



EFFECTS OF VIDEO-PODCASTS ON LISTENING COMPREHENSION OF SAUDI EFL LEARNERS

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Abstract:

The current use of podcasts, as a new channel to input knowledge, has effectively been promoting listening comprehension which consequently has increased the acquisition of target language. The objective of the present study is to investigate the effects of video-podcasts integration on listening comprehension. The twelve-week quantitative study employed a quasi-experimental pre-test post-test design. Samples included in both the control and experimental groups were 120 English major male undergraduates from a University in Saudi Arabia. The Findings of ANCOVA analysis showed that the video-podcast group significantly outperformed the control group on the post-test. The findings imply that video-podcasts are useful resource for enhancing EFL learners' listening comprehension.

Keywords: video-podcasts, listening comprehension, Saudi, EFL learners, multimedia

1. Introduction

Listening is a conscious, cognitive effort which primarily involves the sense of hearing and leads to interpretation and understanding (Sayeekumar, 2013). Listening helps in understanding input as well as in the development of other language skills. Furthermore, it has also been found promoting the acquisition of pronunciation skills (Trofimovich, Lightbown, Halter, & Song, 2009); enhancing grammar (Mohammed, 2013); and knowledge retention (Fratangeli, 2009). All contact with language is not limited through written means, thus it can safely be claimed that listening proficiency

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plays a vital role in EFL learning (Kuo, 2009). Because of its essential role in communication, listening skill is important in the process of language acquisition. However, its development has been a challenge for language teachers. Rezaei and Hashim (2013) point out that the learners are less exposed to listening materials in communities where English is studied as a foreign language. Despite its importance in language intake and acquisition, listening skill lags behind other language skills. As a result, according to Rezaei and Hashim (2013), this skill seems to be the most demanding skill in the communities where English is learned as a foreign language; and the majority of low level English as Foreign Language (EFL) learners in those communities lack proficiency in listening comprehension. This situation calls for more research on listening comprehension in such communities to explore appropriate methods to compensate for the gap (Rezaei & Hashim, 2013).

According to Krashen (1982), listening competence of EFL learners is closely related to the quality and level of listening content. If the content is too easy, no progress is made; if it is too difficult, comprehension is blocked. This important aspect related to listening skill has been termed as 'comprehensible input' (Corder, 1967; Krashen, 1985; Long, 1983, 1996). This term has also been identified as an important component in eliciting language evolution. Krashen (1982) indicates that the execution of such understandable input via audio and visual means enables language learners to understand meanings of human language. Long (1983) believes that comprehensible input makes use of four different forms of input: speech, context, communication, and conversational structure. The speech content of listening input requires to be presented clearly in understandable context when provided through aural stimulation. These can be enhanced or presented through visual aids when promoting listening comprehension.

Pertaining to this, the availability of podcasts through the push system of RSS has provided language teachers as well as the learners a treasure of materials for teaching listening skills. Video-Podcasts are considered one of the novel forms of video materials that provide language learners numerous opportunities to practice language skills, particularly the listening comprehension. They offer learners opportunities for practicing extra listening practice both inside and outside the classroom at their own pace and in a self-directed manner. According to Viana (2014), Video-Podcasts can act as an extension of the classroom in several ways. It may assist in preparing a lesson, practicing a skill demonstrated, or can be a resource for others who are not even in the same classroom. Video-Podcasts can broaden the resources available to educators and students. They are considered more interesting for students as they are a source for them to access to the authentic listening material on almost any subject they may be interested in.

2. Literature Review

Video-Podcasts can play important part in teaching and learning listening skill. According to Tsai (2010), they are a good source of authentic linguistic input which serves as an effective substitute for native environment for language practice, and consequently, can activate and enrich learners' background. Teachers may make use of this technology to motivate learners particularly the less proficient listeners for improving their interest in learning English and listening. In particular, the visual aspect of podcasts can make learning of listening experience more attractive, engaging and effective. Easy accessibility to video-podcasts allows students an opportunity to improve their listening comprehension anywhere such as at work; at home; or even while travelling. Tsai (2010) believes that watching the authentic listening material can reduce anxiety, frustration and boredom which is so common in traditional listening only environment. Relating to the benefits of video-technology in EFL, the development in technology, and particularly in the field of videos, provides EFL learners more opportunities in language learning and in listening comprehension. The visual and body languages of speakers in videos enhance students' understanding and provide more clues for listening comprehension practice.

2.1 Listening Comprehension

As an integral part of communication, listening holds a key place in a language and it plays vital role in the language acquisition process. But its development has been a real test for language teachers. Rezaei and Hashim (2013) point out that EFL learners are less exposed to listening materials in the communities where English is studied as a foreign language. Despite its crucial importance in language intake and acquisition, listening skill lags behind the other language skills. As a result, this skill seems to be the most demanding skill in the communities where English is learned as a foreign language and the majority of low level English as Foreign Language (EFL) learners in those communities lack proficiency in listening comprehension. This situation calls for more research on listening comprehension in such communities to explore appropriate methods to compensate for the gap.

2.2 Multimedia in listening

According to Mayer (2009), multimedia is generally referred to the combination of text and pictures; and learning occurs when learners create mental images from those words and pictures. Mayer (2009) adds that the words can be in written or spoken form and the pictures can be in any form of image or video. In order to deliver comprehensible input, technology integration in EFL has historical foundations. The utilization of

technology has benefited EFL curriculum and learners over the years. The development of multimedia tools for listening comprehension and the use of input enhancement practices urged many researchers to conduct a number of empirical studies to peep into optimal ways of presenting video material to students. In such an attempt, Perez and Desmet (2012), proposed a general categorization of some of such studies and outlined their central research questions. Though the study found input enhancement techniques through captions as convincing for vocabulary learning at the first sight, their in-depth analysis signals caution in generalizing these findings. Further experimental research, with in view of previous studies in the field, was recommended on gaining deeper insight into the advantages of input enhancement for vocabulary learning.

