Promoting intentional vocabulary learning among EFL learners in Saudi Arabia: The role of captioned and subtitled TV series

Abstract

Video viewing whether a TV series, a documentary, or an excerptcan be a useful tool for exposing learners to enormous amounts of input to increase their vocabulary.Thus, this study investigates the effect of viewing of captioned and subtitled TV series in promoting vocabulary learning among EFL learners in Saudi Arabia, it also investigates the effect of the type of the on-screen text (whether English or Arabic)and proficiency level in gaining vocabulary. Data for this study were collected using a quantitative experimental approach. A total of 19 intermediateSaudi female learners participated in this study, they were assigned randomly into two different groups: captions group and subtitles group, both groups were viewing two episodes of a TV series.A pre and post-tests were administered to measure form recall and meaning recall gains of vocabulary. Results showed that the audio-visual input helped participants learn vocabulary in terms of meaning recall and form recallfor both groups howeverthe relative gains were found to be comparatively more in the captions group in terms of form recall with no statistically significant difference. With the meaning recall, the subtitles groups showed comparatively higher relative gains without any statistical significance. The relative gains were comparatively higher among students with B2 proficiency than those with A2 in both meaning recall and form recall, irrespective of the groups ($p>0.05$). The analysis also showed no effect of language of the on-screen text on either form or meaning recall.Taken together, these results suggest that audio-visual materials may aid students in learning and developing new vocabulary in EFL classrooms. Teachers can utilize them to

supplement pupils' lack of vocabulary along with their textbooks by piquing their interest and stimulating their curiosity.

Key word:reading habit, learning vocabulary, listening activities, language learners

List of Terms and Abbreviations

A2: A proficiency level based on the Common European Framework of Reference which means (Elementary English).

B1: A proficiency level based on the Common European Framework of Reference which means (Intermediate English).

CEFR: An abbreviation for the Common European Framework of Reference.

EFL: An abbreviation for English as a Foreign Language.

L1: An abbreviation for the First Language.

L2: An abbreviation for the Second Language.

Audio-Visual Input: "Means a product containing visual imagery or sound or both. Examples of audiovisuals are motion pictures, live or prerecorded radio or television programs, slide shows, filmstrips, audio recordings, and multimedia presentations"("Search Legal Contracts, Clauses and Legal Definitions | Law Insider", n.d.).

Captions: Refer to the on-screen text in the second language combined with the second language soundtrack (Markham, 1999, p. 321). For example: watching an English documentary program combined with anEnglish soundtrack and English language text on the screen.

Incidental Learning: "Learning something without the intention to learn it or learning one thing while intending to learn another, for example, unintentionally picking up vocabulary, patterns, or spelling through interaction, communicative activities, or reading for content or pleasure" (Richards & Schmidt, 2010, p.276)

Intentional Learning: In contrast with incidental learning "for examplelearning by following a deliberate programme of study to enhance vocabulary or grammar" (Richards & Schmidt, 2010, p.276)

Meaning-Focused Input: "Acquisition through comprehensible reading and listening input"(Noroozi&Siyyari, 2019, p. 3).

Multimedia: "The use of several different types of media for a single purpose, e.g. as in a video that uses film, audio, sound effects, and graphic images" (Richards & Schmidt, 2010, p.380).

Subtitles: Refer to the on-screen text in the native language combined with the second language soundtrack(Markham, 1999, p. 321). For example: An Arabic native speaker watching an English documentary program combined with anEnglish soundtrack and Arabic text on the screen.

Target Language: "Also L2 (in language teaching) the language which a person is learning, in contrast to a first language or mother tongue" (Richards & Schmidt, 2010, p.583). For example: An Arabic native speaker who is learning the English language.

1. Introduction

Vocabulary is considered an important part of learning a foreign language (Schmitt, 2008)as without it, there is no language to learn; this goes with learners who want to learn a new foreign language; they must know that if they gain no vocabulary items, they will not be able to talk or form a sentencewhich means that the more a person gains vocabulary, the better he understands speaking, reading, listening, and writing skills in a language. Alqahtani (2015) stated that developing a learner's vocabulary is the most crucial part of expanding a language.

Vocabulary can be taught intentionally or acquired incidentally. Reading is one of the most popular ways that help acquire vocabulary; however, there has been a decrease in reading habits (European Commission 2017), especially among young people, who like watching TV to reading (Lindgren and Muñoz 2013; Peters, 2018), there has been a need for different ways of learning vocabulary such as learning from audiovisual input. Information processing theories support the idea that combining visuals and verbal information in audiovisual input can improve target language learning (Sydorenko, 2010). Mayer (2014) also stated that combining words with pictures enables learners to draw connections between them.

In recent years, the rise of multimedia learning environments has increased access to TV showsand movies(Pujadas & Muñoz, 2019).Moreover, other internet platforms have provided possibilities for instructors and learners to improve language learning both inside and outside of formal settings (Pujadas & Muñoz, 2019). In this regard, Webb and Nation (2017) indicated that if learners watch TV for fun in a foreign language, it might be an excellent source of meaning-focused input; that was when the role of captioned and subtitled videos came along. Studies have shown that even a small quantity of information supplemented with captions or subtitles may

significantly increase listening, content comprehension, and vocabulary learning (e.g., D'Ydewalle and Van Poel 1999; Birulés-Muntaner and Soto-Faraco 2016).

Subtitles are referred to as "L1 subtitles" or "interlingual subtitles" whereas captions are referred to as "L2 subtitles" or "intralingual subtitles." The common distinction between subtitles and captions is that subtitles refer to the on-screen text in the native language combined with the second language soundtrack, while captions refer to the on-screen text in the second language combined with the second language soundtrack (Markham, 1999, p. 321).

