

The Use of Technology and its Impact on The Academic Achievement of Second-Year Intermediate Female Students in the English language

Nour Ismail Khalil^{1*}

¹ Department of English, College of Education for Women, Tikrit University, Iraq.

* Corresponding author: mr.noorkhalil@tu.edu.iq

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Abstract

The purpose of this study is to examine the impact of English teaching on academic performance using modern educational technology. The subjects of the study were the second-grade students of Al-Khansaa High School in Saladin Province, with a total of 40 students. The research sample is the experimental group, represented by series A, with a population of (20). In the pre-test, the test result "T" showed that there was no statistically significant difference between the two groups: this shows that assuming there is equivalence and homogeneity between the two groups, the control group was then taught in the normal way, and the experiment groups using modern technology. Then a post-test group was conducted on both groups. By analyzing the post-test results, the overall mean of the control group was (5.80), while the overall mean of the experimental group was (6.71). Although there was a significant difference in the mean values between the two groups, the significance level between the two groups was based on the two. The "t" test between independent groups reaches (0.40). It is greater than (0.05), which ensures that there is no statistically significant difference at the (0.05) significance level, a result the researchers attribute to the difficulty level of the English course, even with the use of modern technology. Based on this finding, several recommendations are made, including Teachers should receive ongoing training and development on the use of technology in English teaching. They must have the skills and knowledge to use technological tools effectively and integrate them into the educational process.

Keywords: Technology, English Language Teaching, Academic Achievement

1- Introduction

Introduction:

Today's society cannot be viewed without the use of technology in various aspects and sectors. One of these challenges is education, which is embodied in the use of technologies in the learning process and in improving the degree of subject knowledge of Tanzanian students. By refocusing more on geography, the impact of technology on learning can be beneficial and deliver improved outcomes for students. English as a system involves the use of place and space, and technology provides the means and methods in the form of tools and applications that enable students to learn more about the world by understanding the grammar of the language. It should also be noted that applying technology in English language teaching means using not just one tool. Moving on to the categories of educational games and applications, it is also possible to enhance students' English language skills. These games and apps can make the learning process fun and at the same time help students develop their problem-solving

abilities. Teaching English Integrating technology into learning English has many advantages as well as in student interaction during learning. In particular, examples of applications and interactive tools can help students engage in the process of language exploration and analysis This encourages their activity in relation to the course materials. To reinforce current concepts and independent research topics for new students, students are welcome to use technology. Students can use some applications that help them understand the relationships in English and interactions between factors. To some extent, applying technology in English language learning can help enhance students' real-life abilities. By taking advantage of the tools and applications available to them, using the principles of technology, students can study anytime they want and with the flow they prefer. By using online education, an individual can study under his own table according to his desire and need in using learning applications. It ensures diversification of learning as well as methods of presenting knowledge. Computer software, games, culturally relevant activities, and videos can be used as effective tools to provide students with a rich and varied learning process.

First: The problem of the study

The difficulty of the academic subjects taught to students makes it increasingly difficult for students to review and master the curriculum. Moreover, teachers' transfer of scientific material to students with the least possible effort is considered a stumbling block in achieving the necessary goals, especially because of the scientific research for this course. Searching is difficult. Educational statistics and performance indicators studied in previous years indicate low rates of student achievement in the English language. This was proven by the reality of the education department in neighboring schools and through the visits of the field research team. The study of the current situation concluded that students do not want to study the subject, choose intermediate second level courses, and develop the issue of English language and modern technology in this area. On this basis, the research questions can be identified as the following:

- 10 What impact does the use of technology in cross-teaching in regional classrooms have on the academic performance of second-grade students?
- 11 Is there a statistically significant difference at the significance level (0.05) between the control group and the experimental group using modern technology for English teaching and modern technology in the academic performance level of second-grade students?

Second: Research Objectives

The purpose of this research is to achieve some of the following objectives:

- 1- To study the impact of using modern technology to teach the subject of " Present Continuous" on the academic performance of second-grade students.
- 2- To determine the extent to which there is a statistically significant difference at the significance level (0.05) between the control group and the experimental group using modern English teaching techniques and modern technology in the level of academic performance of students in the second class.