According to Mayer (2009), learners create mental images from words and pictures in the learning process, and the words can be either in written or spoken form and the pictures can be in any form of image or video. This reflects the role of visual element in the learning process and has attracted a number of researchers to examine the influence of visuals on listening skill. Li (2013) found positive effects of using advance organizers for listening comprehension. Walters explored the influence of Visual Verbal Integration Training (VVIT), a novel intervention for enhancing students' listening abilities. Findings indicated positive effects of VVIT on participants' listening performance. Further, they demonstrated improvement in level of confidence, happiness, academic and organizational skills. Further experimental research with larger samples was recommended to verify the effectiveness of VVIT for high visual and low auditory students' challenges.

Use of video resources is becoming more frequent in EFL teaching, particularly in teaching listening comprehension. Conclusive evidence of the effectiveness of multimedia technology in language listening came from a study by Aldera (2015). He investigated the effectiveness of using multimedia technique (video mode + test) on listening comprehension. The results exhibited significant effects of visual stimulus over the auditory mode in enhancing listening comprehension. Sarani, Behtash, and Arani (2014) found significant positive effects of video-based tasks on students' listening comprehension in realizing and understanding the authentic language more efficiently. Similarly, Chen, Wang, and Xu (2014) examined the effects of two different presentation modes (audio and video) on L2 listening comprehension and found that well designed multimedia audio video materials were more favourable to listening comprehension. Kuo (2009) also found positive effects of integrating YouTube video clips on the listening comprehension performance of Taiwanese EFL learners.

Rahmatian and Armiun (2011) compared the effects of audio material and video material on listening comprehension. Results showed positive contribution of video message to an enhanced understanding of the audio message in some cases. Yet, audios

were found helping students occasionally concentrating on audio elements. Furthermore, videos were found helping in increasing accuracy, guessing and anticipating but at the same time, they may sometime include some disconcerting elements leading learners' attention away from elements.

2.3 Captioned Videos

Since several types of videos are produced, all those types can be published as video-podcasts through RSS technology. Thus, the available video-podcasts at present include videos, enhanced videos and captioned videos. The videos with captions refer to the videos that have subtitles in the first or target language. They are perceived as a useful tool for enhancing listening comprehension by several researchers. An interesting approach to this issue was proposed by Perez, Noortgate, and Desmet (2013). They conducted a meta-analysis to find the effectiveness of captioned video (i.e. L2 video with L2 subtitles) for listening comprehension and vocabulary learning in second language acquisition. The results indicated a large effect of captions both on listening comprehension and vocabulary learning. Test type was identified to moderate the effect sizes on listening comprehension whereas proficiency level did not moderate the effect sizes of vocabulary learning and listening comprehension.

Safranji (2015) explored the effects of videos with and without subtitles on learners' listening comprehension. The study also examined students' attitude towards using this learning tool in listening comprehension. The findings revealed positive influence of using movies in listening activities. Particularly, results revealed enhancement in learning vocabulary, understanding foreign culture, and enjoyment in learning classes. Aldera and Mohsen (2013) also found positive impact of annotations for captioned animation in multimedia listening activities on vocabulary learning. However, there was a negative effect on listening comprehension and recall. Ghasemband and Nafissi (2012) confirmed that effects of English captions have significant effect on Iranian EFL students' listening comprehension. Gowhary, Pourhalashi, Jamalinesari, and Azizifar (2015) concluded that the use of captions had a significant effect on learners' listening comprehension and the ones who received English captioned videos performed better over the other group who watched only videos without captions. To conclude, the findings in the discussion above suggest that the use of captions could help overcome listening comprehension difficulties to some extent.

2.4 Podcasts

One of the latest web-based materials that have significantly contributed to the EFL learning is known as podcast. They are usually downloadable audio or video files that

can be played directly without any special software or MP3 player. Heilesen (2010) refers Podcasts as the audios and videos published on the internet. No special software or MP3 player is required to play it. Hubackova (2013) confirms that nothing except a computer and an internet connection is needed to download podcasts. Most often, they are free and without any advertisement which is important for teachers' needs (Hubackova, 2013). The easiness in using technology is very important for its maximum utilization. Ho, Chou, and Fang (2016) confirm that once people feel they can operate or learn new technology easily; their intention to use it will become stronger. Hence, in a video-podcast system, as compared to other videos available at other sources, if people realize that it is easier to use and they do not need to put too much effort into using it, they would be more willing to use it in EFL learning, particularly in listening. Video-podcast is one of the fastest growing web based trends in some of the educational institutions around the world for a variety of purposes, and listening skill can be one of them. According to Kavaliauskienė and Anusienė (2011), podcasts distinguish from other types of online multimedia materials mainly because they provide users the opportunity to download content automatically. For Al Qasim and Al Fadda (2013), Podcasts are different from radio broadcasts because they are connected to a listening device by Really Simple Syndication (RSS) feeds which were introduced by Dave Winner in 1997.