In Saudi Arabia, studies in the field of captioning and subtitling have either talked about the effect of different modes of captioning and subtitling on learning vocabulary incidentally among university students (e.g., Bensalem 2016; Bensalem, 2018), examined different captioning modes on L2 pronunciation (e.g., Mahdi) or listening skill (e.g., Bensalem 2016). To the best of my knowledge, there is no study in the Saudi context that used a TV series as a viewing material, and there is only one study (e.g., Aloqaili 2014) that has tackled young learners (secondary school learners) with intentional vocabulary learning. The current study fills this gap by choosing younger learners (intermediate school learners) with intentional teaching of the target words through a different material (TV series).

This research contributes to the field of foreign language learning through audiovisual materials; it is expected to be useful for teachers as a solution for students' lack of vocabulary by developing their vocabulary mastery through focusing on the teaching of vocabulary along with exposing them to interesting audiovisual materials inside classrooms.

The current study mainly investigates the effect of viewing captioned and subtitled TV series in promoting intentional vocabulary learning among EFL learners

in Saudi Arabia and the effects associated with the type of on-screen text (Arabic or English) and learners' proficiency level.

This research seeks to address the following questions:

1- To what extent can EFL Saudi learners learn vocabulary through audiovisual input (TV series) in terms of meaning recall and form recall?

2- How can (a) thelanguage of the on-screen text (captions or subtitles) and (b) learners' proficiency level affect vocabulary learning?

Literature Review

2.1 Learning Vocabulary through Audiovisual Input

Vocabulary is one of the most crucial aspects of the English language learning process (Delmayanti& Al Hafiz, 2013), and it has been found that learners find the audiovisual input material as a good way to learn and that may help students become

more motivated and pay attention (Pujadas & Muñoz, 2019). Webb (2015) has stated that one of the biggest benefits of television is that it provides learners with a large quantity of authentic L2 input. Moreover, learners learn better when they are stimulated through various ways such as visual, auditory, verbal …etc. Koskinen et al. (1993, p. 39) emphasized that subtitled television provides a presentation of information, including the opportunity to watch video actions, listen to spoken language, and watch printed text. In that sense, Pujadas and Muñoz (2017) interviewed a group of adolescent and young adult students who had been viewing a target language TV series in the classroom. They agreed that the audiovisual resources were deemed to be more natural, enjoyable, and motivating than other class activities.

A piece of compelling evidence for the role of audiovisual materials in learning vocabulary incidentally comes from Peters and Webb (2018). The study examined learning vocabulary incidentally through viewing a full-length TV program without any captions or subtitles. They considered variables that might affect the acquisition of the vocabulary, such as frequency of occurrence, cognateness, word relevance as well as the prior vocabulary knowledge of the learners. Tow experiments using different test instruments were conducted. The first was to measure the effect of TV viewing on meaning recall and form recognition, while the second experiment measured meaning recognition. The participants were Dutch-speaking EFL learners studying at university. They were randomly divided into either experimental or control groups; the experimental group was presented with audiovisual input while the control group was not. The results showed that television led to incidental vocabulary learning at the level of meaning recall and meaning recognition. It was

also found that learning is influenced by the frequency of occurrence, vocabulary prior knowledge, and cognateness.

In reviewing the literature, Pujadas & Muñoz (2019) stated that most studies focused on learning vocabulary incidentally through audiovisual input (e.g., Peters & Webb, 2018; Rodgers & Webb, 2019; Puimege& Peters, 2019).

On the other hand, studies that investigated intentional vocabulary learning through audiovisual input are very few compared to incidental vocabulary learning (e.g., Aloqaili, 2014; Pujadas & Muñoz, 2019; Suárez & Gesa, 2019; Montero Perez, 2019). Aloqaili's study (2014) examined the efficacy of intentional vocabulary learning from subtitled videos; she also investigated how learners feel about video-based learning materials, using the perspectives of 48 Saudi secondary students whose mother tongue was Arabic and aged 17 years old. She found out that participants gained vocabulary no matter what the language of the on-screen text. This study did not apply exercises or teaching of the target words; however, the participants were told to concentrate on the target words except for the control group, who had proven to gain vocabulary, not to mention that they were exposed to subtitles but without video. This study used a short video clip that lasted only for seven minutes, while the current study chose episodes of a TV series that lasted around 24 minutes each episode with the involvement of teaching the target words. Moreover, all the participants considered the audiovisual materials to be helpful in learning new vocabulary based on the questionnaire survey.

Most studies in this area have examined the acquisition of the target language vocabulary using short clips, films, excerpts, and educational videos, which are almost irrelevant and do not completely represent what the viewer normally sees (Rodgers, 2013). Pujadas and Muñoz (2019) have noticed that only a few studies have

used longer, authentic input such as full-length TV episodes, documentaries, or movies (e.g., BavaHarji et al., 2014; Peters & Webb, 2018; Suárez and Gesa 2019; Pujadas and Muñoz 2019). Pujadas and Muñoz (2019) have examined a Longitudinal study with a longer and more authentic TV series. They also have involved intentional learning of the target items for the focused groups. Participants' proficiency level was mixed between beginner, low, and intermediate. Their first language was Spanish, and they were 106 divided randomly into four groups, two experimental groups (L1 subtitle, L2 captions) and two control groups (L1 subtitle, L2 captions). The focused groups were taught the target items through pre and post-activities, while the control groups were only watching the videos without any teaching. Results showed that the participants learned vocabulary from extensive exposure to audiovisual input. All four groups have learned vocabulary, although the groups who were taught outperformed the groups that were not taught the target items. Participants were better at gaining form recall than meaning recall.

2.2 Captions and Subtitles in Learning Vocabulary

Some target language studies learning from captioned and non-captioned audiovisual material consistently show the benefits of watching videos with and without on-screen text (e.g., Montero-Pérez et al., 2013; Mohd Jelani and Boers, 2018). On-screen text in the form of subtitles (L1 text) or captions (L2 text) is now widely available, and that may aid students (Vanderplank, 2016).

