



T.C.

UFUK UNIVERSITY

GRADUATE SCHOOL OF SOCIAL SCIENCES

DEPARTMENT OF FOREIGN LANGUAGE TEACHING

ENGLISH LANGUAGE TEACHING PROGRAMME

**A STUDY ON USING VISUAL ELEMENTS IN ASSESSING
LISTENING COMPREHENSION**

MASTER'S THESIS

MERİÇ TÜMER

SUPERVISOR

LECT. DR. CEYHUN KARABIYIK

ANKARA

2019

T.C.
UFUK UNIVERSITY
GRADUATE SCHOOL OF SOCIAL SCIENCES
DEPARTMENT OF FOREIGN LANGUAGE TEACHING
ENGLISH LANGUAGE TEACHING PROGRAMME

**A STUDY ON USING VISUAL ELEMENTS IN ASSESSING
LISTENING COMPREHENSION**

MASTER'S THESIS

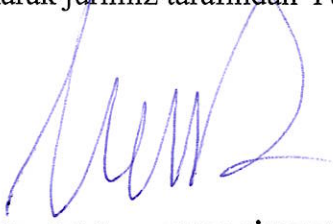
MERİÇ TÜMER

SUPERVISOR
LECT. DR. CEYHUN KARABIYIK

ANKARA
2019

KABUL VE ONAY

Meriç TÜMER tarafından hazırlanan "A STUDY ON USING VISUAL ELEMENTS IN ASSESSING LISTENING COMPREHENSION" başlıklı bu çalışma, 12.12.2019 tarihinde yapılan savunma sınavı sonucunda başarılı bulunarak jürimiz tarafından Yüksek Lisans Tezi olarak kabul edilmiştir.



Prof. Dr. Mehmet DEMİREZEN -Başkan



Dr. Öğr. Üyesi Ceyhun KARABIYIK- Danışman



Dr. Öğr. Üyesi Abdullah ERTAŞ- Üye

Yukarıdaki imzaların adı geçen öğretim üyelerine ait olduğunu onaylıyorum.



Prof. Dr. Mehmet TOMANBAY

Enstitü Müdürü



BİLDİRİM

Hazırladığım tezin/raporun tamamen kendi çalışmam olduğunu ve her alıntıya kaynak gösterdiğimi taahhüt eder, tezimin/raporumun kağıt ve elektronik kopyalarının Ufuk Üniversitesi Sosyal Bilimler Enstitüsü arşivlerinde aşağıda belirttiğim koşullarda saklanmasına izin verdiğimi onaylarım:

† Tezimin tamamı her yerden erişime açılabilir.

12.12.2019

Meriç TÜMER



ACKNOWLEDGEMENTS

I would like to express my sincere thanks and appreciation to all people who contributed to the success of this thesis.

First of all, I would like to express my gratitude to my thesis supervisor Dr. Ceyhun KARABIYIK, for his guidance, support, understanding, and contribution to this study.

I would also like to thank Asst. Prof. Dr. Abdullah ERTAŞ, Prof. Dr. Meltem BATURAY and Eylem İBLİKÇİ for their help during my M. A. studies.

I owe special thanks to Atılım University, Department of Basic English for letting me work and collect my data there.

Lastly, my love and thanks are addressed to my wife Cemre Çiçek TÜMER without whose motivation, help, understanding, and love I would not have managed to finish this study.

ÖZET

TÜMER, Meriç. Dinleme Kavrama Becerisinin Ölçülmesinde Görsel Öğelerin Kullanılmasının Etkisi Üzerine Bir Çalışma, Yüksek Lisans Tezi, Ankara, 2019

Bu çalışmanın amacı, İngilizce'nin yabancı dil olarak öğretildiği bir ortamda görsel öğelerin dinleme kavrayışı üzerine olan etkisini incelemeyi hedeflemektedir. Atılım Üniversitesi'nden 100 adet B1 (CEFR) seviyesinde katılımcı seçilmiştir. Uygulama olarak geleneksel bir dinleme sınavı, sınav kâğıtlarında fotoğraflar bulunan bir dinleme sınavı ve girdi olarak video kullanan bir dinleme sınavı kullanılarak bu üç yöntemin öğrencilerin dinleme kavrayışı üzerine etkisinin olup olmadığı görülmeye çalışılmıştır. Farklı metin türlerindeki etkilerini görmek için, bu ölçümlerde diyalog ve ders anlatımı olmak üzere iki farklı metin türü kullanılmıştır. Elde edilen sonuçlara göre, üç farklı grup toplam puanlar karşılaştırıldığında anlamlı bir farklılık göstermemektedir. Ancak, sınav kâğıtlarında fotoğraflar olan grup ve girdi olarak video kullanılan grup, geleneksel dinleme grubuna göre diyalog türü metinlerde anlamlı bir şekilde daha iyi sonuçlar vermiştir. Aynı üç grup için ders anlatımı türü metinlerde anlamlı bir sonuca varılamamıştır.

Anahtar Sözcükler

Dinlene değerlendirme, dinleme kavrama, dinleme sınavları, görsel ve işitsel işaretler, video sınavları ve ses sınavları, dinlemede görsel işaretler, dinleme değerlendirmede videolar

ABSTRACT

TÜMER, Meriç. A Study On Using Visual Elements In Assessing Listening Comprehension, Master's Thesis, Ankara, 2019

The aim of this study is to analyse the impact of visual elements on listening comprehension in an EFL environment. A sample of 100 participants, B1 (CEFR) level students, from Atılım University was selected. A traditional listening test, a listening test with images on the assessment sheets and a listening test using a video as a channel of input were conducted to see if these three delivery methods have an effect on learners' listening comprehension. To see the difference between different listening text types, there were two different parts in this assessment; dialogue and lecture parts. Results indicated that there was not a significant difference between the three groups in terms of participants' overall assessment scores. However, the learners in the listening test with images on the assessment sheet and the learners in the listening test with video as a channel of input performed better than their peers in traditional listening group in terms of dialogue comprehension scores. There was not a significant difference between the three groups in terms of lecture comprehension scores.

Keywords

Listening assessment, listening comprehension, listening tests, visual and auditory clues, video tests and audio-only tests, visual clues in listening, videos in listening assessment

TABLE OF CONTENTS

Abstract	
1. Introduction	1
1.1. Background of the Study	1
1.2. Theoretical Framework	2
1.3. Statement of the Problem	7
1.4. Purpose of the Study.....	8
1.5. Significance of the Study	8
1.6. Research Questions and Hypotheses	8
1.7. Assumptions and Limitations of the Study.....	10
1.8. Definition of Key Terms	11
1.8.1. Non-Verbal Elements	11
1.8.2. Visual Materials	11
1.8.3. Video Texts	11
1.8.4. Texts with Images	11
1.8.5. Audio Texts	11
1.9. Conclusion	12
2. Literature Review	13
2.1. Listening Comprehension	13
2.2. Listening Assessment	20
2.3. Visuals in Listening Comprehension	23
2.4. Visuals in Listening Assessment	31
2.5. Visuals and Their Effects on Listening Comprehension and Assessment	34
3. Methodology	44
3.1. Research Design	44

3.2. Participants	44
3.3. Instruments	45
3.4. Data Collection	46
3.5. Data Analysis	47
4. Results	49
4.1. The Effect of Listening Assessments on Learners' Overall Listening Comprehension	49
4.2. The Effect of Listening Assessments on Learners' Dialogue Comprehension.....	49
4.3. The Effect of Listening Assessments on Learners' Lecture Comprehension	50
4.4. The Effect of Listening Assessments on Learners' Lecture and Dialogue Comprehension Within Each Group	50
4.4.1. Paired Samples T-Test For TLG	51
4.4.2. Paired Samples T-Test For GIM	51
4.4.3. Paired Samples T-Test For GVI	51
5. Discussion	53
6. Conclusion	58
REFERENCES	60
APPENDICES	73
Appendix 1: TLG Assessment Sheet	73
Appendix 2: GIM Assessment Sheet	75
Appendix 3: GIV Assessment Sheet	77
Appendix 4. Transcript of the Dialogue	79
Appendix 5. Transcript of the Lecture	81

LIST OF TABLES

Table 1: Intelligence Types	3
Table 2: Elements of Schema	4
Table 3: Listening Strategies	14
Table 4: Phonological Changes	19
Table 5: Metacognitive Strategies	20
Table 6: The Principles of Language Assessment	21
Table 7: Assessment Methods In Listening	21
Table 8: Reliability Index	48
Table 9: Descriptive Statistics of the Overall Scores	49
Table 10: Descriptive Statistics of the Dialogue Scores	50
Table 11: Descriptive Statistics of the Lecture Scores	50
Table 12: Paired Samples T-Test Results	51

LIST OF FIGURES

Figure 1: Percentage of Time That Test Takers Spent Observing Visuals	32
Figure 2: Why Didn't You Tell Me?	42

LIST OF ABBREVIATIONS

GIM: Group Using Images on the Assessment Sheets

GVI: Group Using Video As A Channel Of Input

TLG: Traditional Listening Group

Introduction

1.1. Background of the Study

Today, in most teaching environments, video type of texts is mainly used for improving the listening skills of learners. However, they are mostly used in one or two sections in course books and in most teaching environments, they are regarded as unnecessary and omitted. One reason for this is that it is not practical to use videos in terms of technology. However, with the latest improvements in technology, teachers no longer need cassettes or old recorders in order to run a video/audio in a language teaching environment and most computers today are in capable of running these kind of applications. Also, with the help of the internet, teachers are able to use any kind of visual support during teaching and they are not limited to their course books.

As technology improves day by day, there are new opportunities for teachers to implement these improvements into their field. This provides new ways to try in language teaching. In addition to this, with the help of mobile devices, each learner can easily use any kind of visual material whenever they want, which means materials including visual elements are not limited to course books. Moreover, both teachers and learners are very interested in movies or series, which makes visual information a piece of target language (Canning-Wilson, 2000) and such materials help students to process a language better and easier (Çakır, 2006).

As an example to this, TOEFL has been using visual clues for the listening parts of the exam for many years (Ginther, 2002). The theories behind the effects of using visuals are discussed in the next section.

1.2. Theoretical Framework

In foreign language teaching, language acquisition is a very complex process in that a learner is regarded as both a receiver and a processor to access, decode, manipulate and transform a piece of knowledge. There are a number of theories explaining these processes. These theories focus on different techniques to maximize teaching while dealing with the limitations of the learners at the same time. Besides, to achieve this maximization there are differentiated tools focusing on different aspects of language elements as each learner differs from each other.

The idea of multiple intelligences was first put forward by Gardner (1983). He suggests that each person has unique abilities and has different intelligences. Because of this suggestion, the word “intelligence” can carry multiple notions (Macleod, 2002). With this in mind, there should be activities in the classroom serving all these intelligences (Dolati & Tahriri, 2017) as learners might understand their potential and there could be more active lessons, which eventually aids acquisition (Yalmanci & Gozum, 2013). This could be done through different kinds of activities throughout the lessons (Carlin, Salazar, & Cortes, 2013).

Lots of researchers think that designing multiple intelligences inspired courses are a lot better than the traditional ones (Hanafin, 2014; Kaya, Doğan, Gökçek, Kılıç, & Kılıç, 2007; Yalmanci & Gozum, 2013). In terms of language teaching, they are also found useful (Abdi & Rostami, 2012; Saeidipour & Taheri Otaghsara, 2014; Tahriri & Yamini, 2010) as they serve as specialised tools or techniques for each learner.

Multiple intelligences theory is against monotype education systems in its nature as it focuses on differential learning (Gardner, 2006). However, this view confronts the traditional intelligence view as it aims to create a pluralist point of view in education. He also suggests that intelligence is capable of problem solving, which is especially

beneficial for learners when encountering with target culture elements. He also argues that each person has a different set of strengths and weaknesses, which creates different combinations of intelligences.

Intelligence types (Gardner, 1999) are shown in Table 1;

Table 1

Intelligence Types

Musical intelligence	Interested in musical models
Linguistic intelligence	Ability in learning languages
Spatial/visual intelligence	Interested in patterns
Bodily-kinaesthetic intelligence	Using body to deal with problems
Logical-mathematical intelligence	Interested in scientific and mathematical methods
Interpersonal intelligence	Ability to find out the intention and the motivation of others
Intrapersonal intelligence	Ability to find out his/her own intention and motivation
Naturalistic intelligence	Interested in the environment around

Among Gardner's (1999) intelligences, visual/spatial intelligence suggests that each person has the ability to recognise space and is sensitive in terms of colours, lines etc. and in a study conducted by Sulaiman et al. (2017), most learners were visual and kinaesthetic learners compared to a few who were auditory learners.

In this context, it can be concluded that visual input might be decoded easily by these kinds of learners and eventually, learners comprehend a text better because they are more sensitive in terms of any kind of visuals.

According to Anderson and Lynch (1988), schema is a mental process and it transfers aural information to facts by using general knowledge and experience. Head (1926) also suggests that past experience also affects this cognitive process. Mayer (1992) suggests that schema is a set of general knowledge elements that control new information that enters short-term memory.

The elements of a schema (Mayer, 1992) are shown in Table 2;

Table 2
Elements of A Schema

Generality	Frameworks for situations
Knowledge	Pre-existing world knowledge
Structure	Organising a theme
Comprehension	Getting new information from the input

According to Anderson, Pichert & Shirey (1979), a schema is developed each time a new piece of information is gained in terms of more specifications. In addition, it is always active and it changes as a new piece of input is received (Anderson, Pichert & Shirey, 1979). In terms of visuals, they might activate learners' schema faster when they are used as facilitators. In a listening environment, when a learner is exposed to a visual element, it activates that person's schema faster than their peers without visuals as they spend more time to create the context of the task in their minds. Besides, visuals can also build up target culture elements, which eventually results in more background knowledge that can be used in the following tasks. In general, as activating schema is an important concept in language teaching, it can be said that visuals can be a solid way to do it and this might aid listening comprehension.

According to Clark and Paivio (1991), Dual-coding Theory focuses on human behaviour in terms of decoding both verbal and nonverbal elements. It is also related to human cognition along with emotion, motor skills and other psychological domains (Clark & Paivio, 1991). According to Paivio (2006), nonverbal and verbal information affect the ability of recall together although they cognitively behave independently. As an example of this, in Paivio's experiment, the participants created a verbal and non-verbal relation to remember concrete words, although this is not easy for abstract words as they are less likely to be matched with images. The results were that along with verbal input, nonverbal trace in the memory made that memory stronger.

Verbal messages are processed through verbal cognitive systems whereas visual information is processed through both verbal and imagery systems resulting in better memorisation as dual coding is used instead of single (Paivio, 1991). In addition to this, Clark and Paivio (1991) argue that this type of memorization is better as both codes are used in order to restore and remember a piece of information when necessary. According to Irgatoğlu (2010), active practices are very important for learners' motivation, interest, and visuals, and specifically pictures, play an important role in this as they are practical and economical. However, Chung (1994) argues that too many or too detailed pictures might distract receivers as they try to focus on multiple pieces of input simultaneously, which may cause learners to ignore the important pieces of information if they are not experienced learners.

Swaffar and Vlatten (1997) suggest that learners are able to decode images presented to comprehend a text better, which eventually improves learning as when images are used as contextual aids along with audio, they create stronger bonds to be recalled (Hanley, Herron, & Cole, 1995). They also provide interesting and motivating input to facilitate foreign language listening comprehension (Baltova, 1994; Hennessey, 1995; Secules, & Tomasello, 1992; Thompson & Rubin, 1996). As a result, it can be said that when visuals are used as contextual supplements, they provide more memorable background information (Hanley et al., 1995).

Krashen (1985) put forward Input Hypothesis which suggests unknown information in a text can also be analysed and acquired by receivers if the context helps them. In this context, speaking and grammar improve with enough input rather than being taught. This means people can acquire language with information beyond their competence ($i+1$). To do that, extra-linguistic information can be used (Krashen, 1985) as according to Krashen (1982), one of the duties of a language teacher is to provide extra-linguistic support to their students through pictures. This kind of support serves Input

Hypothesis as it pushes the receiver to interpret and decode more. He also suggests that quality of input can be enhanced if non-verbal elements are used more.

