

The Effect of Using Multimedia Techniques on Iraqi EFL Learners' Performance in Vocabulary and Pronunciation at the Primary Stage.

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Abstract

Multimedia is a kind of technological teaching aids that can be applied during the teaching and learning process. It is a combination of sounds, graphics, animation and video. In the world of computers, it is a part of hypermedia, which connects the elements of multimedia with hypertext for the purpose of creating links among pieces of information. Therefore, these techniques are expected to deal with vocabulary and pronunciation difficulties of Iraqi EFL students especially at the primary school ones in order to reduce the mistakes in pronunciation and to enhance their vocabulary repertoire.

The present study aims at investigating the effect of using multimedia techniques on Iraqi EFL learners' performance in vocabulary and pronunciation. For this purpose, it is hypothesized that there is no statistically significant difference between the mean score of the students who are taught vocabulary and pronunciation using multimedia techniques, and that of those who are taught vocabulary and pronunciation using strategies that are recommended in the prescribed textbook.

In order to achieve the aims of the study, an experiment has been designed. The population is male pupils of the fifth grade at the primary schools in Baghdad, during the academic year ٢٠١٦-٢٠١٧. Two sections have randomly been selected; one to be the experimental group and the other has been considered the control group; each group includes ٢٥ pupils. The two groups have been taught the same topics. But only the experimental group received the treatment. The experiment lasted two months.

The two groups have been equalized in the variables of age counted in months, parents' education, and their scores in the mid-year exam. In order to find out pupils' progress in learning vocabulary and pronunciation, the post-test has been divided into two parts one as a written test (vocabulary test) that includes four questions and the other has been considered as an

The Effect of Using Multimedia Techniques on Iraqi EFL Learners' Performance in Vocabulary and Pronunciation at the Primary Stage.....

Asst. Prof. Saad Salal Sarhan, Haider Abdulhasan Hamza

oral test (pronunciation test)that includes two questions at the end of the experiment. The test is ascertained by exposing it to a jury of experts. Then, a pilot study of ٩٠ pupils is conducted to provide data for item analysis which indicates the effectiveness of the test items in terms of their discriminatory power, difficulty level, and alternative of effectiveness. The reliability for the written test (vocabulary test) coefficient has been calculated by using the Cronbach Alpha method and the correlation coefficient of ٠,٨٢ and Kuder-Richardson formula ٢٠ has been used to estimate the reliability of the oral test (Pronunciation test).The correlation coefficient of ٠,٧٣, which indicates that the test is reliable and acceptable.

After statistical analysis of the obtained data, the t-test formula for two independent samples has been used to test the significance of difference between the two mean scores of the two groups. It has been found that there is a statistically significance difference in favor of experimental group. Therefore, it is concluded that multimedia techniques have a great effect in teaching vocabulary and pronunciation. Therefore, a number of recommendations and suggestions for further researches are put forward.

Chapter One Introduction

١. The Problem of the Study and its Significance:

Vocabulary is a set of words that are knows and uses by a person in everyday speech and writing. Successful Learners can understand the importance of growing and expanding vocabulary, from learning new words each day to other methods of expanding their understanding and use of words (Robert, ٢٠٠٨:٧٣).

When students learn a foreign language, learning vocabulary is fundamental and important, but difficult. Cortazzi and Jin (١٩٩٦: ١٥٣) state, “Although vocabulary is the most difficult component of language to learn but it is the most important thing when learning a foreign language”.

In addition to vocabulary, the realization of the significance of pronunciation occupies the first place in most linguistic studies, especially in matters of learning and teaching English as a foreign language (EFL, for short). According to Bruchfield (١٩٨٥: ٢٥) pronunciation is the form of a word (i.e. the word itself) in which the current spelling is only symbolization.

However, Iraqi students encounter pronunciation and vocabulary problems throughout the process of learning EFL. For example, AL-Ka'abi (٢٠٠٥:١) has clarified that these problems arise out of the difference between English pronunciation and English spelling, because “English is

The Effect of Using Multimedia Techniques on Iraqi EFL Learners' Performance in Vocabulary and Pronunciation at the Primary Stage.....