Captions, according to popular opinion, provide more exposure to the target language, making them better for language learning and vocabulary acquisition (Danan, 2004; Vanderplank, 2010; Winke et al., 2010; Taghavi et al., 2012; Peters, 2019). Taghavi et al. (2012) debated the impact of captioned brief news onvocabulary

learning with 45 secondary Iranian students aged between 12 and 14 who were separated into three groups: group A (subtitles in their first language, Persian language), group B (news without any captions or subtitles), and group C (news with English captions). Participants watched 18 brief TV news videos. Results showed that the subtitles group outperformed the captions and no captions groups (B, C) in the pre-test, although the results were not significant. In the post-test, however, the captions group outperformed both the subtitles group and no captions group, which suggests that captions are more beneficial when learning foreign language vocabulary. Peters (2019) investigated the effect of imagery and three types of on-screen text: L1 subtitles, without subtitles, and captions on learning vocabulary from documentary videos. The author used experimental quantitative research. His study took place in Belgium; it was conducted in two separate sessions on different days, and each one's duration was 50 minutes. Participants were 142 EFL secondary school students whose first language was Dutch. They were randomly divided into three groups of 3 captioning conditions. Results showed that the possibilities of learning words were less when there was no on-screen imagery, while the possibility of learning new words was significantly higher with the help of visual support. Results also showed that learning words were related to the type of subtitle, which indicated that learning words were higher in the group that used captions than those with no subtitles and with L1 subtitles, which means that there was no significant difference between the no subtitles group and L1 subtitle group, learning words was also related to some variables such as prior vocabulary knowledge, frequency of occurrence, and corpus frequency and the cognateness.

Subtitling, however, appears to provide higher benefits in some studies, particularly for low-proficiency learners (e.g., Bianchi and Ciabattoni 2008). Bianchi

and Ciabattoni (2008), in their study, focused on two experimental groups and a control group. The two experimental groups were L1 subtitles (Italian) and captions, and the control group was (audio only) learners aged 18-45 years old. Learners were tested one week after the treatment about the words that appeared in the clips. The clips were either an excerpt from a film with a strong imagery-audio correlation (Harry Potter) or an excerpt from a film with no imagery-audio correlation (Fantasia). Results showed that the experimental groups showed the greatest increase, with the L1 subtitles group as the best. However, this cannot be accurate because of the different proficiency levels of the participants in each group between beginners, intermediate and advanced levels.

Some studies have shown a slight or no big difference between caption and subtitle (e.g., Steward and Pertusa, 2004; Bravo, 2008; Bisson et al., 2014; Aloqaili, 2014; Pujadas & Muñoz, 2019). Bisson et al. (2014) investigated viewers reading of different types of subtitling through an eye-tracking study and the incidental learning of foreign language vocabulary by using an auditory vocabulary test. Sixty-four native English speakers participated in this study. Participants were exposed to an excerpt of 25 minutes *SpongeBob Square Pants* movie and were divided into three experimental groups: L1 subtitles (with target language sound and L1 subtitles), reversed subtitles (with L1 sound and target language subtitles), the captions group (with target language sound and target language subtitles) and finally a control group who were exposed to target language audio (Dutch) but without subtitles. The findings revealed that there is no difference between the three experimental groups and the control group and that participants did not acquire new words. Pujadas & Muñoz (2019), in their study, noticed that captions and subtitles have no effect on form and meaning recall, although the focused caption group outperformed the focused subtitle group in

form and meaning recall, while in the non-focused groups, the subtitle group performed a bit better than the caption group in the meaning recall.

2.3 Proficiency in Learning Vocabulary

Many studies have agreed on the fact that proficiency level is related to learning vocabulary (e.g., Lwo and Lin 2012; Suárez and Gesa 2019; Pujadas & Muñoz 2019; Teng 2022). Lwo and Lin (2012) contrasted L1 (Chinese) and L2 (English as a target language) text with students at a junior high school grade 8 using a multimedia animated reading tool that involved two scientific articles presented on a computer. Participants' first language was Chinese; they were divided into four groups depending on their English proficiency level (no captions group, Chinese captions group, English captions group, Chinese plus English captions group). The findings revealed that the impact of varied captions on vocabulary learning in multimedia target language learning is dependent on students' proficiency; it was more useful for lower-proficiency learners to have L2 (English as a target language) or L1 + L2 subtitles (English and Chinese). In other words, learners with different proficiency levels within the same study were found to respond differently to different screen text languages, especially if the learners were less proficient. Suárez and Gesa (2019) examined the impact of sustained exposure to captioned videos on the learning of vocabulary, and whether or not aptitude and proficiency affect it; they came to a conclusion that there is a main effect of proficiency on the scores of learning for the target words form and meaning, although the university students groups (experimental and control) outperformed the school students groups (experimental and control), there was no significant difference between the university groups which suggests that students with lower levels of proficiency (school students) benefited the most.

On the contrary, Pujadas & Muñoz (2019) found that higher proficiency is related to higher gains which means that more proficient students gained more vocabulary than less proficient students. Teng (2022) explored the effects of viewing a full-length documentary TV show on incidental vocabulary learning in terms of recognition and recall of word form and meaning. He also determined the extent to which learner-related factors affect this learning, such as the target language proficiency level and language aptitude. Participants were 82 EFL Chinese learners in their first year at university aged between 18–20 years old. Their first language was Chinese, and their English proficiency level was intermediate proficiency. They were split into two groups those who viewed the video with captions and those who viewed the video without captions. The findings showed that watching the documentary video had various degrees of impact on incidental vocabulary learning in terms of both meaning and form recall and recognition, with the caption group outperforming the no-caption group. Moreover, the learner-related factors (the target language proficiency level and language aptitude) appeared to influence incidental vocabulary gains. Although results showed an important role for proficiency level in gaining vocabulary with more proficient learners gaining more vocabulary, however, this was only on form recall and form recognition with no significant effect on proficiency level in meaning recall and meaning recognition.