Schmidet (1990) suggests that if a piece of language is experienced less by a receiver, it is ignored more. With this information, it can be said that by increasing information and its frequency, comprehension can be increased. To do this, along with verbal input, non-verbal elements might be used as a main goal to get the attention of the receivers by physical appearance. Moreover, as this type of input is used with different channels, they can capture the receivers' multiple senses.

Cognitive theory of multimedia learning was first put forward by Mayer (1997) to understand the relation between visuals and verbal information. According to this theory, visual input is processed by visual systems whereas verbal input is decoded by verbal systems. This principle claims that "people learn more deeply from words and pictures than from words alone" (Mayer, 2009, p.47). According to an experiment conducted by Mayer (1989), participants performed 75% better with captioned pictures along with a text when asked comprehension questions than the participants with the same text without visuals.

As input is processed in two different channels, receivers work more on the information as their brain tries to categorize and decode it. First, in the working memory, a learner focuses more on certain pictures and words in order to be used for comprehension later in the task. This way, learners remember better as these pieces of information are decoded and interpreted into different models in the memory. As there are two methods of input, visual and verbal, receivers create two different models. After that, these models are connected with prior knowledge. Finally, they are moved to long-term memory faster with the help of this combination. According to this theory, using different models helps learners comprehend a text better with the help of these steps.

These theories mentioned above are commonly used to understand a piece of information better in memory by learners in terms of decoding visual elements in a listening environment. Each has an important role while decrypting visual input as they are interrelated and repeated for different tasks. This research is based on these theories as they are thought to be the major elements affecting comprehension while dealing with audio visual materials.

1.3. Statement of the Problem

As English is an international language now, it is considered as a core element of teaching in many countries. In most universities, it is also the medium of instruction. However, most of the time, it is the grammar or the vocabulary which is given more importance in language classes. This causes problems as students often lack productive skills like speaking and writing and they are unable to improve them later. This is because although most syllabi consist of listening or speaking activities, they are ignored by teachers. There are a few reasons for this.

First, it is not easy to be effective in terms of speaking in classes with lots of students. Eventually, this also affects the listening skill negatively. Secondly, some teachers are not willing to use technology in class and it is easy for them to focus on grammar or vocabulary by using traditional tools like classroom boards. Moreover, many institutions do not have the necessary pieces of equipment in order to execute listening activities by using CD-ROMs or audio files. In addition to this, because of cultural and socio-economic reasons in some countries, there are not many opportunities for many students to expose themselves to foreigners as they go abroad less and there are not many people who can speak English in their countries. Because of these reasons, practicing aural activities in the classroom might be crucial for these kind of students.

Also, English and Turkish are different languages in terms of word order that English is a “Subject-Verb-Object (SVO)” language where the subject comes first, the verb second and the object third, whereas Turkish is a “Subject Object Verb (SOV)” language where the subject comes first but it is the object which follows it with the verb at the end.

1.4.Purpose of the Study

The purpose of this study is to see the effects of images and videos in an EFL environment. It also aims to see the effect of using different texts with different types of input.

1.5. Significance of the Study

This study might be helpful for designing new syllabi as it examines the importance of visual elements in a language environment. The portion of video lessons might be re-evaluated and visuals might be used more along with listening in course materials. Moreover, the content of current listening courses can be redesigned fully and the importance of visuals might be reconsidered.

1.6. Research Questions and Hypotheses

After all, teachers cannot avoid using videos if there are positive research results as this might be a huge step for language learners to imitate real life language. In this perspective, the aim of this study is to analyse if visual cues have any positive impact on listening comprehension in an EFL environment. The study examines students’ performance on three different groups; one with images, one with video and one with audio-only which is the control group. The following research questions are put forward:

1. Do listening assessments including images or listening assessments including video input have an effect on learners' overall listening comprehension when compared to traditional listening assessments?

H₀: There will be no significant effect of listening assessments including images or listening assessments including video input on learners' overall listening comprehension when compared to traditional listening assessments.

H₁ : Listening assessments including images or listening assessments including video input will have a significant effect on learners' overall listening comprehension when compared to traditional listening assessments.

2. Do listening assessments including images or listening assessments including video input have an effect on learners' dialogue comprehension when compared to traditional listening assessments?

H₀: There will be no significant effect of listening assessments including images or listening assessments including video input on learners' dialogue comprehension when compared to traditional listening assessments.

H₁ : Listening assessments including images or listening assessments including video input will have a significant effect on learners' dialogue comprehension when compared to traditional listening assessments.

3. Do listening assessments including images or listening assessments including video input have an effect on learners' lecture comprehension when compared to traditional listening assessments?

H₀: There will be no significant effect of listening assessments including visual elements or listening assessments including video input on learners' lecture comprehension when compared to traditional listening assessments.

H₁ : Listening assessments including images or listening assessments including video input will have a significant effect on learners' lecture comprehension when compared to traditional listening assessments.

4. Do listening assessments including images or listening assessments including video input make a significant difference on learners' lecture and dialogue comprehension within each group when compared to traditional listening assessments?

H₀: There will be no significant effect of listening assessments including images or listening assessments including video input on learners' lecture and dialogue comprehension within each group when compared to traditional listening assessments.

H₁ : Listening assessments including images or listening assessments including video input will have a significant effect on learners' lecture and dialogue comprehension within each group when compared to traditional listening assessments.

1.7. Assumptions & Limitations of the Study

First, all the participants are assumed to participate in the tests with their full attention. However, some participants might not have focused on the task enough as this experiment was not a real assessment.

Second, as this kind of input was not a common element of the current curriculum for the participants in this research, some of them might have focused more on the video rather than the task.

Also, there was not a pre-test and it was the first time for the participants to watch, listen and answer simultaneously in an assessment, which means they were exposed to these kinds of activities for the first time. If they had been trained for such activities throughout the term, they might have performed better.

1.8. Definition of Key Terms

1.8.1. Non-Verbal Elements

As texts might convey different types of messages, these pieces of information might be in many forms. Non-verbal elements are one of them such as facials, body movements, gestures etc.

1.8.2. Visual Materials

Visual materials refer to any kind of material consisting of both pictures, graphs and videos etc. Sometimes it is the visual which carries the message but they can also be used along with verbal input.

1.8.3. Video Texts

Videos texts are the materials which include both visual and aural information, but the channel of input is a video rather than still photos. In these kind of texts, learners are exposed to non-verbal elements. However, in some texts, they might watch a video without seeing the speakers.

1.8.4. Texts with Images

In these type of texts, there are images accompanying verbal information. There might be a single or multiple images. These images might be in correlation with the verbal information or they might be used in order to create situational information.

1.8.5. Audio Texts

In these type of texts, there is only audio used as a channel of input.

1.9. Conclusion

As language teaching is a complex system, we cannot say that using visual clues in order to improve listening skills always creates positive results. Still, they fail to create a real life environment as learners are still receivers and they are not active in communication. There is still a one-way communication even though learners are able to see the speakers. When visual clues are introduced, learners are not only listening, but also watching a piece of input. This changes the nature of listening and makes it another skill as there are many other factors now affecting the understanding of learners. However, they might act as facilitators and improve comprehension. They might also act differently in different types of texts. Understanding the effect of visuals and text types can allow us to review our ideology in listening.

Literature Review

2.1. Listening Comprehension

According to Hamouda (2013), listening is a very important skill and it must be a major element of a language classroom as learners cannot improve their speaking skills without it. This makes it clear that without listening, language learning is not completed and in communication, listening takes up 40-50%, speaking, 25-30%, reading 11-16%, and writing 9% (Mendelsohn, 1994).

Brett (1997) also says that listening has a vital role in the language acquisition process. Without listening, a learner cannot process any kind of information and communication fails. However, it is not an easy process as according to Ockey (2007), there are many complex elements in it such as speech, prosody, accent, phonology, hesitations, background information and rhetorical clues. As for Vandergrift (1999), listening is really difficult and learners must be fully aware of the sounds, vocabulary, grammar patterns, stress and intonation to process and reply to any kind of input.

Listening is one of the first skills along with speaking for an L1 learner, but for a foreign language learner, these skills are rather harder than the others (Rubin, 1990). Besides, it is very special in terms of formal and informal variations as each may have a difference tone of voice, intonation, rhythm and background noise (Ayuanita, 2013). According to the same researcher, most of the time, learners listen to a task more than once and this lets them focus more on the questions after they understand the scene or the situation in the first one. However, they might still be in need of more.

Listening is a very complex skill that includes many other side skills which involve both linguistic and non-linguistic features (Vardergift, 2010). Among the four skills, listening is used most in communication (Zhu, 2011) as it is also vital for speaking. Gass (2010) says that it is in the scope of linguistic skills to analyse the speech units and

word meanings by using long term memory, and non-linguistic features to understand pragmatic knowledge and analyse facials, body movements, gestures. She argues that a listener should use both skills in order to comprehend a listening text better.

Daniel (2011) says that while a part of speech is parsed and put in working memory, the receiver tries to connect that piece of speech to his/her long term memory which is constructed to world knowledge and past experience. Then, this information is linked to contextual information in the listening text. These pieces of contextual information are facials and body movements (Vandergrift, 2011). Moreover, “figurative language might have an intended meaning beyond the literal meaning of the words. This means that listeners also have to recognise any possible usage of rhetorical devices such as irony and metaphors.” (Daniel, 2011, p.5). According to these suggestions, we can say that a listener comprehends a piece of input by using his/her background information, which means no matter what the input is, it is the listeners’ mind which makes it meaningful.

According to Vandergrift (1999), listening is a passive activity in which listeners need to analyse sounds, vocabulary, grammar, stress and intonation within the environment specific for that situation. However, to deal with listening, there are some strategies, and phonological knowledge is based on the difference between learners of different proficiency levels along with the strategies that are used (Elmankush, 2017).

Seven listening strategies suggested by Nihei (2002) are shown in Table 3;

Table 3

Listening Strategies

Listening for the main idea	General information questions, details are ignored
Listening for specific details	Focusing on details for comprehension
Listening to predict	Prediction of present and future, decoding rhetorical and paralinguistic elements such as facials and body movements
Listening to make inferences	Understanding the real intention and the meaning

Table 3 Continued

Using non-verbal cues	Analysing non-verbal elements to understand the situation and context better
Listening for taking notes	Decoding and writing down important data
Listening for imitation or reproduction	Imitating the sounds and utterances heard

Among these strategies, listening for main idea, listening for specific details, listening to predict, listening to make inferences and using non-verbal cues are taken into consideration while designing the test items in this research.

Buck (2001) says the listening skill should be practised in the classroom just like the same way a child starts practising it as it is the first skill that the learners start to use (Woottipong, 2014). Underwood (1989) suggests a child is exposed to verbal input before they speak, write or read and all these skills improve gradually as listening itself improves as a skill. In this context, developing listening skills is very important in order to be a good speaker (Woottipong, 2014). Krashen (1989) also agrees that listening eventually improves other skills.

As listening improves with other skills, it is easier to receive and decode information better. This makes it clear that after some time and enough exposure, experienced listeners can predict the context and perform better in an assessment (Buck, 2001). This is because they have more world knowledge and context information in their long term memory. In this perspective, it can be said that experience brings the ability to predict what is next and eventually aids listening comprehension. To do this, a listener basically needs empathy, background knowledge and cultural knowledge, but as these pieces of information can change from person to person, each listener can react in a different way to each text (Hedge, 2006).

There are two main strategies in listening comprehension; top-down and bottom-up (Daniel, 2011). Bottom-up strategy is decrypting the speech segments and understanding linguistic elements mainly. Top-down strategy is building contextual

knowledge by using the prior information of the receiver to grasp the general meaning in a listening text (Vandergrift, 2011), which means the ability to predict context is defined as a top-down process. According to Long (1989), using background knowledge is also active in listening as learners are in need of interpreting a piece of information to understand a message, which is often built by using past experience. As a result, if learners have more background knowledge, they can use the clues in the target language better in order to understand the context (Tayler, 2001).

Vandergrift (2011) says that there are three aspects of listening comprehension. They are perception phase, parsing and utilization. Whereas the perception phase is accepted as a bottom-up strategy, utilization is a top down strategy, especially used by high level English learners (Osada, 2004a). Parsing stage however, is recognised as a both bottom-up and a top-down strategy. As lower level foreign language learners lack linguistic knowledge, they should focus more on content words which give them more clues about the topic to build a contextual accumulation about the listening text, but because higher level learners can use top-down strategies easier, they can activate their metacognitive skills to comprehend the text easily (Vandergrift, 2010). This makes it clear that in order to increase comprehension, low level learners must acquire the necessary skills.

Buck (2001) says in bottom-up strategy, when a listener receives an input, it is first segmented into phonemes that are small fragments carrying meanings. After that, each word is decrypted and analysed in terms of basic level of information. At this point, the receiver tries to figure out whether there are any kind of literal meanings in order to understand that specific situation. In short, the input is transferred through many cognitive steps. Buck says "It is, as it were, a one-way street." (Buck, 2001, p.2). However, people always use their background knowledge and hypnotising skills to communicate. Thus, we

choose special words for different situations and different meanings. This is again a top-down process (Buck, 2001).

Stress and intonation are other factors in listening comprehension as most of the time, vital parts of communication are stressed in English (Brown, 1990). According to Buck (2001), stressed syllables are louder and often preceded by a pause. As stressed words or even sentences might carry different meanings, understanding them might be crucial for the learners. As for comprehension, lacking this ability can cause communication breakdowns as receivers might miss vital parts of a message. An example given by Buck (2001, p.36) shows this change in a sentence.

“My 'SIster returned yesterday.”
“My sister re'TUrned yesterday.”

In the first sentence, the stress is on “SISTER” which indicates the important element of this sentence is the person, not the action whereas in the second one, the receiver is expected to focus on the action rather than the person (Buck, 2001). This example makes it clear that stress is also very important in listening as the meaning in the message might change substantially.

Speech rate is also very important in listening comprehension. According to Tauroza and Allison (1990), an average speech rate for British English is 210 words for conversations and 140 for lectures in one minute, which means 4.33 syllables for conversations and 3.17 for lectures in one second. It can be said that conversations include more verbal information than lectures as the speakers of lectures might slow down in order to be understood better. The context is probably a more detailed one when compared to daily life conversations that aim to convey as many messages as possible in a short time.

Hesitation is another factor that might hinder foreign language learners as it includes elements like unfilled pauses, filled pauses, repetitions (Buck, 2001). Voss

(1979) analysed them in an experiment and concluded that one third of the problems that occurred in comprehension were about hesitation phenomena as receivers might lack crucial information about how to decode them or they might miss a piece of the message.

According to Buck (2001), there are two different types of language use: transactional and interactional. In transactional language, the aim is strictly on the success of the communication. There is always a clear goal like a business meeting whereas in interactional language, the aim is not the content, but the style in which the way people speak is more important than what they say. Both of these types of language are used in real life. Sometimes they are used together, but in this case, one of them must be more dominant for that specific situation (Buck, 2001).

In terms of listening, transactional listening is one-way whereas interactional is two (Lynch, 2011). Interactional listening is especially important for higher education learners as the main input is mostly the conversational lectures in which receivers are usually active as they also ask or answers questions (Morell, 2004; 2007). That's why they should be exposed to visual elements more and visual elements should be a part of their assessments (Mekheimer, 2011). On the other hand, transactional listening activities force learners to take notes as they are mostly in noninteractive lectures as in these kind of sessions, receivers are passive and they are not asked to join the conversation (Badger, Sutherland, White & Haggis, 2001).

Buck (2001) says that listening comprehension is a set of elements including one's world knowledge, experience, feelings, emotions and intelligence and all these are used simultaneously. Besides, listening also includes the problem of context. In real life, a person does not have to create a context by catching some specific words from a text as they are already in it whereas in a listening task, learners must understand and interpret cognitive elements to create one in order to perform better (Buck, 2001). This actually makes it clear that a listening assessment environment is totally different from a real life

situation. According to this suggestion, it can be said that traditional listening assessments evaluate listening as a language skill, not a communication facilitator.

