Employing Podcast Technology in Developing English Pronunciation: A Quasi-Experimental Study

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ABSTRACT: This study looked at the impact of podcast technology on the development of English listening skills. It used a mixed method (qualitative and quantitative methods). A quasi-experimental technique with a post-course test was adopted. Two teachers were interviewed in a semi-structured format. The sample for the study was 52 fifth-grade students at a private school in Amman, Jordan. They were divided into two classes (26 students for the experimental class and 26 for the control class). The experimental class was taught listening via teacher and podcast, while the control class was taught listening via teacher alone. To collect data, a multiple-choice test, survey, and interview were carried out. To analyze data, SPSS was used to analyze quantitative data, and Braun and Clark's thematic approach was used to analyze qualitative data. The findings of the study were that (i) the effect of employing podcast technology on improving listening skills is obvious and (ii) the superiority of the experimental class over the control class is large. (iii) the possibility of using podcast technology in the development of listening skills, increasing the students' bank of vocabulary, and improving their pronunciation.

KEYWORDS: English, Fifth grade students, listening skill, podcast technology, quasi-experimental technique.

INTRODUCTION
The interest in listening skill stems from the fact that it is the most important step in a student's educational progress (Djabbarova, 2020). Any weakness or neglect in learning that skill will undoubtedly affect the rest of the other language skills. In fact, learning it necessitates significant effort in order to improve the efficiency of this process in the overall performance of learners (Alerby & Brown, 2021).

The skill of listening is a basic pillar that students cannot ignore because of its importance and its integration with the rest of the skills of learning any new language. Listening has a big impact on students' speaking skills and then their overall level until they reach fluency (Dizon, 2020). Unfortunately, some teachers and students don't take care of it and focus instead on reading and writing. Sometimes students who use English as a second or foreign language get frustrated when they do not understand every word they hear in English, despite having a large stock of vocabulary, expressions, and knowledge of grammar. As a result, listening is the natural starting point for learning English. So, schools should make every effort to develop listening skill (Newton & Nation, 2020).

English listening skill is reflected in the skill of pronunciation in a large and clear way, especially for those who are interested in learning the most famous accents, such as the American and British. The strong listening skill comes from the learners’ attempts to listen to English from its native speakers and their ways of pronouncing words (Brännström et al. 2021). There is no doubt that it may be difficult at first, but with persistence and repetition, learners may reach a remarkable development in their pronunciation.

EDUCATION AND TECHNOLOGY
In terms of educational technology, technology plays a key role in identifying novel learning patterns and implementing them to improve educational outcomes (Kara & Ghalia, 2021; Dron, 2022). Thus, it was vital to stay up with technological advancements such as the use of modern technologies (computers, programs, multimedia, audio, video, and CDs) to improve learning (Alsaree 2016; Shagiyeva, 2020).

According to Fansury, Januarty & Ali Wira Rahman (2020), the second generation of the web aims to activate the learner's role in enriching digital content on the Internet and cooperating in the construction of electronic societies. The qualities of the second generation of the web are in these applications, which include blogs, social networks, and podcasts. This study used podcast technology in improving listening.
LITERATURE REVIEW

Podcast technology is one of the technologies that emerged in late 2004. Its use has spread in the educational process by recording and rebroadcasting lectures. It is often used in language learning because of the possibility of practicing it many times, which helps students memorize and understand the academic lessons.

Podcast technology is a multimedia application that employs a succession of audio and video files. People can subscribe to this channel and download the latest files automatically as soon as they connect to the Internet. The technology publishes these files, which are transmitted across a fixed audio-visual channel (Indahsari, 2020). It is very easy to deal with the podcast application and download through iTunes if it is an iPhone, iPod, iPad, or Android.

Podcasts have a very nice feature for students, where they can download what they want from the recordings and then listen to them when they want, without the need to connect to the Internet, take advantage of their break, sit on the bus or train, listen to useful audio episodes, and learn new things about recording (Thomas et al. 2020). The podcast does not require any recording studio, audio equipment, or large technology; only a mobile phone and mic are needed.

The significance of using podcast technology in education

With the advancement of technology, it has become vital to concentrate on enhancing learning patterns by using strategies in a practical manner (Quintana & Heathers, 2021 ). Indeed, the use of technology in the learning process has helped to solve numerous problems, particularly when it comes to resolving individual variances amongst students (Al-Harazneh, Alobetha, & Alodwan,2022). This contributes to the simplicity of representing the topic multiple times in order to assist and understand the knowledge in the brains of the pupils in a fun way. The use of technology increases pupils' desire to use it (Sun & Gao, 2020).

