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The Effect of Using Podcasts as a Supplementary Tool on EFL Secondary School Students' Achievement

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Abstract

This study examined student achievement when podcasts replaced traditional lectures in the mandatory technology course for all students. “Podcasts are a tool that assists students in their education, with numerous advantages in medical education.” Podcasts can be categorized by duration: short (1-5 minutes), moderate (6-15 minutes), and long (beyond 15 minutes). Short-duration podcasts are advantageous as they provide high-yield information efficiently and concisely. Subsequently, it analyzed the efforts of the podcast group and the obstacles to podcast utilization. Moreover, the students preferred using a computer and mobile device for downloading podcasts, which they predominantly listened

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to at home before the classroom presentation. They generally appreciated the podcasts and their duration, believing them to be effective enough for learning. They concurred that the podcasts were user-friendly but contended that they should not supplant lectures.

Keywords: Podcasts, supersymmetry tool, Student`s achievement, digital technologies, Educational Podcasts

أثر استخدام البودكاست كأداة مساندة على تحصيل طلبة المرحلة الثانوية في اللغة الإنكليزية

نور اركان غالب

جامعة تكريت/ كلية التربية للعلوم الإنسانية/ قسم اللغة الإنكليزية

المستخلص

تتناول هذه الدراسة تحصيل الطلبة عند استبدال المحاضرات التقليدية بالبودكاست في المقرر الإلزامي للتكنولوجيا المقدم لجميع الطلبة. تُعدّ البودكاست أداة تُسهم في دعم تعلم الطلبة، وتوفر العديد من المزايا، لا سيّما في التعليم الطبي. يمكن تصنيف البودكاست وفقاً لمدة العرض إلى: قصيرة (من 1 إلى 5 دقائق)، ومتوسطة (من 6 إلى 15 دقيقة)، وطويلة (أكثر من 15 دقيقة). وتُعدّ البودكاست القصيرة مفيدة لأنها تُقدّم معلومات مركّزة وعالية القيمة بطريقة فعّالة وموجزة.

كما قامت الدراسة بتحليل جهود مجموعة البودكاست والعقبات التي واجهت استخدامها. أظهرت النتائج أن الطلبة فضّلوا استخدام الحاسوب والأجهزة المحمولة لتحميل البودكاست، وأنهم استمعوا إليها غالباً في المنزل قبل الحصة الصفية. وبصورة عامة، قدّر الطلبة محتوى البودكاست ومدتها الزمنية، وعدّوها وسيلة فعّالة للتعلم. كما اتفقوا على سهولة استخدامها، إلا أنهم أشاروا إلى أنها لا ينبغي أن تحلّ محلّ المحاضرات التقليدية.

الكلمات المفتاحية: البودكاست، أداة التناظر الفائق، تحصيل الطلاب، التقنيات الرقمية، البودكاست التعليمي

Introduction

The utilization of podcasting among contemporary Internet users' aids students in academic settings by enhancing their learning outcomes and progress. Consequently, it is unsurprising that educators and educational institutions are increasingly employing this medium to facilitate instruction, particularly in the realm of teaching. The advent of the internet in the early 1990s facilitated the emergence of new educational paradigms,

particularly electronic learning (e-learning) and mobile learning within the academic sector. <https://www.researchgate.net/publication/288580944> .

Podcasting technology refers to a form of mobile and computer-based learning that utilizes devices to listen to audio podcasts or view video podcasts. Preliminary research on podcasting technology examined its educational application in universities and schools today. Recent research studies on podcasting have revealed its impact on teaching and learning in both primary and higher education.

SECTION ONE

1.1 Statement of Problem

Despite the extensive incorporation of digital technologies in contemporary educational practices, the pedagogical potential of podcasts as a supplementary instructional resource has received relatively limited scholarly attention. This study seeks to examine whether incorporating educational podcasts can actively effect on students' academic in their education.

1.2 Aims of the Study

1. To investigate whether there is a significance differences exists between the performance of the experimental and control group in the posttest.
2. To investigate whether there is a significance differences exists between the recognition level and production level achievement of the experimental group in the posttest.

