The Effect of Podcasts and Vodcasts Among Motivated Iranian Learners of English: Different Listening Proficiency Levels

Research Article

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Abstract
These days, technology is an inseparable part of our lives. There is still comparatively little research into effective podcast or vodcast design and students' perceptions and attitudes towards this method. In the present study, the purpose is to clarify the impact of podcasts and vodcasts on motivated learners' improvement in listening skills. The researchers used purposive sampling, and learners were divided into control and experimental groups. To this end, a validated version of a questionnaire that shows the degree of interest in improving listening skills was used to select a good number of motivated learners. Among the selected learners,

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250 intermediate and advanced learners aged 18-35 who were studying English as a foreign language in Ayandegera Institute in 2020 were asked to fill out two questionnaires. Among 60 podcast files and 50 vodcast files, 10 podcasts and 10 vodcasts were chosen according to content validity ratio (CVR) and content validity index (CVI) (0.42, 0.79) formula. The design of the study was experimental. In the current study, descriptive statistics and ANCOVA tests were applied in the analysis of the quantitative data. It was implied that there was a significant difference between the pre-test and post-test scores of the experimental group in both podcast and vodcast groups, whereas there was little significant difference between the pre-test and post-test scores of the control group. Also, the findings showed that there was no significant difference between listening to podcasts and watching vodcasts.

Keywords: listening skill, podcast, teaching English, technology, vodcast

Introduction

Motivation is one of the most significant notions in psychology and language teaching (Hauze & Marshall, 2020). Teachers and students mostly apply the term to describe what causes success or failure in learning (Calderón et al., 2020). In fact, language learners require the motivation to present primary impetus to begin L2 learning and later the driving force to support the long and often lengthy process (Liu et al., 2020).

Traditionally, psychologists have more incentive to think what motivation is and how we can manage it to motivate learners (Yu, & Lee, 2020). Recently, however, more and more scholars have adopted to explore the educational implications of research by intellectualizing motivational methods (Abdeddaïm et al., 2006, Dörnyei, 2001; Yu, & Lee, 2020).

Thus, motivational research has reached the stage of maturity where theoretical advances have played a role in methodological advances (Outakoski et al., 2019). Sattar et al. (2020) suggest that future research should evaluate the ability to teach motivational strategies in general and to examine specific methods that can be used in particular. Thus, Madrid (2002) examined one of the most powerful motivational strategies among 19 different motivational strategies, based on the students and teachers' perception of the use of audiovisual resources and modern technologies. In this regard, the podcast as a recently advanced technology in the field of computer- assistant language learning and mobile assisted language learning is one of the favorable innovations that as an educational device can help in higher levels of motivation and language development in English learners in general, and EFL learners of English, in particular (Chaudhuri, 2020; Ramírez-Verdugo, 2016).

Accordingly, as discussed by Rukthong and Brunfaut (2020), learning through listening is one of the most important educational features provided by the podcast. For many people, listening may be more engaging and less tedious than reading. Therefore, in this study, those learners who were interested in

improving their listening skills were chosen to facilitate the process of the study. It is known that human beings for thousands of years in the learning process have used listening as the main way (Lipetz et al., 2020). Listening may motivate learners who do not like reading. According to Kotaman (2020), Macdiarmid et al. (2020), and Martínez (2019), ELT podcasts are especially suitable for extensive listening, to motivate learners' enthusiasm to listen in English, and to encounter them in the speech of native speakers. One of the difficulties in the foreign language educational context seems to be related to the approaches employed in the classrooms. To use any language approaches, language teachers need to be familiar with learners and teachers' problems in using educational technologies (Taghizadeh & Yourdshahi, 2020).

Learners may show inappropriate responses to the interlocutors in different discourse situations. Speakers of a foreign language are not truly successful until the intended meaning they convey is understood by listeners.

Basically this is why most foreign language teachers often do not include this part of the English language due to lack of time, knowledge and awareness of the importance of using it in daily life (Castillo & Eduardo, 2009).

In this study, the aim of the research was to investigate the impact of podcasts and vodcasts among motivated EFL learners of English listening skills at different levels.

Research Questions

The following research questions led to the course of the present study:

1- *Does the application of podcasts significantly affect motivated learners' improvement in listening skills?*
2- *Does the application of vodcast significantly affect motivated learners' improvement in listening skills?*
3- *Is there any significant difference between listening to podcasts and watching vodcasts in their impact on motivated learners' improvement in the listening skill?*
4- *Is there any significant difference between the improvement of Intermediate learners or Advanced learners in their listening skills?*

Literature Review

Listening Comprehension

Listening skill is considered as the most frequently used skill in language learning. Efficient communication needs professional listening skills and understanding the spoken form of the language. A lot of studies (Hasan & Hoon, 2012; Hegelheimer & O'Bryan, 2007a; Kavaliauskienė, 2008; Sze, 2006) indicate the effectiveness of podcasts in some language skills, especially in listening comprehension. One of the main purposes of podcasting is the im-

provement of listening because it contains various audio and video files of authentic resources that are available on the internet (Abdous et al., 2012; Lim & Bang, 2018).

The use of listening to podcasts became limited to class lectures and made them accessible on the internet for later review. Listening to podcasts provides a great opportunity to improve the grammar and listening skills simultaneously and it can motivate the learners of the class inside and outside the classroom context. Listening to podcasts provides a situation to listen to various types of voices and brings varieties of English to the classroom (Hegelheimer & O'Bryan, 2007b).

Such listening activities bridge the gap between informal listening form which focuses on real-life communication and formal listening skill. Using podcasts causes listeners to use them to develop their listening abilities and their learning capabilities in general (Abdeddaim, 2013).

Podcasting

Podcasts are a new way to play audio files on the Internet and provide users with many possibilities. What distinguishes podcasts from previous models of Internet publishing is the ease of production, publishing, download capability and so on. They are often uploaded or downloaded; these sound records aid the learner to acquaint with the foreign language and instructors can apply them as valuable audio material that will be exploited in and out of class for activities like pronunciation. Also, there are even special podcasts for ESL learners that can fit pronunciation to the actual needs of researchers. The podcast will help students learn listening skills. Podcasting is the combination of sound records where we will give our resources and play it inside and out-of-doors of the classroom (Hegelheimer & O'Bryan, 2007a). Learners use i-pods to listen to their desired music files. Podcasting permits learners to use their tech-based entertainment systems for instructive goals. They are a new technology that finds its own users and is used for a variety of purposes, but the use of podcasts is not limited to personal use, and this new media feature quickly spread to other areas. Podcasts have grown exponentially around the world, and in less than a year, they have become so ubiquitous that the term podcast found its way into Oxford Dictionary in 2005, although it was used in 2004 for the first time (Bahadorfar & Omidvar, 2014).