In listening, there are also phonological changes that receivers experience and need to interpret (Buck, 2001). These changes are shown in Table 4;

Table 4
Phonological Changes

Assimilation	Elision	Intrusion
Sound influence on the pronunciation won't you - wonchoo	Sound drop in speech next day - nexday	Introduction of a new sound want to eat – want toweat

Accent also affects the performance as learners might feel uncomfortable when they are exposed to unfamiliar accents for the first time and eventually, this disrupts communication and lowers comprehension (Buck, 2001). This might be an important problem for many receivers as listening is ignored in most language classes. Because of this, it is hard for L2 learners to be exposed to different accents.

Elmankush (2017) suggests that individual differences such as working memory, proficiency, metacognitive strategies and anxiety also affect listening comprehension. Working memory deals with processing and storing information as well as recovering it (Gathercole & Baddeley, 2014). However, Vandergrift (2015) argues that foreign language input starts as an extra process on working memory and this action might create unwanted pieces of output which eventually hinders communication although the receivers have enough vocabulary knowledge about the context (McDonald, 2006). Vandergrift (2004) argues that using visuals along with aural input might also overload working memory, which draw learners' attention from the important pieces of information to insignificant ones.

As for proficiency, Elmankush (2017) thinks that it is determined by testing vocabulary, phonological and background knowledge of the learners. Vocabulary knowledge is used to refer to the collection of words a listener knows and according to

Bloomfield, Wayland, Rhoades, Blodgett, Linck and Ross (2010, p.12), “we assume that if listeners know more than 5000 vocabulary items, they are likely to have a good chance at understanding what has been said.” This makes it clear that vocabulary is also important in listening comprehension as some words might carry vital information about the message.

To deal with listening, metacognitive strategies are other methods could be used by learners in order to overcome the difficulties that they might experience such as misunderstanding and unknown words (Vandergrift, 2012).

According to Vandergrift and Tafaghodtari (2010), there are five strategies that learners might use to increase their comprehension;

Table 5

Metacognitive Strategies

1. Planning and evaluation	Learners get ready for the text and evaluate their level.
2. Problem solving	Learners combine their experience along with general knowledge to make inferences.
3. Avoiding mental translation	Learners should not try to translate what they hear.

Table 5 Continued

4. Self-knowledge	Learners discover the text difficulty and control their anxiety level.
5. Directed attention	Learners always try to focus on the next piece although they notice that they have missed a piece of important information.

2.2. Listening Assessment

According to Hamouda (2013) and Osada (2004b), the most important problem in listening is that most courses are grammar, reading and vocabulary focused and listening is often ignored by the teacher along with speaking. Gilakjani and Sabouri (2016) also think that learners experience many problems in listening comprehension and teachers are supposed to help learners on how to cope with it. Most of the time, learners

lack listening input when practising English as a foreign language whereas there are plenty of materials to practise other skills (Rezaei & Hashim, 2013). This means that the problem in listening is due to its low amount of practice and input.

To control assessment, there are some principles of language assessment. These principles are shown in Table 6 (Ayuanita, 2013, p.121);

Table 6
The Principles of Language Assessment

Practicality	Financial, time, administrative constraints, scoring, interpretation
Reliability	Consistency, dependability, construct, administrative, student Related and scoring reliability
Validity	Measurement of the intention
Authenticity	Being as natural as possible, contextualisation rather than isolation, interesting topics, thematic organisation, real world tasks
Wash back	Feedback, preparation for the assessment

According to Buck (2001), two of the most important properties of a good test are reliability and construct validity. Reliability means that there should be the same results each time the same test is applied on the same participants. Construct validity is testing the intended target language. He also lists the features of a successful listening construct; the text should be as authentic as possible which includes elements of real life, level of grammar should be appropriate for the test takers, questions should not be answered easily with just one or two words, there should be inferential meanings in the text, and world knowledge of the participants should not be an effective element for the test takers.

However, in listening there are special methods in terms of assessment. These assessment methods in listening are shown in Table 7 (Ayuanita, 2013, p.119);

Table 7
Assessment Methods In Listening

Intensive listening tasks	Distinguishing phonemic pairs (Ex. grass-glass) Distinguishing morphological pairs (Ex. miss-missed) Distinguishing stress patterns (Ex. I can go-I can't go) Paraphrase recognition (Ex. I came from Taiwan-I am Taiwanese) Repetition (students repeat a word)
----------------------------------	--

Table 7 Continued

Responsive listening tasks	Multiple choice, open ended responses Simple discourse sequences Tough test
Selective listening tasks	Listening cloze (students fill in the blanks) Verbal information transfer (students give multiple choice verbal response) Picture cued information transfer (students choose a picture) Chart completion (students fill in a grid) Sentence repetition (students repeat stimulus sentence)
Extensive listening tasks	Dictation (students listen, usually 3 times, and write a paragraph) Dialogue (students hear dialogue – multiple choice comprehension questions) Dialogue (students hear dialogue – open ended response) Lecture (students take notes, summarise, list main points, etc.) Interpretive tasks (students hear a poem – interpret meaning) Stories – Narrative (students retell a story)

According to Buck (2001), discrete-point approach in assessment is to focus on a single unit or units and test them one by one so as to generalise the result for the whole language as it is impossible to test everything. True/false and multiple choice questions are examples of it. Specifically, in listening, they are in the form of phonemic discrimination, paraphrase recognition and response evaluation tasks (Buck, 2001). Phonemic discrimination tasks often use minimal pairs as questions. Learners hear two words such as “so” and “saw” and later they are asked to use this information in a task.

In paraphrase recognition, the aim is to test a certain part of a text; “John **ran into** a classmate on his way to the library.” (Buck, 2001, p.64). In this sentence, the meaning of “ran into” is tested with other distractors like “exercised”, “ran”, “injured” and “unexpectedly”. In response evaluation, learners are asked to respond to a situation which can be a question or a statement (Buck, 2001).

Short-answer questions test learners’ comprehension level by asking questions that can be answered with information extracted from the input (Buck, 2001). These questions can be WH questions along with sentence completion items. Another type of question is True/false questions that require a test taker to decide whether the statement

is true or false. However, according to Burger and Doherty (1992), these kind of questions are controversial in terms of assessing listening skills as in natural communication, both receivers and senders try to understand what they say to each other. They do not check whether that statement is correct or not in terms of information. As for inference questions, test takers are expected to decode a piece of information from the input and interpret it cognitively in order to answer the questions as these questions are not found in the text clearly. In multiple choice questions, test takers have options as distractors and often one distractor is a very close one to the real answer, which aims to test the comprehension level of the participants (Buck, 2001).

According to Elmankush (2017), major elements in designing listening tests are the test takers and their age along with the purpose of the test. Field (2012) suggests that the tests should be designed in a way that the items reflect real world experience. Chapelle (1998) argues that there are three elements to define construct in listening assessment. Trait-oriented approach focuses on the characteristic features of the input which define the skills that are necessary for the task. Behaviourist approach deals with the context of the input such as setting, genre etc. Interactionalist approach combines these two approaches and is responsible for all the factors (Buck, 2001).

2.3. Visuals In Listening Comprehension

According to Irgatoğlu (2010), listening comprehension is not only about the speaker, but also about the listener. Rivers (1981) says listeners are exposed to words, their arrangement and intonation to get the hidden meaning. This means that to comprehend a text better, there should be a correlation between the linguistic information and the context (Rivers, 1981).

To create the context, multimedia materials might be beneficial. Multimedia means using different combinations of text and visuals (images, videos, graphics etc.) with which learners try to understand a context (Mayer, 2009). There can be four different options that are available for listening assessments and they are using audio only, using still images, using content images and using videos (Suvorov, 2008). However, Ockey (2007) argues that each of these options might have a different output for each learner, which can affect the validity of the test as analysing the use of visuals in EFL content is actually a rather new concept.

Although video-mediated content has been used in many resources for a long time, there has been little research about the effects of visual elements on listening comprehension. It is actually hard to analyse this concept as technology is growing fast. Language teaching is trying to keep up with this improvement, but the techniques and tools in this field are changing very fast along with the term “visuals”. In the past, the way to use visual in an EFL environment was using cassettes or cd/cassette players. Installing these devices was not easy. In terms of content, it was impractical for schools to store these cassettes or devices.

However, the use of visual content in language teaching increases as it is easier to access and use these kind of devices. As a result, researchers are starting to think of the importance of visuals, which means non-verbal communication. Among them, Baltova (1994), Gruba (1997), Hasan (2000), Kellerman (1990), Progoch (1996) and Shin (1998) think that listeners can understand the content better if there is some non-verbal input in a task. In Baltova’s (1994) experiment with 53 students, participants were given two different tests, a sound only and a video test. Video group scored almost twice as high as sound-only group. Shin (1998) worked with 83 students in his experiment with a video and audio-only group. After a test consisting of multiple choice and open-ended questions, the video group scored higher. According to the same researchers,

comprehension diminishes if a content has less non-verbal input. So, we can say that non-verbal elements may assist learners in processing and understanding any kind of input as in most cases in real life, learners are able to see the speaker.

Bloomfield, Wayland, Rhoades, Blodgett, Linck & Ross (2010) suggest that anxiety affects comprehension negatively when the input is a difficult one. This results in decrease in comprehension. Ginther (2002) and Suvorov (2013) suggest that visuals can be one of the factors that might lower it as they let learners use their background knowledge and activate their schemata faster. According to Tsai (2010), visual input also decreases boredom. These are important outcomes of using visuals. Unfortunately, they are very common in language environments. As anxiety is a common problem among language classes, using visuals might help learners lower it. Visuals also aid comprehension by providing clues about the text (Shahid & Ali, 2017) and this lowers anxiety and stress as learners are exposed to real life elements which are closer to what they already see or hear every day (Carmona & Echeverry, 2016).

Mamun (2014) also claims that with the help of videos, learners are more active in the lessons and they improve their ability of predicting what is coming next. This ability is very important in comprehension as it is related to following information and reacting to it within the borders of target culture whether these predictions are right or wrong (Hedge, 2006). This means an audio-only input, which lacks all these factors, might not be a reflection of real life to be practised in a language class. In addition to this, Von Raffler-Engel (1980) thinks that without kinesics, language is redundant. All the visible patterns in a language (along with the others mentioned above) are to convey the message, which is the ultimate aim of each language and paralinguistic information is an important part of it.

In this context, Jewitt (2013) comes up with the term of multimodality. It means the learners are exposed to multiple ways of communication such as visuals, audios,

gestures, body movements etc. Eventually, visual information is more meaningful as the learners are exposed to paralinguistic features (Winiharti & Karjo, 2017). Lee (2014) and Folley (2015) think that multimodality affects learners in a positive way and they are able to remember better with the help of images.

Burgoon (1994) says that people tend to use more non-verbal cues than verbal ones if there is a problem with the verbal message. This makes it clear that people use non-verbal cues in order to convey any kind of message when they think that verbal communication cannot meet the needs of that specific message. Also, according to Wagner (2010), use of visual cues may provide positive results when asked to learners. They feel more comfortable with visual type of material rather than audio-only. As a result of this, performance and motivation increase.

According to Daniel (2011), foreign language learners may also have problems with enunciation, pronunciation and accent differences. Besides, speed, pauses and hesitations can also hinder comprehension. There are also other factors such as assimilation, elision, intrusion and reduced forms. All these factors are real life elements and together they make communication meaningful as each has a special function. However, in a real life situation, the receiver can easily ask the sender to repeat a piece of speech whereas in an assessment environment, learners get the input only once or twice.

According to Chung (1994), there are two parts in comprehension; the message sent by the sender and the message received by the receiver. For the sender, the message can be in three forms which are oral, paralinguistic (such as speech sounds, quality of voice, pitch etc.) and visuals including facials and body movements (Suvorov, 2008).

It has been the teacher who was responsible for the listening for many years because of the limitations in technology in this field, but recent developments have made recorded videos or audios possible in a classroom environment meaning that the media

including both visual and auditory elements can be used easily by the teachers (Wagner, 2007). Nunan (2005) also suggests that with the help of technology, it is now possible to create the foreign language content in a classroom by using different features of it. The tasks in listening should include real life elements more than the others as learners are supposed to use them in real life (Tekin & Parmaksız, 2016). However, most activities today are just texts that are read aloud, to which learners never respond, but in real life, listening is actually for speaking and there are no comprehension questions following them (Ur, 1996). Moreover, Tekin and Parmaksız (2016) suggest that using more real life elements also increases motivation as tasks become more interesting.

Register is another important element of communication. According to Lynch (1998) and Rost (1990), learners can extract this kind of information from visuals in listening as it provides physical and situational context, and eventually increases comprehension. An example to this can be a situation in a cinema. When learners see such environments, they try to use their background knowledge about that environment and try to create a bridge with the input. Thus they interpret what they hear in a better way by activating their schemata.

Videos might be used in an English language teaching context for a range of others reasons (cited in Suvorov, 2009, p. 54):

“Seeing a situation and its participants while listening enhances situational and interactional authenticity, which may aid comprehension (Buck, 2001; Wagner, 2007). Body language, facial expressions, and gestures of a speaker provide additional information to the listener (Buck, 2001; Coniam, 2001; Ockey, 2007; Rubin, 1995). With visual input, a listener can more easily identify the role of a speaker and the context of a situation (Baltova, 1994; Gruba, 1997; Rubin, 1995).

Visual elements can activate a listener's background knowledge (Ockey, 2007; Rubin, 1995).”

According to Benson (1992), there are seven other key factors to use videos in a class; alternative learning styles are activated by visual media, the enhancement of decoding and schematising, the discursive nature of video which displays an array of sociolinguistic markers, the greater access to non-verbal languages, a lowering of the affective filter, improved access to the target culture and the material seen on video can be readily retained.

According to studies conducted by Parry and Meredith (1984), Sueyoshi and Hardison (2005), using visual cues helped students to perform better in a test. In Sueyoshi and Hardison's experiment (2005) with 42 students, students were randomly assigned to three different groups; a hand gesture and face video group, a face only video group and an audio-only group. The result was that the two video groups with visuals scored better. Other studies by Brett (1997) and Gruba (1993) indicated the opposite. Gruba (1993) worked with 91 students in two groups, a video and an audio-only group. There was not any significant difference in scores.

In Parry and Meredith's (1984) experiment with 178 students, a video and audio-only group were given two tests. The result was that the video group scored higher. In his experiment, in 2001, Coniam worked with 104 teachers, divided into two different groups; an audio only and a video group. There was no significant difference in scores. In Ginther's (2002) experiment, TOEFL test takers were examined in terms of the effects of visual elements on their performance. The result was that visual cues helped test takers perform better.

Mueller (1980) concludes from his research that visual support can be beneficial for low-level students only if visuals are introduced before or after listening. In his

experiment, higher level students did not show any significant difference. In this perspective, MacWilliam (1986) thinks that using video materials might decrease comprehension as learners may easily be distracted and their attention can easily be taken away from the real input, the audio. According to another experiment conducted by Ockey (2007), videos did not help the participants. Besides, half of them stated that videos were distracting rather than helping.

These findings are in contrast to the findings of Suvorov (2009) and Wagner (2010). According to Mirvan (2013), videos helped the participants as they consisted of real life elements. For this research, it can be said that when videos include natural and authentic context, the learners perform better. For example, in Progoth's (1996) experiment, participants watch and listened to a conversation and a monologue including real life elements. At the end, they reported that they felt more comfortable with the video. Another study conducted by Wagner (2007) suggests that the behaviour of the learners also affects comprehension. In the experiment, he focuses on how much time his participants spend on the visual input. The results suggested that this behaviour changes according to the text type as participants focus on visual elements an average of 72% of the time for dialogues and 67% for lecture videos. This result is similar to Ockey's (2007) experiment suggesting 73.6% for lecture videos. These figures might cause problems for lecture type of texts which include more formal information and learners might easily miss them if they focus more on visuals rather than the audio which is actually regarded as the necessary input in terms of the assessment in that session.