Asst. Prof. Saad Salal Sarhan, Haider Abdulhasan Hamza

one of the languages that lacks an exact one to one correspondence between phonemes and graphemes” , and Al Ta'y (٢٠١٥: ١) mentions that vocabulary has a vital role in communication, more than the other components of language. If pupils lack vocabulary during communication activities, they cannot say what they want to say.

Multimedia is a text and sound combination delivered by computer or digitally manipulated or other electronic means. It is any combination of digitally manipulated graphic art, text photographs, sound, video fundamentals, and animation (Vaughan, ٢٠٠٨: ٧٢).

Newton (١٩٩٨: ١٠٤) defines multimedia as different types of media mixed together in the information's communication between two users and their computers. It usually involves image processing , voice communication, and sound processing. Multimedia is a set of data processing combination with graphics, text, sound, animation, and video.

It means that if technologies come together from the different industries to a communication medium, it presents the mixture of interactive computers, highly fidelity video and sound.

The multimedia techniques are suggested to be a solution for both vocabulary and pronunciation difficulties because this technique is supposed to make the learners recognize and produce them well inside the classroom with several examples. The learning is supposed to be easier than the prescribed methods for both vocabulary and pronunciation.

In order to fix or, at least, reduce the effect of this problem, the researcher intends to use the multimedia techniques inside the classrooms of the primary schools in Baghdad to improve their learners' vocabulary repertoire and pronunciation.

٢. The Aim

The present study aims to investigate the effect of using multimedia techniques on Iraqi EFL learners' performance in vocabulary and pronunciation at the primary stage.

٣. The Hypotheses:

The following hypotheses are posed in order to fulfil the aim of the study:

١. There is no statistically significant difference between the pronunciation mean scores of the pupils who are taught by using the multimedia techniques and those who are taught by using the textbook prescribed method.

٢. There is no statistically significant difference between the vocabulary mean scores of the pupils who are taught by using the multimedia

The Effect of Using Multimedia Techniques on Iraqi EFL Learners' Performance in Vocabulary and Pronunciation at the Primary Stage.....

Asst. Prof. Saad Salal Sarhan, Haider Abdulhasan Hamza

techniques and those who are taught by using the textbook prescribed method.

٣. There is no statistically significant difference between the overall performance mean scores of the pupils who are taught by using the multimedia techniques and those who are taught by using the prescribed method.

٤. Limits of the Study:

The present study is limited to the following:

١. The academic year ٢٠١٦-٢٠١٧.
٢. The fifth primary grade Iraqi male pupils.
٣. The material of the textbook Iraq Opportunities ٣.

٥. The Value:

The results of this study are hoped to be of some value to those who are involved in the teaching-learning process whether the teachers of English, syllabus designers or the learners. It can be of some value to the teacher since it shifts the process toward the learner rather than the teacher. It can be of some value to the learners since it gives them great opportunity to involve in the process with enjoyment. As for syllabus designers, they may supplement textbooks with activities that foster vocabulary and pronunciation learning, such as new words and their pronunciation. Finally, it may fill in an important theoretical gap in the field of teaching EFL.

٦. The Procedures:

For the sake of carrying out the experiment, the following procedures are adopted:

١. Selecting two representative samples randomly from the fifth grade primary school pupils; one of them will be the experimental group and the second one will be the control one.
٢. Equalizing the two groups in a number of variables.
٣. Choosing a suitable experimental design.
٤. Designing and validating a pre-test for these samples in order to equalize their vocabulary and pronunciation performance.
٥. Applying the multimedia techniques to the experimental group.
٦. Designing and validating a post-test to both groups.
٧. Comparing the results of the post-test for both groups.
٨. Using suitable statistical procedures to calculate the effect of multimedia techniques on vocabulary and pronunciation of Iraqi EFL primary school pupils, and

The Effect of Using Multimedia Techniques on Iraqi EFL Learners' Performance in Vocabulary and Pronunciation at the Primary Stage.....

Asst. Prof. Saad Salal Sarhan, Haider Abdulhasan Hamza

٩. Drawing conclusions and making suggestions and recommendations in the light of the obtained results.

٧. Definitions of Basic Terms:

Here are some definitions for the terms that are used frequently in the present study.

١. **Effect:** Richards and Schmidt (٢٠٠٢: ١٧٥) define effect as the association between two or more variables or the effect of one variable's strength on another.