2.5 Podcasts in EFL Learning

A view from the available literature on technology integration in language learning reveals implementation of various technological tools in the field and podcast is one of them. A huge development has been seen in the field of podcasts in the last few years. The following paragraphs document and discuss the literature as it pertains to the use of podcasts in language learning and in listening comprehension. A comprehensive review of studies on video podcasts from 2002 to 2011 by Kay (2012) is a nominal work which paved way for future research and educational practice in the field. A sum of fifty-three peer-reviewed articles on the history and growth of video podcasts, types of podcasts, previous literature reviews, advantages and concerns of using video podcasts, methodological challenges, and suggestions for future research were selected. Important benefits noted were: control over learning, positive affective and cognitive attitudes toward video podcasts, increased learning performance, and improved study habits. Whereas, reduced class attendance, a variety of technical problems and preference of some students for lectures were recognized as some of the main challenges. Methodological concerns include lacking description of video podcasts, limited sample selection and description, and the absence of reliability and validity estimates for data collection tools. The paper suggested focusing on the design and

quality of video podcasts, viewing patterns and impact on learning effectiveness, pedagogical strategies, and individual differences in video podcast use.

Additionally, Viana (2014) examined the effects of video-casts on student learning. Athletic training students in two programs gave two class presentations, one in the traditional format and one with the use of video-casts, over the course of one semester. Score comparisons helped determining students' level of the knowledge between the two formats in the favour of video-casts format. More incorporation of video-casting into classroom was recommended for further retention of the skills taught in the program.

From the discussion, it seems that the use of podcast is an effective tool that significantly aids to EFL learning. However, data from several studies have also identified no or negative effect of podcasts on students' performance. For example, Abdous, Facer, and Yen (2012) examined the effectiveness of Podcasts Integration into the Curriculum (PIC) versus Podcasts as Supplemental Material (PSM). Results revealed inconclusive relationship amongst PIC group's learning performance. However, there was a strong relationship between the use of PSM and participants' performance in the final scores, specifically in higher level courses.

Identifying another perspective of podcasts' effectiveness, Fratangeli (2009) investigated the impact of podcasting on the retention of cognitive based knowledge. He compared a group in podcast instruction mode to a traditional lecture format group. Result indicated no statistically significant difference in knowledge retention in both of the groups. The post-quiz qualitative data indicated students' satisfaction in the ability to review utilizing podcast technology. It was concluded that podcasting is a useful instructional tool that increases learners' motivation and willingness to study content presented in a variety of formats.

Hoskyns-Long (2009) states that one of the crucial dimensions to podcasting is that it is expected to help educators to meet the on-going challenge to align their teaching methods and meet the expectations of a wired generation. To this end, Abdous et al. (2009) compared the academic advantages of integrating podcasts into the curriculum against their use as a supplemental or review tool. The results showed that the use of this technology is effective when teachers use it for multiple instructional purposes such as video presentation, paired interview of students, completing specific assignments, roundtable discussion or for guest lectures. This use of podcasts is more motivating for students. Despite the small sample size and limitations in the instructional techniques, the study infers that podcasting has the potential of greater benefits if its role is more than simple a tool for reviewing. The findings of the study suggest that more research on examining the effects of specific instructional uses of podcasting is worthy.

2.6 Podcasts in Listening

Examining the effectiveness of podcasting on students' listening seems more critical due to its fast growing adoption in higher education. Much research has investigated the role of visual support in listening activities. Numerous researchers and scholars have examined its effectiveness from several perspectives finding mix of results, though positive effects have been prevalent in most of the cases. Heilesen (2010) presented a comprehensive review of scholarly literature on experiences with podcasting in higher education from 2004 to 2009. He concluded that the core objective of podcast implementation was to boost listening comprehension competence in EFL learners. Contrary to his belief of podcasting as one of the solutions to the challenges in the development of higher education, he found a sort of shaky results regarding its effectiveness. It was concluded that the efficacy of podcasting on students' performance was still fairly weak, however, podcasting tend to have a general positive impact on the academic environment which allows students employ this new tools rationally as a supplement to their academic activities.

Al Qasim and Al Fadda (2013) examined impact of podcasting on listening comprehension of female Saudi EFL undergraduates. In that quantitative study, they employed a total of 46 female undergraduates of a Saudi university. The samples were divided into two groups as a control and experimental groups. The study employed students' created podcasts as the instructional material. Data was obtained after six weeks of treatment period. The results revealed significant difference between the control and experimental groups in favour of the experimental group.

Thus, the utility and scope of podcasts is very obvious from the previous literature. Its effectiveness in EFL has widely been recorded for the improvement of learning environment, learners' positive attitude toward language learning and technology aided teaching which ultimately leads to successful learning experience. Taken together, the studies suggest a role for podcasts in promoting learning process. There is quite considerable literature available on the potentials of podcasts, mainly the audio format. However, the measurable benefits of the video format of podcasts have yet been documented tentatively. This guided the researcher to wonder what could be potential rationale for integrating video-podcasts for enhancing listening comprehension.

3. Theories related to the study

3.1 Input Hypothesis

Stephen Krashen (1982) offered five significant hypotheses in the field of second language acquisition that influence and examines individual language learning process

(Ellis, 2015). To a great extent, the input hypothesis of Krashen (1985) demonstrated that comprehensible input is a part of a natural process to develop learners' level from their present level of the target language. With the help of equation $i+1$, he expressed the need of utilizing current knowledge (i) and adding new information ($+1$) to acquire second language. Richard-Amato (1988) attempted to decode the equation and took ' i ' for distance between the actual language development and the potential language development ($+1$). Mainly, it emphasizes that Comprehensible Input (CI) is essential for achieving higher level of acquisition in the first as well as the second language. The Input Hypothesis claims that if the input is too easy, no progress is made, and if it is too difficult, learning is blocked.

