



IMPACT OF DIFFERENT SUBTITLED MODES ON VOCABULARY ACQUISITION IN L2 ENGLISH LEARNERS: AN EXPERIMENTAL STUDY

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Vocabulary acquisition is a key component of second language learning, and it directly affects learners' overall language competence. Many prior studies have revealed that technology-based language learning tools can be used in second language classroom to enhance the vocabulary knowledge of learners. The main objective of this experimental study was to examine the effect of bimodal and standard subtitles compared to a no subtitle mode, on L2 learners of English in developing their incidental vocabulary knowledge within a classroom context. The sample included 81 adult intermediate learners of English from a Sri Lankan university, selected based on their proficiency. The participants were divided into four groups randomly; three experimental groups and one control group. The first experimental group (A) watched the video with bimodal subtitles once, the second group (B) watched the video with standard subtitles once and the third group (C) watched the same video without subtitles. All groups watched the same video during the experimental session. Pre-tests and post-tests were conducted to assess participants' receptive and productive vocabulary knowledge of the five target words that occurred in the videos. The control group took only the pre-test and post-tests, without viewing the video. The results revealed that the participants in group A, who watched the video with bimodal subtitles, developed their receptive knowledge of the target vocabulary during the experiment, as indicated by the pretest to posttest results. The group B, which watched the video with standard subtitles and group C which watched the video without any subtitles demonstrated no significant gains in receptive and productive vocabulary knowledge, in contrast to the pre-test to post-test results. The control group did not show any significant difference between pre and posttest results. The findings indicate that video watching with bimodal subtitles can increase L2 learners' receptive vocabulary knowledge, and any other subtitled mode does not support enhancing the receptive and productive vocabulary knowledge of L2 learners. The study has several implications for effective use of technology in ESL classroom to facilitate vocabulary development.

Keywords: bimodal subtitles, L2 acquisition, subtitled videos, standard subtitles vocabulary learning

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1. INTRODUCTION

English has assumed a pivotal role as a global mode of communication in today's interconnected world. Its importance extends beyond linguistic proficiency, catalyzing international understanding, economic growth, accessing knowledge, and cultural exchange. As the lingua franca of the digital age, English empowers individuals to communicate effectively across borders, engage in global discussions, and contribute to a more inclusive and interconnected global society. Therefore, it is essential to recognize and embrace the importance of English as a tool for communication to thrive in an increasingly interconnected and interdependent world.

The use of audiovisual materials, such as videos and movies, accompanied by subtitles, has gained significant attention in second language learning research (Perez, 2022). This approach combines auditory and visual stimuli, providing learners with opportunities to enhance their listening, comprehension, and vocabulary skills in a meaningful context. In exploring the background and empirical studies conducted to examine the effectiveness of audiovisual materials with subtitles in second language learning, more benefits can be seen in the English language teaching and learning process namely, enhancing listening comprehension, vocabulary acquisition, grammar and syntax development, cultural and pragmatic understanding

Considering the enhancement of L2 vocabulary of English language learners, audiovisual materials with subtitles offer learners the opportunity to reinforce their second language learning skills. These visual aids promote better comprehension of the spoken language by providing contextual cues and reinforcing the meaning of unfamiliar words or phrases.

Subtitles play a crucial role in second language vocabulary acquisition. When learners encounter unknown words while watching audiovisual content, they can refer to the written subtitles to understand their meaning and context (Nation, 2001). According to Koolstra et al. (2002), subtitles act as a form of scaffolding, facilitating word learning by providing visual and auditory support simultaneously. Moreover, the visual representation of words in context contributes to the retention and consolidation of new vocabulary items (Hébert et al., 2018). Three types of subtitles were introduced by Zanon (2006: 47) as bimodal subtitling, standard subtitling and reversed subtitling. Bimodal subtitling indicates English dialogues with English subtitles, Standard subtitling displays English dialogues with the subtitles in the learners' mother tongue and reversed subtitling visualizes the dialogues in the learners' mother tongue with English subtitles.