٢. **Multimedia:** Multimedia is a collection of different types of media that uses for a particular purpose. In other words, it includes graphic images, video, sound effect, and audio. It is a group of computer mediated or computer controlled technologies that make possible for pupils to contact and use information in a variety of forms: text, sound, video and moving images (Richards and Schmidt, ٢٠١٠: ٣٨٠).

٣. **Vocabulary:** Vocabulary is a collection of words a person uses or knows when he speaks with others that are part of specific language. It is defined as a set of all words that person used and understood when constructing new sentences (Aitchison, ٢٠٠٣: ٦).

The operational definition of vocabulary is the number of words the fifth primary school learners have that enable them to communicate in real-life situations.

٤. **Pronunciation:** It is the mastery of the sound system of a given language and the activity that leads to this mastery (Haycraft, ١٩٧٨: ١). It is the way of how to produce the sounds of language, including articulation, intonation and rhythm (Mcarthur and Mcarthur, ١٩٩٢: ٨١٠). Pronunciation is the act or result that a particular person pronounces the words of language (Hornby, ٢٠٠٣: ١٠٥٧).

The operational definition is that pronunciation refers to the method words or sentences are spoken according to acceptable articulation, by using correctly voiced segments and suprasegments.

٥. **Technique:** A technique is a trick, stratagem, or contrivance that takes place in a classroom .It is used to accomplish an immediate objective, and gives concrete and tangible instructions for how to conduct the work of an activity (Richards and Rodgers , ٢٠٠١:١٩).

٦. **Performance:** Borman (٢٠٠٣:٨٧) defined performance as a value of an individual behavior that is expected over a standard period of time for maintaining once enhancing the social, psychological , and organizational context of work.

Chapter Two

Theoretical Background a

٢. Multimedia:

٢.١ The Notion of Multimedia:

Neo and Neo (٢٠٠١:٢) define multimedia as the collection of integrated multisensory interactive presentation or application to convey information or message to an audience. Mayer (٢٠٠٥:٢) clarifies that multimedia involves both graphics and texts.

Mele (١٩٩٣: ٢٣) defines multimedia as an original name for computer, in which it uses for recording, processing and reproducing of sound, images (static and dynamic), text and other numerical information.

Jerram and Gosney (١٩٩٥: ٣) state that multimedia often refers to the enhanced possibilities of personal computers in processing text, and all kinds of visual and audio information. Williams et al. (١٩٩٥: ٣٣٢) define multimedia as presenting information on more than one medium, including text, graphics, animation, video, and sound. Multimedia is a group of sounds, graphics, video, and animation. In the world of computers, it is a part of hypermedia, which connects the elements of multimedia with hypertext for creating links between information. (Štiglic, ١٩٩٥:١٧٧).

McFarlane (١٩٩٧: ١٦٠) clarifies that multimedia is a combination of high resolution images, digital stereo sound, text, video and animation. In other words, multimedia can be applied during the learning and teaching process because it is a kind of technological teaching aids that help pupils to intervene with the information.

Multimedia is the variety of media such as text, graphics, audio, and video (Kim and Gilman, ٢٠٠٨: ١).

Multimedia takes a mediating role between “man and information”. It intervenes between the pupils and information (Lavrnja, ١٩٩٨: ١٢٧). It can be said that Multimedia is carriers and transmitters of information, i.e. it contains or transmits information (Blažic, ٢٠٠٧: ٣٨). As a tool for language learning or teaching multimedia has certainly always facilitated the tasks of language learning both instructed and non-instructed learners. In order to improve the quality of teaching we need to use multimedia to ensure an effective communication. However, multimedia offers some positive contributions toward the learning and teaching process (Brinton: ٢٠٠١: ٦٦).

٢. ٢ The Development of Multimedia:

The term multimedia was firstly used by Bob Goldstein the singer and artist during his show in a New York club in ١٩٦٦ (Zuras, ٢٠١٠: ١٧٦). Multimedia began to be used at the beginning of the ١٩٨٠s in connection

The Effect of Using Multimedia Techniques on Iraqi EFL Learners' Performance in Vocabulary and Pronunciation at the Primary Stage.....

