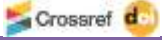


# Exploring English Teachers' Viewpoint towards the Use of Augmented Reality Technologies and their Impact on EFL Students' Achievement in Short Story

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## ABSTRACT:

The current study aims to explore the extent of knowledge and skills of English teachers regarding augmented reality technologies, their importance in teaching, and teachers' attitudes towards their uses from one aspect. In addition, to investigate their impact on secondary grade students' achievement in short story from the other aspect. A descriptive and quasi-experimental approaches have been adopted, and the researcher has used a questionnaire and a test as instruments for collecting data. They have been applied to (33) English language teachers in Habaniya city as well as to (30) students from Ababil secondary school that relates to General Directorate of Education in Anbar Governorate. They have been divided into two groups: the control group, consisting of (15) students, and the experimental group, also consisting of (15) students. The obtained results have showed that the extent of knowledge and skills of teachers concerning augmented reality technologies has been at a medium level. It also reveals that these technologies have a great importance in education with a positive attitude towards their use in teaching. Farther more, it has been found that there was a significant impact on students' achievement in short story due to the use of augmented reality technologies.

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## 1. Introduction:

Information and communication technology has contributed to significant progress in the educational process. There are new technologies emerging that have affected the way information is exchanged and transmitted through the use of electronic devices and technological tools which have impacted the development of students' education. They enable them to learn at their own pace and time and allowing them to access various educational resources.

The use of technology plays an important part of education and is recommended as one of the solutions for enabling effective learning. The use of technology in education improves students' learning levels and provides an effective and active interactive learning environment, making the student more engaged with the educational content and adding an enjoyable and exciting experience to the educational process (Demir & Yilmaz, 2020).

Many technological tools and materials for educational purposes have emerged, such as the use of interactive smartboards, technological applications, simulation programs, and AR environments that provide diverse virtual and educationally engaging learning environments. And there is an interactive learning environment that enables students to interact and communicate more with each other. AR is considered an advanced form of virtual reality (Kapucu & Yildirim 2019).

AR refers to a technology that integrates the virtual world with the real world by adding digital elements to it such as graphics, sound effects, videos, or sensory feedback, unlike virtual reality which creates an entirely artificial environment (Liono & Amanda, 2021).

AR technology is considered one of the key inputs for achieving educational process goals by integrating digital educational materials with various tools and means that provide students with an enjoyable learning process. This technology can be employed for students at different levels and across various specializations, as it increases students' desire and motivation to learn, making them feel excitement and satisfaction. Additionally, this technology plays an effective role in developing students' skills, such as problem-solving, teamwork, diverse assessment, and understanding different perspectives (Onder, 2017).

The use of AR technology in educational environments has expanded to include all groups of students across different age stages. This is based on the principle that students represent the center of the entire learning process.

The researcher observes that the weakness of English language teachers is a result of their reliance on programs that generally emphasize the cognitive aspect, neglecting other dimensions such as skills and technical aspects, and presenting the contents of some subjects in a disconnected manner. It is clear to everyone that our educational community has lagged far behind in keeping up with this tremendous progress as required which has affected the preparation of teachers. Moreover, it is well understood by those working in education and teaching methods how important the skills aspect is, both theoretically and practically, as it leads to the development of well-rounded personalities capable of effectively fulfilling their duties.

The researcher through his experience in teaching English language for more than twenty years, as well as his attendance at training classes and discussions with his fellow teachers about the teaching process, has noticed results indicating a lack of use of modern technologies in delivering information among some teachers. This will negatively affect their students' achievement. The reasons may be attributed to the ambiguity of educational objectives related to training and the development of thinking skills and cognitive processes, which involve standards that do not allow the teacher to know, embody, and understand these goals, and then implement them to achieve knowledge outcomes that lead him to delve into the students' ideas.

In order to identify the problems that students always face in English language, the researcher conducted a survey of a group of English language teachers. He has directed a questionnaire to several English language teachers belonging to Habaniya city from both genders, and it was found that 86% of them had no prior knowledge of AR techniques and did not possess the ability to employ them in teaching field.