Since technology plays an important role in our lives, it has also become an essential resource in English language teaching. Technology is mainly used when providing language input and practice. In particular, technology can be used when providing listening input. Many studies can be identified which were conducted in different countries but the applicability of those findings to Sri Lankan learners needs to be tested in the local context. This study focuses on how audio-visual materials with different types of subtitles can be used as listening input to enhance vocabulary knowledge among undergraduates in the pre-intermediate level in the local universities. The main objective of this experiment is to examine whether subtitles help the L2 learners to enhance their second language vocabulary and what types of subtitles (bimodal subtitles or standard subtitles) highly support the acquisition of L2 vocabulary. Etemadi (2012) conducted a study to explore the impact of bimodal subtitling in English movies on content comprehension and vocabulary recognition. The findings revealed no significant difference in vocabulary understanding between learners who watched movies with subtitles and those who did not. In contrast, Zarei (2008) investigated the effects of bimodal, standard, and reversed subtitling on second language (L2) vocabulary recognition and found that learners in the bimodal and standard subtitling groups performed significantly better than those in the reversed subtitling group. Chen (2025) emphasized that bilingual subtitles were the most effective for vocabulary acquisition, followed by subtitles in the learners' first language (L1) and then in the second language (L2). Similarly, Fazilatfar et al. (2011), in their study comparing standard and reversed subtitles to no subtitles, concluded that reversed subtitles were more beneficial for L2 vocabulary learning. Supporting this, Gorjian (2014) also demonstrated that learners exposed to reversed subtitles outperformed those using standard and bimodal subtitles in acquiring new vocabulary.

1.2 Research Questions

RQ 1: Are there any effects of subtitled videos on L2 vocabulary learning?

RQ 2: Which subtitling mode (bimodal, standard, or without subtitles) results in higher levels of incidental vocabulary acquisition?

2. METHODOLOGY

The method of data collection of this study was designed based on a structured and controlled experimental design using a quantitative method to analyze the impact of subtitled videos on second language vocabulary learning.

2.1 Participants

81 undergraduates who are studying at a state university took part in this study, and this sample is a collection of 31 male students and 50 female students. All the participants are in the 20 to 24 age category and they all have learnt English since their childhood. Their language proficiency is intermediate level and it was tested using APTIS - English Proficiency Test developed by the British Council, UK. All



the participants were divided into four groups randomly and the groups were defined as follows: A = watched videos with bimodal subtitles only once, B = watched videos with standard subtitles only once, C = watched videos without any subtitle once, D = control group.

2.2 Input Materials

A documentary video clips was selected from the National Geographic You Tube Channel which encourages people to care and be concerned about the planet and the environment where we live.

In selecting the videos as a language input, several criteria were considered namely less than 5 minutes in length, appropriate language according to the intermediate level, high quality visual, supporting the dialogue with audio-visual connection, the speed of delivering the speech, authentic materials, not developed for language teaching and suitable content.

2.3 Data Collecting Instruments (Pre-test and post-test)

The participants' vocabulary knowledge was tested before and after the intervention based on a vocabulary test. There are two tasks to test the receptive vocabulary and productive vocabulary knowledge of participants based on the video. 5 unfamiliar words were chosen and the word meaning, and word usage were tested. In the questionnaire, the first task was formed based on the multiple choice question format and participants' receptive vocabulary knowledge was tested there. The second task is a cloze test, and participants' productive vocabulary knowledge was tested by that question.

2.4 Data Analysis and Interpretation Procedures

The methodically collected data were analysed quantitatively using appropriate tools to accomplish the objectives of this study. The collected data from all the groups were organized in Excel sheets and tested using SPSS version 23 for quantitative analysis in order to examine the effect, to compare results of all four groups and to produce different visual graphs. The reliability of the data set and the descriptive analysis of all the variables used were tested using SPSS and the normality was examined according to the Kolmogorov-Smirnov and Shapiro-Wilke tests. In order to analyse the difference between the performance in pre-test and post-tests among the groups, the paired sample T-Test was applied. Both receptive and productive knowledge tests were compared using the ANOVA test.

3. RESULTS AND DISCUSSION

The scientifically collected data were analysed and interpreted using SPSS version 23 and some data were disqualified for various reasons. Mainly, the participants who knew more than three target words were excluded from this study to maintain the integrity and the reliability of the data. Finally, the results from 57 participants were analysed to investigate the effect of audio video materials with bimodal subtitles and standard subtitles on second language vocabulary learning.

ANOVA tests were used to assess whether there were any group differences in the pre- and post-test results for the entire sample. The results indicate that all



combinations show a statistically significant increase in vocabulary knowledge (both receptive and productive; $p < .001$) for the entire sample, with a large effect size in nearly all combinations.