According to Locker (2018), the number of podcasts downloaded was 10.5 billion in 2016 and 13.7 billion in 2018. In addition, it is now available in over 155 countries. It can be used in a variety of ways in the learning and teaching processes. It is one of the current technologies that has been used and has numerous advantages, such as:

- i. Recording educational materials such as transparent slides, which are placed for students to refer to as needed.
- ii. Recording lectures, seminars, and lessons in a timely way and referring to them as needed
- iii. Recording books of various types.
- iv. Recording personal and public interviews, as it saves time and records the information that is going on.
- v. Recording pronunciation flaws and learning the right pronunciation for some pupils, particularly those learning many languages and exits that demand correct pronunciation (Alfa,2020; Harahap,2020; Chan-Olmsted & Wang 2022), and others

The importance of podcasting technology in learning English is as follows

(i) Playing or downloading the audio file allows non-native speakers to evaluate the educational content; (ii) the ability to link the audio file with images that support the content and links to learning resources and information, or (iii) using podcasts as a tool that interacts with the tasks of learning approaches, such as teaching methods based on the constructivist learning model or individual wave models (Doiz & Lasagabaster, 2018; Yoestara & Putri, 2019; Stefancik& Stradiotová,2020).

Several studies have discussed using podcasts in education, such as Kay (2012), who reviewed the literature review that offered a review of studies on video podcasts through the period 2002–2011. The review focused on the obstacles of using podcasts, the history of podcasts, the kinds of podcasts, and the impressions of authors regarding the podcast. Kay's study (2012) concluded that using podcasts in education is effective. Chung and Kim (2016) also investigated students' stimuli, approaches, and behaviors related to the use of podcasts in the learning environment. His study found that the following dimensions of motivations were prominent for podcast use: (1) voyeurism/social; (2) tradition; (3) relaxation; (4) escape; and (5) education.

Moreover, Prakash, Muthuraman and Anand. (2017) investigated the attitudes of medical students toward short-duration podcasts. The sample for the study is 94 medical students who study biochemistry through a 3-minute podcast. The findings of their study reveal that a 3-minute lesson via podcast is useful, enjoyable, and helps the students review their lessons before the exam. In the same field, Riddell et al. (2020) discussed the reasons why people are attracted to the use of podcasts in education, how podcasts can be widely integrated into education, and what challenges students face when using podcasts. To answer these questions, 16 teachers were interviewed at two academic American and Canadian institutions. The results of the study confirm that the podcast is easy to use anytime and anywhere, and it is also a good method to repeat the lesson many times.

Based on the literature review, there is no study that tackles using podcasts to improve English listening for students at elementary schools. Therefore, this study aims to examine (i) the effect of podcasts on improving the listening skills of students, and (ii) the characteristics of podcasts that motivate the students to learn pronunciation.

RESEARCH METHODOLOGY

The paper uses a quasi-experimental method to examine the efficiency of using postcad applications in teaching English listening for fifth grade students in Jordan. A quasi-experimental method is a study methodology that compares units (families, farms, firms, universities, students, and others) by dividing the units into experimental and control groups to determine the influence of a certain
intervention, program, or experience. This method is beneficial for evaluating the influence of a program or event that cannot be randomly assigned for ethical or practical reasons.

**Population and Sample (Quantitative approach)**
The study's population consists of 200 students from a Jerusalem school in Jordan. Based on Krejice and Morgan 1970, 52 students are appropriate number to be the sample for the study, therefore, this number is selected and all the students are from the fifth grade (class A= 15 female students and 11 male students). Class B (16 female students and 10 male students. This study was carried out in the academic year 2022–2023. Arabic is the native language for the students and teachers while English is a foreign language.

**Sample (Qualitative approach)**
Participants
This study used purposive sampling. The criteria for selecting the participants were that they should (i) be English teachers, (ii) have three years' experience, (iii) be one male and one female; (iv) be familiar with using podcasts in teaching listening. The sample size was two English teachers.