1.3 Limits of the Study

This study is limited at AL- Aqida secondary school for girls in Tikrit city who study “**English for Iraq 4th secondary school student`s book**” during the academic year 2024-2025.

1.4 Research Questions:

1. How does using podcasts as a supplementary tool help improve students' academic achievement?
2. How does the use of podcasts effect on students' perceptions of learning and examinations?

SECTION TWO

1.1 Students' Achievements on Use of Educational Podcasts

Many studies have expressed positive findings regarding the use of podcasts in education. Many students found podcasts engaging and expressed their appreciation for them. Furthermore, they believed that engaging with podcasts could facilitate the improvement of their language learning abilities (Hasan & Hoon, 2013, p. 99)

Students have less worry and fear, fostering a sense of belonging in their learning and studying when they engage with podcasts (Lee & Chan, 2007, p.87).

Evaluating students' pronunciation and comprehension in a collaborative learning initiative utilizing podcasts: Alternative, supplementary, and innovative applications. Podcasts enable students to preview lessons and information prior to lectures, record them for later listening if attendance is not possible, or reinforce their understanding of the material. Secondly, podcasts can offer students supplementary resources on the learning process (Rajic, 2013, p.9)

Two categories of extra materials can be utilized in podcasts. The first category involves preparing summaries that are beneficial for learning and examination purposes. Supplementary materials may include supplementary resources that enhance or deepen a student's comprehension, along with review and summary content (Rajic, 2013, p.66).

The ultimate application of podcasts in education is a creative tool , when students enhance their enthusiasm in learning by generating knowledge rather than merely

assimilating it. Students may document their own audio on podcasts to disseminate their learning experiences with peers in their class and students from other institutions (Rajic, 2013, p.66).

2.2 Applications of Educational Podcasts

Podcasting is a unique way to help students study (Rajic, 2013,P.567). He distinguishes between three types of educational podcasts: substitutional, supplemental, and creative uses. First, podcasts can be used to deliver pre-lecture information or to record lectures so that students can listen to them again if they were unable to attend or to reinforce what they learned.

Second, a podcast can also be used to supplement learning by providing additional material. There are two types of supplementary material that can be used. The first and most usual application is for them to provide course summaries or syntheses. Supplementary material can be in the form of additional material that can widen or deepen the student's comprehension in addition to revision and summary material (Rajic, 2013,P. 578).

The recent application of podcasts in education exemplifies a creative tool, wherein students engage more deeply in learning by generating knowledge rather than only receiving it. Students may produce their own podcasts to disseminate their learning experiences to their peers and students from different institutions. (Rajic, 2013,P 579).

2.3Effect of Podcasts on Students' Language Skills

A considerable number of studies have investigated the positive impact of podcasts on students'. The benefits of using podcasts in language learning to help students improve their four skills (listening, writing, reading and speaking) have been studied, and the results demonstrate that students' four skills have improved.

<https://scimatic.org/storage/journals/11/pdfs/1819>.

Further, the study of skills found that students` post-test results via podcast were much greater than their pre-test, podcasting can help students in summaries, record their lectures, facilitate self-study, build language confidence, and create an active learning

environment, it is an effective educational podcast for improving all students' skills. (Hasan & Hoon, 2013,P. 21).

Furthermore, to enhance students' four language skills, podcasts encourage learners to concentrate on their tasks, recognize new vocabulary, retain the sounds of spoken words, and improve their reading and writing abilities. Podcasts have a significant impact on students' listening comprehension and speaking performance. The findings also indicated that students showed great interest in using podcasts during classroom sessions or lectures. Moreover, the podcast materials, activities, and videos—such as listening exercises and meaningful tasks—motivated students to study English more effectively.(Abdulrahman, Basalama, & Widodo, 2018,P. 890).

Students have indicated reported that using podcasts enhanced their learning and gave them greater flexibility in supporting the learning process. Lecturers also viewed the program as a useful addition to their teaching the tool. However, most students did not use podcasts directly to develop their academic skills, but rather used them to improve their language skills and enhance their speaking and listening skills (Sutton-Brady, Scott, Taylor, Carabetta, & Clark, 2009,P.345).

