The Effect of Visual Support on Listening Comprehension in Turkish Elementary EFL Learners

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Abstract: The role of visual materials in listening tasks has long been a matter of interest for researchers with the development of technological tools. However, studies have often reported inconclusive results as to the efficiency of video-mediated activities compared to audio-only materials. The aim of this study is thus to investigate whether listening materials with visual support have a significant effect on listening comprehension scores, and to elicit learners' opinions on both channels of input. 39 high school students at a public school participated in the study. Three video excerpts of different topics have been used to assess the listening comprehension. The scores of learners have been analyzed though SPSS version 21.0. The results indicate that the mode of input, video and audio, in listening tasks significantly influences the listening comprehension scores of the learners. The higher scores of the video group support the claims of multimodal approach, comprehensible input theory and cognitive theory of multimedia learning. Interview findings show that learners favor visual materials more than audio-only materials. It has been concluded that videos are more favorable than audio materials and seem to lead to a better comprehension, but videos may distract the attention of the learners as well.

Keywords: listening tasks, listening comprehension, visual materials, audio materials.

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Introduction

Listening skill has a significant role in language learning as a skill which is the most commonly used one out of the four language skills in learning and teaching context (Ferris, 1998; Zhu, 2011). Therefore, listening has been suggested to be primary focus of lessons by some researchers as the success of language learning, as in child language acquisition, depend on listening (Hamouda, 2013; Putriani, et. al., 2013). However, it sometimes becomes difficult for learners to practice listening and for teachers to develop the related skills because of some reasons. One reason is that learners in communities where English is taught as a foreign language are not exposed to listening input frequently enough (Rezaei & Hashim, 2013). The second main reason can be that most of the materials offered in coursebooks utilize only audio modes through CDs (Winiharti & Herlina, 2017).

Regarding the technological improvements which provide numerous opportunities for classrooms, it has been reported that audio materials are not efficient in the practice of listening skill and using videos or images that support the audio material can improve the development of listening skill (Chen et al., 2014; Guichon & McLornan, 2008; Yasin, Mustafa & Permatasari, 2018). In teaching and learning context, the use of materials supported with visual aids such as video, sound, music, speech or body language can function better in the construction of meaning (Jewitt, 2013). Videos may help learners to make use of paralinguistic items such as facial expression and gestures to comprehend the content better. Therefore, listening activities can be more beneficial and meaningful when the listeners have the chance of observing how language is used in a real situation by means of materials with but audio and visual support.

Theoretical Framework

Multimodal Approach

Multimodality in English Language Teaching refers to refers to" the combination of various communicative modes (sound, images such as graphs or pictures, video, written text, transcribed speech, etc.) within one text" (Cubillo & Garrido, 2010) The term "multimodality" was coined by The New London Group (1996) for the discussion of altering the methods of communication as a result of developing technology. They supported a new approach to foster the engagement of

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learners through a much more extensive use of communicative tools particularly multimedia tools rather than traditional forms (New London Group, 1996).

These modalities can be exemplified as various forms of expressions by means of visual, audio, gestural or spatial aids, which contributes to reshaping words, images or sounds in a digital context (Jewitt, 2006). All these various forms come together in a language learning environment and help the learners to achieve comprehension in more meaningful ways thus improve their learning.

Multimodality and Listening Comprehension

Listening activities in which the input is conveyed only by means of audio materials have been criticized by some scholars for some reasons. Firstly, learners may have a misconception that communication in the target language may only be achieved through one single mode without what accompanies speech (Ackerley & Coccetta, 2007; Busà, 2010). Another shortcoming is that learners may have difficulties in dealing with the authentic language used in real-life situations if they continuously focus on one mode or aspect of communication (Busà, 2010).

With respect to multimodality in EFL classroom, utilizing different modes in listening comprehension activities can be influential in fostering student learning (Lee, 2014). It has been shown in Folley's study (2015) that learners are more able to remember the content and details when they are provided with visual support in a listening comprehension task. The key role that multimodality plays in language learning can also be associated with Krashen's term "comprehensible input" (Krashen, 1985). According to Krashen (1982), EFL learners' competence in listening depends particularly on quality and level. If the students are given too easy content, they cannot achieve progress; if they are given too difficult input, they cannot achieve comprehension. Therefore, Krashen (1982) suggests that providing comprehensible input by means of visual and audio materials help to increase the level and quality of comprehension. Pertaining to this, the availability of video materials in listening tasks contributes to both the multimodality and comprehensibility of the input.