Based on the above, and in light of the importance of employing AR in the educational process, the need to integrate technologies with educational curricula for teaching English, and the importance of connecting students with modern technologies to enhance their self-directed learning. The current study aims to explore the extent to which English language teachers use AR technology in teaching English in secondary school. Thus, the researcher's interest has arose from a sense of the problem that requires English language teachers to be explored the extent of their use of these techniques, their importance, the attitudes to their use, and their impact on the achievement of their students in short stories.

The traditional teaching methods and techniques are no longer able to keep up with the current era of modern information technology and advanced techniques in presenting educational content. Therefore, there has become a need to adopt an e-learning system. Due to the circumstances and crises that have had impacts on e-learning, all elements of the learning system have been affected, including the teacher, student, educational system, curricula, administrative systems, and educational requirements. One of the manifestations of these crises is the inadequate qualification of faculty members due to the lack of communication with the latest developments in modern technologies and techniques, as well as their absence from the outside world. (Arafa, & Sale, 2024).

The current era is witnessing an astonishing intellectual and technological advancement that has led to the diversification of sciences and knowledge, leaving its marks on all aspects and fields of life. The inflation in the amount of knowledge and information makes it difficult for curricula at all educational stages to encompass all these tremendous intellectual developments. This requires development and change of the philosophy, objectives, methods, and techniques of education (Sakharna, 2023).

In the light of what has mentioned, the significance of the study has immersed as it addressed AR as modern technologies for developing the skills of English language teachers, which will lead to improve students' achievement, as they are the central focus in the educational process to access the target goals. The value of this study summarized by the researcher which stems from its usefulness in:

1. Providing English supervisors with important data to assess teachers' performance inside classrooms.
2. Reinforcing the points of strength of the teachers' performance and treating the points of weakness that will be reflected on their efficiency.
3. Identifying modern educational trends that improve teachers' performance.
4. Farther mover, the findings of the present study are hoped to be of beneficial value to the other English teachers in general.

## 2. Literature Review

It is so essential to make a review for previous studies that shed light on the technologies of AR to get a clear view on how they deal with these studies comparing with the current study. Sulaiman's study (2020) aimed to find out the impact of using AR technology on the academic achievement of sixth-grade students with learning difficulties in computer science. The study instrument was a standardized achievement test measuring cognitive aspects in computer science. It was applied to a sample that included (150) sixth-grade students with learning difficulties, randomly divided into two groups: experimental group consisting of (75) students and control group consisting of (75) students. After applying the measurement tools, the result revealed that there was a statistically significant difference between the means of the experimental group in the pre-test and post-test for the achievement test in favor of the post-test. Additionally, there was a statistically significant difference between the means of the experimental and control groups in the post-test for the achievement test, again in favor of the experimental group. Furthermore, there was an effect of using AR technologies in enhancing academic achievement in computer science among students with learning difficulties in intermediate schools.

Sakharna's study (2023) dealt with identifying the effect of using augmented reality technology on the achievement of second-grade students with learning difficulties in the subject of mathematics. The study followed a quasi-experimental design to achieve its aim. The sample consisted of (40) students with learning difficulties from two different public schools in Zarqa Governorate, with (20) students in each group. One group was randomly assigned as a control group that was taught by using traditional methods, while the other group was an experimental group that was taught by using augmented reality technology. The study tool was a achievement test in mathematics, which was validated for its reliability and validity. The study results indicated that there were differences between the mean scores of second-grade students in the mathematics achievement test in favor of the experimental group that was taught using augmented reality technology.

Sulaiman & Al-Sinay' study (2024) was conducted to investigate the effectiveness of using AR technology in enhancing cognitive achievement among eighth-grade female students. The experimental method was used, and the sample included (42) female students from Al-Maziona Basic Education School in Dhofar Governorate, Sultanate of Oman. They were divided into two groups: experimental group and control group. The study applied an achievement test to measure cognitive achievement. The study found statistically significant differences between the two groups in cognitive achievement in favor of the experimental group.

Both studies, Binhomran (2021) and Shaman (2023), focused on the effectiveness of using augmented reality technology in learning and acquiring English vocabulary and the motivation

of learners towards it. Both of them concluded that using augmented reality technology has been effective in acquiring English vocabulary and enhancing motivation for learning.