Hui (2007), however, found that both high and low-proficiency groups gained similar scores. He investigated the effects of captions on incidental vocabulary learning. Participants were 182 Chinese at theNanjing Institute of Meteorology. Firstly, they were divided into two main groups, the high-proficiency group and the low-proficiency group. These two groups were divided into three groups, the L1 (Chinese) caption group, the target language (English) caption group, and the no

caption group. They viewed a documentary video. Results revealed no significant difference in gains between high and low proficiency groups; however, in the word recognition and word spelling, the English caption group improved both in high and low proficiency groups, while in word meaning, the L1 (Chinese) caption group outperformed the English and no caption groups.

Methodology

3.1Design

A quantitative experimental approach was utilized in this study to gather data from 19EFLSaudi female students from an intermediate school to investigatethe effect of captions and L1 subtitles in learning vocabulary in terms offormand meaning recall.

3.2 Participants

A total of 19Saudi female learners in anintermediate school participated in this studywhose first language was Arabic and aged 13years old. They were divided into twogroups, the caption group (English language) and the subtitles group (Arabic language).Bothgroups were taught the target words through activities before and after viewing sessions. Participants attended 4 sessions including test sessions,almost one hour for each session.According to the Common European Framework of Reference (CEFR) classification, their proficiency level was (A2, B1).

3.3 Test Instruments

Oxford placement test

Pre and post-tests

A questionnaire

3.3.1Oxford Placement Test

The Oxford Placement Testaimed to put responders at the right level while also testing their overall language competence.In this research, all the participants tookan Oxford placement test to measure their proficiency level before starting the treatment.

3.3.2Pre and post-tests

Pre and post-testswere given to the participants to measure their acquiring of new vocabulary(See appendix A).Thisstudy adaptedPujadas& Muñoz's (2019) way of measuring form and meaning recall, they asked the participants to listen to the English word twice and then write it down and provide an L1 translation for it. Writing the English word measures the form recall while providing L1 translation for the word measures the meaning recall. In this study, however,participants were given the first letter of the English word written for them and were also provided with the remaining letters in a box (written cues) in a random organization. Participants had to complete the target word by writing the rest of it after listening three times to the word in English and then they had to provide it with an Arabic translation.

The purpose of choosing this type of testis because Jelani and Boers (2018) stated that tests required to be compatible with the input modality in order to measure the advantages of both captions and subtitles for vocabulary learning, so choosing a type of test that requires only written (target language) word would be in favor of the captions group (Pujadas& Muñoz's, 2019).

Pre and post-tests were identical and measured both form and meaning recall at the same time. For pronunciation of the target words, this study usedthe site(*howjsay.com)*to pronounce the target words correctly.

3.3.3A Questionnaire

One questionnaire adapted from Aloqaili(2014) was conducted after the intervention to collect learners' attitudes towards subtitles and to gather participants' views about the usefulness and the learning value of the sessions.(SeeAppendixB)

3.4Materials

Two episodes of a TV series called *Ghost Writer* were presented to participants for two reasons: first,according to Rodgers and Webb (2011) related television programs including episodes in a series contain lesser word families than unrelated programs, and that word families in the 4000 to 14000 level were much more likely to reappear in a full season of a TV series than in a random selection of television programs. This means that the more episodes of the same television series you watch, the more vocabulary you may acquire from them (Webb and Rodgers, 2009a). Second, the episodes were of a suitable length (24 minutes) for each.

3.5Target Words

Following previous research (Pujadas& Muñoz2019; Suárez and Gesa 2019) this study picked five target words for each session, tenasa total in two sessions, the goal of choosing those target words was based on two reasons. First, less familiarity with the target words by the participants. Second, the frequency of occurrence within the

episode.On this point, frequency impacts in audio-visual input have been investigated extensively in vocabulary studies, and it has been discovered that repeated exposureto unfamiliar words improves learning. (e.g., Rodgers, 2013; Peters et al., 2016; Peters, 2019; Peters and Webb, 2018; Rodgers and Webb, 2020).

For less familiarity, the participants'English teacher was consulted on whether participants were familiar with the target words or notwhilethe researcher checked on their textbook to make sure that those words were not there. For frequency of occurrence,the researcher usedthe feature(find box) inMicrosoft Wordto count the occurrence of the words automatically after the source text was written. The selected words occurred between (2 and 6 times) within the episode, and between(2 and 8 times) within the two episodes, they consisted of nouns, verbs, and adjectives. (See Appendix C)

3.6 Data Collection Procedure

Before the intervention participantswere given a placement test to measure their proficiency level, andthen they weredivided randomly intotwo different groups (captions group and subtitles group). After the division,they were given a pre-test. Next week, (first session)learners were given a pre-viewing activity,the activity was a worksheet containing one question (SeeAppendix D),the question was matching the English word with its definition and after that, their answers were corrected and discussed orally, the reason behind this activity is to introduce the participants with the target words and then make aconnection with those words while watching the video. Then, they were viewed episode one with captions for the captions group or subtitles for the subtitles group, after viewing they wereimmediately given a post activity which is a memory card game that contained the target words(see

AppendixE), according to Nabila and Saun (2018) a memory card game can aid in motivating young learners to acquire vocabulary.The next day, (second session)followedthe same procedures as the first session.In the third week,participants were given a post-test and a short questionnaire(See Table 1).

Table 1*Pedagogical intervention design*

Prior the intervention			**After the intervention**
Week 1	Week 2		Week 3
Oxford placement test, Pre-test	Day 1 Session 1	Day 2 Session 2	Post-test A questionnaire

3.7Validity

This study adapted thequestionnairefrom Aloqaili(2014) and the pre and post-tests from Pujadas& Muñoz (2019). However, some addition was included in the questionnaire and the form recall test section by the researcher to fit the purpose of the research. Two university professors specialized in applied linguistics from King Saud University were consulted on the appropriateness of the overall research methodology. Their instruction and advice were followed and changes were made based on what they believed was suitable.