3.2 Cognitive Theory of Multimedia Learning

Paivio's (1991) dual coding theory, Sweller's (2003) Theory of Cognitive Load (TCL), and Baddeley's (1992) model of working memory set the basis for Mayer's (2009) Cognitive Theory of Multimedia Learning (CTML). It suggests that a combination of audio and video as visual stimuli could be more effective in processing input information than using a single audio stimulus. CTML of Richard E. Mayer and others claims that multimedia assists the way human brain learns. Based on 'Multimedia Principal', learners learn better from words and pictures than the words alone.

According to CTML, multimedia instruction motivates learners to create relevant mental pictures from the material used and try to make meaningful connections between words and pictures. When words and pictures are both presented, learners get opportunity to build verbal and pictorial mental models and to make connections between them. As active participants, the learners understand the material presented and eventually make new knowledge. When words alone are presented, learners can construct a verbal mental model but are less likely to make a pictorial mental model and build connections between the verbal and pictorial mental models.

3.3 Research Question and Hypothesis

The following question and a null hypothesis were formed in the study:

- RQ. Is there any significant difference between the mean scores of the experimental group and that of the control group on the listening comprehension post-test?
- H₀. There is no significant difference between the mean scores of the experimental group (instructed with video-podcasts as supplementary material) and that of the control group (instructed with traditional method) on the listening comprehension post-test.

4. Methodology

This section describes the research design, treatment, and instrument used in the study.

4.1 Research Design

The present study employed a quantitative method with a quasi-experimental pre-test post-test design to investigate the effects of video-podcasts as supplementary material in listening comprehension. Initial evaluation of the present study indicated that the quantitative design would be more appropriate than the qualitative for investigating the research question and testing hypothesis of the research. According to Robbins (2006), qualitative research method is suitable for investigating social or cultural phenomenon whereas quantitative research technique is appropriate for exploring research questions and answers. Moreover, Creswell (2002); and Simon (2011) are of the view that the quantitative approach is a more appropriate technique in the presence of predetermined independent and dependent variables in a research study.

In addition to that, the quasi-experimental method is more appropriate than the true experimental method if random selection is impossible or difficult (Creswell, 2002; Taylor, 2008; Wyre, 2007). Taylor (2008) believes quasi-experimental design as more effective because this approach permits inclusion of volunteers. The deanship of MU admission and registration enrolls students and does not allow any change in the groups allotted by the office. Hence, the difficulty in random selection of participants at the study location resulted in the absence of random selection which makes true experimental research method inappropriate for the present study. However, the quasi experimental design is appropriate because it allows using volunteer subjects in the absence of random selection (Creswell, 2002).

Furthermore, according to Cook, Tankersley, Cook, and Landrum (2008); and Creswell (2002), quasi-experimental method is appropriate to explore the effectiveness of a particular teaching method on students' learning. Hence, the selected quasi-experimental approach was found ideal for studying effects of video-podcasts compared to traditional teaching methods. Moreover, since the present study involves testing hypothesis, the quasi-experimental design is more appropriate for the study. Creswell, 2002 states that the quasi-experimental research design is an appropriate method for answering research questions, and testing the hypotheses.

4.2 Sampling

The target samples for the study are male aged 18 to 25 years English major undergraduates registered in the 2nd semester of Academic Year 2105/ 2016. They are first year level one students in college of Education, Majmaah University where they

study all four language skills including listening, reading, speaking and writing for three semesters in either a language laboratory or a smart classroom before embarking on their major language and literature courses. All the listening classes are taught in well-equipped high-tech language labs. Students from four classes studying at MU were involved in the research. Three of the classes were randomly assigned to experimental groups and one class was treated as the control group. In this regard, section 1 was treated as the control group which was taught in traditional settings based on teacher-centred methods of instructions whereas, section 2 was assigned to 5 video-podcasts, section 3 to 10 video-podcasts, and section 4 to 15 video-podcasts groups to form the experimental group. Figure 3.2 illustrates details of the sampling in the study.

In a quasi-experimental research, the number of sampling according to Creswell (2002) is 15 participants in each of the control and experimental groups of an experimental research are sufficient. Moreover, the sampling was based on convenience and availability. Fraenkel, Wallen, and Hyun (1993) define convenience sampling as groups of individuals who are conveniently available for the study. They believe that in case of extreme difficulty or impossibility in selecting random or systematic non-random sampling, a researcher may use convenience sampling. Due to availability of pre-existing intact groups only, all students in those particular classes were included as subjects (Sytsma, 2009). Intact group sampling is one of the typical techniques of convenience sampling in which already formed groups are used to represent a larger population (Watt & Van den Berg, 1995).

4.3 Material Development

'Interactions-1 Listening and Speaking' (Diamond Edition) is one of the most widely used text books for listening in the universities in Saudi Arabia. MU has assigned this book for teaching of listening skill for level one in College of Education (COE). This text book accompanied by an audio CD was used as the text book for the experiment in the present study. The text book contains 10 chapters, each one covering a particular topic. Of those ten chapters, the selected five topics are on 'Academic Life', 'Experiencing Nature', 'Foods', 'Community', and 'Home' to provide real-life English conversations and enhance students' performance in the skill through the most familiar input materials. The first five chapters contain the most basic vocabulary that helps level one student to achieve their course objectives conveniently. Moreover, the text is not too difficult and therefore, a chapter can easily be completed in the allocated four (4) hours in two weeks for one chapter. Thus, a total of five chapters were included in the study.

