of question was an essay which used a video as the media. The videos were adapted from a YouTube channel named ASAP SCIENCE. The students were asked to answer ten comprehension questions based on the two videos given. The second type was a multiple choice which used audio as the media. The questions were taken from a TOEFL exercise part A which has 30 multiple choice questions.

After taking the pretest, both of the groups were given treatment. The treatment was done in four meetings. Group A had audio only listening materials in the process of teaching and learning activities, whereas group B was given videos as the materials in the learning process. The videos were also taken from ASAP SCIENCE on YouTube. Both got the same listening content because the audios were the mp3 formats of the videos given to group B, the video group. In the last meeting the students were asked to do a posttest with the same questions and media as the pretest. At the end of the posttest, the teacher asked several students whether they preferred using video or audio only materials for learning.

4. Findings and Discussion

The purpose of this research was to identify a comparative study between teaching students using video and audio recordings in the Listening A class for undergraduate students. Group A was taught

listening using audio only media while group B was taught listening using video. After getting the results of the pretest and posttest of the two groups, the researcher compared the scores by using t-test formula. The researcher used statistic formula of t-test with 5% significance. The result of the test can be seen on the table below:

Table 1 The Result of Audio-only Group (Group A)

Students	Pretest	Posttest	Gained Score
ASS	88	82	-6
AMI	14	24	10
LCE	18	42	24
KCP	32	42	10
CKP	54	44	-10
DO	12	28	16
ETD	44	60	16
G	72	86	14
GDP	48	66	18
LIT	40	54	14
SN	36	8	-28
RO	40	40	0
SA	38	36	-2

Students	Pretest	Posttest	Gained Score
IKWA	86	80	-6
OYM	78	80	2
YSS	38	40	2
ZO	46	54	8
Sum	**784**	**866**	**82**
Mean	**46.11764706**	**50.94117647**	

Table 2 The Result of Video Group (Group B)

Students	Pretest	Posttest	Gained Score
CD	52	60	8
EVIP	26	34	8
ED	34	44	10
H	60	68	8
JBP	76	88	12
JOB	44	48	4
KV	40	46	6
LWS	64	82	18
NV	70	86	16
NAA	90	88	-2
REG	40	58	18

Students	Pretest	Posttest	Gained Score
SR	20	26	6
TN	32	34	2
TA	62	64	2
VC	40	18	-22
YYC	78	90	12
YI	22	20	-2
Sum	**850**	**954**	**104**
Mean	**50**	**56.11764706**	

It can be seen from Table 1 that the mean score of pretest in group A was 46,11, while the mean score of posttest was 50,94. The total gained score in this group was 82. Therefore, it can be concluded that there was significant difference in the pretest and posttest. However, from Table 2 informs that the mean score of pretest in group B was 50, while the mean score of posttest was 56,11. The total gained score in this group was 104 which was more significant than the gained score from group A, the audio group.

Therefore, from the tables presented above it can be concluded that group B which were getting the video treatment got the higher score than the audio group. However, as mentioned before, in analyzing the data from the result of pretest and posttest, the researcher also used

statistic calculation of the t-test formula with the degree of significance 5%.

Table 3 Standard Deviation Table

Students	X1 (Gained Score)	X2 (Gained Score)	$X1^2$	$X2^2$
1	-6	8	117.0724	3.5344
2	10	8	26.8324	3.5344
3	24	10	367.8724	15.0544
4	10	8	26.8324	3.5344
5	-10	12	219.6324	34.5744
6	16	4	124.9924	4.4944
7	16	6	124.9924	0.0144
8	14	18	84.2724	141.1344
9	18	16	173.7124	97.6144
10	14	-2	84.2724	65.9344
11	-28	18	1077.1524	141.1344
12	0	6	23.2324	0.0144
13	-2	2	46.5124	16.9744
14	-6	2	117.0724	16.9744