Asst. Prof. Saad Salal Sarhan, Haider Abdulhasan Hamza

with computers, and since then has been used in a wider context to describe anything involving the senses of sight and hearing in a computer environment. In a limited sense, multimedia is used in three meanings, i.e. for signifying devices through which a message is carried, the format of the display of a message, and the senses that the recipient uses for receiving a message. The possibility of enriching displays of certain information or content, e.g. audio or video record influences its comprehensibility, and so the encyclopedias or textbooks are nowadays frequently made multimedia. Multimedia provides the user with the possibility of interacting with the content, which is a characteristic that makes it unique. Interactivity gives this medium an important psychological dimension which engages the user and gives him the power to act (Kovacec, ٢٠٠٥: ٥١٣).

As one of the components in the learning and teaching process, multimedia is used by the teachers as a source to explain the materials to students. Many schools utilize technology as the sources in the teaching and learning process, because the existence of technology has given us a big influence in the educational field. In fact, technology is attracting the students' motivation in learning a language, so it affected to the language teaching positively. With the boom of information and communication technology (ICT) in the past ٢٠ years, the teaching of foreign language (FLT) has become inconceivable without implementing them. More and more teachers started to explore various kinds of ICT in order to keep up with their students (Meiers, ٢٠٠٩: ١).

٢. ٣ Kinds of Multimedia:

Kim and Gilman (٢٠٠٨: ١) and Jacobson and Archodidou (٢٠٠٠: ١٦) mention some kinds of multimedia such as audio, text, video, and graphics. In addition, at the same time multimedia combines both images and audio resources, and in communicative situations in the real world, it combines sounds and images (Labayen et. al, ٢٠٠٦: ٩).

Multimedia has two main kinds that used in the teaching and learning process. These kinds are non-technical media and technical media. Each type will be presented below:

١. Non-technical Media:

These media are low cost but available everywhere because they do not need electricity, technical resource, or funding. Many examples that belong to this category, include white board, black board, magnet board, board games, flash card, photos, line drawings, cartoons and the like (Brinton, ٢٠٠١: ٦٧).

The Effect of Using Multimedia Techniques on Iraqi EFL Learners' Performance in Vocabulary and Pronunciation at the Primary Stage.....

Asst. Prof. Saad Salal Sarhan, Haider Abdulhasan Hamza

٢. Technical Media:

These kinds of media can bring the outside world in all its complexity into the classroom, because they deal with a larger degree of psychology reality, but they are high-cost and less user- friendly than the non-technical media. In fact, pupils may grow to expect technology in the language classroom as well since they tend in today's language classes to surround themselves with it in their daily lives. There are several objects that belong to this type including audiotape player, recorded player, film projector, TV filmstrip, and computer (Ibid: ٧٠).

Multimedia is composed of various kinds, such as sound, video, text, graphics, and animation. These kinds can contribute differently to the learning of material:

١. **Text:** In English teaching we can use ordinary text or various typographic effects for emphasis or clarification. This type is a fundamental element in all multimedia applications, for it conveys more information. Teachers can use different font sizes, color, and style to catch the reader's awareness when presenting information or emphasizing a certain word or phrase (Vanghan, ٢٠٠٤:٧٥). Text includes tables of contents, dictionaries, and help facilities and other resources such as captions, subtitles, and notes (Shavinina, ١٩٩٩:٣٣).

٢. **Graphics:** Wright (٢٠٠٣:٩٢) defines graphics as a mixture of images and pictures; such as chart, diagram, and photograph, which contain no movement. They can stimulate interest and motivation, improve understanding ability of language, and offer especial reference object and topic. Graphics play a vital role in language teaching. They often range from traditional media such as prints, maps, drawings, and posters to images processed or created entirely within a computer (Photographic images, slides, prints, from negatives, or even digital cameras) which record photographic images directly as computer graphics (Shavinina, ١٩٩٩:٣٣).

٣. **Animation:** Animation is a series of images that is ٢D or ٣D artwork or model positions in order to create a false impression of movement. Simply speaking, it ranges scope from the basic graph with a simple motion to a detailed image with complex movements. Assisted by the use of animation, teachers can highlight key knowledge points and heighten students' motivation (Vanghan, ٢٠٠٤:٩٣).

٤. **Sound:** It is speech, music, or any other sound that is stored and produced by computers. It has more advantages than tape recorder. In multimedia, teacher can use more vivid and fruitful sound to help students' English learning (Ibid: ٩٤).