Motivation

In the area of foreign/second language learning (L2), motivation has long been distinguished as one of the key determinants of L2 achievement and attainment (Owens et al., 2020). Motivation serves as the primary drive to generate learning and later acts as a function in acquiring a foreign language. One can fairly claim that without enough incentive, even the smartest learners are doubtful to master higher levels of L2 proficiency (Hawke, 2010). Given this crucial im-

portance, L2 motivation has been the subject of much research in recent decades. In this regard, L2 motivation research from a macro perspective (Gardner's sociocultural tradition, 1988) has shifted to more specific and process-oriented approaches (Kormos & Dörnyei, 2004).

Technology in Language Teaching

Educators need to recognize the importance of technology in the classroom context. Technologies can be included in classrooms setting in various ways and for various purposes. One of these technologies which is available for English learners through the world is podcasting. It is one of the newest technologies in the last century. Podcasting mentions writing or subscribing to audio and video files that can be taken and played on an extensive variety of mobile devices, such as MP3 players and iPods (Cain, 2020). Nowadays, technologies are the main and prominent part of language learning in the world for different levels. Technology can be used as an effective way of teaching and learning for English language learners (Chapelle, 2003).

There are different new technologies that assist to improve language learning among students. Some of these online technologies are electronic dictionaries, websites, presentation software, email messaging programs, computer-assisted language learning programs, chatting, listening CD-players and learning video-clips for English language learning (Nomass, 2013). As technology plays a vital role in the world, utilizing multimedia to make a context to teach English has its distinctive benefits (Al-Atabi & Alsalihi, 2020; Chen & Chung, 2008).

Ashton- Hay argued that the use of audio and video online is not new but providing stand-alone items for accessible independents learning is an innovation (as cited in Rosell- Aguilar 2007).

However, they indicate that there is a correlation between teaching pragmatic elements with technologies. The previous studies show great opportunities to increase the level of pragmatic competence with podcasting, too. The role of the traditional teachers has been changed by using technology in recent years. For example, technology makes teaching interesting, productive, and easy to learn the language elements (Yamazaki, 2019).

Technology indicates the change of social and linguistic aspects of learning a second or foreign language. It affects education and culture and provides the visual and auditory sense for the learners (Sharif, 2020). By the growth of people of those who want to learn English for various purposes through the world, the effectiveness of teaching materials become extended. Although many learners may be encountered with the traditional method of teaching, it is not meant that the traditional methods are damaging and useless. Technologies in the modern century make the language learners to be more interested and encouraged to learn various languages. It will help language learners gain confidence and extend themselves (Parrish, 2020).

With the quick advancement of science and technology, the emergence and development of multimedia technology and its usage in teaching, including sound, video, animation outcomes in English class teaching provide a good platform for modification and exploration in English teaching in the new period. The various technological tools can be used by language learners, but each one has its own techniques and application for different parts of language skills (speaking, reading, writing, and listening). Kavaliauskienė, (2008) and Sharma (2009) mentioned that there is a relationship between educational technologies and English language education.

Method

Participants

The participants were Iranian English foreign language learners learning at Ayandegera Institute, in Zanjan, Iran. Participants were chosen among both females and males, approximately aged from 18 to 35. They were selected among the learners who had been located at the Intermediate and Advanced levels based on Oxford Quick Placement test that the researchers used to have learners in the intermediate and advanced levels.

According to Ayandegera institute, there were about 400 learners; based on the Morgan's table (95% confidence, 5.0% error), 196 learners were needed for this study as a statistical society. The questionnaires of motivation named English Listening Comprehension Motivation Scale (ELCMS) developed by Hsu (2006) from Chang's Intrinsic Motivation Orientation Scale was given to 250 learners at the intermediate and advanced levels. The process of choosing the statistical society was purposive sampling.

From 250 learners, 196 were chosen as motivated learners in improving listening skill. As the researchers had 17 items for the listening questionnaire, 17 items were multiplied by 4 (68) and due to choosing the "motivated" and "very motivated" learners in this research, 4 groups were selected. Then, researchers added the whole scores in the listening questionnaire if the result was higher or equal to 68, it showed that the learner was motivated to improve his/her listening skill through podcasts. If the result of the sum of the points in the questionnaire was less than 68, the learner was not recognized as motivated and was omitted. The researchers have worked on learners who were interested in improving their listening skills.

After choosing 196 motivated learners, researchers divided them into two groups: an experimental group and a control group. In order to evaluate the differences between the effect of podcast and vodcast on the learners' listening skill, it was needed to separate podcast and vodcast groups. Thus, the experimental group was divided into two groups: a podcast group and a vodcast group. The number of learners in the podcast group was the same as the number of learners in the vodcast group and both had 65 members. The control group contained 66 learners. In the podcast group, the researchers had 30 male learners and 35 female learners. In the vodcast group, there were 26

male learners and 39 female learners. The control group contained 26 male learners and 40 female participants.

Table 1
Number of Motivated and Unmotivated Learners in Listening

Listening1

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	0	38	15.2	15.2	15.2
	1	212	84.8	84.8	100.0
	Total	250	100.0	100.0	

Instrumentation

Multiple data collection methods were used to obtain comprehensive and useful data and also to increase the validity of the findings. The instruments are mentioned below:

Oxford Quick Placement Test. To elicit the information about the students' proficiency, and to get the homogeneous group, Oxford Quick Placement Test was used in the following rating method:

- 1-17 Beginner
- 18-27 Elementary
- 28-36 Lower-intermediate
- 37-47 Upper-intermediate
- 48-55 Advanced
- 56-60 Very advanced

English Listening Comprehension Motivation Scale Questionnaire. A questionnaire of the English Listening Comprehension Motivation Scale (ELCMS was applied to evaluate the level of motivation of learners to practice understanding English listening comprehension. The items utilized in the ELCMS were expanded from Chang's Intrinsic Motivation Orientation Scale (2001). This scale consisted of 17 statements, and these 17 statements were scored on a five-point Likert Scale, ranging from strongly disagree = 1 to strongly agree = 5, and each statement scored out of 5. ELCMS was administrated at the beginning of the study to the learners of Intermediate and Advanced levels of proficiency in order to choose EFL learners who were motivated to improve their listening skill.