4.1 Data Analysis

The preand posttests data were collected and entered in Microsoft Excel. The data was analyzed using SPSS version 23 (IBM Corp. Chicago, USA). Categorical variables were presented as frequencies and percentages. Continuous variables were expressed using mean and standard deviations. Students' t-test was used to see the statistically significant differences for continuous variables between thetwo groups. A P-value of ≤0.05 was considered statistically significant.

Results

Table 1 shows descriptive statistics for students' proficiency through the Oxford placement test.When a word was unknown in the pre-test but known in the post-test, it was considered learned. Words that were known in both pre and post tests were regarded known but not learned.Following previous research(Horst, Cobb and Meara 1988; Rodgers 2013; Peters and Webb 2018;Pujadas & Muñoz, 2019) relative gains were calculated using the following formula.

$$\text{Relative gains} = (\text{number of learned words/total number of TIs} - \text{number of known TIs}) \times 100$$

The proficiency level test showed that all the students in the subtitles group and captions group showed relative gains, expect for one student in the captions group with meaning recall [Table 2].

Table 2*Students' proficiency through the Oxford placement test.*

Group	Students	Proficiency	Relative gains (%)			
			Form recall		Meaning recall	
Subtitles group	1	B1	44.44	Mean (SD)= 32.7 (13.0)	55.56	Mean (SD)= 47.8 (14.7)
	2	A2	33.33		50.00	
	3	B1	37.50		70.00	
	4	A2	44.44		60.00	
	5	A2	33.33		60.00	
	6	A2	30.00		20.00	
	7	A2	40.00		50.00	
	8	A2	44.44		33.33	
	9	A2	10.00		40.00	
	10	A2	10.00		40.00	
Captions group	1	A2	10.00	Mean (SD)=42.25 (20.5)	.00	Mean (SD)= 36.6 (20.0)
	2	A2	28.57		40.00	
	3	A2	55.56		10.00	
	4	A2	20.00		40.00	
	5	A2	60.00		50.00	
	6	A2	60.00		50.00	
	7	A2	33.33		30.00	
	8	B1	42.86		60.00	
	9	B1	70.00		50.00	

In the subtitle group, the mean relative gains with form recall were found to be 32.7 (SD 13.0), whereas it was 47.88 ((SD 14.7) with the meaning recall (p=0.240). In the caption group, the mean relative gains with form recall were found to be 42.2 (SD 20.5), whereas it was 36.6 (SD 20.0) with the meaning recall (0.0179). [Figure.1, Table3].

Figure1*Comparison of relative gains between two groups*

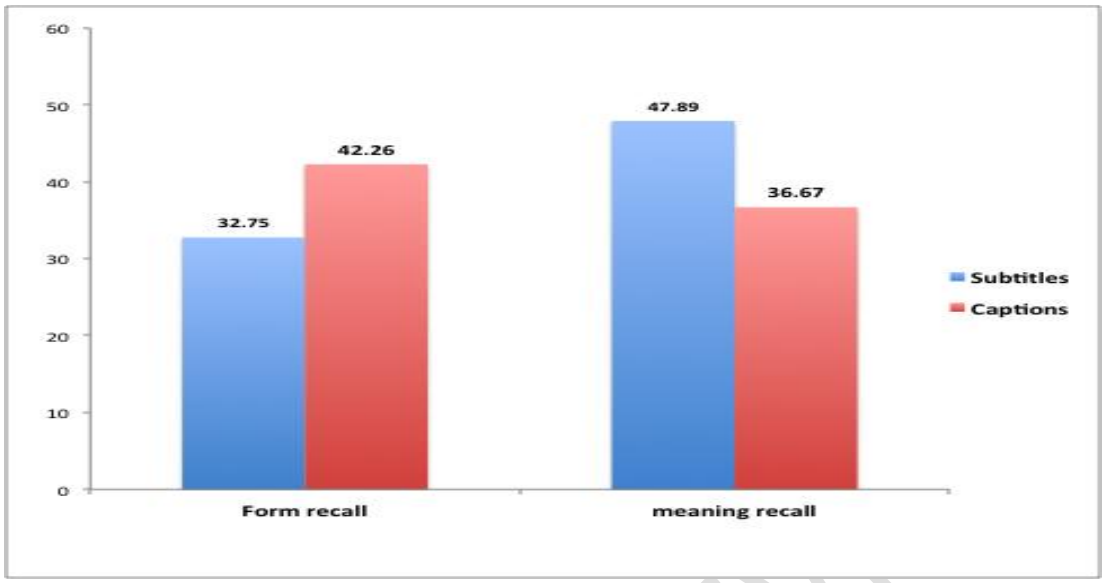


Table 3*Comparison of Relative gains (in percentage) for form recall and meaning recall.*

	GROUP	N	Mean	Std. Deviation	P value
Form recall	Subtitles	10	32.75	13.03	0.240
	Captions	9	42.26	20.55	
	Total	19	37.25	17.22	
Meaning recall	Subtitles	10	47.89	14.77	0.179
	Captions	9	36.67	20.00	
	Total	19	42.57	17.89	

When we compared the relative gains based on the proficiency level, it was found that students who had achieved theB1 level had comparatively more relative gains with form recall and meaning recall in both groups. However, this didn't show any statistically significant differences (p>0.05) [Table4].