Third: The importance of research

The significance of this study is summarized in two aspects: theory and practice. The theoretical significance of this study is to develop a theoretical framework of advanced technology and technology to solve the difficulties faced by students in learning English and modern technology. Oriented to the second intermediate level, efforts are made to enrich the theoretical literature of educational science

with research results related to the research topic. The importance of the study lies in the practical point of view and in reducing the difficulty of the English language and modern technology. This helps improve performance levels in the subject. It also encourages teachers to adopt modern technologies and apply them in the fields of education and research and obtain modern developments in educational tools that serve the curriculum, facilitate the teaching process, and strive to reduce the time and effort required for teaching. Reduce teaching, help convey ambiguous information to students smoothly and interestingly, and provide suggestions and advice that will benefit the field of education.

Fourth: Research hypothesis

The study's objectives and questions can be used to formulate the hypothesis: "In this level of English teaching, there is no statistically significant difference between the control group and the experimental group using modern technology at the significance level (0.05)." The experimental group's academic performance was beneficial.

Fifth: Research Limits

This study is subject to the following limitations:

- 1- Objective limits: The effect of using modern technology to teach the English language in the present continuous tense on the academic performance of students of Al-Khansa School No. 2
- 2- Human Limits: The second grade students from Al Khansa A School were taken as an experimental group, and the B grade students from Middle School , were taken as a control group.
- 3- Spatial limit: Al-Khansaa School, Salah al-Din Governorate,
- 4- Deadline: This study will be conducted during the first semester of the 2023-2024 academic year.

Sixth: Search Terms

Research Terminology The study refers to a number of terms related to the study variables, namely:

First: Application of modern technology in teaching

Al-Balawi (2013) defines modern teaching technology as all hardware and software that teachers can use in the educational process. Researchers programmatically define modern educational technology as all the teaching tools available in schools, using all modern and advanced technologies, in the time required to clarify and convey the information in textbooks to students in the best way and with the least possible effort and energy.

Third: Academic Achievement

The Dictionary of Educational and Psychological Terms defines academic achievement as the amount of knowledge and skills acquired in school subjects, expressed as test scores or teacher-assigned marks, or both. Shehata and Najar (2003). Researchers procedurally defined academic performance as the total score a student earned by answering the test items used in the current study.

The first topic: Theoretical framework and previous research

1.1 Application of modern scientific and technological concepts in teaching

In the educational literature, there are many definitions of the concept of modern teaching technology. Professionals define modern teaching technology means as means designed to serve teachers and

students in the educational process that relies on modern technology. Special expertise is required in the production process. and their use, such as computer programs, e-learning, conscious sound technology, digital cameras, interactive whiteboards, and various projectors connected to computers and other smart devices Al-Ibrahim (2010).

1.2 The impact of modern technology on teaching

In the information age, there is an increasing need to develop education that focuses on the scientific and technological knowledge and skills needed to participate meaningfully in the societies of the future. With the rapid development of scientific knowledge, it is becoming increasingly difficult for the education system to meet the expected educational needs. There is an increasing need to supplement formal education with education through non-formal channels. There is no doubt that educational technology plays an important role in education It can play an effective role in this regard. Mutawa (2002), in a study conducted by Ali and Ali (2011), emphasized the importance of the widespread use of modern technology in education and the necessity of formally training teachers in the use of such educational tools. Al-Asbahi's (2018) research also confirmed that the use of technology has a very positive impact on modern teaching methods. The study did not find differences in the effect of using technology in teaching methods according to the variables of gender and years of experience. On the contrary, the difference in academic qualifications favors master's graduates

1.3 Challenges of using modern technology in schools

As mentioned by Ibrahim (2011), the implementation of modern technology in education brings many challenges and disadvantages. Some of the disadvantages of e-learning technology as part of modern teaching tools are that it requires an infrastructure of required equipment, laboratories, and modern means of communication all exist on the Internet, so all of this imposes high costs on educational institutions and associated maintenance and software requirements. For teachers, the use of e-learning and the use of modern technology requires intensive training on how to use it and how to use it perfectly. Al-Abdulkarim (2011) summarized the main obstacles limiting the use of modern teaching methods as follows:

- 1- The number of students in the classroom is large, the number of teaching staff in the class is large, and there is a lack of suitable facilities within the school.
- 2- Teacher's experience in dealing with modern methods and their rational application.
- 3-Lack of tools to apply modern teaching methods.