There were three video-podcasts about each of the five chapters. The first experimental group received one video-podcasts per chapter; the second group

received two video-podcasts per chapter; and the third one received three video-podcasts per chapter across the treatment period. The content of the video-podcasts covers the vocabulary and information closely related to the five topics included in the experiment. To obtain the research objectives and to provide a clear description of the instructions of the four participant groups, the researcher prepared a carefully designed two Lesson Frameworks which guided the lesson plans and other supplementary materials for both the experimental and control groups. The lesson plans for the experimental group followed the Lesson Framework in Appendix-A; and the control group lesson plans followed the Lesson Framework in Appendix-B. The following is a description showing the way the researcher employed these materials into the listening comprehension classes during the treatment period.

4.4 Research Instrument

A listening comprehension test was employed to collect data for the present study. Taylor (2008) asserts that quasi-experimental design allows researchers using a pre-test and a post-test to investigate learning outcomes and test theories by analyzing change in post-test scores. He further emphasizes that the pre-test post-test design can help researchers controlling threats to internal validity caused by lack of random selection of subjects in a quasi-experimental design study.

A listening comprehension test was employed to measure participants' pre-test and post-test listening comprehension performance in the first week and the 12th week of the experiment respectively. A researcher-made test contains 40 questions in six sections. Each of the sections measures a specific objective or skill of the listening course at the study location. Section one contains 6 questions to test students' competency in listening for specific information. It requires students to complete the spaces with maximum up to two words. A set of six True/ False questions in Section two evaluates inferring skill of the students. Section three tests the focusing ability of students in listening comprehension. It contains eight (8) multiple choice questions with three options for each of questions. The fourth section tests students' skill in listening for detail in which they are required to complete the information with only one word. Questions 29 to 32 in the fifth sections assess students' comprehension in recognizing the main idea of the audio. Here they choose one answer from the four options given. And the last section of the test identifies students' scanning skill in recognizing the numbers or the text relevant to those numbers.

In order to minimize students' reliance on guessing, distracters or fillers are added to multiple choice questions in the LCT (Folse, 2006). There are three and four alternative answers in the multiple choice questions. Osterlind (2002) asserts that higher numbers of alternatives make test items more reliable. Hence, the questions on

the test are set to measure students' competency in the major components of listening comprehension including listening for specific information; inferring and guessing meaning from the context; main ideas; and listening for numbers etc. To ensure the validity of the instrument, a panel of experts was consulted.

4.5 Data Collection Procedure

To obtain the baseline data, the researcher, after obtaining students' consent on a consent form in the first week of the experiment, administered a demographic questionnaire requiring all the participants to provide basic information about them. Moreover, a listening comprehension pre-test was also given to all the participants in the first week to collect data before the start of treatment.

In the experimental period, all the experimental and control groups used the same text books; receiving instructions by the same instructor under nearly identical lesson plans for two hours per week. The only difference between the experimental and the control groups' teaching methods and materials was the inclusion of video-podcasts watching to the lesson plans of the experimental group. However, the control group's lesson plans were limited only to the text book and the audio CD attached to it.

In order to obtain the second group of data, a post-test was given to all the participant groups including the control group in the twelfth week of the experiment.

4.6 Data Analysis Procedure

Statistical Package for Social Sciences (SPSS) version 20.0 was used to analyze the data obtained from the instruments. Participants' demographic information is described through descriptive statistics. Descriptive statistics is a useful method that helps researchers to summarize, describe and present research studies data (Trochim, 2006). ANOVA and ANCOVA techniques were employed to identify relationships between video-podcasts watching and pre and post-test listening comprehension test scores. Prior to hypothesis testing, an ANOVA analysis was conducted to find out group differences in listening pre-test scores. Subsequently, ANCOVA, with pre-test scores as covariate, was utilized to analyze the effects of video-podcasts watching on post-test scores. ANCOVA is the best method for researchers for minimizing initial differences of pre-test scores between the comparison groups of a quasi-experimental pre-test post-test design study (Seabolt, 2008; and Trochim, 2006).

ANCOVA is used in researches to control irrelevant variables which are not included in experimental study but could affect the dependent variables (Belin & Normand, 2009; Field, 2009; Seabolt, 2008). Participants' demographic data such as age, prior experience with video podcasts, self-perceived computer competency and ownership of a smart device were extraneous variables which could affect the

dependent variable – the post-test scores of the present study. Employing ANCOVA technique allows using pre-test scores as a covariate to recompense for any initial differences between the comparison groups and minimize the Type II errors in comparing post-test scores (Field, 2009).

5. Results and Analysis

Pre-test was given prior to the beginning of treatment in the first week of the experiment whereas the Post-test was administered after the treatment in week twelve to measure students' listening performance before and after the treatment. Scores of the students were analyzed. A research question and a null hypothesis were initiated.

RQ1 : Is there any significant difference between the mean scores of the experimental group and that of the control group on the listening comprehension post-test?

H₀₁ : There is no significant difference between the mean scores of the experimental group (instructed with video-podcasts as supplementary material) and that of the control group (instructed with traditional method) on the listening comprehension post-test.

In relation to hypothesis mainly two data analysis techniques were employed to explore the difference between the pre and post-test scores of the participants. First, ANOVA technique was used in order to explore group difference in the pre-test scores of the participants. Then, the effects of watching video-podcasts on listening comprehension post-test were derived using ANCOVA technique in which the pre-test scores was used as covariate.

Table 3 and 4 describe the results of the ANOVA analysis of the pre-test scores. Table 4.2 includes the means and standard deviations of listening comprehension pre-test scores of the four participating groups. The five video-podcast group scored a mean of 19.50 (SD = 5.296); 10 video-podcasts groups obtained slightly less than five video podcasts at 19.27 (SD = 4.323); 15 video-podcasts obtained the highest mean of 20.00 (SD = 3.533); and no video-podcasts obtained 19.97 (SD = 5.203).