Table4*Comparison of relative gains in two groups based on proficiency level*

Groups	Proficiency	N	Mean	Std. Deviation	P value

Subtitles	Form recall	B2	2	40.97	4.91	0.348
		A2	8	30.69	13.81	
	Meaning recall	B2	2	62.78	10.21	0.519
		A2	8	44.17	13.66	
Captions	Form recall	B2	2	56.43	19.19	0.533
		A2	7	38.21	20.39	
	Meaning recall	B2	2	55.00	7.07	0.200
		A2	7	31.43	19.52	

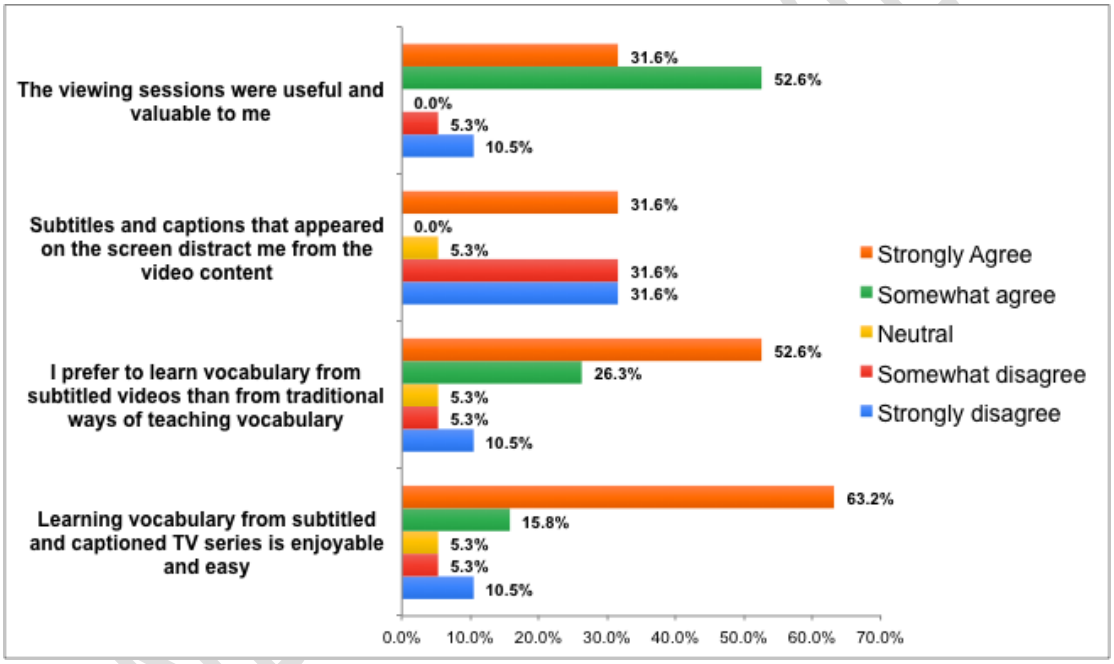
Paired-sample t-tests showed that differences between pre and posttests were significant for both form recall and meaning recall in both subtitle and caption groups ($p<0.001$) [Table5]

Table.5*Comparison of differences between pre and post-test words*

GROUP			Mean	N	Std. Deviation	p value
Subtitles	Pair 1	Pre-test Form recall	0.7	10	0.7	<0.001
		Post-test Form recall	3.7	10	1.6	
	Pair 2	Pre-test meaning recall	0.2	10	0.4	<0.001
		Post-test meaning recall	4.9	10	1.4	
Captions	Pair 1	Pre-test Form recall	0.9	9	1.3	<0.001
		Post-test Form recall	4.8	9	2.0	
	Pair 2	Pre-test meaning recall	0.0	9	0.0	<0.001
		Post-test meaning recall	3.7	9	2.0	

Students' perceptions about learning vocabulary through audiovisual input are illustrated in [Figure 2]. It was agreed by 79% of the students that learning vocabulary from subtitled and captioned TV series is enjoyable and easy, and 78.9% had the opinion that they prefer to learn vocabulary from subtitled videos than from traditional ways of teaching vocabulary. Only 31.6% of the students believed that subtitles and captions on the screen distracted them from the video content, whereas 84.2% agreed that the viewing sessions were useful and valuable [Figure 2].

Figure 2 *Students' perception about learning vocabulary through audiovisual input*



5.1 Discussion

This study investigateshow captioned and subtitled TV series promote vocabulary learning among adolescent EFL Saudi learners in an intermediate school and the factors that affect the acquisition such as proficiency and the type of the on-screen text. Resultsindicated that participants learned vocabulary in both meaning and

form recall with the assistance ofthe audio-visual input. Moreover, the relative gains were larger for more proficient learners than for less proficient learners and that the language appears on the screen has no significant effect on vocabulary learning.

5.1.1 LearningVocabulary through Audio-Visual Input

The exposure of audio-visual input has been proven to be an effective way to learn vocabulary based on the results of the present study, this is in line with many studies in the field that claimed positive effectsfrom audio-visual input in vocabulary learning (e.g., Rogers 2013; Peters and Webb 2018; Pujadas& Muñoz 2019). Additionally, it was found that participants made greater progress in recalling form for the captions group and in recalling meaning for the subtitles group with no substantial differences, this might be rationalized by the focus of the on-screen text during the viewing sessions.

An important factor that might boost learning through audiovisual input is whether learners were pre-taught the target words before viewing or not. Pre-learning difficult terms before seeing audio-visual input could be one way to deal with the presence of unknown vocabulary in the input (Montero Perez, 2019), this suggests that assistance options aimed at assisting learners in dealing with unfamiliar words in the input could be beneficial (Montero Perez, 2019). In the current study,both groups were pre-taught the target words before and after viewing sessions and both of them showedvocabulary gains.

In contrast, some studies have shown that audio-visual input helps learners gain vocabulary without teaching involvement, Puimege and Peters (2019) conducted incidental learning of vocabulary only through the audio-visual materials that exposed learners tocaptioned videos without teaching process and have proven that as a

successful way to learn vocabulary although they believed that some variables factors influence learning such as item-related and learner-related factors.