Also, it can be said that content of the input is also an important element in that the listeners might watch the video both for lectures and dialogues more if the content is interesting or less if it is a boring one (Wagner, 2007). In this context, Rubin (1994) also suggests that visual elements improve listening comprehension as according to a research conducted by Rubin (1990), the video group outperformed the audio-only group. He

stated that visuals provide sufficient data for information processing but deciding which video to use was vital.

Hamouda (2013) suggests that visuals increase the attention of the learners along with their motivation which enable them to focus on the content easily and cope with the troublesome elements like unknown words. In another experiment conducted by Canning-Wilson (2000), visual input including body language made the text easier for the learners when the same input is used in an audio-only text. However, she suggests that although visual elements aids comprehension, they might also distract the learners and eventually lower comprehension for some learners.

Verbal communication is accepted as an element of spoken language whereas non-verbal communication is in the form of facial expressions, gestures and body language and most of the time, they are used simultaneously (Daniel, 2011). It can be said that “non-verbal communication is an umbrella term for a whole range of aspects of human communication which are distinct from speech.” (Daniel, 2011, p.4). Facial expressions, gestures, postures and any kind of body movements can be examples of it (Mehrabian, 2007).

However, the effect of non-verbal communication changes from person to person as some people might focus more on them in communication, which means their effect is very subjective (Vardergrift, 2010), so it should be the learners’ duty to improve their interpretation of visual input as this ability helps them increase both their receptive and productive skills (Daniel, 2011) because most real life situations in terms of listening are face to face and there are only minor one way situations like telephone conversations or radio broadcasts (Batty, 2014). This means listeners are often exposed to gestures, facial expressions and other visual signals. Burgoon (1994) also argues that these signals are the elements of nonverbal communication, which is the main way to communicate for humans. However, this claim may not be possible with the context including abstract

elements (Batty, 2014) as for some contexts, visual signals might be irrelevant or unnecessary (Weidenmann, 1989), or simply they are not the focus points of that specific situation.

As a result, we can say that both claims are valid as learners may encounter with many different situations as although many real life conversations are face to face, the listeners do not always have to focus on verbal clues (Daniel, 2011), but if facial signals are somehow used in an interaction, they might carry vital information and must be interpreted by the receivers (McNeill, 1992).

2.4. Visuals in Listening Assessment

Buck (2001) argues that the visual input might change the state of the learners from active to passive, which is a state that should be avoided during an assessment. He says that the learners might focus more on the input, not the task and the ability to interpret visuals might change from one person to another. Wagner (2007) also suggests that some people can analyse the visual inputs better and this factor should be a concern of an assessment maker. However, Wagner (2007) also says that it is the listeners' choice to look away or to focus on their papers, they can even close their eyes. Some other researchers suggest that being exposed to visual elements make non-verbal elements clearer and more understandable, which eventually aids comprehension (Jafre et al., 2011) as it can be said that these elements are vital for communication that occurs face to face most of the time, except situations which lack visual factors like gestures and body movements and these situations are rare in real life environment (Sejdiu, 2017). As these kind of visual elements are ignored most of the time in language teaching environments, foreign language learners are often frightened and their fluency decreases when they are in a social environment (Borras & Lafayette, 1994).

According to Ockey (2007), visual elements are also very important in most real life situations and there are two ways to use them in assessment; videos and still images. Videos can be preferred as they improve authenticity and still images are preferred because of their practicality. Ockey (2007) suggests that comprehension is a dynamic process that, as Buck (2001) suggests, each learner might have a different understanding as anything can affect how and what the learners think when they are exposed to a piece of input after they are combined with their past experience and world knowledge.

The figure below shows the percentage of time test takers spent observing visuals in Ockey's (2007, p.527) experiment;

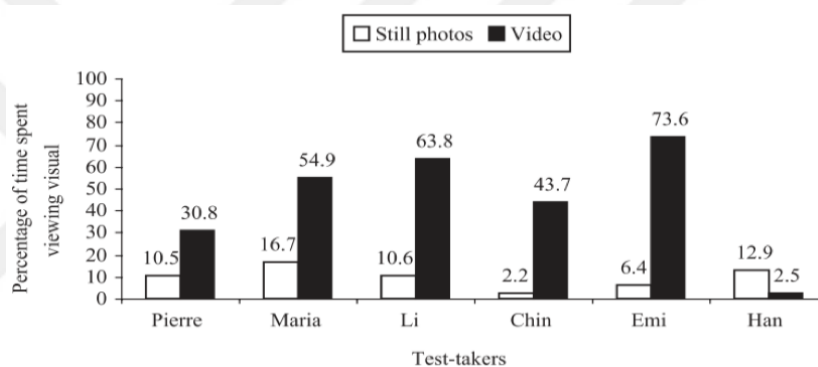


Figure 1. Percentage of Time That Test Takers Spent Observing Visuals

According to this figure, almost all test takers act similarly when the input is a still photo whereas their percentage of time spent observing visuals changes when there is a video as a channel of input (Ockey, 2007). In the same experiment, it was reported by Ockey that many participants were positive about still images to set up a context as they found them beneficial, not distracting.

As for Rubin (1995), the visuals can be very distracting if there is a difference between the audio and the visual input. Although there is a synchronization between them, there might be misunderstandings as each learner decodes them in a different way. Secules, Herron & Tomasello (1992) also claim that visuals improve comprehension, especially for lower level learners whereas Lynch says (1998) their effect is not significant.

However, text types might have an effect on comprehension. According to Bejar, Douglas, Jamieson, Nissan, and Turner (2000) and Ginther (2002), there are two different types of visuals; context and content visuals. Context visuals are for setting the scene and situation (Ginther, 2002). That's why this type of visuals is also known as situation visuals. Content visuals portray the content of the input. In an assessment, each of these types of visuals affects the performance of test takers (Ginther, 2002) as context visuals might be used to activate learners' schema in terms of the situation in that task whereas content visuals are to build up knowledge in learners' mind so as to understand the text in depth.

In terms of assessment, according to Armium and Rahmatian (2011), with the advance of technology, video material is used more often in listening than it was before, which means videos are also accepted as a new media input. In 1997, Gruba used the term 'video media' to highlight the positive effects of video assessment as an assessment tool. According to Woottipong (2014), learners perform better when videos are used in assessment. Similarly, Khoshsima and Izadi (2014) and Martinez (2010) found the same results when their video and audio only groups were compared in terms of listening comprehension. In 2015, Memarzadeh and Shariati conducted a similar research and found a significant difference in listening comprehension scores in two groups when videos were used as an assessment tool. According to Sulaiman et al. (2017), learners scored better when the input was a video instead of an audio.

According to Sulaiman et al. (2017), assessments must be related to real life and there must be real life elements in them such as conversations and lectures. They believe that eventually, such elements help learners understand a context better. According to Campoy-Cubillo and Querol-Julián (2015), in a typical task, participants listen or watch the input and they need to focus on the questions simultaneously which is hard work when stress is also effecting them in an assessment situation. If learners lack this ability, they

are not able to decode information and respond to questions simultaneously. Wagner (2008) thinks that the main problem of when to use visuals in assessment is the lack of technology and practice. Also test makers need more resources when compared to audio only tests.

2.5. Visuals And Their Effects On Listening Comprehension And Assessment

Chan, Lei and Lena (2014) suggests that if learners watch videos, they expose themselves to more non-verbal elements like gestures and facial expressions, which clearly include more authentic content when compared to an audio-only input. Thus, learners are more interested in the lesson. Before that, in 1975, Rubin claimed a similar point of view suggesting videos also increase enthusiasm and attention of the learners along with widening learners' imagination. It can be said that with the help of all these factors, students can remember up to 84% by the combination of listening and watching compared to 15% by listening only and 25% by watching only (cited in Chan, Lei, & Lena, 2014).

The length is also an important factor affecting listening comprehension as according to Baltova (1994), body language aids learners' comprehension, but long conversations may hinder it. Because of this, Canning Wilson (2000) suggests that videos should not be used in teaching or assessment without careful planning. There are also other studies suggesting that the effect of videos also varies in different levels of language proficiency (Chan, Lei, & Lena, 2014). In their experiment, low level students were less successful than their peers. In the interview, some participants said that the video distracted them. Besides, as they often did not use these kinds of visual elements before, it was really hard for them to focus both on the input and the task. However, higher level learners performed better. Berne (1998) refutes this argument and suggests that the

proficiency levels of the learners do have an effect on the impact of the visuals. This makes it clear that level of proficiency is also an element when discussing the efficiency of visual elements. However, with enough practice, low level learners can also achieve the same success as this is due to lack of experience.

According to Campoy-Cubillo and Querol-Julián (2015), whether to use visuals or not totally depends on the objectives of a listening task. If the aim of the test designer is to assess the participants' aural abilities, an audio test fits the need as visual factors might distract them and lower their comprehension (Campoy-Cubillo & Querol-Julián, 2015). On the other hand, if the focus of the task is on interaction, visual elements like lip movements can aid participants in term of comprehension (McGurk & MacDonald, 1976). Because of all these variations, learners should be trained to decode both types of input (Campoy-Cubillo & Querol-Julián, 2015).

According to some other studies (Bransford & Johnson, 1972; Mueller, 1980; Wolff, 1987), using pictures as visuals improves listening comprehension as they increase awareness, but researchers like Friedman & Stevenson (1980) and Klein (1985) argue that these results may vary from research to research as each learner might have a different background of understanding and decoding visuals, and even the same visual input may mean a different thing for each learner. Some other researchers (Dean & Enemoh, 1983; Omaggio, 1979; Mueller, 1980) claim that visuals can also be used before a listening task in order to set the scene and build the scheme for learners to comprehend what is next better.

Suvorov (2013) suggests that there are three dimensions of visuals; congruity, dynamism and movement, and rhetorical effectiveness. Congruity controls the relation between the visual and the audio. In this relationship, the visuals are not ineffective decorative elements, instead, they are vital for the message, which makes them important elements of communication for everybody. However, as Schriver (1997) is concerned

that visuals can be decoded differently by each learner, he suggests five methods to use combine visuals with aural input. These methods are redundancy in which words and visuals are identical; complementary in which words and visuals are different, but both of them are needed to be decoded for the task; supplementary in which words and visuals are different, but one is used for the main idea whereas the other is for supporting it; juxtapositional in which words and visuals provide different information but both are needed to be analysed together in order to comprehend the text; stage-setting in which words and visuals are different and one is used to present the situation and the other for the main idea.

The second dimension of Suvorov (2013) is dynamism and movement. Together, they control the shift between temporal and spatial dynamism. There are two types of visuals in terms of using them as input; static and dynamic (Elmankush, 2017). Static means still pictures whereas dynamic means using videos as visuals. However, according to Suvorov (2013), not all the videos are dynamic as the content might be the same in a video although there is a movement in principle. These kind of videos are actually static. We can also say that some pictures are not static but dynamic if there are new ones shown as input periodically during an assessment (Elmankush, 2017).

The third one is the rhetorical effectiveness which focuses on the effect of visuals. According to Suvorov (2013), visuals might draw attention of the learners as they include personal features like gestures and body movements, and these visuals are marked as rhetorically effective (Suvorov, 2013). Kostelnick and Roberts (2011) argue that rhetorical effectiveness is determined by factors such as organisation, intensity, consciousness and accuracy of the visuals. It can be said that visuals including these elements are positive in terms of rhetorical effectiveness to get the receivers' attention more (Kostelnick & Roberts, 2011).

As for Ginther (2002), still photos are helpful only if they are integrated with the audio and have important pieces of information. In Suvorov's (2011) and Elmankush's (2017) eye tracking experiments, it was seen that participants looked at the video more than the photos. According to Imhof (2009), when participants are exposed to these kind of visuals, they aid comprehension. As for Field (2008), important information in a conversation is transferred by facial expressions along with other visuals, but a traditional listening task does not include these elements.

It is also indicated that visuals increase confidence and as a result, there is more room for participants to focus on the input (Ko, 1998). According to Celce-Murcia and Hilles (1988), visuals are beneficial for beginner and low-intermediate learners in particular as most of the time, these type of learners have difficulty in comprehending longer verbal input. Teng (1994) also agrees with this idea and suggests that it is the beginners who are more vulnerable in terms of listening without comprehending, which results in giving up after some time.

Gruba (1997) suggests there are clear benefits of using videos. The most important one is that videos include elements of real life such as using verbal and visual input together, which are indispensable features of communication. Along with this, using visuals is not a new concept for language teachers as in most lessons, visual items are already used for different purposes. As an example of this, Coniam (2001) conducted a study including audio-only and video tests. Audio group scored better than the video group, but there was not a significant difference. Moreover, the participants were asked questions about the test and it was reported that the participants in the video group did not mention any advantages of the video in terms of comprehension. Coniam (2001) thinks that the reason for this was the video input was about a talk show lacking gestures, body movements etc. According to these results, it can be said that the difference between content and context is actually meaningless as each learner might find a different kind of

input beneficial in each situation (Ockey, 2007). Ockey (2007) tried to analyse the difference between still images and videos with a lecture context along with interviews. The participants were less interested in the images when compared to videos. However, he reports that images might be beneficial at the beginning of a task only and videos are distracting. In addition, paralinguistic features are found to be distracting for some participants. Suvorov (2008) argues that this can be due to different learning styles and cultural background of the participants.

Shahabi (2016) conducted another research with 60 students and half of them were exposed to gestures and facial expressions. The results were that visuals had a positive effect on participants' scores meaning that gestures and facial expressions improve comprehension. According to this research, it can be said that nonverbal elements including body movements, gestures, facial expressions and postures etc. (Kellerman, 1992) help comprehension. However, all these elements can be interpreted in a different way by different receivers (Pennycook, 1985) as each culture has a different way of using them. However, because videos include these kind of elements from different real life situations a lot, they can improve the ability of interpretation of this kind of input of the learners resulting in better comprehension if learners are exposed to these kind of materials several times (Mirvan, 2013).

According to Shahid & Ali (2017), videos are more frequent now in terms of practising listening skills. Aldera (2015) conducted a research about this and found that visuals improve comprehension if they are used more often. These results are similar to Sarani, Behtash, and Arani's (2014) experiment suggesting positive influence of visuals on the participants especially for analysing authentic language. Shahid & Ali (2017) also reported in their experiment that visuals improve comprehension of the participants significantly. This makes it clear that using authentic material is also important in terms of visuals.

According to Knight & Sweeney (2007), gestures are also very important as without them, there might be communication breakdowns. These signals can manipulate communication in many ways (Dahl & Ludvigsen, 2014) as learners are exposed to the real language in the text (Harmer, 2001). According to Yasin, Mustafa, and Permatasari (2017), along with the spoken language, learners also experience non-verbal elements such as gestures and body movements in a task. Moreover, as visuals include real life elements of culture, they aid learners a lot in terms of target culture (Harmer, 2001). These cultural elements can be the way people dress, talk, argue or eat. Harmer also suggests that visuals motivate learners and eventually teaching is more successful as watching is thought to be more exciting than listening in language teaching.

According to Köksal (2004), some benefits of videos are listed below;

1. Videos help teachers get their learners' attention because they are thought to be interesting.
2. As they include real life language, they contain many grammatical structures along with stress and intonation elements, which can be used to expose learners.
3. They can boost imagination.
4. They improve long-term memory as they create auditory and visual links together.
5. They improve oral comprehension.

According to Lynch (2010), the listener, the speaker, the content and the visuals are the factors effecting comprehension as a whole. For the listener; some topics might not be of interest although the listeners are active in that piece of communication. They try to understand some specific marks to keep the communication going. For the speaker; there might be communication problems as using hesitations, reduced forms etc. are very common in daily life. For the content; there might be unusual information in the content as each person's background is different. Each content might have a different set of words

that are not common in real life, which means some words used in that content might be unfamiliar for another group of people. For visuals, elements like videos, pictures, gestures, body movements etc. might increase comprehension as they include visible clues although the learners have problems with the audio. Tai (2014) also suggests that body language is very important in comprehension as it might turn classroom into a positive environment because learners also improve their understanding of body movements, which creates better comprehension. According to an eye-tracking experiment conducted by Suvorov (2013), most participants focused on the speaker's appearance like face, head etc. and body movements.