The Effect of Using Multimedia Techniques on Iraqi EFL Learners' Performance in Vocabulary and Pronunciation at the Primary Stage.....

Asst. Prof. Saad Salal Sarhan, Haider Abdulhasan Hamza

٥. Video:

Mayer (٢٠٠٧: ٨٥) and Berk (٢٠٠٩: ٧) state that video as multimedia learning tool which combines pictures with verbal forms is highly useful for learning outcomes. It is the visible part of a television transmission and broadcasts visual images of stationary or moving objects. Compared with animation, video can offer more vivid information. But it will consume more storage space than animation (Vanghan, ٢٠٠٤: ٩٤).

٦. **Film:** Film is one of the oldest audio-visual technical products used in teaching. It provides a greater number of pupil's simultaneous usage and furnishes information that is difficult to access. Educational film enables discovering reality in its vitality. It allows vivid and clearly direct connecting of spatial and time determination of objects and occurrences. Education film enables optimal time condensation of shown developments for the needs of teaching. Through educational film, the registration of an insert from the flow of events can pedagogically focus onto those moments which are in line with teaching goals (Švajcer, ١٩٩٤:١٥٥).

Shank (٢٠٠٥: ٩) suggests the instructional purposes and the types of multimedia as teaching aids that can be applied in the learning and teaching process.(see Table ١)

Table ١: Examples of Multimedia Types

Instructional Purposes	Types and Tools of Media
١. Navigate keys	Image map, links, site map, navigation tree, table of contents, search, help.
٢. Explain, document, and narrate	Used text as (drill-down, explanation, instruction manual, text of narration).
٣. Show models, examples, representations.	Photo (new copier model). Diagram (how to feed paper into copy machine). Screen captures (menus in an application). Schematic (diagram of audio mixer parts). Process model (flowchart).
٤. Demonstrate qualitative and quantitative relationships.	Concept map (the Internet, shown as a visual map of related concepts).
٥. Show changes over time.	Chart (the organizational chart). Graph (the correlation between stress and life expectancy).
٦. Show hidden concepts	Animation (cloud changes before a thunderstorm)
٧. Enable direct practice	Applet (the effect of standard deviation on shape of normal curve).

(ibid: ١٠)

The Effect of Using Multimedia Techniques on Iraqi EFL Learners' Performance in Vocabulary and Pronunciation at the Primary Stage.....

Asst. Prof. Saad Salal Sarhan, Haider Abdulhasan Hamza

٢.٤ The Advantages of Using Multimedia :

Using multimedia techniques in the teaching and learning process can bring a big contribution. Learners can apply the content in various contexts when using an effective multimedia and this can provide learning experiences that mirror real-world experiences. Furthermore, multimedia helps learners build more accurate and effective mental models than from the text alone if it is well-designed (ibid: ١).

In addition, well-designed multimedia show some potential benefits, including:

١. Multimedia helps to generate alternative perspectives.
٢. It encourages active participation in the class.
٣. It makes learning accelerate.
٤. It uses in retention and application of knowledge.
٥. It depends on skills of problem-solving and decision-making.
٦. It allows pupils to understand the system.
٧. It provides higher-order thinking.
٨. Encourages pupils with focus and autonomy.
٩. It helps pupils sequencing of information and control over pacing.
١٠. It enables pupils to access and retain information.

(Ibid: ٤)

Hoven (١٩٩٩:٢٣) suggests another advantage of using multimedia that it allows pupils to decide the way and the pace that suits their students. For example, by using movie, video or TV students can watch movies or educative programs in the target language. The pupils also use a computer application that makes them study on a listening or speaking application. On the other hand, Ehsani et al. (١٩٩٨:٩٨) highlight that by using self-paced interactive learning environments (i.e. combining sound, text, vision, animation, and video) to create much more educative and creative classroom environments.

In such cases, Shank (٢٠٠٥: ٢) clarifies that pupils can process information through two basic channels, verbal and visual by using multimedia, because it uses both channels; so many people suppose that multimedia is clearly better. Many researchers have found that multimedia appeals more readily to diverse learning preferences since it helps pupils learn more easily.

The way of communication with each other is changing when people use multimedia. The form of communication itself will be better comprehended and effectively done by implementing multimedia. The message and the delivery are reinforced by the inclusion of multimedia elements, which

The Effect of Using Multimedia Techniques on Iraqi EFL Learners' Performance in Vocabulary and Pronunciation at the Primary Stage.....