5.1.2Captions and Subtitles in Learning Vocabulary

In the present study,both groups showedvocabulary gains in terms of both form and meaning recall with no statistically significant difference. This finding indicates that the language of the on-screen text whether English or Arabic had no significant impacton either form or meaning recall,although the captions group outperformed the subtitles group in the form recall while the subtitles group outperformed the captions group in the meaning recall.The absence of statistical distinctions between captions and subtitles groups is consistent with (e.g., Steward and Pertusa 2004; Bravo 2008; Aloqaili 2014; Bisson et al. 2014; Pujadas& Muñoz 2019).

It is worth mentioning that these results do not necessarily mean that the language of the on-screen text is ineffective. Previous studies have shown a great effect of the language of the on-screen text through their findings (e.g., Bianchi and Ciabattoni 2008; Vanderplank 2010; Winke et al. 2010; Taghavi et al., 2012). A possible explanation for such results might come fromseveral reasons such as the duration of the intervention (brief or longitudinal), the audio-visual input type (cartoon, documentary, TV series, movie, short clip), the type of test format, learners' proficiency, and so on.The contradictionsof the results among studies regarding the effectiveness of the language of the on-screen texthave certainly raised the need for more future studies and investigations.

5.1.3 Proficiency in Learning Vocabulary

The results indicate that more proficient learnersacquired more words than less proficient learners in both form and meaning recall, this finding is in line with some studies (e.g.,Bravo 2008;Pujadas& Muñoz 2019; Suarez & Gesa 2019; Teng 2022) who found that in both form and meaning recall learners' proficiency level was substantially connected to vocabulary growth.This proves that more proficient learners are more competent in the vocabulary of the target language than less proficient learners because they have a certain degree of competency that is required to understand the target language while less proficient learners have less processing capability of the target language.

In contrast, studies like(Winke et al. 2013 Lwo and Lin 2014)have shown that less proficient learners benefited more than more proficient learnersfrom the captioned videos. Lwo and Lin (2014) findings showed no substantial difference in learning for more proficient learners, regardless of the sort of captions they viewed however in the case of less proficient learners providing English captions or (Chinese with English) captions were useful for understanding simple sentence structures while complex sentence structures only (Chinese with English) captions had a favorable influence on the proper repetition of the sentences.In this regard, Lwo and Lin (2014) assumed that a less proficient learner is more likely to take in material that they observe selectively,they appear to be unaffected by the presence of excessive information.Katchen (1996) stated that (L1) native captions may be a disadvantage for advanced learners since it is possible to get reliant on them, and they can even slow the learner down by distracting him. Moreover,Mayer (2009) stated that the multimedia principle may apply more effectively to less-knowledge learners than to more-knowledge learners probably because less-knowledge learners need direction in creating referential linkages between depicted and verbal representations.

6.1 Conclusion and Pedagogical Implications

This study scrutinized the impact of watching captioned and subtitled TV shows on vocabulary learning among EFL students in Saudi Arabia. It also examined the impact of the kind of on-screen text (English or Arabic) and proficiency level on vocabulary acquisition.The study findingsproved that the audio-visual input helped learners toacquire vocabulary in both form and meaning recall and that the type of the on-screen text does not affect the acquisition of the words whilelearners' proficiency proved to have a primary influence on learning scores in either form or meaning recall.

The inclusion of audio-visual materials such as TV series, excerpts, documentaries, or movies within EFL classes could help students master and develop new vocabulary not to mention that they offer a fun and engaging learning environment that encourages students to learn more quickly and effectively. Teachers can use them to facilitate students' lack of vocabulary besides their textbooks as they stimulate their curiosity and interest.

6.2Limitations and Recommendations

This research has its own limitations. First, the short duration of the interventionwasdue to the limitation of time and space which reduced the number of viewing sessions to only two sessions while the planned was a full length of a TV series.This also caused the post-test to be conducted in the next week which mighthave unguaranteed results as the participants were still retaining the effect of the sessions and the pre-test and therefore inaccurate results. Second, the small number of the participants who participated in the experiment were the only available while the plan was to follow previous research which might give more accurate results.Third, this study focused only on female learners due to the Saudi separation system in education, it is unclear if the gender of the participants might make any difference in the results.

Future research may investigate a full length of a TV series which takes alonger duration and gives more exact results.Future research should also consider the effect of retention through delaying the post-test.

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List 1

Students' proficiency through the Oxford placement test.

Group	Students	Proficiency	Relative gains (%)			
			Form recall		Meaning recall	
Subtitles group	1	B1	44.44	Mean (SD)= 32.7 (13.0)	55.56	Mean (SD)= 47.8 (14.7)
	2	A2	33.33		50.00	
	3	B1	37.50		70.00	
	4	A2	44.44		60.00	
	5	A2	33.33		60.00	
	6	A2	30.00		20.00	
	7	A2	40.00		50.00	
	8	A2	44.44		33.33	
	9	A2	10.00		40.00	
	10	A2	10.00		40.00	

Captions group	1	A2	10.00	Mean (SD)=42.25 (20.5)	.00	Mean (SD)= 36.6 (20.0)
	2	A2	28.57		40.00	
	3	A2	55.56		10.00	
	4	A2	20.00		40.00	
	5	A2	60.00		50.00	
	6	A2	60.00		50.00	
	7	A2	33.33		30.00	
	8	B1	42.86		60.00	
	9	B1	70.00		50.00	

List 2 :*Comparison of Relative gains (in percentage) for form recall and meaning recall.*

	GROUP	N	Mean	Std. Deviation	P value
Form recall	Subtitles	10	32.75	13.03	0.240
	Captions	9	42.26	20.55	
	Total	19	37.25	17.22	
Meaning recall	Subtitles	10	47.89	14.77	0.179
	Captions	9	36.67	20.00	
	Total	19	42.57	17.89	