Pre-Test. Pre-tests were used to check the current level of chosen learners in their listening skills. One listening task was used as a pre-test to have the learners listening scores before giving them the podcast files.

The pre-test of listening skill was chosen from Official Examination Papers from University of Cambridge TESOL Examinations, IELTS 8, test 1 (2011). The test contains four sections and the range of the scores is 1-9. The higher the scores, the better the learners' listening skills.

After the learners took the pre-test, the researcher and the supervisor of the study checked the learners' scores according to IELTS rubrics. For listening, the scores band was used as follows:

The IELTS Listening test comprises 40 questions. Each correct answer is given one mark. Scores out of 40 are changed to the IELTS nine-band scale. Scores were reported in whole and half bands. The table below shows the listening scores band:

Table 2
IELTS Listening Score Band

Band Score	Raw Score Out of 40
5	16
6	23
7	30
8	35

In order to have the validity of what the researchers had done, two authorized teachers checked the correction of the researcher

and the supervisor's scoring. Here is the result:

Table 3
Comparison of the Scores of Two Raters in Listening Pre-Test and Post-Test of Both Control and Experimental Groups

		Raters	Mean	Std Deviation	Variance	T test. sig	Pearson Product Moment Correlation
Podcast group	Listening pre	Raters1 Raters2	6.15 5.86	1.86 1.71	3.44 2.91	0.404	0.950**
	Listening post	Raters1 Raters2	6.72 6.68	1.73 1.64	3.01 2.68	0.917	0.962**
Vodcast group	Listening pre	Raters1 Raters2	6.24 6.12	1.77 1.62	3.13 2.63	0.680	0.968**
	Listening post	Raters1 Raters2	6.85 6.77	1.65 1.55	2.71 2.42	0.785	0.952**
Control group	Listening pre	Raters2 Raters1	6.11 5.962	1.76 1.65	3.098 2.710	0.621	0.941**
	Listening post	Raters2 Raters2	6.16 6.04	1.81 1.80	3.270 3.241	0.661	0.980**

This table shows the mean and standard deviation of the listening scores in pre-test and post-test in the podcast, vodcast, and control groups by two correctors. T-test was used to compare the scores and the results of this test showed that there was no significant difference between the scores of two correctors in the control group and experimental groups (Sig > 0.05). The Pearson correlation test showed that the scores of two correctors in both control and experimental groups and in pre-test and post-test exams had a high correlation with each other (Sig > 0.05).

Post-Test. Post-tests were used to check the learner's listening level of proficiency after listening to podcast files and watching vodcast files. One listening task was used as a post-test and these tests' level of difficulty was the same as the pre-tests' level of difficulty.

The post-test of listening skill was chosen from Official Examination Papers from University of Cambridge ESOL Examinations, IELTS 8, test 2. As a post-test, the test contains four sections and the range of the scores is 1-9. The higher the scores, the better the listening skill, and the differences in scores indicated the differences in the learners' level of proficiency. The scores of the post-test were examined by the researcher and her supervisor and two authorized teachers checked the accuracy of the scores. The score band in the post-test was exactly the same as the pre-test.

Podcasting and Vodcasting. The podcasts of this study were 10 audio files and 10 video files. These files were chosen by Lawsh CVR and CVI formula. Among 60 podcast files and 50 vodcast files, 6 authorized teachers voted for choosing the best files. According to the formula which is mentioned below, 10 audio files and 10 video files were chosen by the teachers and the researcher gave the files as the treatment to the experimental group. Podcasts were given to the first part of the experimental group and vodcasts were given to the second part of the experimental group.

The podcast file was downloaded from www.ESLPod.com. All the content of the listening podcasts was somewhat similar to the content of the institute textbook, as it included reading material as well as introductions with many idioms and idioms in each lesson followed by an explanation in audio format.

In accordance with the Lawsh CVR, an item should get a CVR of higher than 0.42 to be validated. Then CVI of the words was estimated applying Waltz and Bausell (1981) formula. It should be stated that the acceptable index of CVI equals 0.79 and if there is an item with a CVI less than 0.79, the item should be deleted.

$$CVI = \frac{\text{Number of experts who scored items 3 or 4}}{\text{Total number of experts}}$$

$$CVR = \frac{(Ne - N/2)}{N-2}$$

N_e = Number of experts who voted for the item N = Total number of authorized teachers

Table 4
Content Validity Ration of Podcasts According to Lawsh Formula

Podcast Files	Number of experts (N_e)	CVR	Validity
1	6	1	Valid
2	5	0.6	Valid
3	3	0	Invalid
4	2	-0.3	Invalid
5	2	-0.3	Invalid
6	3	0	Invalid
7	4	0.3	Invalid
8	4	0.3	Invalid
9	2	-0.3	Invalid
10	3	0	Invalid
11	1	-0.6	Invalid
12	5	0.6	Valid
13	2	-0.3	Invalid
14	3	0	Invalid
15	3	0	Invalid
16	4	0.3	Invalid
17	2	-0.3	Invalid
18	6	1	Valid
19	4	0.3	Invalid
20	1	-0.6	Invalid
21	3	0	Invalid
22	5	0.6	Valid
23	3	0	Invalid
24	5	0.6	Valid
25	3	0	Invalid
26	4	0.3	Invalid
27	4	0.3	Invalid
28	4	0.3	Invalid
29	3	0	Invalid
30	2	-0.3	Invalid
31	2	-0.3	Invalid
32	3	0	Invalid
33	1	-0.6	Invalid
34	5	0.6	Valid
35	3	0	Invalid
36	4	0.3	Invalid
37	2	-0.3	Invalid
38	2	-0.3	Invalid
39	2	-0.3	Invalid
40	1	-0.6	Invalid
41	4	0.3	Invalid
42	3	0	Invalid
43	1	-0.6	Invalid

Podcast Files	Number of experts (N_e)	CVR	Validity
44	3	0	Invalid
45	3	0	Invalid
46	1	-0.6	Invalid
47	4	0.3	Invalid
48	5	0.6	Valid
49	4	0.3	Invalid
50	3	0	Invalid
51	2	-0.3	Invalid
52	1	-0.6	Invalid
53	5	0.6	Valid
54	3	0	Invalid
55	1	-0.6	Invalid
56	3	0	Invalid
57	5	0.6	Valid
58	4	0.3	Invalid
59	1	-0.6	Invalid
60	4	0.3	Invalid