Cognitive Theory of Multimedia Learning

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The main idea behind Cognitive Theory of Multimedia Learning (CTML) is that learners are better able to build meaningful connections between words and pictures, and these meaning connections result in a deeper learning (Mayer, 2009). In CTML, one of the basic principle is the to encourage the learners to create meaningful and coherent mental representations using the material presented to them (Sorden, 2012)

CTML is based on three assumptions: the dual-channel assumption, the limited capacity assumption, and the active processing assumption (Mayer & Moreno, 1998). The dual-channel assumption proposes that working memory possesses two channels: the auditory and visual, which is originally based on Baddeley's (1986) theory of working memory. The second assumption, which is the limited capacity assumption, claims that working memory has sub-systems and these sub-systems work on a limited capacity. Finally, the third assumption, the active processing assumption, states that individuals construct knowledge in a meaning way when they are provided with relevant material. In this way, they are better able to organize a coherent mental structure (Mayer, 1996; Sorden, 2012).

The Role of Video Materials in Listening Comprehension

In language learning, videos are used to include visual and audible components in teaching the use of language in real-life situations (Martinez, 2010). Olah Batty (2015) claims that "listening rarely occurs in the dark" with the exception of telephone conversations, radio broadcasts or public address systems (p.5). In other situations, listeners have the opportunity of eliciting extra-linguistic features with the help of such instruments as facial expressions, gestures and the setting (Rost, 2002)

According to Burgoon (1994), nearly 70% of the meaning is transmitted through visual, nonverbal codes when compared to verbal codes. It can therefore be assumed that the elements found in the real social situation cannot be delivered and provided with only audio materials. In this sense, visual materials seem to play a significant role in delivering extra-linguistic information that is needed in processing the messages. Several benefits of videos used in an English language teaching context have been listed by some researchers. It has been claimed by Buck (2001) that authenticity in terms of situation and interaction is enhanced as the learners see the situation and the participants, which provides a better comprehension. Coniam (2001) states that videos provide

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a number of additional information such as body language and facial expressions for the listeners. With the help of visual input, listeners can better identify who the speaker is and what the topic is (Buck, 2001). Finally, it has been reported that visual aids play an important role in triggering the listeners' background knowledge. (Ockey, 2007).

However, it has also been argued that visual input does not always foster comprehension. Rubin (1995) indicates that if learners do not have the necessary background knowledge about the content of the video material or if visual content does not match with learners' cultural expectations, listening comprehension may be impeded because of confusing input. Another point is that visual input may sometimes distract learners' attention or mislead them if the relationship between audio and video is not established well and what is heard does not match what is shown. Although visual aids sometimes play a significant role in listening comprehension tasks, it is not exactly certain whether these clues are made use of by learners in learning and teaching context.

Related Studies

There have been a number of studies which have investigated the effect of visual materials on listening comprehension when compared to audio materials. However, the number of studies that support the inclusion and effectiveness of video on listening is as many as the number of studies that support the exclusion of videos from listening activities or test.

It has been suggested in some quasi-experimental studies that video materials are effective sources for listening comprehension and learners presented with video material outperform those with audio material (Mohamadkhani, Farokhi & Farokhi, 2013; Shahid & Ali, 2017; Winiharti & Herlina, 2017; Yasin, Mustafa & Permatasari, 2018). This efficiency of video materials have often been linked to such advantages of visual aids a being stimulating, compact and time efficient (Sejdiu, 2017).

On the other hand, in some of the studies arguing that video is effective in listening practice, it is emphasized that this efficiency is not always at the same level and may depend on certain conditions. Chen, et al. (2014) reports that the effectiveness of video is closely related to the level of the students. They found out that learners with a high English proficiency perform better with

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video materials when compared to audio materials only while this difference is not significant in learners with low level of English.

Video materials have not always been reported to be effective in listening comprehension activities or tests. Several researchers investigating the effects of visual input have found that the inclusion of visual input through video materials may not be beneficial and its effect on comprehension is not significant (Başal, Gülözer & Demir; 2015, Batty, 2015; Chung, 1994; Göktürk & Altay, 2015; Londe, 2009; Lynch, 1998; Yousofi, Davoodi & Razmeh, 2015). It has been argued in these studies that visuals can be distractive and therefore hinders their comprehension (Chung, 1994) and that the video content can sometimes cause misunderstanding (Batty, 2015).