**Table 1. Demographic Data of the Interviewees**

<table>
<thead>
<tr>
<th>Interviewee</th>
<th>Sex</th>
<th>Interviewee</th>
<th>Sex</th>
</tr>
</thead>
<tbody>
<tr>
<td>I1</td>
<td>F</td>
<td>I2</td>
<td>M</td>
</tr>
</tbody>
</table>

**Data collection tools**
(1) **Quantitative approach**
(a) **Multi-choice test.** To exclude the influence of the teacher on the research outcomes, just one teacher was assigned to teach the two classes: experimental and control. In terms of age, it was corrected by selecting the fifth grade to avoid any differences in age. There were 11-year-olds there. Class (A): students were taught English listening via podcast technology. Class (B) students were taught English listening via the traditional method. The course lasted for three weeks (about 15 hours). Then both classes sat for a test that covered the listening materials that were taken during the three weeks. The aim of the test was to compare the results between the two classes, and examine if the podcast method was effective or not. The multiple-choice test (MCT) is composed of 40 questions. The full mark is 100, and the pass mark is 50. Every question has a mark of 2.5.

**The validity of the questionnaire:**
To confirm the validity of the multiple-choice test, it was examined by three English teachers from three Jordanian schools. They were asked to check the appropriateness of every question and assure the validity of the language and the fit of the question to accomplish the objectives of the study. Based on the ideas and opinions of the teachers, the authors corrected the questions.

**Stability of the study tool:**
To ensure that the study tool is stable. The stability was estimated using the Couder-Richardson equation (20) on an exploratory sample from outside the study sample consisting of (10) male and female fifth-grade pupils at the school who were chosen at random, and it was equal to (0.80). It has a high value, which implies that the test is stable.
- The survey questionnaire A questionnaire was distributed to the experimental class. It has nine items to identify the perspectives of the students in the experimental class towards the use of podcasts. This questionnaire had 10 items that were taken from Abdulrahman, Basalama and Widodo (2018).
- To examine the reliability of the survey, the authors use Cronbach Alpha. The results of all items were greater than 0.750. Therefore, reliability is accepted.
- To examine the validity of the survey, it was examined by four professional experts from two Jordanian universities to check its language and meanings, then it was modified by the authors to be nine items.

(2) This survey used a 5-point Likert scale (strongly disagrees (5), disagree (4), neutral (3), agree (2), and strongly agree (1). The formula to find the level of each items was: (highest value - lowest value) / 3, (5-1) / 3 = 1.33 class length. 1.33-2.33 is low. from 2.34 to 3.66 medium. 3.67 - 5 high.

(1) **Qualitative approach**
The study conducted two semi-structured interviews with the two teachers. Every meeting lasted for 20 minutes. 20 x 2 = 40 minutes.
Triangulation
Triangulation is defined as "a process of verification that increases validity by incorporating several viewpoints and methods" (Yeasmin & Rahman, 2012, p. 156). To examine the validity of the study, the authors used three experts from Yarmouk University in Jordan to examine the extracted themes.

Data Analyzing tool
1) Quantitative approach.
For quantitative data, the SPSS (23) version was used to analyse the data.

2) Qualitative Approach
The interviews were recorded, then written as text, and the text was analyzed via the thematic approach of Braun and Clarke (2006).

Findings
The demographic factor
Table (1). The sample's distribution

<table>
<thead>
<tr>
<th>Division</th>
<th>Group</th>
<th>Teaching strategy</th>
<th>Student population</th>
<th>Male</th>
<th>Percentage</th>
<th>Female</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Experimental</td>
<td>podcast technology</td>
<td>26</td>
<td>11</td>
<td>%42.30</td>
<td>15</td>
<td>%57.96</td>
</tr>
<tr>
<td>B</td>
<td>Control</td>
<td>the traditional method</td>
<td>26</td>
<td>10</td>
<td>%38.46</td>
<td>16</td>
<td>%61.53</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>52</td>
<td>21</td>
<td></td>
<td>31</td>
<td></td>
</tr>
</tbody>
</table>

The total for the two classes is 52 students. The rates of females in both classes were higher than the males.

The Multible Choice Questions
Table 2. Descriptive Statistics for the multible choice questions

<table>
<thead>
<tr>
<th></th>
<th>Experiment</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>26</td>
<td>26</td>
</tr>
<tr>
<td>Mean</td>
<td>80.5000</td>
<td>63.3000</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>9.01015</td>
<td>9.65669</td>
</tr>
<tr>
<td>* % 90-100</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>*%80-89</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>*%70- 79</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td>*% 60-69</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>*% 50-59</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>*% 40-49</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
<td>26</td>
</tr>
</tbody>
</table>

* the number of the students who got...
Table 2 demonstrated that the number of students who got a 90–100 score was eight in the experimental class and one in the control class. In contrast, the number of students who got a 40–69 was zero in the experimental class and three in the control class.