Latifi, Tavakoli, and Javad (2013) suggest that videos include kinesics like gestures and body language, and they are the main sources of information in oral communication (Von Raffler-Engel, 1980). However, according to their experiment, there was not a significant difference between the audio and the video group. Hasan (2000) suggests that learners comprehend a text by using their background knowledge by connecting both aural and visual input.

In terms of input, Irgatoğlu (2010) argues that a text is harder if vocalised by a native. To comprehend a native text better, listeners do not have to focus on each word; instead, they are supposed to understand the content in detail and they need to have the ability to guess unknown words, which can be done by using past experience and background knowledge (Chastain, 1976). To make this process less difficult, teachers need to focus on activating learners' schema and previous knowledge about the content by using visuals (Hennessey, 1995; Thompson & Rubin, 1996; Schallert, 1976). According to Irgatoğlu (2010), while listening to a native speaker, learners need to focus on the content rather than the language. At this point learners can make use of visuals to focus on the content more.

Researchers like Buck (2001) and Gruba (1993) are more concerned about the assessment of listening as a skill and they suggest that a listening task should assess the skill itself whereas Bachman and Palmer (1996) argue that non-verbal elements should be part of the assessment if the aim is to evaluate communication as they carry non-verbal information vital for that piece of the situation and without non-verbal elements, there could be breakdowns in communication (Burgoon, 1994). Buck (2001) suggest that more research is needed in terms of testing the difference between visuals, still pictures and full motion videos as each situation and input is unique in itself.

According to Kellerman (1990), visual elements might affect comprehension considerably and Buck (2001) also says that they can aid comprehension in terms of situational authenticity. They might also be helpful in interactional language because the focus is on the speakers, but they could be less effective in transactional language which is more about the content. Moreover, Buck (2001) is concerned that each person might have a different level of decoding skills, which questions the aim of an assessment whether it is an audio or visual one. That's why he prefers to focus on audio rather than visual elements.

Most researches agree that non-verbal elements aid understanding when compared to the text which does not include these kinds of elements (Allan, 1984; Altman, 1990; Baltova, 1994; Gruba, 1997; Hasan, 2000; Kellerman, 1990, 1992; Progoosh, 1996; Shin, 1998). Wagner (2007) says that videos in particular increase the number of non-verbal elements in a text which improves comprehension and also emphasising that this result is predictable as receivers often see the senders except some minor situations like listening to the radio and telephone conversations etc. Many other researchers like Bejar, Douglas, Jamieson, Nissan, and Turner (2000); Brown (1995); Buck (2001); Kellerman (1990, 1992); Lynch (1998); Samuels (1984, 1987) also agree with the idea and put forward that seeing the sender benefits the receiver. Burgoon (1994), Kellerman (1992) and Von

Raffler-Engel (1980) specifically focus on kinesics and body movements as they think these elements make communication easier along with gestures and facial expressions. This kind of input also creates context for a speaking environment (Wagner, 2006) which is an essential part of the communication. In the majority of communicative language situations, a listener is able to see the speaker and is able to utilize and exploit the non-verbal information the speaker is projecting. Burgoon (1994, p.357) states that verbal and nonverbal channels are "inextricably intertwined in the communication of the total meaning of an interpersonal exchange".

A figure by Campoy-Cubillo & Querol-Julián (2015, p.19) emphasises the importance of using gestures and body movements;

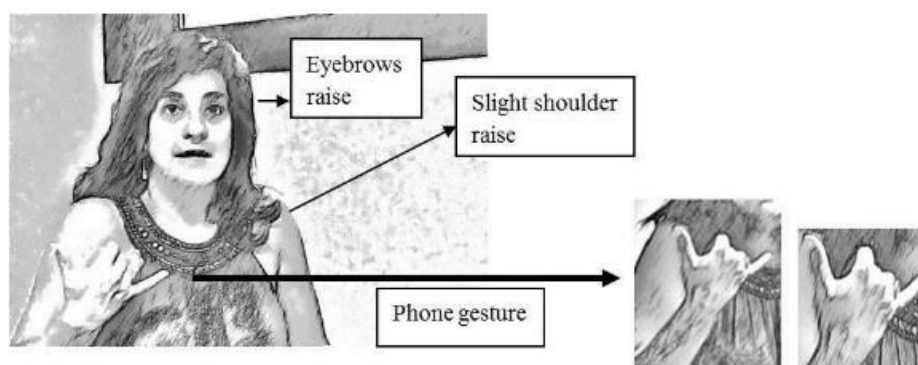


Figure 2. Why Didn't You Tell Me?

In this figure, the woman complains as her nephews fails to buy bread for lunch as there is no bread left at the bakery. Then, she says “Why didn't you tell me?”. However, when she says that, she makes her hand look like a phone and actually implies a phone call, meaning that the verb “tell” is used to symbolise a phone call. Without the visual input, the receivers cannot decode this information. Moreover, her facial expressions and body movements have other clues (Campoy-Cubillo & Querol-Julián (2015). This information complies with Winiharti and Karjo (2017) suggesting learners are exposed to paralinguistic elements such as facials and gestures with a visual input, which makes

the input clearer as the learners see the target situation that is highly crucial in terms of comprehension.

Flowerdew and Miller (2005) also claim that one of the types of knowledge required for listening performance is kinesics which includes non-verbal elements like body knowledge, facials and gestures etc. Flowerdew and Miller (2005) think that kinesics is an important element of listening comprehension. According to Ardila, Bernal, and Roselli (2015), visual elements are used for 60% of information in communication. Elmankush (2017) suggests that verbal and visual elements in communication are used together in order to send or receive a message. Royce (2007) also suggests that as they are used together, verbal and non-verbal elements cannot be ignored in assessment. According to Baddeley's (1992) experiment, processing information with dual channels outperforms using a single channel. That's why Mayer (2005) argues that verbal and non-verbal input might improve comprehension. However, according to another experiment conducted by Göktürk and Altay (2015), there was not a significant difference between audio and video groups although audio group scored slightly better. With all this information, it can be said that using visuals results in both negative and positive conclusions.

Methodology

3.1. Research design

In this research, a post-test only quasi-experimental research design was adopted. The control group was TLG (Traditional Listening Group) which received no interventions in terms of audio-visual aids. The two experimental groups were GIM (Group Using Images On the Assessment Sheets), which received the same audio input as TLG but had pictures related to the topic of the audio text in their listening comprehension test, and GVI (Group Using Video as A Channel of Input), which received the same input as TLG and GIM but through video instead of audio means.

3.2. Participants

This post test only quasi-experimental study aims to investigate the effects of using audio-visual materials on language learners' comprehension. In order to test the proposed hypotheses, 100 participants were selected from Atılım University, School of Foreign Languages, Department of Basic English. These students were grouped in 6 different classes. 2 classes were used for each group (TLG, GIM and GIV). TLG was the control group whereas GIM and GIV were the experimental ones. The ages of the students ranged from 18 to 22.

This is a quasi-experimental research as the participants are not randomly assigned. They were selected according to their previous mid-term exam results conducted by Atılım University. The results of these classes were the highest of that exam in terms of listening scores. All the participants shared the same course materials and teaching points throughout the term. They had exactly the same course content since the beginning of the term. They were B1 (CEFR) students.

3.3. Instruments

The chosen instruments for this study were three different materials, one audio only (TLG) (Appendix 1), one audio with visuals (GIM) (Appendix 2) and one video (GIV) (Appendix 3) material, including the same questions. The same materials were used for all three groups by splitting the video from the audio.

To answer the research questions, the tests consisted of four different types of questions for two types of texts, a dialogue and a lecture. In the first part, there were six “tick or cross” questions. The students were expected to mark a ✓ or a X next to the statements. In the second part, there were six “True or False” questions. The participants were not expected to correct the false ones. These two parts were about the dialogue. In the third part, there were seven “circling” questions. The students were expected to choose the correct word to complete the sentences. In the last part, there were four “open-ended” questions. The participants were expected to write the correct answers for the questions. In this part, short answers were marked as correct. These two parts were about the lecture. The reason behind the selection of these question types was that they were the most frequent types of questions the students encountered in that term.

All the items were also controlled by the Testing Department of the same university. To ensure the level necessities of the participants, topics were about a meeting with a doctor at a hospital and a lecture about tornadoes including grammar and lexical level-appropriate items for the level of the participants (B1-CEFR).

The dialogue video/audio was three minutes and fifteen seconds long. The lecture video/audio was three minutes and thirty-five seconds. These durations of the audios/videos were arranged according to the previous achievement exams at the same university as the learners had already experienced these kind of texts and input.

In the TLG group, there were not any visual aids. Participants listened to the audio and answered the questions on the exam sheet. In the GIM group, there were not any visual aids in the input whereas there were five images on the exam sheets. These images were taken directly from the videos, but they were not chosen in a way that might help the participants in terms of answering the questions. In the dialogue part, there were two images of the speakers. In the lecture part, there were three images about the context. In the GIV group, there were not any images on the exam sheets, but the students watched two videos, one dialogue and one lecture. All the items in the test were not constructed in a way that could be answered by watching the video or analysing the images only. The dialogue was taken from Cambridge English Empower B1 course book. The lecture was taken from Cambridge Unlock 2 Reading & Writing. The videos/audios were not edited and they were of good quality to conduct the test. In terms of technology, the testing environment was satisfactory. The participants were in an environment that they could easily hear or see what was played. The video was projected with an overhead projector. For the audio, there were two speaker devices on the right and the left of the board. The sound quality was adequate. No hearing problems were reported.

3.4. Data Collection

The test was administered to each group one by one. The instructions were clearly explained before the activity. Learners were given one minute to read the questions before the video/audio started. There were two parts in the video/audio. They listened to/watched each task twice. During the input, they answered the questions simultaneously. After the second part, they were given one minute to check their answers. In total, the test lasted 14-15 minutes. Each question was one point each. There were no partial points. Incorrect or multiple responses were not rewarded.

3.5. Data Analysis

This chapter focuses on the interpretation of the data collected through the audio and visual comprehension tests consisting of questions through dialogue and lecture texts designed for this study. The present study aimed at investigating the effects of visuals on listening comprehension of the students' overall scores in different text types. In this study, achievement scores are used as dependent variables, while the use of multimedia elements (pictures and videos) are the independent variables. The data were analysed by using the Statistical Package for Social Sciences (SPSS) 23.0.

This chapter reports the results of the study. All statistical tests conducted to address the research questions used "0.05" as the minimum alpha level of significance. This chapter is organised according to the order of the research questions. It presents descriptive statistics (range, means, and standard deviations) and the results of one way ANOVA tests and paired samples T-Tests.

Then, to measure the internal validity, Cronbach's Alpha Coefficient was utilised (Cronbach, 1951). The results showed that the data set was appropriate to conduct any further tests ($\alpha = 0.70$). Reliability was ensured through item analyse in terms of difficulty, discrimination, and KR20. The results showed that the item set was appropriate to conduct any further tests. Items had acceptable discrimination and difficulty as participants of low ability were achieving lower scores on the questions than of higher ability and the questions were on the borderline of being easy or medium level. KR20 value suggested that the items had good reliability in a consistent manner. According to mean and median scores, it can be said that more participants did better than their peers. As for standard deviation, there was little variability amongst the scores which suggests participants performed quite similarly on the test.

Table 8

Reliability Index

Number of participants	100
Total possible score	23
Total possible dialogues score	12
Total possible lecture score	11
Mean item difficulty	0,603
Mean discrimination index	0,353
High group minimum score (n=38)	16,00
Maximum score	22,00
Low group minimum score (n:32)	12,00
Minimum score	5,0
Median Score	14,00
Mean Score	13,870
Standard deviation	3,738
Point biserial	0,366
KR20	0,702

Results

4.1. The Effect of Listening Assessments on Learners' Overall Listening Comprehension

In order to answer the first research question, a one-way ANOVA was conducted aiming to compare learners' overall listening comprehension in GIM, GVI and TLG conditions. The results indicated that there was not any significant effect of visual elements or listening assessments including video input at the $p < 0.05$ level on learners' overall listening comprehension ($F(2, 97) = 1.94, p > 0.05$).

However, it can still be inferred from the data that GIM and GVI scored slightly better than TLG (Table 9). Therefore, H_0 could not be rejected for the first research question.

Table 9
Descriptive Statistics of the Overall Scores

	N	MEAN	MEAN(%)	SD
TLG	33	12.82	55.73%	4.44
GIM	33	14.36	62.43%	2.58
GVI	34	14.36	62.43%	3.85

4.2. The Effect of Listening Assessments on Learners' Dialogue Comprehension

In order to answer the second research question, a one-way ANOVA was conducted aiming to compare learners' dialogue comprehension in GIM, GVI and TLC conditions. The results indicated that there was a significant effect of visual elements or listening assessments including video input at the $p < 0.05$ level on learners' dialogue comprehension ($F(2, 97) = 7.44, p = .001$). To find out where this effect comes from, A Games-Howell post-hoc test was conducted as the homogeneity of the variances assumption could not be satisfied by the Levene's test. ($F = 8.52, p < 0.05$).

The results showed that a significant effect was found in the TLG and GIM comparison ($p < .05$). Another significant effect was found in the GVI and TLG comparison ($p < .05$) (Table 10). Therefore, H_0 was rejected and H_1 was accepted for the second research question.

Table 10
Descriptive Statistics of the Dialogue Scores

	N	MEAN	MEAN(%)	SD
TLG	33	6.67	55.58%	2.40
GIM	33	8.30	69.16%	1.23
GVI	34	8.29	69.08%	2.12

4.3. The Effect of Listening Assessments on Learners' Lecture Comprehension

In order to answer the third research question, a one-way ANOVA was conducted aiming to compare learners' lecture comprehension in GIM, GVI and TLC conditions. The results indicated that there was not any significant effect of visual elements or listening assessments including video input at the $p < 0.05$ level on learners' lecture comprehension ($F(2, 97) = 0.07, p > 0.05$).

However, it can still be inferred from the data that TLG scored slightly better than GIM and GIV (Table 11). Therefore, H_0 could not be rejected for the third research question.

Table 11
Descriptive Statistics of the Lecture Scores

	N	MEAN	MEAN(%)	SD
TLG	33	6.24	56.72%	2.29
GIM	33	6.06	55.09%	1.87
GVI	34	6.09	55.36%	2.22

4.4. The Effect of Listening Assessments on Learners' Lecture and Dialogue Comprehension Within Each Group

In order to answer the 4th research question and compare lecture and dialogue comprehension scores within each group (TLG, GIM and GVI) three paired samples T-

tests were conducted (Table 12). Therefore, this section is divided into three sub categories.

Table 12
Paired Samples T-Test Results

	N	MEAN Difference	SD	DF	T	P
Within TLG	33	0.42	1.54	32	1,581	.124
Within GIM	33	2.24	1.83	32	7.010	.000**
Within GVI	34	2.20	2.01	33	6.394	.000**

** refers to $p < .001$

4.4.1. Paired Samples T-Test For TLG

In order to compare the dialogue and lecture comprehension scores within TLG, a paired samples t-test was conducted. The result showed that dialogue comprehension test scores of the learners in TLG ($M=6.67$, $SD= 2.40$) were not statistically different from lecture scores ($M= 6.24$, $SD= 2.29$); $t(32) = 1, 581$, $p > .05$.

4.4.2. Paired Samples T-Test For GIM

In order to compare the dialogue and lecture comprehension scores within GIM, a paired samples t-test was conducted. The result showed that dialogue comprehension test scores of the learners in GIM ($M=8.30$, $SD= 1.23$) were statistically different from lecture scores ($M= 6.06$, $SD= 1.87$); $t(32) = 7, 010$, $p < .01$. These results indicate that students who were tested via images scored significantly better in dialogue type of texts than lecture type.