Table 3: Means and Standard Deviation of the Pre-test

	N	Mean	Std. Deviation	Std. Error
Control Group	30	19.97	5.203	.950
5 VP Group	30	19.50	5.296	.967
10 VP Group	30	19.27	4.323	.789
15 VP Group	30	20.00	3.533	.645

Table 4 describes the results of ANOVA analysis for the pre-test of the four participating groups. No significant difference was found across the four groups in the

analysis ($F [3,116] = .180, p = .910$). This infers that participants in all the four groups are of the same level of listening comprehension before any treatments were given to them.

Table 4: ANOVA of Pre-Test

		Sum of Squares	df	Mean Square	F	Sig.	η^2
PRETEST * GROUP	Between Groups (Combined)	11.633	3	3.878	.180	.910	.005
	Within Groups	2502.333	116	21.572			
	Total	2513.967	119				

Further analysis namely Analysis of covariance (ANCOVA) technique was used to explore whether the use of different teaching approaches in the instructions of the control group and the three experimental groups would cause any significant differences in students' listening comprehension post-test scores. The data in table 5 illustrate the means and standard deviation of the three experimental groups using 5 video-podcasts ($M = 26.57, SD = 6.10$); 10 video-podcasts ($M = 29.37, SD = 4.34$); and 15 video-podcasts ($M = 30.43, SD = 4.15$). It reveals that each of the three experimental groups outperformed the control group ($M = 25.53, SD = 6.03$).

Table 5: Mean and Standard Deviation of Pre and Post-test

Group	Pre-test		Post-test	
	Mean	Std. Deviation	Mean	Std. Deviation
Control Group	19.97	5.20	25.53	6.03
5 VP Group	19.50	5.29	26.57	6.10
10 VP Group	19.27	4.32	29.37	4.34
15 VP Group	20.00	3.53	30.43	4.15

ANCOVA analysis in table 6 indicates a significant group difference in post-test scores, ($F [3,120] = 12.279, p < .001, \eta^2 = .243$). In addition, the combination of ANCOVA and ANOVA results in Table 6 indicates a significant effect ($F [1,120] = 120.966, p < .001, \eta^2 = .513$) of video-podcasts use in listening classes. It implies that listening comprehension post-test scores of the participants in the experimental groups significantly improved over their pre-test scores as compare to those of the participants in the control group.

Table 6: ANCOVA of Post-Test

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	2108.558 ^a	4	527.139	39.101	.000	.576
Intercept	895.091	1	895.091	66.394	.000	.366
PRETEST	1630.800	1	1630.800	120.966	.000	.513
GROUP	496.615	3	165.538	12.279	.000	.243
Error	1550.367	115	13.481			
Total	97571.000	120				
Corrected Total	3658.925	119				

a. R Squared = .576 (Adjusted R Squared = .562)

6. Discussion

The results of the post-test revealed that the use of video-podcasts had significant positive effects on the experimental group students' post-test scores. The participants in the experimental group instructed with video-podcasts made significant improvement in the post-test score as compare to those in the control group students who were instructed with traditional method without any video-podcasts.

The current result can be associated to brain's functions. According to Wang (1986), the two small areas of brain, Broca's area and Wernicke's area are closely related to listening. Broca's areas control the five senses as well as contribute to language production. Whereas, Wernicke's areas control acquisition and interpretation of sensory listening input; and thus facilitate the meaningful processing of received sound stimuli. Together, they both function to help people acquire and interpret sensory listening input. Since, learning is multi-sensorial, the combination of audio and visual stimuli provides more brain interactions and more improved learning than the listening alone (Kuo, 2009). Additionally, Neville and Bavelier (2000) argue that sensory input messages obtained through a person's physical senses are crucial and have a significant role in eliciting human brain interacting functions. According to Damasio and Sutherland (1994), the use of numerous contributing influences significantly assists in remembrance which is essential for language understanding and acquisition. Moreover, personal engagement through the emotions and paid attention to the stimuli makes the effects even stronger (Kuo, 2009). Thus, the learning experience in the present study, with combination of audio visual authentic content of video-podcasts increased students' attention to the input material which consequently elicited the brain functions more actively in interconnection. This facilitated the processing of received stimuli and enabled listeners to comprehend content better.

The results are likely to be related to Dual-Coding Theory (DCT) by Paivio (1991) which claims the importance of the use of both verbal and non-verbal input in teaching.

Clark and Mayer (2016) are of the view that teachers should bring multiplicity in their teaching methods and in presenting input to enhance learners' learning and to increase their engagement in cognitive learning. Dual-coding and multiple-modality research claims that the use of content in audio visual combination can increase learning (Calandra, Barron and Thompson-sellers, 2008; French, 2006). Dual-coding theory suggests that using both visual and auditory sensory channels can aid learners comprehend and retain information better than using one channel alone (French, 2006). Similarly, the finding extends Cognitive Theory of Multimedia Learning (CTML) of Mayer (2009). It suggests that a combination of audio and video, as visual stimuli could be more effective in processing input information than using a single audio stimulus. The theory claims that multimedia assists the way human brain learns. Generally, multimedia is referred to the combination of text and pictures, and learning occurs when learners create mental images from those words and pictures. The words can be in written or spoken form, and the pictures can be in any form of image or video (Mayer, 2009). Based on Multimedia Principal of CTML, learners learn better from words and pictures than the words alone. It further adds that multimedia instruction motivates learners to create relevant mental pictures from the material used and they try to make meaningful connections between words and pictures. When words and pictures are both presented, learners get the opportunity to build verbal and pictorial mental models and make connections between them. As an active participant, they understand the material presented and eventually make new knowledge. When words alone are presented, learners can construct a verbal mental model but are less likely to make a pictorial mental model and fail to build connections between the verbal and pictorial mental models. The results of the study also confirm a study based on Mayer's CTML theory. Li (2013) examined the effects of advance organizers in combination with cognitive theory of multimedia learning L2 learners' comprehension of English-language DVD soundtrack material. The results of the experimental study revealed positive effects of using advance organizers for listening comprehension.