Table 3. Survey Questionnaire

<table>
<thead>
<tr>
<th>S.N</th>
<th>Rank</th>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>5</td>
<td>I feel that my listening skill improves gradually after listening to Podcasts.</td>
<td>3.87</td>
<td>0.14</td>
<td>High</td>
</tr>
<tr>
<td>2.</td>
<td>8</td>
<td>I discover that it is not easy to understand the speaker.</td>
<td>2.99</td>
<td>0.43</td>
<td>Medium</td>
</tr>
<tr>
<td>3.</td>
<td>2</td>
<td>I find authentic materials that relate to English listening.</td>
<td>4.12</td>
<td>0.28</td>
<td>High</td>
</tr>
<tr>
<td>4.</td>
<td>6</td>
<td>The tasks and activities in podcasts are interesting</td>
<td>3.21</td>
<td>0.26</td>
<td>Medium</td>
</tr>
<tr>
<td>5.</td>
<td>3</td>
<td>I feel that podcasts is very portable and easy to use</td>
<td>4.00</td>
<td>0.2</td>
<td>High</td>
</tr>
<tr>
<td>6.</td>
<td>9</td>
<td>I think that podcasts is not operative in terms of time.</td>
<td>2.86</td>
<td>0.55</td>
<td>Medium</td>
</tr>
<tr>
<td>7.</td>
<td>7</td>
<td>I think that podcasts duration is suitable for me to focus on listening</td>
<td>3.15</td>
<td>0.31</td>
<td>Medium</td>
</tr>
<tr>
<td>8.</td>
<td>4</td>
<td>My vocabulary is increased when I listen podcast.</td>
<td>3.94</td>
<td>0.17</td>
<td>High</td>
</tr>
<tr>
<td>9.</td>
<td>1</td>
<td>I advise teacher to teach listening via podcast.</td>
<td>4.52</td>
<td>0.46</td>
<td>High</td>
</tr>
</tbody>
</table>

The analysis of the survey demonstrated that item no. (9) which stated, "I advise teachers to teach listening via podcast," occupied the first rank with a mean (4.52) and SD (0.46). The level of this item was high. In contrast, item no (6) was the last rank with a mean (2.86), SD (0.55) and medium level.

The Qualitative Analysis

The First Question

How did podcast affect the students' listening and pronunciation skills?

Listening Skill
Both interviewees agreed that using podcasts improved their listening and pronunciation skills. I1 stated that "podcasting helps my students improve their listening as well as their pronunciation."

Vocabulary
Both interviewees agree that using podcasts improves their vocabulary. I 2 confirmed that "as soon as my students listened to the podcast, they acquired many new words, which increased their ability to build new sentences and conversations."

Understanding
Both teachers agreed that podcasts improved their students' understanding of text, listening, conversation, and reading. Interviewee 1 said that "the use of the podcast helped the students absorb the lessons well and understand the details of the text."

The Second Question is: What are the characteristics of podcast that motivate the students to learn pronunciation?

Authentic Materials
The interviewees agreed that podcasts provide authentic materials to teaching listening and pronunciation skills and making students skilled at mastering conversation and dialogue. Interviewee 1 states that, "I believe that the podcast's use of real materials has contributed to my students' mastery of pronunciation and listening."

Interesting
Pleasure is necessary to pursue education, proficiency in pronunciation, and good listening. Through podcast programs, students feel the desire to learn without feeling bored or tired. I 2 stated that "My students report that they really enjoy using podcasts and that they spend a lot of time listening without getting bored."

Motivation
Motivation is one of the advantages of podcasts. The podcast prompted me to think critically about texts and made me inclined to understand the details of any topic. I 1 said that "most of the students told me that they stopped reading texts superficially before using podcasts. As soon as they used podcasts, they read in depth, thought, and had the ability to critique creatively."
DISCUSSION

1. The Discussion of the Quantitative Analysis

Teaching the art of listening using podcasts has played a major role in obtaining high marks. This means that the podcast has proven to be very effective and useful for students because it presents interesting, useful, and real things. Also, the student can listen well with the possibility of repeating what he hears at any time and place. Therefore, there was some agreement among all students that teachers should use podcasts in teaching listening and encourage students to use them. After the end of the course, the students felt that their level of listening had improved due to the many advantages provided by the use of podcasts. In fact, if these features are exploited, academic achievement will be much higher than in traditional education.

On the other hand, most students believe that the podcast is effective in terms of its use at any time, as it is not bound by a specific time. Students can listen to it at any time they want, as podcasts are not bound by a specific time, and they are not bound to listen at a specific time, unlike radio programs, and they can also stop it whenever they want to complete it whenever they want. A few students answered that the podcast was not time efficient, so their answer came last.