4.4.3. Paired Samples T-Test For GVI

In order to compare the dialogue and lecture comprehension scores within GVI, a paired samples t-test was conducted. The result showed that dialogue comprehension test

scores of the learners in GVI ($M=8.29$, $SD= 2.12$) were statistically different from lecture scores ($M= 6.09$, $SD=2.22$); $t(33) = 6, 394$, $p < .01$. These results indicate that students who were tested via videos scored significantly better in dialogue type of texts than lecture type.



Discussion

This study examined the effects of images, videos or audio-only listening tests on test-takers performance. For the 1st research question, GIM and GIV scored slightly better than TLG. This means that using images and videos as input improve comprehension but they are not very effective as they did not have any significant impact on overall comprehension. Also, as mean scores of GIM and GIV are very close, we can say that when learners are exposed to visuals, their help is limited and after some time, learners still rely on their own ability to comprehend rather than using visuals.

This situation is especially important for GIV in that videos were not beneficial for the participants at all. These results comply with Brett (1997), Bejar, Douglas, Jamieson, Nissan, and Turner (2000) and Gruba (1993) suggesting visuals do not affect the learners' comprehension. However, the results conflict with Shin's experiment (1998) in which video group performed better. It can be said that the participants in GIV in particular may not have scored better due to distracting factors. MacWilliam (1986) thinks that using video materials might decrease comprehension because it is easy to distract receivers and as a result, learners can easily focus on the visuals, not the audio and miss important pieces of aural information.

The suggestion of Rubin (1990) might have also affected the performance in this experiment as Rubin (1990) claims that deciding which video to use was vital. If the topic is a boring one, learners might lose their focus and they can easily be distracted as although visual cues might be helpful, just like the participants in Ockey's experiment (2007), the video might have been distracting for them. MacWilliam (1986) has a similar view that visual input might hinder comprehension as sometimes, learners focus too much on the questions and they avoid the input intentionally (Alderson, Clapham and Wall, 1995). As a result, they cannot make use of the non-verbal information provided by the

visuals. For example, in Brett's (1997) experiment, more than half of the participants did not watch the video, instead they were looking at the questions.

This result confronts with Winiharti and Karjo's experiment (2017) in which the visual group performed better than the audio only group and participants are thought to comprehend better as they watched a video as input. Tuffs and Tudor (1990) and Gildea, Miller, and Wurtenburg (1988) also argue that visuals might not be beneficial every time they are used, instead, they might be confusing. According to an experiment conducted by Elmankush (2017), participants found still photos not helpful as the senders are not dynamic and they cannot receive constant information in order to comprehend the text better. In the same experiment, the video group scored better although there was not a significant difference.

Chung (1994) claims that if there are many images that are needed to be analysed by the learners, they might be distractive rather than helping comprehension. This might have also affected the participants in this experiment as in GIM, there were five images on the assessment sheet. The result of this experiment also confronts with Woottipong's (2014) experiment in which using videos improved comprehension significantly whereas it complies with Shahid and Ali's (2017) experiment suggesting videos are helpful in terms of accuracy, guessing and anticipating but they can distract learners and draw their attention from the task.

However, for the 2nd research question, when visuals are used, text type has an impact on listening comprehension as GIM and GIV scored significantly better than TLG. It can be said that images and videos improve comprehension when the text is a dialogue. This can be due to the paralinguistic elements in the images/videos. This conclusion complies with Baltova (1994), Gruba (1997), Hasan (2000), Kellerman (1990), Progosh (1996) and Shin (1998) as they suggest that listeners can comprehend a text better if there are some non-verbal elements in the input.

Wagner (2010) also suggests that non-verbal elements of spoken language, if supported with visual elements, can be advantageous for learners as they not only help to simulate the characteristics of a piece of language but also assist to create more valid inferences with more visual information presented for learners. This is a very important conclusion as it is clear evidence that in a way, visual elements do help learners in terms of comprehension if the text includes elements of paralinguistic elements.

According to Morgan & Fonseca (2004), as visual spatial intelligence allows someone to identify information like shape, line, colour etc., using these kinds of input like pictures and videos aid learners to comprehend a text better. Christison (1998) also suggests that using visual elements also improves spatial intelligence of the learners, which creates more motivation in the classroom as visual elements can also activate a listener's background knowledge (Ockey, 2007; Rubin, 1995).

Activating background knowledge is an important factor in language teaching as Cook (1989) says knowing a language in terms of linguistics is not enough to understand a context and learners need to have a kind of experience about the situation as a pre-knowledge, which is known as schema (Cook, 1989). Harmer (2001) suggests that learners activate their schemata if they are exposed to certain words or patterns, so they can remember better what they see and hear. Irgatoğlu (2010) claims that listeners tend to use their schemata to fill the blanks in their minds in terms of comprehension to create meaningful messages if the input is not clear and sufficient. Visuals are found helpful in terms of comprehension as they give extra information with body movements, gestures and facial expressions, enable background knowledge, and make the context clearer for the receivers (Suvorov, 2009).

For the 3rd research question, there is not any significant difference in all three groups. This result suggests that in terms of lecture type of texts, visuals do not aid comprehension. However, for this particular input, there were not any paralinguistic items

in the video such as gestures, body movements etc. The speaker was talking about tornados and there was a video about the same topic. It can be inferred specifically for this input that lectures without body movements do not improve comprehension. However, if a lecture type of text includes body movements or gestures etc. they might again increase comprehension.

For the 4th research question, the scores of each group were analysed in terms of two different text types, dialogues and lectures within each group. The scores indicated that there was not any significant effect of visuals in TLG. However, in GIM and GIV, the scores indicated that participants performed better in dialogue type of questions when compared to lecture. According to this result, we can say that as the same input was used for each group and there was not any significant difference in TLG in terms of two different text types, the difficulty level of the tasks did not have any impact on the scores of GIM and GIV. As the participants in these groups (GIM and GIV) scored better in a dialogue type of text, it can be said that paralinguistic elements help comprehension and they have a significant impact on dialogue comprehension in which the participants are exposed to multiple visual elements such as body movements and gestures etc. as lecture text type input in this experiment did not include any paralinguistic features.

This result complies with Kellerman (1992) in that kinesics, which includes body movements, gestures and facial expressions, is actually an important part of human communication and without them, there might be communication breakdowns as kinesics is vital when understanding a piece of spoken language. With the facial expressions like lip movements and eye contact, people express nuances and emotions (Neighbour, 2005; Matlin, 2005) and these clues might carry important messages that might aid comprehension.

In an audio-only input however, learners cannot see any body movements. The only language without kinesics might be digital or computer language. Humans interact

with each other, thus, they create languages on the basis of both kinesics and written forms of language. Buck (2001) and Wagner (2007) suggest that seeing a situation and its participants while listening enhances comprehension. Coniam (2001), Ockey (2007) and Rubin (1995) think that paralinguistic features of a speaker give additional information to the listener, which improves comprehension. With the help of these extra information, listeners might perform better (Baltova, 1994; Gruba, 1997; Rubin, 1995).

These results confront with Mueller's (1980) experiment suggesting the participants in the video group did not show any significant difference over the audio group. It also confronts with Londe (2009) and Başıal, Gülözer and Demir 's experiments (2015) which suggest that there was no significant difference between video and audio-only groups although the participants were intentionally exposed to the lecturer's face and body. The results comply with Suvurov's (2008) experiment in which dialogue group scored better than the lecture group when the input has the same visual features and Ruhe's (1996) experiment suggesting visuals improve comprehension. It also complies with Rivers (1981) suggesting paralinguistic elements makes a text easier in terms of comprehension for the listeners as they use non-aural extra information. The results confront with researchers like Coniam (2001), Gruba (1993) and Ockey (2007) as they found no difference in terms of using different visuals on different texts. It also confronts with Suvorov (2009) suggesting context visuals might be beneficial for mini talks but they do not have any effect on performance on dialogues.

Conclusion

It can be said that using videos to test listening comprehension creates meaningful results. However, if learners are exposed to these kinds of input at the beginning of language teaching, most of them can cope with both visual and auditory clues during any kind of assessment as it was observed in this research that some learners tried to focus more on reading the questions and listening rather than watching. However, for some participants, the situation was the opposite in that visuals distracted them. Besides, they sometimes relied too much on the visual clues and there was a possibility that if there were more complex questions or sentences in the test, they could easily be distracted.

On the other hand, the results indicated that using visual clues really improves comprehension in dialogue type of texts. This means that learners are more successful if they see the sender(s). We can say that using visuals is not vital for texts which do not include facial elements. However, it is clear that ignoring them in texts like dialogue in which body movements and gestures etc. carry important elements, there should be more audio-visual materials rather than audio-only as this skill can only be improved if there are enough activities in commercial course books. Only then, learners can improve their comprehension with visual clues. The number of activities including visual clues should not be less than the listening activities in the course books and these activities should start on the very first day of teaching.

In short, researchers who support using visual clues think that they increase validity while others think that visual clues may distract learners and may lower performance. However, if learners train themselves to recognise these visual clues, it might be highly beneficial for them to recognise some certain phrases in a real L2 environment.

For further research, there could be more variety in questions and text types in order to see the effect of visual clues in comprehension. Also different types of samples

can be used in different settings. It is clear that there are more studies proving the positive effects of visual cues but still as it is a relatively new topic, there are no solid conclusions.



REFERENCES

- Abdi, A., & Rostami, M. (2012). The effect multiple intelligences based instruction on students' creative thinking ability at 5th grade in primary school. *Procedia—Social and Behavioral Sciences*, 47, 105-108.
- Aldera, A. S. (2015). Investigating Multimedia Strategies to Aid L2 Listening Comprehension in EFL Environment. *Theory and Practice in Language Studies*, 5(10), 1983.
- Alderson, J., Clapham, C., & Wall, D. (1995). *Language test construction and evaluation*. Cambridge: Cambridge University Press.
- Allan, M. (1984). Viewing comprehension in the EFL classroom. *ELT Journal*, 38, 21-26.
- Altman, R. (1990). Toward a new video pedagogy: The role of schema theory and discourse analysis. *IALL Journal of Language Learning Technologies*, 23, 9-16.
- Anderson, A., & Lynch, T. (1988). *Listening*. New York: Oxford University Press.
- Anderson, R. C., Pichert, J., & Shirey, L. I. (1979). *Effects of Readers' Schemata in Different Points in Time* (Technical report No. 119). Urbana, IL: University of Illinois.
- Ardila, A., Bernal, B., & Rosselli, M. (2015). Language and visual perception associations: Meta-analytic connectivity modelling of Brodmann area. *Behavioural neurology*, 2015, 1-14.
- 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* 1(1), 115-125.
- Ayuanita, K. (2013). Assessing listening in the language classroom. *Okara: Jurnal Bahasa dan Sanstra* 7(1), 115-122.
- Bachman, L. (1990). *Fundamental considerations in language testing*. Oxford: Oxford University Press.
- Bachman, L., & Palmer, A. (1996). *Language testing in practice*. Oxford: Oxford University Press.
- Baddeley, A. (1992). Working memory. *Science*, 255(5044), 556-559.
- Badger, R, Sutherland, P, White, G & Haggis, T (2001). Note perfect: an investigation of how students view taking notes in lectures. *System*, 29(3), 405-417.
- Baltova, I. (1994). The impact of video on comprehension skills of core French students. *Canadian Modern Language Review*, 50, 507-531.
- Başal, A., Gülözer, K., & Demir, İ. (2015). Use of Video and Audio Texts in EFL Listening Test. *Journal of Education and Training Studies*, 3(6), 83-89.

- Batty, A. O. (2014). A Comparison of Video- And Audio-Mediated Listening Tests with Many-Facet Rasch Modeling and Differential Distractor Functioning. *Language Testing*, 32(1), 3-20.
- Bejar, I., Douglas, D., Jamieson, J., Nissan, S., & Turner, J. (2000). *TOEFL 2000 listening framework: A working paper*. Princeton, NJ: Educational Testing Service.
- Benson, V. (1992). *Testing the video class*. Annual JALT conference, Japan.
- Berne, J. (1998). Examining the relationship between L2-listening research. *Foreign Language Annals*. 31 (2), p.169-190.
- Bloomfield, A., Wayland, S. C., Rhoades, E., Blodgett, A., Linck, J., & Ross, S. (2010). *What makes listening difficult? Factors affecting second language listening comprehension*. Maryland: Maryland University College Park.
- Borras, I., & Lafayette, R. (1994). Effects of multimedia courseware subtitling on the speaking performance of college students of French. *The Modern Language Journal*, 78 (1), 61-75.
- Bransford, J. D. & Johnson, M. K. (1972). Contextual prerequisites for understanding: Some investigations of comprehension and recall. *Journal of Verbal Learning and Verbal Behaviour*, 11, 717-726.
- Brett, P. (1997). A comparative study of the effects of the use of multimedia on listening comprehension. *System*, 25, 39-53.
- Brown, G. (1990). *Listening to spoken English*. (2nd ed.). Longman: London
- Brown, G. (1995). Dimensions of difficulty in listening comprehension. In D. Mendelshon & J. Rubin (Eds.), *A guide for the teaching of second language listening* (pp. 59-73). San Diego: Dominic Press.
- Buck, G. (2001). *Assessing listening*. Cambridge: Cambridge University Press.
- Burger, S., and Doherty, J. (1992). Testing receptive skills within a comprehension based approach. In R. J., Courchêne, J. I. Glidden, J. St. John, & C. Therien (Eds.), *Comprehension-based second language teaching* (pp 299-318). Ottawa, Canada: University of Ottawa Press.
- Burgoon, J. K. (1994). Non-verbal signals. In M. Knapp & G. Miller (Eds.), *Handbook of interpersonal communication*. (pp. 344–393). London: Routledge.
- Campoy-Cubillo, M.C. & Querol-Julián, M. (2015). Assessing multimodal listening. *Canada Journal*, 14(1), 34-44.
- Canning-Wilson, C. (2000). Practical aspects of using video in the foreign language classroom. *The Internet TESL Journal*. 6 (11).
- Carlin, R. T., Salazar, M. C., & Cortes, S. V. (2013). A Mexican study of multiple intelligences for pre-service teachers of English as a foreign language. *HOW: A Colombian Journal for Teachers of English*, 20, 170-189.

- Carmona, J. E. R., & Echeverry, D. F. A. (2016). *Implementation of visual aids on students' listening comprehension activities* (Unpublish MA thesis) Universidad tecnologica de Pereira.
- Celce-Murcia, M., & Hilles, S. (1988). *Techniques and resources in teaching grammar*. Oxford: Oxford University Press.
- Chan, C., Lei, W., Lena X. (2014). A Study of Video Effects on English Listening Comprehension. *Studies in Literature and Language*, 8(2), 53-58.
- Chapelle, C. A. (1998). JL Construct definition and validity inquiry in SLA research. In L. F. Bachman & A. D. Cohen (Eds.) *Interfaces between second language acquisition and language testing research* (pp. 32-70). Cambridge University Press.
- Chastain, K. (1976). *Developing Second Language Skills: Theory to Practice* (2nd Ed.). Chicago: Rand McNally College Publishing Company.
- Christison, M. (1998). Applying multiple intelligences theory. *Preserves & in-service TEFL Education programs*, 36(2), 2-19.
- Chung, U. K. (1994). *The effect of audio, a single picture, multiple pictures, or Video on second- language listening comprehension* (Unpublished PhD dissertation), University of Illinois at Urbana-Champaign.
- Clark, J. M., & Paivio, A. (1991). Dual coding theory and education. *Educational psychology review*, 3(3), 149-210.
- Coniam, D. (2001). The use of audio or video comprehension as an assessment instrument in the certification of English language teachers: A case study. *System*, 29(1), 1-14.
- Cook, G. (1989). *Discourse*. Oxford: Oxford University Press.
- Cronbach, L.J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16, 297-334.
- Çakır, İ. (2006). The use of video as an audio-visual material in foreign language teaching classroom. *The Turkish Online Journal of Educational Technology*, 5(4), 67-72.
- Dahl, T. I., & Ludvigsen, S. (2014). How I see what you're saying: The role of gestures in native and foreign language listening comprehension. *Modern Language Journal*, 98(3), 813-833.
- Daniel, A. (2011). A study on the impact of visual cues in listening comprehension on Swedish learners of English (Unpublished MA Thesis). Gothenburg, University of Gothenburg
- Dean, R. S., & Enemoh, P. S. (1983). Pictorial organization in prose learning. *Educational Communication and Technology Journal*, 8, 20-27.