SECTION THREE

3.1 Experimental Design

An experimental design is delineated as the framework that specifies the methodologies employed by a researcher to assess hypotheses and derive significant findings concerning the relationships between independent and dependent variables (Best and Kahan, 2006.P 177). Van (1962,P. 230) asserted that selecting a suitable test design to assess the inferential outcomes of the hypotheses is a crucial component for the success of a study. Goodman (1973, P. 1174) established that experimental design pertains to identifying the methodology for selecting experimental groups and administering treatments, as well as assessing their resultant effects. This study employs a "non-randomized pre-test/post-test control group design" (Isaac and Michael, 1977,P. 43). Consequently, two cohorts of fourth-grade middle school students were chosen to

constitute the study sample. The present study employed a post-test-only similar group design (Best and Kahan, 2006,P. 179), as illustrated in Table (1).

Table (1)
Experimental Design of this Research

Group	Independent variable	Posttest
Experimental	With podcasts tool	Posttest
Control	Traditional Method	Posttest

3.2 Population and sample of the study

3.2.1 Population

Alvi (2016,P 10) states that "all members fulfil the criteria of the research." Lehman and Mehrens (1971:18) assert that population " refers to all the designated groups of subjects, typically individuals." Best (1981,P. 263) asserts that all individuals within a population may belong to a certain category or subset that is more restrictive than the broader group, such as all school teachers, all female preparatory school students, or all practical grade children, among others. The population of the current study includes EFL Iraqi secondary school students of fourth year in Salah Al-den Government .

3.2.2 Sample

Fry et al. (2000,P. 125) characterize a sample as a subset of a population. Richards and Schmidt (2010,P. 506) define sampling as "the plan of choosing a sample" and delineate the numerous options for making this selection.

AL-Aqida Secondary School for Girls in Tikrit has been chosen as the sample for the study during the academic year 2024-2025. The sample has 50 students divided into two groups. The fourth grade comprises two portions. Section A has been randomly selected as the experimental group from AL-Aqida Secondary School for Girls, whereas Section B has been designated as the control group from the same institution. Each part comprises twenty-five students, as indicated in Table 2.

Table (2)
study's sample

Group	Sections	Number
Experimental	A	25
Control	B	25
Total		50

3.3 Instructional Material

The fourth-year students of AL-Aqida Secondary School for Girls in Tikrit City, Salah al-Din Governorate, were selected as the sample for the experiment. The textbook is employed in all Iraqi schools as a resource for instructing fourth-year secondary students in the English language, who have been studying English for at least six years. The investigator directed the experimental cohort. Lessons are scheduled for every Monday, Tuesday, and Thursday. Instruction for the two groups began on November 18, 2024, and ended on February 17, 2025.

The experimental group comprises the following materials:

English for Iraq Student's Book 2nd (student book and activity book),

- speaker
- Data show,
- Mobile devices
- CDs
- Video or audio.

3.4 Steps of of Experimental procedures

- The teacher prepared the lesson materials in advance, including podcasts, videos, and the student textbook.
- At the beginning of each session, the teacher briefly introduced the lesson objectives and explained the tasks to be completed.
- For the experimental group, the teacher played the podcasts and guided students to listen attentively, pause when needed, and take notes.
- Students were encouraged to discuss the content of the podcasts with their peers to enhance comprehension and interaction.
- The teacher provided clarification, answered questions, and facilitated activities based on the podcast content.
- For the control group, the teacher explained the lesson using **traditional lecture methods**, reading from the textbook, giving examples, and asking questions.
- In both groups, students completed exercises and tasks individually or in pairs under the teacher's supervision.

3.5 Instrument of the study

The research instrument used in the present study was a posttest, designed to measure students' achievement in English, as shown in appendix (A)

3.6 Scoring Scheme of students' in Posttest

A scoring system is utilized to execute the analytic methodology of the assessment. Madsen (1983,P.121) and Heaton (1988,P.148) say that the analytic technique relies on the

scoring scheme properly developed by the examiner. The overall score is 100 marks, allocated as follows:

- 1- There are five items in Question one. The right answer takes four score and the wrong answer takes zero.
- 2- Question two consists of ten items and is scored out of 20. Each correct answer is takes 2 marks.
- 3- Question three contains a passage and is scored out of 20 marks.
- 4- There are ten items in question number four and scored out of 20, for each correct item specified two marks and zero for incorrect item.
- 5- Question number five consists of two sections. In Section (A), there are ten items, scored out of 10, with each correct answer takes 1 mark and zero for incorrect answers. In Section (B), there are ten items, scored out of 10, with each correct answer takes 1 mark and zero for incorrect answer.