Students	X1 (Gained Score)	X2 (Gained Score)	$X1^2$	$X2^2$
15	2	-22	7.9524	790.7344
16	2	12	7.9524	34.5744
17	8	-2	10.1124	65.9344
N=17	**∑X1 = 82**	**∑X2 = 104**	**$\sum X1^2$=2640.4708**	**$\sum X2^2$=1435.7648**

The formula used for calculating the pretest and posttest can be seen below:

a. Determining mean Variable X1

M1 = ∑X1 / N1

= 82 / 17

= 4.82

b. Determining mean Variable X2

M2 = ∑X2 / N2

= 104 / 17

= 6.12

c. Determining t_o

$$t = \frac{M1 - M2}{\sqrt{\left[\frac{\Sigma X1^2 + \Sigma X2^2}{N_1 + N_2 - 2}\right] - \left[\frac{N1 + N2}{N1N2}\right]}}$$

t = 0,67

d. Determining t-table in significance level 5% with df:

df = N1 + N2 – 2

= 17 + 17 – 2

= 32

The value of t_{table} on the degree of significance 5% is 2.03. From the result above, it can be seen that the value of t_o is 0.67 and the degree of freedom in the table of significance on the df is 32. By comparing the value of t_o and t_{table} it can be concluded that t_o was lower than t_{table}, 0.67 < 2,03, which means that there is no significant difference between the students who are given video treatment and the students who are given audio-only treatment.

The result of the findings was quite shocking because based on the gained scores, the students who are getting a video treatment mostly show some improvement in terms of their scores of pretest and posttest. The data of pretest score in Group A, audio-only group, show that the

score is 12 up to 88. It means that the lowest score is 12 and the highest score is 88. The mean score of this group is 46.11. Whereas the pretest score from Group B, which is taught using video, is 22 up to 90. In other words, the lowest score is 20 and the highest score is 90. Therefore, the mean score of Group B is 50.

After getting the treatment, the students are given the posttest to know their improvement after the treatment. The data of posttest score in audio-only group is 24 up to 86, which means that the highest score is 86 and the lowest score is 24. The mean score of this group is 50.94. On the other hand, the data of posttest score in video group is 18 up to 90. It means that the highest score is 90 and the lowest score is 18. The mean score of this group is 56.11.

Even though the gained score of the video group students is higher than the audio-only group students, it cannot be concluded that there is a significant difference in teaching listening using video or audio-only media to the students' listening comprehension. As stated previously, the value of t_o is lower than t_{table}, $0.67 < 2.03$, for level significant of 0.05. Thus, the null hypothesis (H_o) is accepted, while the alternative hypothesis (H_a) is rejected.

This result can be attributed to the three factors proposed by Taylor and Garenpayeh (2011) about external contextual factors and individual characteristics. The students may have been distracted by the

images and not all the students may have understood the content since they are still in their first year of undergraduate students and English is a foreign language. Internal cognitive factors may also have played a role in students' performance via a loading effect while processing information. Moreover, as stated previously, Gruba (1993), Bejar, Douglas, Jamieson, Nissan, and Turner (2000) and Ockey (2007) showed that the use of video in the classroom did not help much with students' comprehension. Ockey (2007) and Batty (2015) also added that only half of the test takers found that the visual was helpful, whereby the rest found videos as a distraction.

The result in this study is also contradictory with the findings of several other studies which mention that there is indeed a significant difference on the students' performance after getting the video treatment. The theory mentions that visual information in video is important in the learning process especially in teaching foreign-language listening. Rubin in Buck (2001, pp. 46-47) states that visual support can aid language learners, especially less proficient learners, and is particularly helpful with more difficult text. Additionally, video as a medium that combines both audio and visual supports is a perfect media for students who are auditory or visual learners.

In line with the result of this study, Wagner (2010) found a negative correlation between video viewing rates with listening test

performance. He mentioned that the students might get unnecessary distraction from the video although he added that videos might decrease anxiety on the parts of students. On top of that, he claimed that watching a video during a listening task might result in missing crucial information for the test. Some of the students participated in this research were mentioning the same thing. They assumed that by watching the video they got really distracted with the visual and did not really pay much attention on what the speakers said. Thus, they could not comprehend the audio properly resulting in having difficulties in answering the questions.