2. The Discussion of the Qualitative Analysis

First question: How did podcast affect the students’ listening and pronunciation skills?

Podcasts can be listened to to learn and improve the English language’s listening and pronunciation skills. Using books and studying curricula to improve these skills is a classic and traditional method of learning. If students look for alternative ways to learn in addition to this method, they can take a look at English podcasts where they can focus on different aspects of the language. The podcast, which will help them practice the above skills quickly, will accompany them anywhere and anytime during the day. It gives them faster reactions in the process of thinking, understanding, and speaking English. The amount of exposure they have to a language is directly related to the time it takes them to learn it. Given how children learn language, it would not be wrong to say that they achieve this by experiencing and repeating over and over again what they hear. Podcasts can be listened to to learn and improve the English language’s listening and pronunciation skills. Using books and studying curricula to improve these skills is a classic and traditional method of learning. If students look for alternative ways to learn in addition to this method, they can take a look at English podcasts where they can focus on different aspects of the language. The podcast, which will help them practice the above skills quickly, will accompany them anywhere and anytime during the day. It gives them faster reactions in the process of thinking, understanding, and speaking English. The amount of exposure they have to a language is directly related to the time it takes them to learn it. Given how children learn language, it would not be wrong to say that they achieve this by experiencing and repeating over and over again what they hear.

Vocabulary

The podcast mainly works on developing the listening skills of the English language. It also helps students acquire many words and language expressions, which is reflected in their speaking and writing skills. In order to reach this result, students do not have to be satisfied with listening only once; they can re-listen many times, read the texts (the transcript), and, of course, apply what they have learned, which ensures that they benefit optimally. Also, reading the text accompanying each episode will help students learn new words.

Reading is one of the best ways to develop vocabulary. As students read the vocabulary in context from the podcast, they get to know the meanings of words that they did not know before. Reading also allows them to repeat words they already know in order to improve their memory. This is in addition to their discovery of new words that they would not have known elsewhere.

What are the characteristics of Podcast that motivate the students to learn pronunciation?

Authentic Materials

The teachers agreed that since the podcast uses real languages and texts, the students find it fun to learn. When podcasts became popular in most countries, many authentic lessons became available on podcast sites for all students. Teachers in various scientific fields are directing students to use podcasts to listen to many lectures. Moreover, the original material in the podcast is considered a motivating factor for students to develop themselves scientifically. Thus, they become superior and proficient. It is not necessary that the authentic materials be designed to fit the lesson, but the students should have the teacher intervene to clarify some things that cannot be clarified through the podcast.

Interesting

The podcast does not need a screen, and it can be listened to while sitting or walking. One clip can be listened to several times so that the student can absorb and understand the lessonPodcasts are really fun, especially if you love to listen to content while performing various daily tasks. It's great to work while learning by listening to podcasts. You feel that this listening motivates you to work actively. Podcasts are really fun, especially if you love to listen to content while performing various daily tasks. It's great to work while learning by listening to podcasts. You feel that this listening motivates you to work actively. However, the principle of radio has been improved and developed further due to the Internet. It has turned into what can be called a podcast, which can be
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said to be optional Internet radio. Until not long ago, there were not many people interested in it (and I am one of them), but the large number of programs and their diversity inspired me to start listening to some of them and loving them.

Motivation

The role of podcasts in prospective learning is to improve students’ listening comprehension skills, despite their levels. Many students can absorb more information when they hear it rather than read it, reaching higher levels in some cases. This stimulates discussion, which, in turn, encourages creative thinking and open communication between the students and the teacher. Narrating stories that simulate reality improves the participation of students since they can relate to events by telling stories that simulate their social and scientific realities. This reflects the concerns and issues of today’s society, which occupy them more effectively than reading fiction, so students realize that what they learn applies to real life.

CONCLUSION

Podcast technology is a modern technology that makes a great contribution to addressing many educational challenges that require perfect pronunciation. The advantages of podcasts are: (i) students can listen more than once to discern the correct pronunciation; (ii) increasing the learner's motivation by paying attention to study with a variety of current tools; (iii) the ability to listen to the podcasts individually or in groups; and (iv) the cost of podcasts is very low compared to the traditional method. The study concludes that (i) the significance of teaching instructors how to create and design podcasts to improve education; (ii) the need to use podcast technology in all academic levels and disciplines; (iii) the need to motivate schools to pay attention to using podcasts to improve listening; and (iv) the need to conduct more studies and research on other English skills such as speaking and reading.

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