Asst. Prof. Saad Salal Sarhan, Haider Abdulhasan Hamza

leads to a better learning rate. Multimedia and its power lie in the fact that it is multisensory, motivating many senses of the audience. It also enables the users of the application to control the content and flow of information as it is interactive. The positive aspects of using multimedia are strengthened by those statements as a supplement to the explanation of the teachers. The technology roles can be felt positively in the teaching and learning process, and in every single aspect of human life. In other words, using the effective multimedia can help the teacher to transfer the material and help the pupils to understand the material easily (Vaughan, ١٩٩٣:٦٢).

Chapter Three

Methodology of the study

٣,٠ An Introductory Note:

The current study has conducted an experiment so as to attain the aim of the study and test its hypotheses. The chapter is deal with the following points:

١. The experimental design
٢. The sample and population selection
٣. Experiment application

٣,١ Experimental Design

Kirk (١٩٩٥: ١)states that An experimental design is a plan used to conveying experimental units that make the researcher to test hypotheses by reaching suitable conclusions about relationships between independent and dependent variables. It is the blueprint of the procedures to treatment levels and makes the statistical analysis associated with the plan (Best and Khan, ٢٠٠٦: ١٧٧).

The non-equivalent posttest-only, equivalent-groups design has been adopted in order to attain the aim of the present study in which the two randomly selected groups are measured in the post-test but only the experimental group receives the treatment. This design can be described as follows: (see Table ٢).

Table ٢

The Experimental Design

Experimental group -----Multimedia techniques-----post-test
Control group -----Traditional method-----post-test

The Effect of Using Multimedia Techniques on Iraqi EFL Learners' Performance in Vocabulary and Pronunciation at the Primary Stage.....

Asst. Prof. Saad Salal Sarhan, Haider Abdulhasan Hamza

٣,٢ Population and Sample selection

The population of the present study includes the male pupils of the fifth year at the primary school in Baghdad, during the academic year ٢٠١٦-٢٠١٧.

Al-hadhar primary School for boys in the General Directorate of Education/ Al-Resafa II has been selected. There are four sections in the school; one section has randomly been selected to be the experimental group that is section (B), which includes twenty-six pupils and the other section has also been selected randomly to be the control group that is section (D), which includes twenty-seven pupils. Pupils, who were absent, have been excluded from the two sections; so the final number of the sample is fifty; i.e., ٢٥ pupils in each group (see Table ٣,٢).

Table ٣,٢

The Number of the Learners before and after Excluding the Absentees

Group	Number of subjects before excluding	Number of subjects after excluding	Absent
Experimental Group	٢٦	٢٥	١
Control Group	٢٧	٢٥	٢
Total	٥٣	٥٠	٣

٣,٣ The Experiment Application

The instruction of the experiment started on ١٦th February, ٢٠١٧. It lasted two months, and ended on ١٦th April, ٢٠١٧. The researcher himself taught the experimental and control groups in order to control the variable in the experiment. The lessons are arranged for both groups on four days, i.e. Sunday, Monday, Tuesday, and Thursday for each week.

In this study, the pupils have equal learning opportunities; the pupils of the two groups have the same conditions except one that is *multimedia techniques*.

٣,٣,١ The Instructional Material

The pupils have been taught four units of *Iraq Opportunities* ٣ (Units ٢١, ٢٢, ٢٣, and ٢٤). They taught all the components of the units, but the main emphasis is on vocabulary items and their pronunciation.

The researcher prepared a typical lesson plan for each group for each lesson concerning vocabulary and pronunciation and discussed them with the jury members (see Appendix C).

٣,٣,٢ The Control Group

The pupils of the control group have been taught vocabulary and pronunciation using the techniques recommended by the official teacher's

The Effect of Using Multimedia Techniques on Iraqi EFL Learners' Performance in Vocabulary and Pronunciation at the Primary Stage.....

Asst. Prof. Saad Salal Sarhan, Haider Abdulhasan Hamza

guide *Iraq Opportunity* ٣ (see Appendix D), embedded with the grammar exercises, reading passages and other language activities.