Table 5
Content Validity Ratio of Vodcasts According to Lawsh's Formula

Podcast Files	Number of experts (N_e)	CVR	Validity
1	6	1	Valid
2	3	0	Invalid
3	2	-0.3	Invalid
4	2	-0.3	Invalid
5	4	0.3	Invalid
6	3	0	Invalid
7	5	0.6	Valid
8	2	-0.3	Invalid
9	3	0	Invalid
10	3	0	Invalid
11	4	0.3	Invalid
12	2	-0.3	Invalid
13	4	0.3	Invalid
14	3	0	Invalid
15	3	0	Invalid
16	3	0	Invalid
17	4	0.3	Invalid
18	2	-0.3	Invalid
19	5	0.6	Valid
20	3	0	Invalid
21	2	-0.3	Invalid
22	4	0.3	Invalid
23	3	0	Invalid
24	3	0	Invalid
25	4	0.3	Invalid
26	4	0.3	Invalid
27	3	0	Invalid
28	4	0.3	Invalid
29	2	-0.3	Invalid
30	2	-0.3	Invalid
31	5	0.6	Valid
32	3	0	Invalid
33	1	-0.6	Invalid

Podcast Files	Number of experts (N_e)	CVR	Validity
34	3	0	Invalid
35	1	-0.6	Invalid
36	6	1	Valid
37	5	0.6	Valid
38	2	-0.3	Invalid
39	2	-0.3	Invalid
40	2	-0.3	Invalid
41	2	-0.3	Invalid
42	3	0	Invalid
43	1	-0.6	Invalid
44	6	1	Valid
45	6	1	Valid
46	1	-0.6	Invalid
47	3	0	Invalid
48	5	0.6	Valid
49	3	0	Invalid
50	5	0.6	Valid

Procedure

Oxford Proficiency Test was given to the learners who had been accepted in an intermediate or advanced level chosen to be in the sample size. The first questionnaire was Chang's Intrinsic Motivation Orientation Scale and the second questionnaire was designed by the researchers. The design process was that 30 items were written and out of these 30 items, 6 authorized teachers chose 16 items as valid according to Lawsh CVR and CVI formula. The learners who were motivated in improving their listening skills were chosen as the sample of the study. Motivated learners were divided into three groups. The first group was the podcast group. Thus, podcast files were given to the learners of this group. The number of learners in the podcast group was 65. The second group was the vodcast group. Learners in this group were given the vodcast files and the number of them was 65 as well. In the third group, namely, the control group, learners did not have access to any podcast or vodcast files, and they only attended the institute's regular classes.

Design of the Study

The design of this research was experimental. In the current study, a pre-test and a post-test (podcast group, vodcast group, and control group) were used for all three groups. The main independent variables were podcasts, vodcasts, and motivation and the dependent variable was listening skill.

Data Analysis

To analyze the data gathered from these members, SPSS 22 software was used. Afterward, one-sample Kolmogorov-Smirnov tests, Bar Charts, and histograms were run in order to check the distribution of the data for normality and

to see whether the hypotheses required for ANCOVA tests were met. The researchers conducted a pre-test and a post-test for all three groups. The control group did not receive any podcasts and vodcasts, but the experimental group which was divided into two groups, i.e. a podcast group and a vodcast group, received the files. This separation was aimed to compare the results of both groups in order to understand the impact of the podcast and the effect of vodcast separately on the learners' listening skills. Learners in the experimental group received podcasts and vodcast files for one month.

Results

Podcast Descriptive Indicators

Descriptive indices related to the scores of variables in the podcast experiment group were calculated and the results are presented in Table 6.

Table 6
Distribution Statistics of Variables in Podcast Group, Vodcast Group & Control Group

		N	Mean	Std. Deviation	Minimum	Maximum
podcast group	Listening pre	65	6.15	1.86	2.00	9.00
	Listening post	65	6.72	1.73	2.50	9.00
vodcast group	Listening pre	65	6.24	1.77	2.00	9.00
	Listening post	65	6.85	1.65	3.00	9.00
Control group	Listening pre	66	6.11	1.76	1.50	9.00
	Listening post	66	6.16	1.81	2.50	9.00

Table 6 shows the listening scores in the podcast and vodcast in the experimental and the control groups. According to the results of the table, the average listening scores in the post-test of the podcast and vodcast experimental groups increased but did not change in the control group.

Table 7
One-Sample Kolmogorov-Smirnov Test Output to Check the Normality of Podcast, Vodcast (Experimental) & Control Groups

	Variable	Kolmogorov-Smirnov Z	Asymp. Sig. (2-tailed)
Podcast Group	Listening pre	1.04	0.23
	Listening post	1.13	0.16
Vodcast Group	Listening pre	1.15	0.14
	Listening post	1.15	0.14
Control Group	Listening pre	1.15	0.15
	Listening post	1.32	0.06

Given the values of Sig in table 8 which are higher than 0.05, the null hypothesis meant that the variables in questions are normal.

Homogeneity of Variances. Subjects should be homogeneous in terms of variance. In this study, the Levene test was used to investigate the homogeneity of the variance, the results are presented in Table 8.

Table 8
Test of Homogeneity of Variances Between the Control and Experimental Groups in Pre-Test

group		Levene Statistic	df1	df2	Sig.
podcast	Listening pre	0.24	1.00	129.00	0.62
	Listening post	1.99	1.00	129.00	0.16
vodcast	Listening pre	0.04	1.00	129.00	0.84
	Listening post	0.40	1.00	129.00	0.53

Given the values of Sig in Table 8 which are higher than 0.05, the null hypothesis meant that the homogeneity of variances is accepted at the significant level of 0.05, and thus the hypothesis of homogeneity of the variance in the pretest group is accepted at 5% error level.

Homogeneity of Regression Slope. To check the homogeneity of the regression slope, the researchers needed to compute the F value of the interaction between the covariate and the independent variable, if this index is not significant (Sig > 0.05), this default is met. The outcomes of the study are as follows:

Table 9
Regression Slope Homogeneity Test Between the Covariate and Independent Variables of the Podcast and Vodcast

Source	F	Sig.	Conclusion
group * Listening pre	2.89	0.07	verify the regression slope homogeneity
group * Listening pre	3.09	0.06	verify the regression slope homogeneity

Given the values of Sig in table 9 which are higher than 0.05, the null hypothesis meant the homogeneous slope of the regression line between the covariate and independent variables was at the significance level.