3.7 Test Validity

Validity refers to the degree to which a test in education accurately measures what it is intended to measure, and it is considered one of the key characteristics of a test. Brown (2010, p. 29) defined validity as the extent to which an instrument measures what it claims to measure. Gronlund (1998, p. 226) mentions that validity is “the degree that interference made from evaluation”.

Also, Elliott et al (2011, p. 183) states that validity means the mark to which the interpretations of test degree support by hypothesis. Thus it refers to the appropriateness, significance, and conclusions inferences made from test scores. There are two types of validity: face validity and content validity.

1-Content Validity

Content validity is defined as “the extent to which items in a tool represent the content universe to which it will be applied” (Straub, Boudreau et al. 2004, p. 29). According to

Anderson (1975,P.460), content validity pertains to the extent to which a test accurately assesses the characteristics it is designed to assess.

2- Face Validity

Face validity pertains to the authenticity of a test, and it is advantageous since students must be persuaded that the test accurately assesses what it purports to measure (Brown, 2001:388). Patton (1997, p. 34) states that face validity refers to the extent to which an instrument appears to measure what it is supposed to measure. Similarly, Harris (1967, p. 7) defines face validity as "the way in which the test appears to students, test administrators, teachers, and others."

3.8 Pilot study of posttest

A pilot study might be a small feasibility study conducted to test different aspects of the procedure planned for a larger, more rigorous investigation (Arain et al., 2010, p. 117)

One characteristic of the pilot test, as noted by Blessing and Chakrabarti (2009,P.53), is the reduced number of participants compared to the core test, as it is undertaken solely to improve the quality and efficiency of the primary test. The alternative is to disclose any inadequacies in the design and structure of the questions. These deficiencies can be readily rectified prior to the principal test using a large sample.

Conducting a pilot study was highly recommended for the present research. Fifteen students were randomly selected from Al-Aqida Secondary School for Girls. The pilot study was conducted on February 23, 2025, under standard classroom conditions. It aimed to estimate the total time required to complete all test items, which was found to be 95 minutes. Furthermore, the pilot study assisted the researcher in finalizing the administration procedures of the posttest 3.10 Reliability of Achievement posttests.

The reliability of a test is regarded as one of the essential characteristics of a quality assessment. Alderson (1995,P.294) defines dependability as "the extent to which test scores are consistent." The stability of the test measures is essential; dependability pertains to the degree of stability of the test (Best & Khan, 2006,P.289).

Ravitch (2007,P.16) defines dependability as "a measure of consistency in testing." For example, assume that an individual completed two distinct versions of an identical test on different days, and the outcomes of both assessments were analogous.

This study assesses the reliability of the post-test by comparing it to a control group. The reliability coefficient was determined to be 0.91, indicating the homogeneity of the test items.

3.9 Final Administration of posttest

The posttest was administered to both groups, the experimental and Control groups, on the same day, and the same time on the 17th of February, 2025.

The test papers were distributed to the whole testees who are required to read carefully the given questions of the Written section and clearly record their responds on their test papers within 40-50 minutes.

Once, the written section was completed, the test papers have been collected to be scored in terms of the scoring scheme. After that, the oral section starts. The two oral questions have been administrated individually by the researcher herself. The testis's responds were recorded on a CD to be evaluated using a five-point scale and in terms of the already identified criteria, i.e. vocabulary, grammar, pronunciation, and fluency.

SECTION FOUR

4.0 Introductory Note

This section focuses on the statistical analysis of the gathered data and the interpretation of the results, aiming to evaluate the validity of the following two hypotheses:

1. No statistically significant differences exist between the mean scores of the experimental and control groups on the post-test.