٣,٣,٣ The Experimental Group

The experimental group has taught the vocabulary and pronunciation of words by using multimedia techniques. These techniques are used to improve their pronunciation and to enrich their vocabulary items for about ٢٠ minutes per lesson and the rest of the lesson they are taught as the control group exactly (see Appendix E).

Chapter Four

Analysis of Data, Conclusions, Recommendations, and Suggestions

٤,٠ An Introductory Note:

The obtained data have been statistically analyzed and computed at the end of the experiment through administering the suitable statistical tools to find out and determine whether there is any significant difference between the two groups' mean scores in the post-test.

Afterwards the results are interpreted. Finally, and in the light of these findings, conclusions are drawn, recommendations are presented, and suggestions are put forward.

٤,١ The Results

٤,١,١ The Results of the First Hypothesis

In order to find out whether there is any important difference between the two mean scores of the experimental and the control groups in the vocabulary achievement on the post-test, the t-test formula for two independent samples has been used. The mean score of the E.G. is (٢٩,٨٠) whereas the mean score of the C.G. is (١٩,٧٦). The calculated t-value (٤,٢٤٦) is greater than the tabulated one (٢,٠٠٩) at level of significance ٠,٠٥, and this points out that the difference between the two mean scores is statistically significant in favor of the E.G. . This means that the achievement of the E.G. in vocabulary is better than the C.G. . Therefore, the effect of using multimedia techniques is positive and the null hypothesis is discarded and an alternative hypothesis is adopted (see Table ٣ for more information).

Table ٣

group	N	\bar{X}	S ²	Df	t-value		Level of significance
					Computed	Tabulated	
Experimental	٢٥	٢٩,٨٠	٨,٠٠٠	٤٨	٤,٢٤٦	٢,٠٠٩	٠,٠٥
Control	٢٥	١٩,٧٦	٨,٧٠٥		٢,٠٠٩		

The t-test Statistics for the two groups in the Vocabulary on the Post- Test

The Effect of Using Multimedia Techniques on Iraqi EFL Learners' Performance in Vocabulary and Pronunciation at the Primary Stage.....

Asst. Prof. Saad Salal Sarhan, Haider Abdulhasan Hamza

٤, ١, ٢ The Results of the Second Hypothesis:

In order to find out whether, or not, there is any important difference between the two mean scores of the experimental and the control groups in the pronunciation achievement on the post-test, the t-test formula for the two independent samples has been used. The mean score of the E.G is (٢٨,٨٨) whereas the mean score of the C.G. is (١٦,٠٤). The calculated t-value (٥,١٨١) is greater than the tabulated one which is (٢,٠٠٩) at level of significance ٠,٠٥, and this indicates that the difference between the two mean scores is statistically significant in favor of the E.G. . This means that the achievement of the E.G. in pronunciation is better than the C.G. . Therefore, the effect of using multimedia techniques is positive and the first null hypothesis is rejected and an alternative hypothesis is adopted (See Table ٤ for more information).

Table ٤

The t-test Statistics for the Two Groups in the pronunciation on the Post-Test

Group	N	\bar{X}	S ²	Df	t-value		Level of significance
Experimental	٢٥	٢٨,٨٨	٨,٥٦٥	٤٨	Computed	Tabulated	٠,٠٥
Control	٢٥	١٦,٠٤	٨,٩٥٦		٥,١٨١	٢,٠٠٩	

٤, ١, ٣ The Results of the Third Hypothesis:

The t-test formula has been used in order to find out whether there is any important difference between the two mean scores of the experimental and control groups in the total score on the post-test. The mean score of the E.G. is (٥٧,٨٠) and that of the C.G. is (٣٥,٨٠). The calculated t-value (٦,٧١٧) is larger than the table value (٢,٠٠٩) at level of significance ٠,٠٥ and ٤٨ degrees of freedom, which indicates that the difference between the two mean scores is statistically significant. This means that the E.G. is better than the C.G. , so the effect of using multimedia techniques on learners' achievement is positive and the hypothesis which indicates that there is no significant difference between the achievements of pupils who are taught vocabulary and pronunciation through multimedia techniques and those who are taught vocabulary and pronunciation through the prescribed method is rejected (see Table ٥).

The Effect of Using Multimedia Techniques on Iraqi EFL Learners' Performance in Vocabulary and Pronunciation at the Primary Stage.....