The Linearity of the Correlation Between the Covariate Variable and the Independent Variable. One of the presuppositions of using ANCOVA test is that the pre-test variable (covariate) and the independent variable must be linearly related to each other.

To check the linearity of the correlation of the independent and the covariate, the researchers need to calculate the F of the correlation variable. If this index is significant, this hypothesis is respected. The results of the survey are as follows:

Table 10
The Test of Linearity of the Correlation of the Independent and the Dependent Variable in the Podcast Group

Group	Source	F	Sig.	Conclusion
Podcast Group	Listening pre	1027.40	0.000	linear correlation between the covariate and the independent variable
Vodcast Group	Listening pre	1135.1	0.000	linear correlation between the covariate and the independent variable

Given the values of Sig in Table 10 which are less than 0.05, it means the hypothesis of a linear correlation between the covariate and the independent variable is at the significance level.

Testing Research Hypotheses

Hypothesis 1: Listening to Podcasts has a Significant Effect on Improving Listening Skills. Covariance analysis was used to test the above hypothesis. As noted, the hypothesis required for the analysis of covariance was examined.

According to the above hypothesis, the hypothesis is as follows:

H0: There is no significant difference between listening to podcasts and watching vodcasts in their effect on the learners' listening skills.

H1: There is a significant difference between listening to podcasts and watching vodcasts in their effect on the learners' listening skills.

The results of the analysis of covariance are listed in the following tables:

Table 11
The Result of Covariance Analysis to Examine the Improvement of Listening Skill by Podcast

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	370.32	2	185.16	528.16	.000
Intercept	6.17	1	6.17	17.59	.000
Motivation pre	360.19	1	360.19	1.03E3	.000
group	9.07	1	9.07	25.87	.000
Error	44.87	128	0.35		
Total	5840.00	131			
Corrected Total	415.20	130			

As shown in Table 11, the value of F in the analysis of covariance for the listening improvement by podcasts variable is 25.87 and since Sig = 0.000 is less than 0.05, it is significant at the 0.05 level and assuming no effect of listening improvement through listening to podcasts is rejected. Thus, it can be said that

the means of the two groups on the post-test after adjusting for pre-test scores are significantly different. As displayed in the previous tables, the mean score of listening in the control group was 6.11 in the pre-test and 6.15 in the post-test, while the mean score of listening in the podcast group (experimental group) in the pre-test was 6.14 and 6.71 in the post-test. Considering the significant difference between the post-test scores in the two control and experimental groups, it shows that by removing the pre-test co-factor, listening to the podcast increases the power of listening skills.

Hypothesis 2: Watching Vodcasts has a Significant Effect on Improving Listening Skills. Covariance analysis was used to test the above hypothesis. As noted, the hypothesis required for the analysis of covariance was examined.

According to the above hypothesis, the hypothesis is as follows:

H0: There is no significant difference between the Intermediate and Advanced learners in their watching vodcasts.

H1: There is a significant difference between the Intermediate and Advanced learners in their watching vodcast. The outcomes of the analysis of covariance are listed in the following tables:

Table 12
The Result of Covariance Analysis to Examine the Improvement of Listening Skill by Vodcasts

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	362.38	2	181.19	592.84	**.000**
Intercept	5.65	1	5.65	18.48	**.000**
Motivation pre	346.92	1	346.92	1.13E3	**.000**
group	10.67	1	10.67	34.89	**.000**
Error	39.12	128	0.31		
Total	5936.15	131			
Corrected Total	401.50	130			

As shown in Table 12, the value of F in the covariance analysis for the listening improvement variable is 34.89 and since Sig = 0.000 is less than 0.05, it is significant at the 0.05 level and it is rejected that there was no effect of listening improvement through watching vodcast. Thus, it can be concluded that the mean of two groups in the post-test after adjusting the pre-test scores is significantly different. As shown in the previous tables, the mean score of listening in the control group was 6.11 in the pre-test and 6.15 in the post-test, while the mean score of listening in the experimental group was 6.23 in the pre-test and 6.84 in the post-test. Considering the significant difference between the post-test scores in the control and experimental groups, it is determined that, by removing the pre-test co-factor, watching vodcasts has a significant effect on improving listening skills.

Hypothesis 3: There is a Significant Difference Between Listening to Podcasts and Watching Vodcasts in Their Effect on Listening Skill. Covariance analysis was used to test the above hypothesis. As noted, the hypothesis required for the analysis of covariance is examined. The results of the analysis of covariance are listed in the following tables.

According to the above hypothesis, the hypothesis is as follows:

H0: There is no significant difference between listening to podcasts and watching vodcasts in their effect on the learners' listening skills.

H1: There is a significant difference between listening to podcasts and watching vodcasts in their effect on the learners' listening skills.

To test the above hypothesis, researchers used the t-test for two independent samples, which are reported in the Table 13.

Table 13
Independent Samples Test Group

		Levene's Test		t-test for Equality of Means					
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Post test	Equal variances assumed	0.16	0.69	0.44	128.00	0.66	0.13	-0.46	0.72
	Equal variances not assumed			0.44	127.66	0.66	0.13	-0.46	0.72

To perform the above test, the researchers first needed to examine the default variance equation using Levon's test. The results in Table 14 show that the value of Sig is 0.69 and higher than 5%, thus assuming equality of variances is accepted. T-tests results also show that the Sig value is 0.66 and higher than 0.05. Therefore, it shows that there is no significant difference between listening to podcasts and watching vodcasts in improving listening skill. Although podcast learning mean was 6.72 and vodcast learning mean was 6.85 (it indicates that vodcast learning outperformed podcast learning in improving listening skill), the difference between the two means is not statistically significant.

Hypothesis 4: There is a Significant Difference Between the Intermediate and Advanced Learners in Their Improvement in Listening Skills. According to the above hypothesis, the hypothesis is as follows:

H0: There is no significant difference between the Intermediate and Advanced learners in their improvement in listening skills.

H1: There is a significant difference between the Intermediate and Advanced learners in their improvement in listening skills.