Relationship between the reviewed literature and the study's findings is quite apparent. There is strong evidence for using podcasts as an instructional tool to enhance teaching and learning (McDermott, 2014; Nguyen, 2011). Forbes (2015) confirms that podcasts may be a useful format to communicate ideas. Ng'ambi and Bozalek (2015) indicate that the control in space and ability through watching video-podcasts benefit non-English speakers in comprehension of the delivered content. Black and Fernando (2014) also supported the notion that mindful training through podcast instructions can provide a creative means to bring learners in the learning process with increased engagement and attention. However, Carbonell (2016) believes, the instructional

material activities integrated into instructional design must meet the objectives of the targeted learners.

The result of the present study is partially in line with the study by Aldera (2015). The study investigated effectiveness of using multimedia technique on listening comprehension. The experimental group watched the video conversations whereas the control group listened to the same material delivered by audio tracks for the same period of time. The results exhibited a significant effect of visual stimulus over the auditory mode in enhancing listening comprehension. It was concluded that when additional information is presented in the form of video clips and other visual cues to assist understanding of the spoken message, the improvement in EFL listening comprehension is even more significant. It confirmed the evidence that using video in the listening instructions enhances EFL listening comprehension. Thus, using multimedia technology such as video-podcasts can be an effective means of presenting additional input material for improving listening skill as was found in the present study. In the present study, the experimental group was instructed through the video-podcasts which were closely related to their topics in the course; whereas the control group was instructed with audio material only. A significantly greater performance of the experimental group indicates a positive impact of the video-podcasts used in their instructions. However, the use of additional video-podcasts material in the present study differs from Aldera's (2015) study that used video material for the experimental group and the same material in the audio form for the control group. The use of additional video material closely related to the course topics in the present study may have stretched students' vision on the topics and inflamed their comprehension skills, and consequently, they performed significantly better than the control group.

The result also partially agree with the study by Sarani, Behtash, and Arani (2014). They examined the effects of video-based tasks on listening comprehension of Iranian pre-intermediate EFL learners. Results indicated significant positive effects of video-based tasks on students' listening comprehension in realizing and understanding the authentic language more efficiently. The study concluded that video is very appropriate and suitable tool for enhancing listening comprehension when it is accompanied by different tasks. Safranjanj (2015) also testifies positive influence of using videos in listening instructions. Particularly, they assisted in learning vocabulary, understanding foreign culture, and enjoyment in learning classes. All these components are of vital importance for successful listening that can be enhanced by adding videos in instructions. Thus, it can therefore be assumed that the supplemental use of video podcasts may have eased understanding of the target language culture, and the vocabulary which positively influenced their performance in listening comprehension in the present study.

In addition, Erben, Ban, and Castaneda (2008) assert that watching a person during communication assists English language learners in scaffolding comprehension because it allows them to look at speakers' body language and facial expressions which aid in decoding the meaning of the message. Moreover, Chen et al. (2014) confirm that the combination of audio video material has certain advantage to increase learners' listening comprehension. Accordingly, in the present study, the visual content of the video-podcasts such as the scenes, actions, emotions, and gestures, supported learners to decode the message and comprehend significantly better than the control group with audio only instructions. It seems possible that the positive finding may be due to the fact that the authentic content of the video-podcasts provides an attractive opportunity that helps in learning difficult vocabulary and enhances listening comprehension, particularly to the adult language learners. The authentic material, according to Lu (2007), assists learners to build confidence in their abilities and to comprehend English overall. Moreover, Davis, Connolly, and Linfield (2009) state that the podcasts promote active learning activities; help moving away from 'didactic delivery'; and turn classes into more discussion-oriented sessions.

The supplemental role of video-podcasts in the present study also seems to be one of the influential factors for its positive finding. This notion is advocated by Evans-Waughen (2012). The pre-test post-test study examined whether podcasts are a good educational tool to help students in achieving academic objectives. It was concluded that podcasts are not suitable for all learners; and podcasts should not be used as sole source of information. Rather, they should be used as a supplementary material to enhance traditional teaching and educational practices (Evans-Waughen, 2012). The discussion implies that the use of podcasts as a sole material can drive learners away from the course objectives, and there is a need of guided training in selecting and using the most appropriate podcasts for better and targeted achievement. Although, the use of podcasts as a supplemental material is supported, it is important to distinct between the supplemental use and the optional use of this tool. The optional use of podcasts might reduce overall participation of learners in the learning process, and thus, affects their learning negatively (Harris, 2011). The use of video-podcasts as supplemental material under the teacher's supervision might have satisfied all types of learners in the present study, and attracted them to participate in learning activities more actively which assisted them in enhancing their performance.