The current study is characterized by the novelty since it deals with AR technologies and employing them to enhance English teachers' performance and students' achievement at the same time.

### **3. Augmented Reality (AR)**

AR is a technology that combines the real world with digital elements such as images, videos, information to enhance user's experience. These digital elements are displayed through devices like smartphones or AR glasses. It is considered a modern technology that adds virtual elements to the real environment, allowing users to have an interactive and immersive educational experience. It enhances the user's surrounding world with visual and auditory information, improving their understanding and perception of educational topics (Sulaiman,2020).

AR is one of the technological innovations that has revolutionized the field of education as it integrates virtual elements with the real surroundings of students, enhancing their interaction and interest in the educational material. It is an engaging interactive technology that allows you to add the virtual objects you want texts, drawings, videos, sounds or a composite mix of all of them in a 3D format, to a real environment that adds a digital dimension, creating a unified environment where digital and physical elements converge, making things appear before you as if they are real. Using AR technology requires simple tools such as smartphone cameras, sensors, and other tools to collect data from the surrounding environment, then process and display it in an interactive manner (Sakharna,2023).

#### **3.1. How do AR Technologies Work?**

AR technology works by integrating digital data with the real environment in real time. This process involves several steps and techniques as follows:

##### **a. Capturing Images and Sensory Data:**

AR technology begins by capturing images using a smartphone camera or the built-in camera in AR glasses. Other sensors can also be used to collect data about the environment, such as depth, lighting, and location.

##### **b. Data Processing and Object Recognition:**

Data collected is processed by advanced software to analyze images and recognize objects and surfaces in the real environment; this helps the system understand the context and the place where digital elements will be placed.

##### **c. Overlaying Digital Elements:**

After identifying and analyzing the environment, the system overlays digital images or information onto real images in a way that makes the digital elements appear as part of the natural environment.

**d. Real-Time Interaction:**

Users can interact with the digital elements through touch devices, gestures, or voice commands, making the experience more interactive.

**e. Calibration and Adjustment:**

The system continues to monitor and calibrate the relationship between digital elements and the real environment, which includes adjusting the position, size, and orientation of digital elements based on user movement and changes in the surrounding environment, to ensure they remain in harmony with the real world.

**f. Content Presentation:**

AR environment with digital elements is displayed on the screen such as a smartphone screen or AR glasses allowing the user to see the real world and digital modifications together (Demir, & Yilmaz, 2022).

**3.2. Characteristics of AR Technologies**

Blending reality with the virtual world in a real environment, making it an interesting experience. They:

- Provide clear, strong, and accurate information.
- Create an interactive environment among the involved parties.
- Reduce costs.
- Give an ability to transcend spatial limitations.
- Enhance a remote collaboration.
- Improve shopping experience.
- Increase efficiency and productivity in industrial and commercial environments.

(Sakharna,2023).

**3.3. AR Technologies in Education**

AR enhances education by overlaying digital information onto the physical world, creating engaging, interactive, and immersive learning experiences that help students understand complex concepts, improve retention, and boost motivation. AR helps students visualize abstract topics, collaborate on projects, learn at their own pace, and participate in activities like virtual field trips or dissections, ultimately transforming traditional classrooms into more dynamic and effective learning environments (Demir & Yilmaz, 2022).

Education has always been one of the most prominent and rapidly developing fields over the past years, and due to the bright future that education pioneers see for AR technology, the steps for this technology in the field of education have become clear. Although it is timid in

some countries, its effects are evident in others. The educational environment is a fertile ground for applying AR technology, as it can be used to transform paper books into interactive display platforms via smart devices. Instead of just reading books, you can create a three-dimensional cartoon character that narrates a story and presents live video recordings simply by pointing the smart device's camera at the book. It can also be used in lessons about human anatomy by viewing the organs in three dimensions, making it easier for teachers to explain and giving students a deeper understanding of the lesson.