It can be concluded from this summative review of literature that there is not a conclusive and consistent finding in reference to whether visual input play a significant role in comprehension of listening materials. There seems to be no agreement among researchers as to whether visual support makes a difference for learners' performance on listening texts. Therefore, more research is required to better understand the role of visual information in listening comprehension (Batty, 2015). Moreover, there seems to be not enough study which investigates learners' performance with visuals on listening comprehension in Turkey context with elementary learners of English. In this sense, the present study is significant in terms of providing more data and contributing to the field considering the use of visuals in listening comprehension activities quantitatively and including learners' perspectives.

In the light of these, the study aims to answer the following research question:

(1)   Does listening materials with visual support have a significant effect on listening comprehension of Turkish Elementary EFL learners?

(2)   What are the perceptions of learners about the use of visual and audio-only listening materials?

Method

Research Design

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The design adopted for this study is mixed approach with a quantitative quasi-experimental research approach, which aimed to compare the extent to which utilization of visual aids facilitate comprehension in listening tasks, and a qualitative approach, which utilized student interviews to have a better insight into learners' performances on the tasks.

Participants

The participants of this study are voluntary 39 high school students at a public school in Gaziantep, Turkey. The students are elementary level classes according to the English proficiency test results given by the instructors. The ages of the participants are between 16 and 18. These students speak Turkish as their first language and come from a cross-section of urban and suburban backgrounds. They are offered 8 hours of English courses per week. These courses mainly focus on reading and grammar.

Research Instruments

Three listening comprehension worksheets were employed to collect data for the present study. The comprehension questions in all worksheets are open-ended questions, which require short answers, and True/False questions. The participants were asked to fill in the worksheets while they listened to the materials.

The listening materials of the study are three video excerpts of different topics selected from New Headway Elementary 4th Edition. The rationale for choosing these three excerpts is the appropriateness in length, speed, content and difficulty level. The first excerpt is about a person's usual day. The second excerpt talks about jobs and their routines. The final excerpt is about a couple's decision whether to rent a flat or a house. All the three excerpts have both video and audio versions.

Data Collection Procedure

Thirty-nine students participated in the study, which were then divided into two groups hereafter called Video Group (f=) and Audio Group (f=). Both groups were given listening comprehension video worksheets (Unit 2, 3 and 4) from New Headway Elementary 4th Edition. Video group was presented with three videos. On the other hand, Audio Group only listened to

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audio versions of the same videos. The videos take up to 6-8 minutes, each of which is divided into three sections. The participants listened to or watched the excerpts once. The only difference between Audio Group and Video Groups was the inclusion of video support in favor of Video Group. Both video and audio materials have background sounds such as sound of cars or sounds of other elements. Before the presentation of video or audio files, the students were given a pre-listening session, which is provided in the worksheets mainly focusing on the vocabulary in the material. Following the pre-listening session, Video Group watched the videos and completed the worksheets while or after watching. Audio Group listened to the audio files and completed the same worksheets while or after listening. Each session was completed in a separate week. The students were told that they were in an experiment. They were asked to write nicknames on the worksheets. The worksheets were then combined and scored based on the answer key provided with the coursebook.

For the qualitative part of the study, semi-structured interviews which included open-ended questions were conducted. The questions in the interview were about how the participants dealt with the worksheets and whether they found the listening material, either video or audio, enough to comprehend the content. Audio Group was also asked whether they would comprehend better if they were provided with visual aids.

Data Analysis

Quantitative data obtained in the study were analyzed though SPSS Version 21.0 and the reliability of the participants' scores on each part of the listening comprehension test was calculated. Cronbach's Alpha score for responses of the participants on tests was found to be .645, which is considered reliable. To answer the first research question, descriptive statistics for each test were calculated and an independent-sample t-test was conducted to determine whether there was a statistically significant difference between the learners' mean scores on audio and video versions of the listening material. As to the second research question, interview data were transcribed and analyzed, and the responses were divided into interpretive categories through content analysis technique.

Findings

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Findings related to the Research Question #1: Does listening materials with visual support have a significant effect on listening comprehension of Turkish Elementary EFL learners?

The first research question of the study investigates the effect of visual aid on listening comprehension test scores of the learners through comparing the group with video listening material to those with video listening material. Table 1 contains the descriptive statistics for each of the test applied for 40 participants.