Table 1: Pre and post-test difference in the overall sample

	<i>df</i>	<i>p</i>
V1PreT1T-V1PostT1T	81	0.001
V1PreT2T-V1postT2T	81	0.001

3.1 Group comparisons

In order to analyze any performance differences between pre and post-tests across different groups, the paired sample t test was used. The groups were defined as follows: A = watched videos with bimodal subtitles only once, B = watched videos with standard subtitles only once, C = watched videos without subtitles once.

According to the analyses, a significant difference can be seen statistically in between the pre-test and the post-test on task one, which was tested receptive vocabulary knowledge of the learners, with a considerable effect size ($p < 0.05$) in group A that watched the video with bimodal subtitles. But, this finding does not indicate a significant difference statistically between the pre-test and the post-test on task two, which tested productive vocabulary knowledge of the learners. This result concludes that pre-intermediate level learners are able to increase their receptive vocabulary knowledge by watching videos with bimodal subtitles when they watch the video once. Table 2 summarizes these findings.

Table 2: Pre and post-test difference in Group A

	<i>t</i>	<i>df</i>	<i>p</i>
V1PreT1T-V1PostT1T	-3.281	20	0.004
V1PreT2T-V1postT2T	-1.000	20	0.329

As the table 2 indicates, a significant difference cannot be seen statistically between the pre-test and the post-test in the receptive vocabulary knowledge and productive vocabulary knowledge both. This finding may indicate that pre-intermediate level learners are not able to increase their receptive and productive vocabulary knowledge by watching videos with standard subtitles. Table 3 summarizes these findings.

Table 3: Pre and post-test difference in Group B

	<i>t</i>	<i>df</i>	<i>p</i>
V1PreT1T-V1PostT1T	-2.781	18	0.014
V1PreT2T-V1postT2T	-0.195	18	0.848

Table 3 displays the results of group C that watched the same video without any subtitles. In the case of this group, it was expected to examine if there is any impact on watching video in L2 vocabulary learning, and the result indicates that a significant difference cannot be seen statistically between the pre-test and post-test results, though they were able to watch the video without any subtitles. Table 4 summarizes these findings.



Table 4: Pre and post-test differences in Group C

	<i>t</i>	<i>df</i>	<i>p</i>
V1PreT1T-V1PostT1T	-0.765	16	0.455
V1PreT2T-V1postT2T	-3.054	16	0.008

Finally, the control group's results are shown in Table 4. For this group, there is no statistically significant difference between the pre- and post-test results under any of the conditions. As a result, in subsequent studies, the Control Group is used as the baseline data group in further analysis.

Table 5: Pre and post-test differences in Group D

	<i>t</i>	<i>df</i>	<i>p</i>
V1PreT1T-V1PostT1T	0.402	27	0.691
V1PreT2T-V1postT2T	0.238	27	0.813

The first research question (RQ1) investigated whether pre-intermediate learners would increase their receptive and productive vocabulary knowledge of the target vocabulary when they are exposed to videos with and without subtitles. The results reveal that learners can do this when they are exposed to videos with subtitles or without subtitles. The second research question (RQ2) investigated whether bimodal subtitles or standard subtitles lead to a greater incidental vocabulary acquisition in watching a video with subtitles. However, those learners who watched videos once, with bimodal subtitles, were able to develop their receptive vocabulary knowledge only and they were not able to increase their productive vocabulary knowledge when they watched the videos with bimodal subtitles. Learners in group B who watched the video once, with standard subtitles, were not able to develop their receptive vocabulary knowledge and productive vocabulary knowledge both compared to the control group. Learners in group C who watched the video once, without any subtitles, were not able to develop their receptive vocabulary knowledge and productive vocabulary knowledge compared to the control group.

4. CONCLUSIONS/RECOMMENDATIONS

Overall, these results indicate that watching videos with subtitles or without subtitles develops the receptive vocabulary knowledge of learners when they watch the video only once. However, watching the same videos repeatedly with or without subtitles may also increase learners' productive vocabulary knowledge. If learners can develop the habit of watching videos with or without subtitles with more concentration may develop not only their receptive vocabulary knowledge but also productive vocabulary knowledge. According to the overall study, the result of this study indicates that learners can increase their receptive vocabulary knowledge when watching the video with bimodal subtitles, revealing that videos with both audio and subtitles in the same language may support learners to acquire L2 vocabulary than watching videos with standard subtitles. Furthermore, the findings of this study encourage teachers to explore new teaching methods beyond traditional language



teaching methods using audio-video materials with the latest technology, since subtitled videos can facilitate second language vocabulary learning.

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