To test the above hypotheses, the researchers used the Levene's test, which is discussed in the Table 14:

Table 14
Independent Samples Test Group

			Levene's Test		t-test for Equality of Means					
									95% Confidence Interval of the Difference	
			F	Sig.	T	df	Sig.	Mean Difference	Lower	Upper
Experimental	listening	Equal variances assumed	0.47	.50	2.11	63	.04	.32	.17	0.63
		Equal variances not assumed			2.11	50.98	.04	.32	.02	0.63
	speaking	Equal variances assumed	0.03	.87	1.65	63	.11	.27	-.06	0.60
		Equal variances not assumed			1.64	51.02	.011	.27	-.06	0.61

To perform the above test, the researchers first checked the default equality of variances using the Levene's test. The results of Table 15 show that the Sig value in the listening group is 0.50 and higher than 0.05; therefore, the hypothesis of the equality of variances is accepted. T-test results also show that the Sig value is 0.04 and less than 0.05, thus it follows that the H0 hypothesis is accepted. In other words, there is a significant difference between Intermediate and Advanced learners in their improvement in listening skills and Advanced learners are better in improving their listening skills according to the results.

Discussion of Findings

This study was designed to collect data from the questionnaires and the results of the respondents were gathered to obtain the effect of podcasting and vodcasting and also the differences between them. The data analysis in this study indicates the improvement of the listening skill of the participants by the use of podcasts. The podcasts were used for different situations such as formal, informal, direct, indirect, and how to make invitations and requests. All the podcasts were used for all participants. The data analysis shows improvments in post-tests, which means that technologies like podcasts and vodcasts can help better learning and teaching.

The objective of this research was to investigate the extent to which learning through listening materials would help the learners have access to the instruments by which they can improve their skills easily. This kind of study was not supported in previous similar studies and motivated the researchers to concentrate on this research.

The in-depth files and correction revealed that there is a significant difference between the learners who are using materials in order to reach improvement and the learners who are just attending foreign language classes.

Results of the First Research Question

The first research question asked, "Does the application of podcasts significantly affect motivated learners' improvement in listening skills?"

As mentioned before, first the researchers chose motivated learners who were interested in improving their listening skills by podcasts, through using a questionnaire (ELCMS). Then, among these motivated learners, a podcast group was chosen. After giving the pre-test to the learners, the podcast files were given to the learners, and later the post-test was presented. The control group did not get the podcast files.

According to the results of the Covariance Analyses, it was revealed that listening to podcasts has its effect on motivated learners' improvement in their listening skills. As table 12 shows, the F value for the effect of podcasts on motivated learners' listening skill is 25.87 ($F = 25.87$) at a significant level ($P < 0.05$) and by comparing the means in both pre and post-tests in both control and podcast (experimental) groups, it was revealed that there is a significant difference between pre-test mean ($M = 6.15$) and post-test mean ($M = 6.72$) in the experimental group. But there is little significant difference in pre-test mean ($M = 6.11$) and post-teat mean ($M = 6.16$) in the control group. It means that listening to podcasts improves the motivated learners' listening skill and the null hypothesis which says "the application of podcast does not affect the motivated learners' listening skill" will be rejected.

The findings in this section is in line with what was found by Al Qasim and Fadda (2013) who made a research about the efficacy of podcasts on EFL higher education learners' listening comprehension, and claimed that podcast instructions cause a significant difference in listening comprehension. Another study by Stefancik, and Stradiotová, (2020) aimed to examine whether or not podcast significantly impacts on learners' listening comprehension. The findings demonstrated that there was a significant difference in post-test scores between the learners who were taught employing podcasts and learners who were taught without podcasts. It can be perceived from the data analysis using ANOVA that the significance value ($Sig. = 0.010$) is lower than 0.05. It means that podcast has a significant impact on learners' listening comprehension.

Results of the Second Research Question

The second research question asked, "Does the application of vodcasts significantly affect motivated learners' improvement in listening skills?"

According to the results of the Covariance Analyses, it was revealed that watching vodcasts has an effect on motivated learners' improvement in their listening skills. As table 13 shows, the F value for the effect of vodcasts on motivated learners' listening skill is 34.89 ($F = 34.89$) at a significant level ($P < 0.05$) and comparing the means in both pre and post-tests in both control and vodcast (experimental) group revealed that there is a significant difference between pre-test mean ($M = 6.24$) and post-test mean ($M = 6.85$) in the experimental group. While there is little significant difference in pre-test mean ($M = 6.11$) and post-teat mean ($M = 6.16$) in the control group. It means that watching vodcasts improves motivated learners' listening skill and the null hypothesis which says "the application of vodcast does not affect the motivated learners' listening skills" will be rejected.

The findings of this study coincide with Pradana's (2016), who conducted research on the effectiveness of video use in improving listening ability. He showed that students' grades and speech learning stages are improved by using video casts to improve students' attitudes. The improvement in students' scores can be seen in the increase in students' listening scores from the primary study and the scores after the implementation of listening instruction using video casts in the first cycle. The average score of students in the pilot study was 60.03, while the mean score at the end of the study was 72. Specifically, 20 students out of 20 (100%) scored higher than or equal to 60 at the end of the study, while in the pilot study, 11 students out of 20 (55%) scored higher than or equal to 60. Implementing video casts in the classroom, all students were expected to score at least 60 times or more (C +). Given that the class was heterogeneous, which means that students were classified based on their level of knowledge and skills, the criteria for success were determined exactly 100%. In another study by Faramarzi et al., (2019), the impact of vodcasting tasks on the development of EFL listening comprehension in an online application was examined. The results showed that there was a statistically significant increase in listening comprehension scores from pre-test to post-test. The difference was computed using Eta square statistics, which indicates the size of the large effect. It was determined that learners' superior performance was associated with vodcasting tasks. Also, the Pearson-product correlation coefficient was used which showed a significant positive relationship between participants' participation in vodcasting tasks and their test performance. The study will be useful for teachers, professors, curriculum designers, and all academic departments.

Results of the Third Research Question

The third research question asked, "Is there any significant difference between listening to podcasts and watching vodcasts in their impact on motivated learners' improvement in listening skill?"

According to the results of the t-test, it was showed that there is no significant difference between listening to podcasts and watching vodcasts in their effect on the listening skills. As table 14 shows, the value of Sig is 0.69 and higher than 5%, thus assuming equality of variances is accepted. T-tests results also show that the sig value is 0.66 and higher than 0.05. Therefore, it turns out that the H0 hypothesis "There is no significant difference between listening to podcasts and watching vodcasts in improving listening skill," is accepted. Although podcast learning mean was 6.72 and vodcast learning mean was 6.85 (it indicates that vodcast outperformed podcast in improving listening skills). The difference is not statistically significant.