Table 1. Descriptive Group Statistics

Group	N	Test Scores (out of 25)			Mean	Std. Deviation
		Test 1	Test 2	Test 3		
Video Group	21	19.2	17.8	12.6	16.5	2.087
Audio Group	19	13.4	10.3	12.3	11.88	3.529

It can be seen in Table 1 that, considering overall score, the Video Group has a higher mean (M=16.5) than the Audio Group (M=11.88). Regarding the scores of the groups for each test, while the video group has much higher scores for Test 1 (VG M= 19.2, AG M=13.4) and 2(VG M= 17.8, AG M=10.3), the difference between groups for Test 3 (VG M= 12.6, AG M=12.3) does not seem to be much.

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In order to investigate the significance of these mean differences, independent samples t-test was performed. Table 2 displays the result of this test for both overall scores and for each of the three tests.

Table 2. Independent T-test Results

*significane at the .05 level

As Table 2 shows, a statistically significant difference was found between Video Group and Audio Group regarding Test 1 and Test 2 ($p<.05$). However, no statistically significant difference was observed in the participants' mean scores for Test 3 ($p>.05$).

However, on average, it was found that the participants did receive a significantly higher score in the listening comprehension tests in the presence of video (M=16.56, sd=2.227) as opposed to scores in audio (M=11.91, sd=4.450) only condition ($p<.05$).

Listening Comprehension Worksheets	Groups						
	Video Group		Audio Group				
	M	SD	M	SD	n	t	
Test 1	19.2	4.429	13.4	.995	9	-3.664	001*
Test 2	17.8	.932	10.3	.445	9	-6.243	001*
Test 3	12.6	.086	12.3	.996	9	-.191	849
Overall Score	16.56	.227	11.91	.450	9	-4.006	001*

Findings related to the Research Question #2 : What are the perceptions of learners about the use of visual and audio-only listening materials?

The second research question of the study is to find out perceptions of learners about the use of visual and audio-only listening materials. With this aim, a semi-structured interview was carried

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out to gain insights into how students dealt with worksheets through the use of audio or video listening materials. The participants were asked about their opinions on the task and their performance, and what their preferences were.

The first question is to explore how the interviewees' dealt with the exercises in the worksheets and what kind of strategies they used. The common points in the responses are presented in Table 3.

Table 3. Participants' Responses on their Performance in Worksheets

Group		Responses	Frequency	%
Video	Group	Checking the Exercises before Listening	3	42.8
Interviewees		Not focused on the Video Often	2	19.0
		Guessing from the Video	1	11.9
Audio	Group	Checking the Exercises before listening	2	16.6
Interviewees		Not able to follow the audio	3	100
Total				

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As Table 3 shows, students from both Video Group (f=3) and Audio Group (F=2) indicate that they checked the worksheets before the activity as the first strategy that they used to deal with the worksheets, Two students from Video Group state that they were not focused on the video very often. In this sense, interviewee 2 states "I missed a few questions because I was watching the video. Then, I did not really watch the video carefully as I was focused on the worksheet not to miss another question". Moreover, one student indicates that she was able to deal with the worksheets through the help of the visuals in the videos. She stated " In some parts, I didn't understand the person who was speaking but I was able to answer some questions just from the video".

The second question is only for video group participants in order to find out whether and in what ways the video excerpt was helpful in comprehending the content and answering the related questions. The common points in the participants' responses are given in Table 4.

Table 4. Video Group's Opinions on Video Excerpts

Group		Responses	Frequency	%
		It is really helpful	6	42.8
Video	Group	Helpful for	3	
Interviewees		vocabulary		19.0
		Helpful for	3	
		understanding the		11.9
		context		

It can be observed in Table 3 that all students in the Video Group (F=6) indicates that video excerpts were helpful in terms of their comprehension and their test performances. Three students also state that video excerpts were particularly helpful for vocabulary knowledge. Interviewee 3 states "There were many words that I do not know or remember. However, I was able to understand when I see the objects in the video. Otherwise, I couldn't have done some questions". Finally, three students state that video excerpts were particularly helpful in understanding the context. Interviewee 1 states "For example, in the second video, when I saw people making cakes, I understood what they were talking about."

The third question is only for audio group participants in order to investigate how it would be like if they were provided with visual support. The common points in the participants' responses are given in Table 5.