The above situation makes clear to researchers the interdependence between the challenges posed by the use of modern technological means and modern teaching methods. The development of the educational process has to be social in all aspects and compatible with various economic and technical considerations, which is one of the main reasons for poor teacher supervision.

1-4: academic achievement concept

In language, achievement is defined as everything that is left, proven, and past, no matter what else happens, achievement is what distinguishes what is happening, this name is attributed to Ibn Manzur (1968). As a result, customary scientific efforts it is achieved by carrying out educational and learning work within the scope of the educational field to achieve what students gain from the teaching and educational guidance and educational and training measures given or prescribed by Qila and Zaki Pull's

(2004) degree of benefit. The definition of academic achievement in the Dictionary of Educational and Psychology Terms is the amount of knowledge and skills acquired in school subjects and expressed by test results or results specified by the teachers Shehata and Najjar (2003).

1.5 Factors for poor academic performance

Poor academic performance is one of the educational and social problems that parents and teachers in education complain about. Even students worry a lot about their thinking without realizing that this delay may be a normal time in their lives. Students with low academic performance tend not to exhibit pathological traits, which worries families and sometimes even angers their fathers Alsayed (2011). The results of a study titled "Factors leading to low academic performance: an exploratory study from the perspective of a sample of college students" conducted by Al-Qawareh (2013) are as follows: Psychological factors that contribute to low motivation in learning among some students compared to learning Poor physical fitness and low motivation. Low self-confidence. Family factors, especially students' concerns about family demands and existing differences among family members. Parents are less interested in their children's future; social factors include students' early marriages and heavy social commitments. There is a lack of understanding of the problems faced by parents whose children hang out with delinquent classmates. Academic factors. Pupils enter specialist subjects without inclination, there is poor guidance and leadership, and exam time is unorganized. Economic factors. Some students work after class, and their economic level is low. The price of books is high, and their daily expenses are insufficient. Another study by Al-Atrash (2013) titled "Causes of Low Academic Performance Levels of ninth-grade Students in Basic Education: causes and Treatments" was a "field study in the City of Wheels, Libya." The study concluded that the most important reasons for students' low academic performance are subjective: (students are addicted to cheating, have low self-confidence, feel fearful and stressed, and spend time with unsuccessful students in school). School reasons: Insufficient use of teaching resources, teachers are interested in some students, ignore other students, and do not care about students' feelings. Then there are social reasons (poor financial status of the family, harsh treatment of students by parents, lack of a proper learning atmosphere at home, and lack of interest on the part of the family in their children continuing their studies at home).

1.6 Previous studies

Al-Moghamesi (2016) also conducted a study aimed at assessing the extent of use of modern technology and software in secondary mathematics education among 37 girls, the researcher followed the survey method and developed a special questionnaire for this study. Understand student perceptions of the use of modern procedures in mathematics courses. The study participants were students of Secondary School No. 37 in the Kingdom of Saudi Arabia. The sample consisted of (25) randomly selected students. Research has found that teachers are not using a variety of sophisticated teaching tools in the classroom. Teachers also do not use modern and diverse teaching strategies to provide students with a modern curriculum that helps them understand and excel at the material.

-Mahmoud (2016) conducted a study on the role of multimedia in achieving learning course objectives in group social work practice, in which the researcher used an integrated social inquiry approach with a research community consisting of all faculty members. Researchers from the Department of Social Work, School of Social Work, Noura Bint Abdulrahman University, used a questionnaire as a research tool. The study concluded that faculty members unanimously agreed on the role of technological media in achieving: This course provides group social work practice and the ability to understand group social work course content interestingly and engagingly.

The second topic: the field aspect

2.1 study method

The researcher used a semi-experimental method to design two experimental groups and a control group. They conducted pre- and post-tests to measure the effect of modern technology in English teaching and the impact of modern technology on academic performance. The researcher chose this method because it is an appropriate scientific method to show the effect of changes in the dependent variable due to the introduction of the independent variable on the latter. And use special statistical methods to measure impact. This is done by specifying two groups, one of which is the control group. The other is the experimental group, provided that a pre-test is conducted to ensure the equivalence of the two groups and a post-test is conducted to measure the effect of the experiment on both groups— methods used and to answer the main research questions of the study.