The outcomes of this study are in line with Nawir's (2020) study which investigates the undergraduate experiences, attitudes, and understanding of podcast and vodcast use. The results showed that podcasts and vodcasts are an additional useful resource for learning, especially when applied in conjunction with speaker slides and as a device for amendment /evaluation. This online content has been translated into more understanding learners, complementing, and reinforcing their learning without substituting traditional lectures. There is space for movable media files to become a standard method in higher education. Another study by Namaziandost and Nasri (2019) showed that audio-visual materials can facilitate listening comprehension. In other words, when the learners' audio and visual senses are involved, they can comprehend better.

Results of the Fourth Research Question

Is there any significant difference between the improvement of Intermediate learners or Advanced learners in their listening skills?

According to the results of t-test in Table 14, the significance level is 0.039 and less than 5%, thus the listening ability is significantly different in the intermediate and advanced groups and more progress has been made in the advanced group.

The in-depth files and correction showed that there is a significant difference between the learners who are using materials in order to get improvement and the learners who just attend foreign language classes.

Conclusion

The aim of this study was to examine the impact of podcasts and vodcasts on motivated EFL learners through the improvement of their listening skills. The first major finding was that listening to podcasts and watching vodcasts both

improve and enhance the listening skill of motivated learners. In explaining this finding, it can be said that nowadays, learners are interested in using technology in the classroom environment; mobile phones and the internet is almost accessible to everybody. Finally, motivated learners who go to institute classes in order to improve their knowledge welcome entering technology to their learning world. Thus, listening to podcasts and watching vodcasts improve motivated learners' listening skills.

The second major finding was that there is no significant difference between listening to podcasts and watching vodcasts in their effect on motivated learners' listening skills. In explaining this finding, it can be said that as vodcasts are a subcategory of podcasts; there is no difference between the effect of them on learners. In addition, it can be concluded that there is no difference between the situation when learners' both audio and visual senses are involved with learning and the situation in which merely the audio ability is involved.

Although using technology in the learning process is necessary, it is ignored in schools and institute classes. However, today's world seems to use the podcast and vodcast in educational systems. This is an important factor in improving learners' skills and other factors include learning styles, strategies, teachers and parents' role, etc.

References

Abdeddaim, S. (2013). *The effectiveness of using podcasts for developing learners' listening Skills* [Unpublished master's thesis]. Mohamed Kheider University of Biskra.

Abdeddaïm, Y., Asarin, E., & Maler, O. (2006). Scheduling with timed automata. *Theoretical Computer Science*, *354*(2), 272-300. https//doi.org/10.1016/j.tcs.2005.11.018.

Abdous, M. H., Facer, B. R., & Yen, C. J. (2012). Academic effectiveness of podcasting: A comparative study of integrated versus supplemental use of podcasting in second language classes. *Computers & Education*, *58*(1), 43-52. http:/doi.org/10.1016/j.compedu.2011.08.021.

Al-Atabi, F. K. T., & Alsalihi, H. D. (2020). Iraqi EFL university instructors' orientations towards online educational platforms. *Journal of Talent Development and Excellence*, *12*(2), 2565-2574.

Al Qasim, N., & Al Fadda, H. (2013). From call to mall: The effectiveness of podcast on EFL higher education students' listening comprehension. *English Language Teaching*, *6*(9), 30-41. http://doi.org/10.5539/elt.v6n9p30.

Bahadorfar, M., & Omidvar, R. (2014). Technology in teaching speaking skill. *Acme International Journal of Multidisciplinary Research*, *2*(4), 9-13.

Cain, J. P. (2020). A qualitative study on the effect of podcasting strategies (studycasts) to support 7th grade student motivation and learning outcomes. *Middle School Journal*, *51*(3), 19-25. https://doi.org/10.1080/00940771.2020.1735867.

Calderón, A., Meroño, L., & MacPhail, A. (2020). A student-centered digital technology approach: The relationship between intrinsic motivation, learning climate, and academic achievement of physical education pre-service teachers. *European Physical Education Review*, *26*(1), 241-262. https://doi.org/10.1177/1356336X19850852.

Castillo, R. E. E., & Eduardo, R. (2009). *The role of pragmatics in second language teaching* [Unpublished doctoral dissertation]. SIT Graduate Institute.

Chapelle, C. (2003). *English language learning and technology*. John Benjamins.

Chaudhuri, J. D. (2020). Stimulating intrinsic motivation in millennial students: A new generation, a new approach. *Anatomical Sciences Education*, *13*(2), 250-271. https://doi.org/10.1002/ase.1884. Epub

Chen, C. M., & Chung, C. J. (2008). Personalized mobile English vocabulary learning system based on item response theory and learning memory cycle. *Computers & Education*, *51*(2), 624-645. http://doi.org/10.1016/j.compedu.2007.06.011

Dörnyei, Z. (2001). New themes and approaches in second language motivation research. *Annual review of applied linguistics*, *21*(1), 43-59. https://doi.org/10.1017/S0267190501000034

Faramarzi, S., Tabrizi, H. H., & Chalak, A. (2019). The effect of vodcasting tasks on EFL listening comprehension progress in an online program. *International Journal of Instruction*, *12*(1), 1263-1280.

Gardner, R. C. (1988). The socio-educational model of second-language learning: Assumptions, findings, and issues. *Language Learning*, *38*(1), 101-126. https://doi.org/10.1111/j.1467-1770.1988.tb00403.x

Hasan, M. M., & Hoon, T. B. (2013). Podcast applications in language learning: A review of recent studies. *English Language Teaching*, *6*(2), 128-144. https://doi.org/10.5539/ELT.V6N2P128.

Hauze, S., & Marshall, J. (2020). Validation of the instructional materials motivation survey: Measuring student motivation to learn via mixed reality nursing education simulation. *International Journal on E-Learning*, *19*(1), 49-64. https://www.learntechlib.org/primary/p/187329/

Hawke, P. (2010). Using internet-sourced podcasts in independent listening courses: Legal and pedagogical implications. *Jalt CALL Journal*, *6*(3), 219-234.