Table 5. Audio Group's Opinions on Audio and Video Excerpts

Group	Responses	Frequency	%
	Video would be very useful	6	42.8
Audio Group Interviewees	I would get more scores with visual support	6	19.0
	Audio may be boring	4	

All the participants in the Audio group prefers to watch videos instead of just watching audio files and believe that they would get more scores if they were presented videos (F=6). Interviewee 5 states "I think I would answer many of the questions that I couldn't do if I watched

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the video version. Some parts were very fast. If there were pictures or a video, at least I would get some information." There were also some students (F=4) who indicates listening to audio is boring. Interviewee 6 point out "Some parts were very long and I didn't understand what the speaker was talking about. So, sometimes I was lost and bored."

Discussion and Conclusion

The comparison of the learners' overall scores on video and audio-only listening comprehension tasks shows that the mode of input in listening tests significantly influences the listening comprehension test scores of the learners. Although overall scores of the learners from both groups are almost similar in listening comprehension test three, this can be the result of the difficulty of the final test, in which both groups had difficulties and had both low scores. The findings obtained in the study are in line with some other studies in the literature (Mohamadkhani, Farokhi & Farokhi,2013; Shahid & Ali, 2017; Winiharti & Herlina,2017; Yasin, Mustafa & Permatasari,2018) in that the inclusion of video material leads to increased test scores in listening comprehension tests. This significant difference between the groups can be related to Cognitive Theory of Multimedia Learning (CTML) of Mayer (2009). The theory proposes that a combination of audio and video materials, as the channel of input, leads to more effective comprehension than using only audio materials. Regarding principles of CTML, learners are motivated by a combination of audio-words and pictures-videos to develop meaningful connections, which leads to a better learning (Mayer, 2009). In this sense, the results obtained from the study provide evidence for CTML.

Moreover, the fact that the learners who were provided with video material have higher scores than those with audio material only can also be associated with multimodality approach (New London Group, 1996). In this approach, it is argued engagement of learners in multimedia tools rather than traditional forms foster their learning. Considering multimodality particularly in EFL classroom, making use of different modes in listening comprehension activities can be influential in fostering student learning (Lee, 2014) and contributes to the comprehensibility of the input by means of visual and audio materials.

Therefore, it can be assumed that the Video Group in the study were able to construct meaningful connections and mental representation by combining video and audio, and this multimodality in the channel of input provided them more comprehensible input. As a result, they performed better in listening comprehension tests that the Audio Group, who were provided with only-audio material, and therefore lacked of multimodality and comprehensible input. This might have caused a construct-underrepresentation, which can be the reason why they had lower scores than the Video Group.

On the other hand, the results seem to be different from some studies which indicate there is no difference between these two groups (Başar, Gülözer & Demir; 2015, Batty, 2015; Chung, 1994 ; Göktürk and Altay, 2015; Lynch, 1998; Londe, 2009; Yousofi, Davoodi & Razmeh, 2015). This inconsistency may be due to contextual and demographic factors, and English proficiency levels of students.

As to the findings obtained through semi-structured interviews, it has been found out that learners favor visual materials more than audio-only material indicating that visual support provide contextual information and vocabulary cues. Also, the learners who received audio-only listening material pointed out they they would prefer visual listening materials. However, one interesting finding is that some learners from the Video Group, although they were presented with visuals, indicated that they were not able to follow the video from beginning to end as they were sometimes distracting because of music or fast scene transitions. This response from two learners brings another consideration over the effectiveness of video. In other words, it can be concluded from quantitative analysis and interview findings that videos are more favorable than audio materials and seems to lead to a better comprehension; however, it should also be noted that videos may also distract the attention of the learners.

Implications and Recommendations

The results of this study provide implications for teachers, students and material developers. The video materials and listening tasks should be incorporated into classroom listening activities more frequently. In addition, material developers should be careful about the content of the videos

in order not distract the attention of learners with a high amount of background music or fast transitions between scenes. In addition, teachers should also include more videos and video-listening activities in their lesson plans, and should teach their learners listening and note-taking strategies while watching video materials.

Suggestions for Further Research

The present study was limited to students with elementary level of English, and listening comprehension tests included same type of tasks. So, further research about the role of video and audio materials in listening comprehension can include learners from different levels, with respect to task types as well. Some other considerations such as learning strategies can also be investigated to have a better insight into the difference between video and audio listening materials.

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