2.2 Study population

The research population includes students from the Department of the Second Middle School (A), studying English and modern technology, with Al-Khansaa School as the experimental group community, a total of 20 students, students from the Second Middle School (B)), numbered (20) students as control group.

2.3 Study Tool

Among the researchers, he tested a pre-test and tested one of the dimensions of academic performance as a tool for the current study. The tool (pre-test and post-test) consists of three questions. The main questions are taken from the third chapter (present continuous tense) and Question 1: Multiple choice of four words from Vocabulary. The second question consists of two vocabulary questions, and the third question concerns filling in the blanks in the pre-test and the shapes in the post-test. You then ask a series of questions related to the topic of the question. The tool is distinguished by the diversity of the types of questions and the diversity of psychological level measures, as it does not rely only on memory, but goes beyond application, analysis, etc.

2.4 Authenticity of Research Instruments

In order to verify the authenticity of the instrument, the pre-test and post-test were submitted to a professor who teaches English and modern technology and the subject supervisor of Salah al-Din Education Directorate, Salah al-Din Education Supervision Department and evaluation, some passages The wording and content of the test have changed.

2.5 Learning Instrument Stability

The researcher conducted the difficulty coefficient and discrimination coefficient on the pretest and posttest of the control group and the experimental group. Table (1) shows the results of the difficulty coefficient and discrimination coefficient.

Table (1) Difficulty levels and discrimination coefficients of pre-and post-tests for the experimental group and the control group

Test Type	The Collection	Discrimination coefficient	Coefficient of difficulty
Pre-test	Control group	-0.038-0.083	16.76-41.76
	Experimental Group	-0.119-0.023	2.54-24.40
Post-Test	Control group	0.003-0.038	17-42
	Experimental Group	-0.032-0.027	8.14-27.13

As can be seen from Table (1), the difficulty coefficients of all tests are between very difficult and moderately difficult. Researchers can roughly consider the difficulty level of the scientific material tests included in English courses. While the discrimination coefficient refers to a question's weakness in differentiating student proficiency, researchers can attribute it to students' apathy toward answering test questions because they are not part of their grades.

2.6 Presentation and discussion of results

First: Verify equivalence between the control group and the experimental group

The researcher used a "t" test between two independent groups to ensure equivalence between the control group and the experimental group through pre-test results, which showed that there was no statistically significant difference between the control group and the experimental group. , which showed that the two groups were equivalent in performance levels in English and modern technology courses. The results are shown in Table 2.

Table (2) Results of the equivalence "T" test between the control group and the experimental group based on the pre-test results

The Collection	Sample size	Arithmetic mean	Standard deviation	t-value	P-value
Adjuster	20	6.81	1.53	1.81	0.22
Experimental	20	6.02	1.82		

Second: Post-test differences in technology use effects between the control group and the experimental group

Modern Teaching on Academic Performance Topics:

The researcher used a "t" test between two independent groups to find out the statistically significant difference between the control and experimental groups in the post-test results and the impact of using modern technology on academic performance. The results showed that the arithmetic experimental group The average total score on the post-test was (0.50) higher than that of the control group. The results of Levine's homogeneity of variance test showed that the statistically calculated "F" degree was 0.46 and statistically significant (0.33) when the significance level was less than 0.05. Significance. It

can be concluded that the variances of the post-test results for the control and experimental groups are homogeneous, which allows us to use the test results. t' between two independent groups. Here, the results of the "T" test show that there is no statistically significant difference between the post-test mean values of the control group and the experimental group at the significance level (0.05) for the use effect. The application of modern technology in English teaching and the impact of modern technology on research success, Table (3) shows this.