5. Conclusion

Based on the study conducted for the undergraduate students majoring in the English department, it can be concluded that there is no significant difference between teaching students using video and audio in Listening I class. Even though the gained score of the students who were taught using video was higher than those who were taught using audio-only materials, the value of t_o was lower than the value of t_{table} which resulted in the rejection of the alternative hypothesis. Therefore, using video in teaching listening may or may not be really helpful in increasing the students' listening comprehension. There are other factors which may affect the students' ability in listening. However, it

is suggested that English teachers need to use various ways in teaching English especially in listening. By doing so, it can give more motivation to the students to learn English.

REFERENCES

Arikunto, S. (2006. *Prosedur penelitian suatu pendekatan praktek.* Jakarta: Rineka Cipta.

Armium, N. & Rahmatian, R. (2011). The Effectiveness of audio and video documents in developing listening comprehension skill in a foreign language. *International Journal of English Linguistics, 118.*

Batty, A. O. (2015). A comparison of video- and audio-mediated listening tests with many-facet rasch modeling and differential distractor functioning. *Language Testing*, 3-20.

Bejar, I., Douglas, D., Jamieson, J., Nissan, S., & Turner, J. (2000). TOEFL 2000 listening framework: A working paper (TOEFL Monograph Series Report No. 19). Princeton, NJ: Educational Testing Service.

Brett, P. (1997). A comparative study of the effects of the use of multimedia on listening comprehension. *System, 25*(1), 39-53.

Buck, G. (2001). *Assessing listening*. Cambridge: Cambridge University Press.

Canning-Wilson, C. (2000). Practical aspects of using video in the EFL and ESL classroom. *The Internet TESL Journal, 6*(1).

Feak, C.B. & Salehzadeh, J. (2001). Challenges and issues in developing an EAP video listening placement assessment: A view from one program. *English for Specific Purposes, 20,* 477-493.

Gruba, P. (1993). A comparison study of audio and video in language testing. *JALT Journal, 15*, 85-88.

Hamdi, A. S. (2009). *Metode penelitian kuantitatif (Aplikasi dalam pendidikan).* Yogyakarta: Rajawali Press.

Khoshsima, H. & Izadi, M. (2014). Dynamic vs standard assessment to evaluate EFL learners' listening comprehension. *Iranian Journal Applied Language Studies.* 1-26.

Long, M. & Richards, J.C. (1994). Teacher thinking and foreign language teaching. *MEXTESOL Journal, 18*(2).

Martinez, R. G. (2010). Effects on teaching listening skills through videos to advanced students from the foreign language department at the University of El Salvador during the first

semester 2010. Doctoral dissertation. University of El Savador, Central America

Memarzadeh, M. & Shariati, M. (2015). Video clips used as an assessment tool in listening placement tests. *International Journal of English Language Teaching, 3*(8), 56-70.

Mirvan, X. (2013). The advantages of using films to enhance students' reading skills in the EFL classroom. *Journal of Education and Practice, 4*(13), 62-66.

Nation, I.S.P. & Newton, J. (2009). *Teaching ESL/EFL Listening and Speaking.* New York: Routledge.

Ockey, G. (2007). Construct implication of including still image or video in computer-based listening tests. *Language Testing, 24*, 517-537.

Oxford, R. L. (1993). Research update on teaching listening. *System, 21*(2), 205-2011.

Rost, M. (2011). *Teaching and researching listening.* New York: Longman.

Taylor, L. & Garenpayeh, A. (2011). Assessing listening for academic purposes: Defining and operationalizing the test construct. *Journal of English for Academic Purposes, 10,* 89-101.

Vandergrift, L. (1999). Facilitating second language listening comprehension: Acquiring successful strategies. *ELT Journal, 53,* 168-176.

Wagner, E. (2010). Test-takers' interaction with an L2 video listening test. *System, 38,* 280-291.

Woottipong, K. (2014). Effect of using video materials in the teaching of listening skills for university students. *International Journal of Linguistics*, *6*(4), 200-212.