The observed increase in listening comprehension in the present study could also be credited to using downloaded video-podcasts. Downloaded video-podcasts may have facilitated in running the technology aided instructions smoothly without any interruptions concerning to technical issues. This subsequently allowed all the allocated time to instructions as per the lesson plans and succeeded in achieving higher positive

results. Moreover, the use of video-podcast at the study location is in its primary stage, and therefore, students' technical proficiency in using it was expected to be very low. Thus, the idea of using downloaded podcasts in classroom seems more effective and beneficial for achieving learning objectives. In these settings, no complications such as technical difficulties in accessing the podcasts may hinder the learning process which was the main concerns in previous studies - such as the studies by Lebron-Lozada (2012); and by Harris (2011). The use of downloaded video-podcasts allowed students to focus on learning objectives with greater ease and increased motivation. They benefited from this new technology without spoiling time on technical issues.

The role of the teacher in selecting the most relevant and appropriate content can be associated to the findings of the present study. Previous literature confirms the relationship of appropriate podcast material to the learning outcomes. According to Farshi and Mohammadi (2013), difficulty in filtering the most appropriate and relevant podcasts by the learners is one of the most important concerns in successful integration of this learning tool in instructions. However, the present study utilized video-podcasts that were carefully selected by the teacher which were closely related to the students' academic needs. They made the use of video-podcasts with no anxieties or other extra burden of searching the most appropriate material. Thus, the provision of the appropriate and relevant video-podcast materials assisted in creating a successful technology integrated learning environment. Consequently, positive effects of using the learning tool were observed. Rahimi and Asadollahi (2011) investigated the level of readiness of Iranian university students in using podcasts for academic purposes. The findings confirmed that the most of the participants in the study owned portable devices. Moreover, they had a satisfactory level of access and a high level of familiarity with podcasts. Despite that, most of the podcasts downloaded by them were found irrelevant to their academic objectives. The study noted that students lack experience in using podcasts for academic purposes due to the absence of teachers' guidance on utilization of podcasts for this purpose. The study noted that learners preferred using their mobile devices only for the podcasts other than academic purposes. The authors believed that the role of EFL teachers in providing the most appropriate podcasts can be an important factor to achieve higher academic performance. Hence, it is evident that instructor's role for the successful integration of podcasts is essential. Students really need teacher's guidance on how to benefit from the available podcasts before they become autonomous podcast users for their academic necessities. Thus, teacher's role in the present study in selecting the most academically-relevant video-podcasts may have significantly assisted in higher learning achievement.

Despite similar sentiments expressed in several studies, the research is not definitive. Some studies Baker, Harrison, Thornton, and Yates (2011) evaluated the

benefits of incorporating podcasting into a university course. The study employed two ten minutes podcasts as a supplementary material. The duration of each of the podcasts was 10 minutes. The results suggested that there was no difference between the performance of the control and the experimental groups. The author attributed the absence of insignificant results to the smaller size of samples in the study and suggested for further studies with larger samples to see the true impact of videos on listening. Similarly, the present study also contradicts to the study of Sutton-Brady, Scott, Taylor, Carabetta, and Clark (2009) in which the participants favoured the traditional study over the learning through podcasts. The findings revealed time pressure, and participants' level of English language as some of the main obstacles that hindered the podcasts success among his subjects in the study. There are several factors determined by these two studies which hindered podcasts' success. Whereas, the absence of the above factors in the present study and specific focus on the most appropriate 'comprehensible input' as per the current level and need of the participants in the present study logically justifies why the findings are significantly positive. However, a persistent research in higher education on the concrete impact of podcasts on overall student learning in a course is still needed.

Overall, the key finding is that the use of video podcasts improved experimental groups' post-test scores significantly than the control group learners with no video-podcasts. In other words, integration of video-podcasts enhanced Saudi EFL learners' listening skill significantly than the traditional curriculum with audio listening input only. Addition of special effects to audios and visual cues of pictorial material closely related to their course, allowed EFL learners experience a real English environment and improve their listening comprehension (Bransford, 1979). In addition, the audio input in visible context provided EFL learners natural speech listening of the target language speakers. Thus, this can be concluded that carefully selected video-podcasts can definitely be advantageous in teaching listening skill and enhance Saudi EFL learners' listening comprehension.

Relating to the implication for teaching, several elements emphasize that the latest learning tools such as podcasts are needed to be integrated into EFL curriculum. First, as the overall learning environment around the world is evolving to high-tech environment, our teaching methods must also evolve to suit the change. The participants in the present study found using technology in their life and majority of them possess an advance level of efficacy in its use. This inclination of today's generation to technology indicates the need to integrate this tool into their learning. Second, Lawlor and Donnelly (2010) emphasized that the podcasts must be integrated into the course and not "bolted on as an optional extra". Thus, the podcasts should be specifically mounted on the course syllabus and prepared by the professionals in the

field of podcasting to provide students a high quality stuff which will probably be welcomed more warmly by them. Inclusion of both the genders and multiple study locations in future studies can help in broader implications of the results. In addition, other language skills such as reading writing and speaking can also be studied to see the scope of video-podcasts in EFL. Educational authorities and EFL instructors may consider adopting video-podcasts as a teaching tool for promoting students' listening skill.

7. Conclusion

Undoubtedly, the use of computers or rather Computer Assisted Language Learning (CALL) promotes positive learning among its learners (Ali, Mukundan, Baki, & Ayub, 2012). Students in the current study that used podcasts via computer found the latter are useful resources for them. In fact, nowadays, both EFL teachers and students in the present high-tech ridden environment feel more motivated towards technologies. But it is essential to pay attention on the pedagogical design and usage of the podcasts to show practitioners its most effective use in higher education. The role of teacher is important in that design. It was noted in the present study that the students required assistance and explanations of the content in the video-podcasts pertaining to catching up abstract ideas that were beyond their understanding. Thus, the most appropriate content of the Video-Podcasts with the assistance of teacher can take podcasts aided instructions up to the maximum effectiveness.

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