2. No statistically significant differences exist between the mean scores of the experimental group regarding cognitive and production levels on the post-test.

4.1 Posttest Achievement Comparison: Experimental vs. Control Group

To validate the first hypothesis, the arithmetic means and standard deviations of the scores from the two student groups were computed. The experimental group's average score was 76.52, whereas the control group's average score was 62.52. The t-test for two independent samples yielded a computed t -value of 3.28, in contrast to the tabular value of 2.01 at 48 degrees of freedom and a significance level of 0.05, as presented in Table 3. The results demonstrate statistically significant performance differences between the two groups, favouring the experimental group.

Table (3)

Means, Standard Deviations, and t-Values of the Two Groups in the Achievement Posttest

Groups	No. of students	Mean	SD.	T-Value		DF	Level of Significance
EG.	25	76.52	16.03	Calculated	Tabulated	48	0.05
CG.	25	62.52	14.00	3.288	2.01		

4.2 Comparison of Recognition and Production Levels in the Posttest

To validate the second hypothesis, the results indicated that the mean scores of students at the production level was 40.14, and at the recognition level it was 36.38. The

implementation of the (t) test for two dependent samples yielded a computed (t) value of (5.53), in contrast to the critical (t) value of (2.06) at (24) degrees of freedom and a significance level of (0.05), as illustrated in Table (4). The results demonstrate statistically significant variations in student performance between recognition and production levels, favouring the recognition level. The second hypothesis is therefore rejected.

Table (4)

Mean Scores, Standard Deviation, and T-Value of the Experimental Group's Performance at Recognition and Production Levels

Group	No. of students	Mean	SD.	T-Value		DF	Level of Significance
				Calculated	Tabulated		
Recognition	25	40.14	9.00	Calculated	Tabulated	24	0.05
Production	25	36.38	7.30	5.53	2.06		

4.3 Discussion of Obtained Results

The results of the current study indicate that the experimental group, instructed using the podcast as a supplementary tool, outperformed the control group, which was taught using traditional methods. The podcasting tool has demonstrated significant efficacy in instructing EFL to intermediate school students. The enhancement of students' proficiency in English can be ascribed to the use of the podcasting tool, as detailed below:

1. The podcasts tool enhance students' achievement by creating independence activity and motivating their minds to engage in creative communication.

2. Students expressed enjoyment in learning through the application of podcasts tool that motivate them to use all of their senses.
3. The podcasts tool is flexible and interesting in use.
4. The podcast tool promotes creativity and facilitates students' understanding, retention, and overall learning effectiveness.
5. The podcasts tool encourages students to generate idea, help the students in record information, and enhance their retention. Further, podcasts promote the active participation in classroom as they are motivated to take part in various activities and tasks.

SECTION FIVE

5.1 Conclusions

The results of the current investigation lead to the following conclusion:

1. podcasts has an effective role in enhancing the achievement of intermediate school students in English.
2. Using podcasts in EFL teaching enhances both student–student and student–teacher interactions within the classroom.
3. podcasts enable the students to mix their senses at one time in the lesson.
4. podcasts promote cooperative learning within the same group and competition with other groups.

5.2 Recommendations

Based on the results obtained and the conclusions formed, the following recommendations are suggested:

1. Educators are encouraged to utilize podcasts in English instruction to enhance their students' performance.
2. Teachers should shift from traditional methods of teaching English as a Foreign Language (EFL) to innovative instructional tool, such as podcasts, which promote a more engaging learning environment. They should transition from being authoritative instructors

to facilitators who support and guide students in effectively acquiring English language skills.

3. Teachers are advised to employ technological podcasts to develop engaging lessons and enhance the learning process.

4. Schools should use modern technology in the instruction of English as a Foreign Language, utilizing films, audio recorders, images, touch screens, and websites, among other resources.

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Appendix (A)

The Achievement posttest

AL-Aqida secondary school For girls

forth class

Time:45 minutes

Q1: write a paragraph of between 60 and 70 words about your eating habits and preference . (20 marks)

Q2:Match the words with their antonyms . (20marks)

- | | |
|--------------|--------------|
| 1. Dead | a unofficial |
| 2. Official | b old |
| 3. Different | c impure |