Table (3) "T" test results of two independent post-test results of the control group and the experimental group

The Collection	Sample size	Arithmetic mean	Standard deviation	t-value	P-value
Adjuster	20	5.80	1.60	1.06	0.40
Experimental	20	6.71	1.91		

Third: The difference between pre-test and post-test on the teaching effect of modern technology:

The researcher conducted a "T" test on two related samples, comparing the experimental groups themselves based on the results of the pretest and posttest scores to determine if there were statistically significant improvements due to the effects of using modern technology. The researchers also conducted a "T" test on two related samples of the control group to see if there was a statistically significant difference in the performance of the control group. The results showed that there was a statistically significant difference between the pretest and posttest results of the experimental group, and the significance level (0.05) was in favor of the posttest, indicating the effect of the use of modern technology in English course teaching and modern technology. Levels continue to increase, and the results suggest otherwise.

There is a statistically significant difference between the pre-test and post-test results within the group at the significance level (0.05) official. As shown in Table 4.

Table (4) "t" test results between two relevant groups on the pretest and posttest differences between the control group and the experimental group

The Collection	Variables	Arithmetic mean	Standard deviation	t-value	Degree of freedom	P-value
Adjuster	Pre-test	6.81	1.53	1.81	19	0.07
	Post-Test	5.80	1.60			
Experimental	Pre-test	6.02	1.82	2.19	19	0.02
	Post-Test	6.71	1.91			

The researcher expressed the result that there was no difference between the control group and the experimental group in the post-test of the difficulty level of the English and modern technology course in the third semester of the second grade as "persistent." The average score of the students in the experimental group who completed (10) items in the post-test was (6.40), and the corresponding percentage is (64%); this result indicates that the student's performance level is low during this semester. This result is consistent with the findings of Al-Maamari and Al-Nasiri (2016) that there is a certain

degree of difficulty in English and modern technology courses. The researchers believe that the use of modern technology in teaching has an impact on improving the performance level of the experimental group and statistical significance shows that there is a difference in the pre-test and post-test results of the experimental group. Pass the exam because despite the high level of difficulty in English and Modern Technology courses, the use of modern technology methods helps to improve the level of academic performance of students in English and Modern Technology courses at Al-Khansa School.

In conclusion:

The results based on the application of the interventions and their effects on second-year intermediate students in the English language at Al-Khansaa High School in Salah al-Din Governorate were as follows:

1. Multimedia can contribute to enhancing interest and demand for English lesson plans as concepts such as images, videos, and virtual reality are adopted.
2. Through the use of self-learning applications, games and activities, the child can learn actively. The use of technology enables students to explore topics and demonstrate ideas and grammar of English in the real world for themselves.

With the help of technology, students get additional resources in educational materials such as websites, apps, and videos. Therefore, students can access these resources at a time and place that is convenient for them, increasing opportunities for continuous learning and personal development.

4. It has highlighted the aspect of students who have a way of dealing with international content and even other students from different parts of the world. Exposure to their cultural diversity.
5. The general idea is that technology can help with the specific task and track the performance of students in the English class. There are options for developing games and other educational tools to create tests and quizzes, monitor the learning process and use the information received for more effective management of the process.

Suggestion:

Accordingly, based on the conclusions reached by the researchers, they pointed out the most important recommendations related to the use of technology and its impact on second-year female students in the English language at Al-Khansa Secondary School in Salah al-Din Governorate:

1. It is recommended that teachers undergo regular professional development regarding the use of technology in English. - To possess the skills and knowledge necessary to direct technological tools and apply them in the educational process.
2. Infrastructure related to the use of technology in learning must be well implemented, for example computers, the Internet, language-related software and applications. Make sure these resources are available and up-to-date.
3. Technological means should be utilized in making the English teaching materials more diverse. Tagging multimedia such as photos, videos, and virtuality can be employed to enhance the learners' participation rates and make them active in hunting knowledge.
4. To promote active learning, self-learning applications, educational games, and other interactive activities must be used. Other best practices relate to student learning where students can be

encouraged to conduct self-research on English language topics and encouraged to apply the language in real situations.

5. As a form of enhancing interaction and cooperation among students. Technology should be embraced. Students should be encouraged to work in groups or solve their knowledge and experiences together with the help of social media platforms.

6. Technology should be adopted in conducting assessment as well as in monitoring students' progress. The use of technology in assessment allows for the provision of interactive quizzes and quizzes, monitoring of student progress, analysis of data to identify areas where students are experiencing difficulties, and effective management of learning.

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