- Dolati, Z., & Tahriri, A. (2017). EFL Teachers' Multiple Intelligences and Their Classroom Practice. *SAGE Open*, 7(3), 1–12.
- Elmankush, I. (2017). *Investigating the impact of including videos or still images in computer-based academic listening comprehension tests* (Doctoral dissertation, University of York, York, England).
- Field, J. (2008). *Listening in the language classroom*. Cambridge: Cambridge University Press.
- Field, J. (2012). The cognitive validity of the lecture-based question in the IELTS Listening paper. *IELTS Collected Papers 2: Research in Reading and Listening Assessment*, 2, 391.
- Flowerdew, J., & Miller, L. (2005). *Second language listening: Theory and practice*. Cambridge University Press.
- Folley, S. (2015). The effect of visual cues in listening comprehension: Pedagogical implications for nonnative speakers of English. *Culminating Projects in English*. Paper 39.
- Friedman, S. L., & Stevenson, M. B. (1980). Perception of movement in pictures. in M. A. Hagen (Ed.), *The Perception of Pictures*. (pp. 225-255). New York: Academic.
- Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. New York, NY: Basic Books.
- Gardner, H. (1999). *Intelligence Reframed Multiple Intelligences for the 21st century*. New York: Basic Books, A Member of Perseus Books Group.
- Gardner, H. (2006). *Multiple Intelligences - New Horizons, 2nd edition*. New York: Basic Books, a Member of the Perseus Books Group.
- Gass, S. (2010). Experimental research. In: Paltridge, B. & Phakiti, A. (ed.) *Continuum companion to research methods in applied linguistics* (pp.7-22). Great Britain: MPG Books Group.
- Gathercole, S. E., & Baddeley, A. D. (2014). *Working memory and language*. Psychology Press.
- Gilakjani, A. P., & Sabouri, N. B. (2016). Learners' Listening Comprehension Difficulties in English Language Learning: A Literature Review. *English Language Teaching*, 9(6), 123.
- Gildea, P. M., Miller, G. A., & Wurtenburg, C. L. (1988). *Contextual Enrichment by Videodisc: A first report*, (Report No. 12). Princeton: Princeton University, Cognitive Science Laboratory.
- Ginther, A (2002) Context and content visuals and performance on listening comprehension stimuli, *Language Testing* 19 (2), 133–167.

- Göktürk, N., & Altay, A. (2015). the Relationship Between Efl Learners ' Learning Styles and Their Scores in Audio and Video-Mediated L2 Listening Tests. *Journal of Theory and Practice in Education*, 11(3), 971–988.
- Gruba, P. (1993). A comparison study of audio and video in language testing. *JALT Journal*, 15(1), 85-88.
- Gruba, P. (1997). The role of video media in listening assessment. *System*, 25, 335-345.
- Hamouda, A. (2013). An Investigation of Listening Comprehension Problems Encountered by Saudi Students in the EL Listening Classroom. *International Journal of Academic Research in Progressive Education and Development*, 2(2), 113-15.
- Hanafin, J. (2014). Multiple intelligences theory, action research, and teacher professional development: The Irish MI project. *Australian Journal of Teacher Education*, 39, 126-142.
- Hanley, J. E. B., Herron, C., & Cole, S. P. (1995). Using video as an advance organizer to a written passage in the FLES classroom. *The Modern Language Journal*, 79, 57-66.
- Harmer, J. (2001). *The Practice of English Language Teaching*, (3rd Ed.). Malaysia: Pearson Education Limited.
- Hasan, A. (2000). Learners' perceptions of listening comprehension problems. *Language, Culture and Curriculum*, 13, 137-153.
- Head, H. (1926). *Studies in Neurology*, New York: Oxford University Press.
- Hedge, T. (2006). *Teaching and learning in the language classroom*. Oxford: Oxford University Press.
- Hennessey, J. M. (1995). Using foreign films to develop proficiency and to motivate the foreign language student. *Foreign Language Annals*, 28, 116-120.
- Imhof, M. (2009). Teaching critical listening. *Listening Education*, 1(1). Teaching listening: Methods for the classroom.
- Irgatoğlu, A. (2010). *The Effects Of Using Pictures As Contextual Supplements To Improve Foreign Language Listening Comprehension* (Master's thesis, Gazi University, Ankara, Turkey).
- Jafre, M. Z. A., Pour-Mohammadi, M., Souriyavongsa, T., Tiang, C. D. B., Kim, N. O. L. (2011). Improving Listening Comprehension among Malay Preschool Children Using Digital Stories. *International Journal of Humanities and Social Science*, 1 (14), 159-164.
- Jewitt, C. (2013). Multimodal teaching and learning. In Chapelle, C. A. (ed). *The Encyclopedia of Applied Linguistics* (pp. 4109-4114). Oxford: Blackwell Publishing Ltd.

- Kaya, O. N., Doğan, A., Gökçek, N., Kılıç, Z., & Kılıç, E. (2007, April). *Comparing multiple intelligences approach with traditional teaching on eight grade students' achievement in and attitudes toward science*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.
- Kellerman, S. (1990). Lip service: The contribution of the visual modality to speech perception and its relevance to the teaching and testing of foreign language listening comprehension. *Applied Linguistics*, 11, 272-280.
- Kellerman, S. (1992). 'I see what you mean': The role of kinesics behavior in listening and implications for foreign and second language learning. *Applied Linguistics*, 13, 239-258
- Khoshsima, H., & Izadi, M. (2014). Dynamic Vs. Standard Assessment to Evaluate EFL Learners' Listening Comprehension. *Iranian Journal of Applied Language Studies*, 6 (2), 1-26.
- Klein, D. (1985). *Conditions influencing the effectiveness of animated and non-animated displays in computer assisted instruction* (Doctoral dissertation, University of Illinois Urbana-Champaign, Urbana Champaign, Illinois, USA).
- Knight, L. V., & Sweeney, K. (2007). Revealing implicit understanding through enthymemes: A rhetorical method for the analysis of talk. *Medical Education*, 41, 226–233.
- Ko, K. H. (1998). *The role of visual support in bottom-up processing of spoken text in an L2 video episode*. (Unpublished doctoral dissertation), State University of New York, Buffalo.
- Köksal, D. (2004). To kill the blackboard? Technology in language teaching and learning. *TOJET: The Turkish Online Journal of Educational Technology*, 3(3), 62-72.
- Kostelnick, C., & Roberts, D. D. (2011). *Designing visual language: Strategies for professional communicators*. Longman.
- Krashen, S. (1982). Principles and Practice in Second Language Acquisition. *TESOL Quarterly* (17).
- Krashen, S. (1985). *The Input Hypothesis: Issues and Implications*. Harlow: Longman.
- Krashen, S. (1989). *Language acquisition and language education*. London: Prentice Hall.
- Latifi, M., Tavakoli, M., & Javad, A. (2013). Investigating the Effect of Video Materials on Testing Foreign Language Learners' Listening Performance, 13(9). *Middle-East Journal of Scientific Research*, 1197–1201.
- Lee, H. C. (2014) Using an arts-integrated multimodal approach to promote *English learning*. *English Teaching: Practice and Critique*, 13 (2), 55-75.
- Londe, Z. C. (2009). The Effects of Video Media in English as a Second Language Listening Comprehension Tests. *Issues in Applied Linguistics*, 41-50.

- Long, D. R. (1989). Second Language Listening Comprehension: A Schema-Theoretic Perspective. *The Modern Language Journal*, 73, 32–40.
- Lynch, T. (1998). Theoretical perspectives on listening. *Annual Review of Applied Linguistics*, 18, 3-19.
- Lynch, T. (2010). Listening: Sources, Skills, And Strategies. In R. Kaplan (ed.) *Oxford handbook of Applied Linguistics* (pp. 74-87). Oxford: Oxford University Press.
- Lynch, T. (2011). Academic listening in the 21st century: Reviewing a decade of research. *Journal of English for Academic Purposes*, 10, 79-88.
- Macleod, M. V. (2002). *Teachers' perceptions and practices of Howard Gardner's theory of multiple intelligences*. Mount Saint Vincent University, Scotland.
- MacWilliam, I. (1986). Video and language comprehension. *ELT Journal*, 40, 131–135.
- Mamun, A. (2014). *Effectiveness of Audio-visual Aids in Language Teaching in Tertiary Level*. (Unpublished MA thesis). Dhaka: BRAC University.
- 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* (Published doctoral dissertation). University of El Salvador, Central America.
- Matlin, M. (2005). *Cognition*. London: J. Wiley & Sons.
- Mayer, R. E. (1997). Multimedia learning: Are we asking the right questions. *Educational Psychologist*, 32, 1-19.
- Mayer, R. E. (1989). Systematic thinking fostered by illustrations in scientific text. *Journal of Educational Psychology*, 81, 240-246.
- Mayer, R. E. (1992). *Thinking Problem Solving, Cognition* (2nd ed.). New York: W. H. Freeman and Company.
- Mayer, R. E. (2005). Cognitive theory in multimedia learning. In R. E. Mayer (Ed). *The Cambridge handbook of multimedia learning* (31-48). Cambridge University Press.
- Mayer, R. E. (2009). *Multimedia learning*: Cambridge university press.
- McDonald, J. L. (2006). Beyond the critical period: Processing-based explanations for poor grammaticality judgment performance by late second language learners. *Journal of Memory and Language*, 55(3), 381-401.
- McGurk, H., & MacDonald, J. (1976). Hearing lips and seeing voices. *Nature*, 976(264), 746-748.
- McNeill, D. (1992). *Hand and mind: What gestures reveal about thought. Hand and Mind: What Gestures Reveal about Thought*. Chicago, IL, US: University of Chicago Press.
- Mehrabian, A. (2007). *Nonverbal communication*. New Jersey: Aldine Transaction.

- Mekheimer, M. A.A.G. (2011). The impact of using videos on whole language learning in EFL context. *Arab World English Journal*, 2 (2), 5-39.
- 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.
- Mendelsohn, D.J. (1994). *Learning to listen: A strategy based approach for the second language learner*. San Diego: Dominie Press.
- Mirvan, X. (2013). The advantages of using films to enhance student's reading skills in the EFL classroom. *Journal of Education and Practice*, 4(13), 62-66.
- Morell, T. (2004). Interactive lecture discourse for university EFL students. *English for specific purposes*, 23(3), 325-338.
- Morell, T. (2007). What enhances EFL students' participation in lecture discourse? Student, lecturer and discourse perspectives. *Journal of English for Academic Purposes*, 6(3), 222-237.
- Morgan, J., & Fonseca, C. (2004). Multiple intelligence theory and foreign language learning: A brain – Based perspective. *International Journal of English Studies*, 4(1), 119-136.
- Mueller, G. A. (1980). Visual context clues and listening comprehension: an experiment. *The Modern Language Journal*, 64, 335-340.
- Neighbour, R. (2005). *The inner consultation: how to develop an effective and intuitive style*. 2nd ed. Cornwall: TJ International Ltd.
- Nihei, K. (2002). *How to teach listening*. ERIC. Retrieved from <http://files.eric.ed.gov/fulltext/ED475743.pdf>
- Nunan, D. (2005). From the special issues editor. *Language Learning & Technology*, 9(3), 2-3.
- Ockey, G. (2007). Construct implications of including still image or video in computer-based listening tests. *Language Testing*. 24 (4), 517-537.
- Omaggio, A. C. (1979). Pictures and second language comprehension: Do they help? *Foreign Language Annals*, 12, 107-116.
- Osada, N. (2004a). Listening comprehension research: a brief review of the past thirty years. *Dialogue*. 3 (1), 53-66.
- Osada, N. (2004b). The effects of lengthened silent pauses on listening comprehension of Japanese EFL-learners with a special focus on auditory impression and free written recall protocol. *Jacket Bulletin*. 39 (1), p.105-121.
- Paivio, A. (1986). *Mental Representations: A Dual-Coding Approach*, Oxford University Press, New York.

- Paivio, A. (1991). Dual coding theory: Retrospect and current status. *Canadian Journal of Psychology*, 45(3), 255.
- Paivio, A. (2006). Dual Coding Theory and Education. *Pathways to Literacy Achievement for High Poverty Children*, 1–20.
- Parry, T., & Meredith, R. (1984). Videotape vs. audiotape for listening comprehension tests: An experiment. *ERIC Document Reproduction Services ED*, 254-107.
- Pennycook, A. (1985). Actions speak louder than words: Paralanguage, communication, and education. *TESOL Quarterly*, 19, 259–282.
- Progosh, D. (1996). Using video for listening assessment opinions of test-takers. *TESL Canada Journal*, 14, 34–43.
- Rezaei, A., & Hashim, F. (2013). Impact of Awareness Raising about Listening Micro-skills on the Listening Comprehension Enhancement: An Exploration of the Listening Micro-skills in EFL Classes. *Australian Journal of Teacher Education*, 38(8), 1.
- Rivers, W. M. (1981). *Teaching Foreign Language Skills* (2nd Ed.). Chicago, IL: The University of Chicago Press.
- Rost, M. (1990). *Listening in language learning*. New York: Longman.
- Royce, T. D. (2007). Multimodal communicative competence in second language contexts. In T. D. Royce & W. L. Bowcher (Eds.) *New directions in the analysis of multimodal discourse* (pp. 361-390). Psychology Press.
- Rubin, J. (1975). What the “good language learner” can teach us. *TESOL Quarterly*, (9), 41-51.
- Rubin, J. (1990). ‘Improving Foreign Language Listening Comprehension’, in J. E. Alatis (ed.) . *Georgetown University Round Table on Languages and Linguistics* Washington, DC: George- town Univ. Press, pp. 309-16.
- Rubin, J. (1994). A Review of Second Language Listening Comprehension Research. *The Modern Language Journal*, 78, 199-221.
- Rubin, J. (1995). The contribution of video to the development of competence in listening. In D. Mendelsohn, & J. Rubin (Eds.), *A guide for the teaching of second language listening* (151-165). San Diego, CA: Dominic Press.
- Ruhe, V. (1996). Graphics and Listening Comprehension. *TESL Canada Journal*, 14(1), 45.
- Saeidipour, B., & Taheri Otaghsara, S. H. (2014). Impact of multiple-intelligence approach and traditional teaching approach on educational ESP attainment and attitudes of educational science students. *International Journal of Economy, Management & Social Sciences*, 3, 193-195
- Samuels, S. (1984). Factors influencing listening: Inside and outside the head. *Theory into Practice*, 23, 183-189.