Asst. Prof. Saad Salal Sarhan, Haider Abdulhasan Hamza

Table ٥
The t-test statistics for the Post-test Scores

Group	N	\bar{X}	S ²	Df	t-value		Level of significance
					Computed	Tabulated	
Experimental	٢٥	٥٧,٨٠	١٢,٣٨٣	٤٨			٠,٠٥
Control	٢٥	٣٥,٨٠	١٠,٧١٦		٦,٧١٧	٢,٠٠٩	

٤,١,٤ Discussion of Results:

It is obvious that all the findings arrived at in the previous studies introduced in chapter (٢: ٢,٤) show that multimedia techniques reveal certain effectiveness. Likewise, this study reflects the efficiency of applying multimedia techniques on Iraqi EFL pupils' achievement in vocabulary and pronunciation.

It is found that techniques adopted by the researcher in his experiment have proved to be effective since the achievement of the E.G. subjects in the posttest administered at the end of the experiment has surpassed that of the C.G. subjects. And this indicates that using multimedia techniques in teaching vocabulary and pronunciation will enhance learning.

The first hypothesis results indicate that using multimedia techniques in teaching vocabulary are effective and the results related to the second hypothesis also indicate that using multimedia techniques for teaching pronunciation is effective.

Multimedia techniques motivate pupils and make the learning process interesting; since they are prompt learners to figure out the new words and pronounce them correctly.

٤,٢ Conclusions:

In the light of the obtained results, the following conclusions have been drawn:

١. The process of teaching and learning vocabulary and pronunciation through using multimedia techniques is more effective than those techniques used in the prescribed textbook.
٢. Multimedia techniques facilitate the process of teaching vocabulary and pronunciation.
٣. Multimedia techniques make the process of learning vocabulary and pronunciation more interesting and enjoyable.
٤. Pupils can develop their vocabulary and also enhance their pronunciation through using multimedia techniques.
٥. They help and improve EFL learners' mastery of vocabulary and pronunciation.

The Effect of Using Multimedia Techniques on Iraqi EFL Learners' Performance in Vocabulary and Pronunciation at the Primary Stage.....

Asst. Prof. Saad Salal Sarhan, Haider Abdulhasan Hamza

٦. Using multimedia techniques make the pupils figure out a large number of the new words and help them to pronounce these words properly.
٧. The different elements of these techniques attract students' attention to the material.

٤,٣ Recommendations:

According to the results and the conclusions, the following recommendations have been put forward:

١. EFL teachers should use one and clear way of teaching one item of pronunciation and vocabulary instead of using many ways for the same item because this can make pupils confused.
٢. Teachers should use the multimedia techniques as new techniques in their lessons because they are proven effective in teaching vocabulary and pronunciation.. It encourages the teachers to develop their creativity to improve the teaching/ learning process. In addition, the teacher's capability to conduct the teaching and learning activity is improved.
٣. EFL teachers should not give pupils a great mount of items in one time; it is better to give them ٦-٩ items from time to time.
٤. EFL teachers are recommended to have a clear understanding of what knowledge need to be taught and when it is suitable to teach vocabulary and pronunciation.
٥. Teachers have to keep in mind that there are individual differences. This awareness is part of what allows the pupils to understand by using multimedia techniques.
٦. Teachers are recommended to be more cooperative and supportive to smooth the process and give pupils chance to be active and interactive.

٤,٤ Suggestions for Further Research:

For the purpose of following-up, this investigation and in the light of findings, these topics have been suggested for further studies:

١. Investigating the effect of using hypermedia techniques in teaching series of adjectives.
٢. Examining the effect of using sound technique for teaching pronunciation.
٣. A study with using the same techniques can be conducted in the intermediate stage and preparatory stage.
٤. Comparing the effect of using pupil's multimedia techniques between male and female pupils in teaching vocabulary and pronunciation.

The Effect of Using Multimedia Techniques on Iraqi EFL Learners' Performance in Vocabulary and Pronunciation at the Primary Stage.....

Asst. Prof. Saad Salal Sarhan, Haider Abdulhasan Hamza

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The Effect of Using Multimedia Techniques on Iraqi EFL Learners' Performance in Vocabulary and Pronunciation at the Primary Stage.....

Asst. Prof. Saad Salal Sarhan, Haider Abdulhasan Hamza

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