List 3 :*Comparison of relative gains in two groups based on proficiency level*

Groups		Proficiency	N	Mean	Std. Deviation	P value
Subtitles	Form recall	B2	2	40.97	4.91	0.348

		A2	8	30.69	13.81	
	Meaning recall	B2	2	62.78	10.21	0.519
		A2	8	44.17	13.66	
Captions	Form recall	B2	2	56.43	19.19	0.533
		A2	7	38.21	20.39	
	Meaning recall	B2	2	55.00	7.07	0.200
		A2	7	31.43	19.52	

List 4 :

Comparison of differences between pre and post-test words

GROUP			Mean	N	Std. Deviation	p value
Subtitles	Pair 1	Pre-test Form recall	0.7	10	0.7	<0.001
		Post-test Form recall	3.7	10	1.6	
	Pair 2	Pre-test meaning recall	0.2	10	0.4	<0.001
		Post-test meaning recall	4.9	10	1.4	
Captions	Pair 1	Pre-test Form recall	0.9	9	1.3	<0.001
		Post-test Form recall	4.8	9	2.0	
	Pair 2	Pre-test meaning recall	0.0	9	0.0	<0.001
		Post-test meaning recall	3.7	9	2.0	

List 5 :

Pedagogical intervention design

Prior the intervention			**After the intervention**
Week 1	Week 2		Week 3
Oxford placement test, Pre-test	Day 1 Session 1	Day 2 Session 2	Post-test A questionnaire

Appendices:

Appendix (A): Pre and Post-tests (Form recall and meaning recall):

Listen carefully and complete the word in the English section and then provide an Arabic translation in the Arabic section. Use the (box letter) in the English section.

Form recall (English)	**Meaning recall (Arabic)**
e,i 1- P……	
o,p,u 2- S……..	
t,u,r 3-H……..	
t,d,e,e,s,s,r 4-S……	
k,t,e,o,c 5-P……	
i, g,n,o,r 6-B……..	
t,e,r,g,a,n 7-S…….	

u,p,s,e,d,n 8-S……..	
b,u,o,e,r,l 9-T……	
y,r,e,y,s,t 10-M……	

Appendix (B):A survey questionnaire: Likert scale (from 1-5):

How much do you agree with these statements regarding subtitles and captions and their usefulness and value?	**1 = Strongly agree** **2 = Somewhat disagree** **3 = Neutral** **4 = Somewhat agree** **5 = Strongly agree**
1. Learning vocabulary from subtitled and captioned TV series is enjoyable and easy.	1 2 3 4 5
2. I prefer to learn vocabulary from subtitled videos than from traditional ways of teaching vocabulary.	1 2 3 4 5
3. Subtitles and captions that appeared on the screen distract me from the video content.	1 2 3 4 5
4. The viewing sessions were useful and valuable to me.	1 2 3 4 5

Episode 1				Episode 2			
Word	Frequency of occurrence	Frequency throughout the two episodes	PoS	Word	Frequency of occurrence	Frequency throughout the two episodes	PoS
Pie	3	3	N	Boring	6	6	Adj
Soup	6	7	N	Strange	4	4	Adj
Hurt	5	8	V	Suspend	4	4	V
Stressed	4	4	Adj	Trouble	4	4	N
Pocket	2	2	N	Mystery	3	3	N

Appendix (C): Target words

Appendix (D):

Pre-activity: Match the word in column A with its definition in column B.

Session 1

Column A	Column B
A. Pie	1. "A hot liquid food that often has pieces of meat or vegetables in it"
B. Soup	2. "So worried and tired that you cannot relax"
C. Hurt	3. "A small bag sewn into or onto shirts, coats, pants, or skirts, that you can put keys, money, etc. in"
D. Stressed	4. "To feel pain or cause pain in a part of your body"
E. Pocket	5. "A food usually made with fruit baked inside a covering of PASTRY"

Session 2

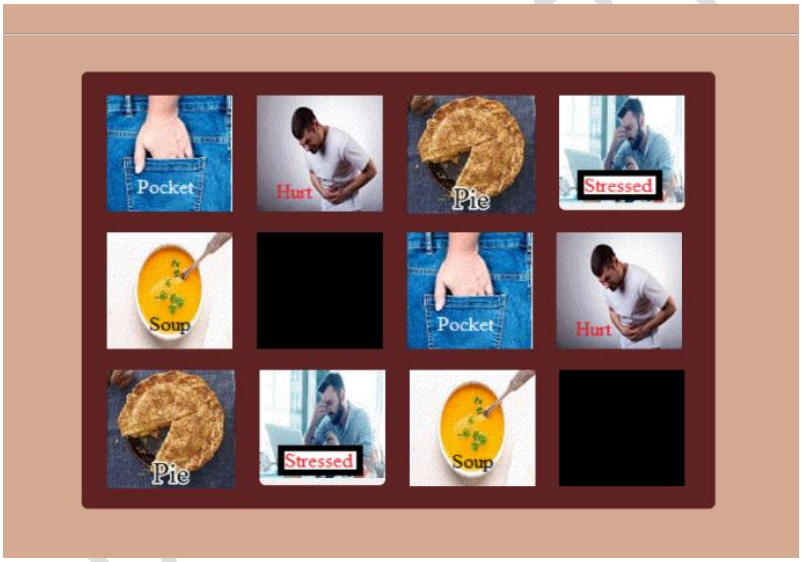
Word	Definition
A. Boring	1. "To officially stop someone from working, driving, or going to school for a fixed period, because s/he has broken the rules"
B. Strange	2. "Problems that make something difficult, make you worry, spoil your plans, etc"
C. Suspend	3. "Something that is difficult to explain or understand"
D. Trouble	4. "Not familiar"
E. Mystery	5. "Not interesting in any way"

Appendix (E):

*Post activity:*Memory card game: Match the English words together:

Session 1

Link: http://rehabsaadalmalki-com.preview-domain.com/



Session 2

Link: https://childrenshospital.tech/