- Samuels, S. (1987). Factors that influence listening and reading comprehension. In R. Horowitz & S. & S. J. Samuels (Eds.), *Comprehending oral and written language* (295–325). San Diego, CA: Academic Press.
- Sarani, A., Behtash, E. Z., & Arani, S. M. N. (2014). The effect of video-based tasks in listening comprehension of Iranian pre-intermediate EFL learners. *GIST Education and Learning Research Journal*, 29-47.
- Schallert, D. C. (1976). Improving memory for prose: The relationship between depth of processing and context. *Journal of Verbal Learning and Verbal Behaviour*, 15, 621-632.
- Schmidt, R. (1990). The Role of Consciousness in Second Language Learning. *Applied Linguistics*, 11(2), 17-46.
- Schriver, K. A. (1997). *Dynamics in document design: Creating text for readers*. New York, NY: John Wiley & Sons, Inc.
- Secules, T., Herron, C. And Tomasello, M. (1992), The Effect of Video Context on Foreign Language Learning. *The Modern Language Journal*, 76, 480-490.
- Sejdiu, S. (2017). Are listening skills best enhanced through the use of multimedia technology. *Digital Education Review*. 60-72.
- Shahabi, H. (2016). Contributory Role of the Gestures and Facial Expressions in Teaching Concrete Vocabulary Items to Iranian Elementary EFL Learners. *Journal of Applied Linguistics and Language Research*, 3(5), 160–176.
- Shahid, S.H., & Ali, Z. (2017). Effects Of Video-Podcasts On Listening Comprehension Of Saudi EFL Learners. *European Journal of English Language Teaching* 2(4), 169-194).
- Shin, D. (1998). Using video-taped lectures for testing academic language. *International Journal of Listening*, 12,56-79.
- Sueyoshi, A., & Hardison, D. (2005). The role of gestures and facial cues in second language listening comprehension. *Language Learning*, 55,661-699.
- Sulaiman, N., Muhammad, A. M., Faizul, D., Khairuddin, Z., & Othman, S. (2017). A Comparison of Students' Performances Using Audio Only and Video Media Methods. *English Language Teaching*, 10, 210.
- Suvorov, R. (2009). Context visuals in L2 listening tests: The effects of photographs and video vs. audio-only format. In C. A. Chapelle, H. G. Jun, & I. Katz (Eds.), *Developing and evaluating language learning materials* (53-68). Ames, IA: Iowa State University.
- Suvorov, R. (2011). The effects of context visuals on L2 listening comprehension. *Editorial notes*, 2.
- Suvorov, R. (2013). *Interacting with visuals in L2 listening tests: An eye-tracking study*. Unpublished doctoral dissertation. Iowa: Iowa State University.

- Suvorov, R. S. (2008). Context visuals in L2 listening tests: the effectiveness of photographs and video vs. audio-only format. *Retrospective Theses and Dissertations*. 15448.
- Swaffar, J., & Vlatten, A. (1997). A sequential model for video viewing in the foreign language curriculum. *The Modern Language Journal*, 81, 175-188.
- Tahriri, A., & Yamini, M. (2010). On teaching to diversity: Investigating the effectiveness of MI-inspired instruction in an EFL context. *Journal of Teaching Language Skills*, 29(1), 165-183.
- Tai, Y. (2014). The Application of Body Language in English Teaching. *Journal of Language Teaching and Research*, 5(5), 1205-1209.
- Tauroza, S., and Allison, D. (1990). Speech rates in British English. *Applied Linguistics*, 11-90 -105.
- Taylor, M. D. (2001). Resource consumption as a function of topic knowledge in nonnative and native comprehension. *Language Learning*, 51(2), 257–280.
- Tekin, İ., & Parmaksız, R. Ş. (2016). Impact of Video Clips on the Development of the Listening Skills in English Classes: A Case Study of Turkish Students. *Journal of Education and Training Studies*, 4(9), 200–208.
- Teng, H. C. (1994). The effects of visual cues on the EFL listening comprehension by technology college students in Taiwan. *Proceedings of the 9th Technological and Vocational Education Conference of R.O.C.* (pp. 247-257). Taipei: Crane.
- Thompson, I., & Rubin, J. (1996). Can strategy instruction improve listening comprehension? *Foreign Language Annals*, 29/3, 331-341.
- Tsai, F. H. (2010). *Integrating Feature Films with Subtitles to Enhance the Listening Comprehension of Students Attending College in Taiwan*: ERIC
- Tuffs, R., & Tudor, I. (1990). What the eye doesn't see: cross-cultural problems in the comprehension of video material. *RELC Journal*, 21, 29-44.
- Underwood, M. (1989): *Teaching Listening*. London: Longman.
- Ur, P. (1996). *A Course in Language Teaching*. Cambridge University Press, New York.
- Vandergrift, L. (1999). Facilitating second language listening comprehension: Acquiring successful strategies. *ELT Journal*, 53, 168-176.
- Vandergrift, L. (2004). 1. Listening to Learn or Learning to Listen? *Annual Review of Applied Linguistics*, 24, 3-25.
- Vandergrift, L. (2010). Researching listening. In: Paltridge, B. & Phakiti, A. (ed.) *Continuum companion to research methods in applied linguistics*. Great Britain: MPG Books Group. p.160-174.

- Vandergrift, L. (2011). L2 listening: Presage, process, product and pedagogy. In E. Hinkel (Ed.), *Handbook of research in second language teaching and learning*, Volume II (pp. 455-471). New York: Routledge.
- Vandergrift, L. (2012). Teaching interactive listening. In H. P. Widodo & A. Cirocki (Eds.), *Innovation and creativity in ELT methodology* (pp. 1-14). New York: Nova Science Publishers.
- Vandergrift, L. (2015). Researching listening. *Research Methods in Applied Linguistics: A Practical Resource*, 299.
- Vandergrift, L., & Tafaghodtari, M. H. (2010). Teaching L2 learners how to listen does make a difference: An empirical study. *Language Learning*, 60(2), 470-497.
- Von Raffler-Engel, W. (1980). Kinesics and paralinguistics: A neglected factor in second language research and teaching. *Canadian Modern Language Review*, 36, 225-237.
- Voss, B. (1979). Hesitation phenomena as sources of perceptual errors for non-native speakers. *Language and Speech*, 22, 129-144.
- Wagner, E. (2007). Are they watching? Test-taker viewing behavior during an L2 video listening test. *Language Learning & Technology*, 11(1), 67-86.
- Wagner, E. (2008). Video listening tests: What are they measuring? *Language Assessment Quarterly*, 5(3), 218-243.
- Wagner, E. (2010). The effect of the use of video texts on ESL listening test-taker performance. *Language Testing* 27(4), 493-513.
- Wagner, M. (2006). *Utilizing the visual channel: An investigation of the use of video texts on tests of second language listening ability*. (Doctoral dissertation, Columbia University, New York City, New York, USA).
- Weidenmann, B. (1989). When good pictures fail: An information-processing approach to the effect of illustrations. In H. Mandl & J. R. Levin (Eds.), *Knowledge acquisition from text and pictures* (pp. 157-170). Tokyo: Elsevier Science. EFL classroom. *Journal of Education and Practice*, 4(13), 62-66.
- Wilson, J. J. (2008). *How to Teach Listening*. Pearson Longman.
- Winiharti, M. & Karjo, C. H. (2017). Audio only or Video?: Multimodality for Listening Comprehension. 10.2991/conaplin-16.2017.41.
- Wolff, D. (1987). Some assumptions about second language texts comprehension. *Studies in Second Language Acquisition*, 9, 307-326.
- Woottipong, K. (2014). Effect of Using Video Materials in the Teaching of Listening Skills for University Students. *International Journal of Linguistics*, 6(4), 200.
- Yalmanci, S. G., & Gozum, A. C. (2013). The effects of multiple intelligence theory based teaching on students' achievement and retention of knowledge (Example

of the enzymes subject). *International Journal on New Trends in Education and Their Implications*, 4(3), 27-36.

Yasin, B., Mustafa, F., & Permatasari, R. (2017). How Much Videos Win over Audios in Listening Instruction for EFL Learners. *Turkish Online Journal of Educational Technology - TOJET*, 17(1), 92–100.

Zhu, X. (2011). Study on the influence of voice on listening comprehension. *3rd International Conference on Communication Software and Networks*, 27-29.



APPENDICES

APPENDIX 1

TLG ASSESSMENT SHEET

1. Leo has a backache problem. He goes to a doctor about it. Listen to the dialogue between Leo and the doctor. Put a “√” for the ones **Leo should do**. Put a “X” if he **shouldn’t**.

1. stay in bed
2. do the things he normally does
3. stay in the same position for a long time
4. have less breaks
5. do some exercise
6. take pills for his problem

2. Listen again. Write (T)rue or (F)alse. **DO NOT** correct the false sentences.

1. Leo doesn't have sleeping problems.
2. He is going to the gym a lot at the moment.
3. He sits down a lot for his job.
4. He isn't taking any drugs for his problem now.
5. He can take a pill every four hours.
6. He must see the doctor again in a week.

3. A stormchaser is a person who goes inside tornadoes or records them as a hobby or to study them. Listen to a recording about stormchasers and tornadoes. **Circle** the correct words to complete the sentences.

1. Tornadoes *only / mostly* happen in the USA.
2. *Some / All* large tornadoes are dangerous.
3. Tornadoes *never / sometimes* hurt people.
4. Stormchasers follow tornadoes for *different / the same reasons*.
5. Stormchasers think tornadoes *are / aren't* dangerous.
6. Stormchasers' work is *critical / safe*.
7. Stormchasers may help people to *get electricity from tornadoes / defend themselves*.

4. Listen again. Answer the questions about Josh Wurman and Reed Timmer.

1. What is the wind speed of huge tornadoes?

2. What does Josh Wurman use to get information about the tornadoes?

3. Who uses a special truck?

4. How does Reed Timmer earn money?

APPENDIX 2

GIM ASSESSMENT SHEET

1. Leo has a backache problem. He goes to a doctor about it. Listen to the dialogue between Leo and the doctor. Put a “√” for the ones **Leo should do**. Put a “X” if he **shouldn’t**.

1. stay in bed
2. do the things he normally does
3. stay in the same position for a long time
4. have less breaks
5. do some exercise
6. take pills for his problem



2. Listen again. Write (T)rue or (F)alse. **DO NOT** correct the false sentences.

1. Leo doesn't have sleeping problems.
2. He is going to the gym a lot at the moment.
3. He sits down a lot for his job.
4. He isn't taking any drugs for his problem now.
5. He can take a pill every four hours.
6. He must see the doctor again in a week.



3. A stormchaser is a person who goes inside tornadoes or records them as a hobby or to study them. Listen to a recording about stormchasers and tornadoes. **Circle** the correct words to complete the sentences.

1. Tornadoes *only / mostly* happen in the USA.

2. *Some / All* large tornadoes are dangerous.

3. Tornadoes *never / sometimes* hurt people.

4. Stormchasers follow tornadoes for *different / the same reasons*.



5. Stormchasers think tornadoes *are / aren't* dangerous.

6. Stormchasers' work is *critical / safe*.

7. Stormchasers may help people to *get electricity from tornadoes / defend themselves*.

4. Listen again. Answer the questions about Josh Wurman and Reed Timmer.

1. What is the wind speed of huge tornadoes?

2. What does Josh Wurman use to get information about the tornadoes?

3. Who uses a special truck?

4. How does Reed Timmer earn money?



APPENDIX 3

GIV ASSESSMENT SHEET

1. Leo has a backache problem. He goes to a doctor about it. Watch the dialogue between Leo and the doctor. Put a “✓” for the ones **Leo should do**. Put a “X” if he **shouldn't**.

1. stay in bed
2. do the things he normally does
3. stay in the same position for a long time
4. have less breaks
5. do some exercise
6. take pills for his problem

2. Watch again. Write (T) rue or (F)alse. **DO NOT** correct the false sentences.

1. Leo doesn't have sleeping problems.
2. He is going to the gym a lot at the moment.
3. He sits down a lot for his job.
4. He isn't taking any drugs for his problem now.
5. He can take a pill every four hours.
6. He must see the doctor again in a week.

3. A stormchaser is a person who goes inside tornadoes or records them as a hobby or to study them. Watch a video about stormchasers and tornadoes. **Circle** the correct words to complete the sentences.

1. Tornadoes *only / mostly* happen in the USA.

2. *Some / All* large tornadoes are dangerous.

3. Tornadoes *never / sometimes* hurt people.

4. Stormchasers follow tornadoes for *different / the same reasons*.

5. Stormchasers think tornadoes *are / aren't* dangerous.

6. Stormchasers' work is *critical / safe*.

7. Stormchasers may help people to *get electricity from tornadoes / defend themselves*.

4. Watch again. Answer the questions about Josh Wurman and Reed Timmer.

1. What is the wind speed of huge tornadoes?

2. What does Josh Wurman use to get information about the tornadoes?

3. Who uses a special truck?

4. How does Reed Timmer earn money?

APPENDIX 4

TRANSCRIPT OF THE DIALOGUE

RECEPTIONIST Mr Seymour?

LEO Yes.

R Dr Evans is ready to see you.

L Thank you.

DOCTOR Come in . . . Please, take a seat. So, what's the problem?

L Well, my back hurts. It's very painful. And I can't get to sleep.

D I see. And when did this problem start?

L About three or four days ago.

D Hmm. And where does it hurt? Could you show me?

L Here. This area.

D Can I have a look?

L Sure.

D So, does it hurt here? And here?

L Yes. Not so much.

D And here?

L Yes!

D And here?

L Yes!

D OK. You can sit down again.

D Have you had any accidents recently?

L No.

D And you haven't hurt your back in any way? Playing sport, that kind of thing.

L No, no. Nothing.

D OK.

L I'm quite worried about it. It hurts all the time – when I walk, when I sit down. I've spent the last few days in bed. And I feel exhausted.

D OK. Well, I don't think it's anything to worry about.

L Phew. That's good to hear.

D But you shouldn't stay in bed – that's not going to help.

L Oh dear. Really?

D No – try to do all the things you normally do, but gently. Don't stay in the same position for a long time. Maybe go for a short walk.

L OK. That sounds fine.

D Do you do any exercise?

L Well, I usually go to the gym, but I haven't been recently. I'm very busy at work at the moment and I just don't have the time.

D I see. And do you spend a lot of time sitting down at work?

L Yes, I do. I work in an office, so I spend a lot of time at my computer.

D Right. It's really important, if you spend a lot of time at a desk in an office, to take regular breaks. And you'll need to start doing exercise again. When you feel ready.

L OK. Breaks, exercise. Fine.

D Are you taking anything for the pain?

L Yes, I've taken some aspirin.

D OK, good. And do you have any allergies?

L No, I don't think so.

D Good. Well, I'll give you a prescription for something a bit stronger.

L OK, that's great.

D Take these, but only when you need them, after food. No more than

two every four hours.

L Right.

D And don't take any more than eight in a 24-hour period.

L Fine.

D And come back again in a week's time if it doesn't improve. I expect you'll feel a lot better by then anyway.

L OK, thanks very much.

D I really don't think it's anything to worry about.

L What a relief! Bye.

D Bye now.

APPENDIX 5

TRANSCRIPT OF THE LECTURE

Tornados are the most violent storms on the planet. They happen all over the world but most are found in Tornado Alley, in the middle of the United States – especially in north Texas, Kansas, Nebraska and Oklahoma. Most tornados are less than 80 metres wide and have a wind speed of less than 180 kilometres an hour. But some tornadoes are more than three kilometres wide and have wind speed of 500 kilometres per hour. These tornadoes are huge and extremely dangerous. They destroy houses, trees, buildings and cars, and they can even kill. In 2011, during the worst tornado season in the US since 1950, 551 people were killed by tornadoes. When people hear tornado sirens, they normally run for cover. But not everyone runs away. Storm chasers actually follow the tornadoes. Storm chasers follow the storms to get scientific facts about how tornadoes work. Josh Wurman is a scientist. He is a professional storm chaser – his job is to study tornadoes. He has a large team and uses advanced technology to get information about tornadoes. This radar

helps track the tornado. He even has a specially protected truck that can go right inside the storms. Other storm chasers follow the storms to take pictures and videos. Reed Timmer works from home. He works with a few friends and uses the internet, a video camera and a 4x4 car to follow tornadoes. He makes money by selling the videos of storms to television companies. The storm chasers' job is very dangerous, but it is also very important. The pictures and information they get help us understand tornadoes better. By improving our understanding of tornadoes, we can predict the storms and hopefully save lives in the future.



ÖZGEÇMİŞ

Kişisel Bilgiler

Adı Soyadı : Meriç TÜMER

Doğum Yeri ve Tarihi : Samsun, 12.07.1988

Eğitim Durumu

Lisans Öğrenimi : Atılım Üniversitesi

Öğrenimi : Mütercim Tercümanlık

Bildiği Yabancı Diller : İngilizce

İş Deneyimi

Çalıştığı Kurumlar: Atılım Üniversitesi

İletişim

E-Posta Adresi: meric.tumer@atilim.edu.tr

mericctumer@gmail.com

Tarih :