Hegelheimer, V., & O'Bryan, A. (2007a). Integrating CALL into the classroom: The role of podcasting in an ESL listening strategies course. *ReCALL*, *19*(2), 162-180. https://doi.org/10.1017/S0958344007000523

Hegelheimer, V., & O'Bryan, A. (2007b). Mobile technologies, podcasting, and language education. In M. Thomas (Ed.), *Handbook of research on Web 2.0 and second language learning* (pp. 331-349). IGI Global.

Hsu, H. I. (2006). *The effects of motivation on Taiwanese college students' English listening comprehension* [Unpublished doctoral dissertation]. University of Idaho.

IELTS, C. (2011). Student's book with answers: Official examination papers from university of Cambridge ESOL examinations (IELTS Practice Tests).

Kavaliauskienė, G. (2008). Podcasting: A tool for improving listening skills. *Teaching English with Technology*, *8*(4), 87-105.

Kormos, J., & Dörnyei, Z. (2004). The interaction of linguistic and motivational variables in second language task performance. *Zeitschrift für Interkulturellen Fremdsprachenunterricht, 9(*2) 34-59.

Kotaman, H. (2020). Impacts of dialogical storybook reading on young children's reading attitudes and vocabulary development. *Reading Improvement*, *57*(1), 40-45.

Lim, H. A., & Bang, E. J. (2018). The effects of music listening on affect, self-efficacy, mental exertion, and task performance of online learners. *Journal of the Scholarship of Teaching and Learning for Christians in Higher Education*, *8*(1), 5-31.

Lipetz, L., Kluger, A. N., & Bodie, G. D. (2020). Listening is listening is listening: Employees' perception of listening as a holistic phenomenon. *International Journal of Listening*, *34*(2), 71-96. https://doi.org/10.1080/10904018.2018.1497489

Liu, Y., Hau, K. T., & Zheng, X. (2020). Does instrumental motivation help students with low intrinsic motivation? Comparison between Western and Confucian students. *International Journal of Psychology*, *55*(2), 182-191.

Macdiarmid, R., Winnington, R., & Merrick, E. (2020). Reflections on the use of podcasts to support learning. *Pacific Journal of Technology Enhanced Learning*, *2*(1), 29-30.

Madrid, D. (2002). The power of the FL teacher's motivational strategies. *Cauce, 25*, 369-422.

Martínez, I. F. R. (2019). Rethinking educational technology, encouraging motivation in learning and aiming for educational quality. *Journal for Educators, Teachers, and Trainers*, *9*(1), 23-56.

Namaziandost, E., & Nasri, M. (2019). The impact of using audio-visual aids on teaching listening among Iranian pre-intermediate EFL learners. *LLT Journal: A Journal on Language and Language Teaching*, *22*(2), 246-259.

Nawir, M. S. (2020). Utilizing videocast: Fostering students' listening comprehension. *Eternal (English, Teaching, Learning, and Research Journal)*, *6*(1), 89-95.

Nomass, B. B. (2013). The impact of using technology in teaching English as a second language. *English Language and Literature Studies*, *3*(1), 111-134.

Outakoski, H., Lindgren, E., Westum, A., & Sullivan, K. P. (2019). Researching writing development to support language maintenance and revitalization: Design and methodological challenges. In C. Cocq & K. Sullivan (Eds.), *Perspectives on indigenous writing and literacies* (pp. 165-185). Brill.

Owens, D. C., Sadler, T. D., Barlow, A. T., & Smith-Walters, C. (2020). Student motivation from and resistance to active learning rooted in essential science practices. *Research in Science Education*, *50*(1), 253-277.

Parrish, A. (2020). Modern foreign languages: Decision-making, motivation and 14-19 schools. *Cambridge Journal of Education*, *50*(4), 469-481. https://doi.org/10.1080/0305764X.2020.1724261

Pradana, S. A. (2016). The use of videocast in improving the speaking ability integrated in a drama class. *English Education: Jurnal Tadris Bahasa Inggris*, *9*(2), 409-428. https://doi.org/10.24042/ee-jtbi.v9i2.389

Ramírez Verdugo, P. (2016). *The fetishism in the implausible doctor of Ramón Gómez de la Serna* [Unpublished bachelor's thesis]. Universidad Autónoma de Madrid.

Rosell-Aguilar, F. (2007). Top of the pods: In search of a podcasting "pedagogy" for language learning. *Computer Assisted Language Learning*, *20*(5), 471-492. https://doi.org/10.1080/09588220701746047

Rukthong, A., & Brunfaut, T. (2020). Is anybody listening? The nature of second language listening in integrated listening-to-summarize tasks. *Language Testing*, *37*(1), 31-53. https://doi.org/10.1177/0265532219871470

Sattar, M. U., Palaniappan, S., Lokman, A., Shah, N., Khalid, U., & Hasan, R. (2020). Motivating medical students using virtual reality-based education. *International Journal of Emerging Technologies in Learning (iJET)*, *15*(02), 160-174. https://www.learntechlib.org/p/217172/.

Sharif, H. A. (2020). European foreign language teaching policy with the use of technology. *Near East University Online Journal of Education*, *3*(1), 46-54. https://dergipark.org.tr/en/pub/neuje/issue/52204/682912

Sharma, A. K. (2009). *Advanced semiconductor memories: Architectures, designs, and applications*. Wiley-IEEE Press.

Stefancik, R., & Stradiotová, E. (2020). Using web 2.0 tool podcast in teaching foreign languages. *Advanced Education*, *7*(14), 46-55. https://doi.org/10.20535/2410-8286.198209

Sze, P. M. (2006). Developing students' listening and speaking skills through ELT podcasts. *Education Journal-Hong Kong-Chinese University of Hong Kong, 34*(2), 115-123.

Taghizadeh, M., & Hasani Yourdshahi, Z. (2020). Integrating technology into young learners' classes: Language teachers' perceptions. *Computer Assisted Language Learning, 33*(8), 982-1006. https://doi.org/10.1080/09588221.2019.1618876

Waltz, C. F., & Bausell, R. B. (1981). *Nursing research: Design, statistics, and computer analysis*. FA Davis Company.

Yamazaki, K. (2019). Future of technology in language teaching & learning. *Technology in Language Teaching & Learning*, *1*(1), 1-6. https://doi.org/10.29140/tltl.v1n1.153

Yu, C. H., & Lee, H. S. (2020). *Creating change to improve science and mathematics education*. Springer.