AR technology offers powerful tools to enhance the learning experience and improve understanding and engagement. Here are some AR tools in the field of education:

- **Educational apps for smartphones and tablets:** Provide interactive experiences for students by incorporating real-time digital content, enhancing interaction between students and educational materials.
- **Smart glasses:** Offer deeper, more immersive 3D interactive experiences, used in fields such as science and history to provide realistic virtual trips.
- **Interactive AR technologies:** Enable students to interact with 3D models and graphs, providing real-life experiences for complex concepts.
- **Online learning platforms:** Rely on integrating AR technology into online learning platforms to enhance the remote learning experience.
- **Educational games using AR:** Provide educational content through educational games that use AR technology to make the learning process more fun and exciting (Sakharna,2023).

### *3.4. Significance of AR Technologies in Education*

Shaman (2023), mentions several advantages of AR technologies that highlight their importance and justify the need for them in educational institutions in particular. These can be summarized in the following points:

- Stimulating motivation and enthusiasm of students, as educational material is presented in an attractive and exciting manner.
- The ability to present educational experiences through 3D models, allowing students to view and analyze subjects from different perspectives, thereby providing a deeper understanding of the topics.
- Offering educational experiences that simulate the instructional material, which is difficult to access physically, such as space and volcanoes.
- Helping students deal with hazardous materials without exposure to harm, such as nuclear reactions and chemical interactions.
- Enhancing collaborative learning and social interaction among students within the same educational environment by improving smartphone-based software and encouraging active participation among students in solving educational problems.

- Providing rich educational content that aids in understanding as it is more firmly etched in students' memories compared to content acquired through traditional means.

### 3.5. AR Technologies used in Education

Arafa & Sale (2024) argues if AR technologies are integrated in the field of education, they will provide effective experiences. The researcher has constructed a questionnaire involving many AR technologies and has asked the experts to choose the suitable ones that cope with the aims of the study. So, they have highlighted on the following:

#### a. JigSpace

It facilitates to find out concepts by using 3D, helping for understanding complicated subjects. It is interactive presentation and allows every one use it easily in minutes in forms of textures, videos, and sounds.

#### b. Layar

This tool integrates digital information, such as videos, or images, with the physical world by the use of camera.

#### c. Arloopa

This application is available on Google Play which is considered a fantastic platform for doing any AR experiences. It also allows the user to visualize 3D models in the real world and it can be utilized in various contexts. It offers more than one language, including English, Russian, German and Spanish.

AR Technologies are revolutionizing education by offering interactive and immersive learning experiences. These technologies can enhance student engagement, improve knowledge retention, and provide access to otherwise inaccessible learning environments. Here's a breakdown of AR applications in education:

#### 1. Interactive Textbooks and Educational Materials:

- AR can overlay 3D models, animations, and supplementary information onto textbook pages or physical objects, making learning more engaging and dynamic. For example, students can view a 3D the figures by pointing their device at a textbook illustration, or explore historical events through interactive AR experiences overlaid on images.

#### 2. Virtual Field Trips:

- AR enables virtual tours of historical sites, or even the solar system, allowing students to explore these environments from anywhere. This provides immersive learning experiences that would be difficult or impossible to replicate in a traditional classroom setting.

#### 3. Language Learning:

- AR can be used to create interactive language learning experiences such as overlaying labels and translations on real-world objects. This can make learning new languages more intuitive and engaging.

#### **4. Skill Development:**

- AR can be used to simulate real-world scenarios for training in various fields, such as speaking, reading, or listening. This allows students to practice skills in a safe and controlled environment, without the risks associated with real-world applications.

#### **5. Enhanced Presentations:**

- AR can make presentations more engaging and informative by adding interactive 3D elements, animations, and supplementary information. This can help presenters capture and maintain audience attention (Sulaiman, 2020).

### ***3.6. Challenges of Using AR Technologies in Education***

Shaman (2023) states although there are many benefits, AR technology faces some challenges in implementation, including:

1. The need for advanced devices: AR technologies may require devices with high technical specifications, which can pose a challenge in some areas that lack these resources.
2. Cost of content development: Developing educational content using AR technology is costly compared to traditional methods, which requires additional funding and support.
3. Teacher training: This technology requires special training for teachers to handle interactive technologies, which necessitates intensive professional development and training programs.
4. The researcher sees that AR technology represents a significant advancement in the field of education. They enhance students' interaction and understanding of scientific concepts. Through these technologies, education become more creative and engaging, allowing students to explore subjects in new and innovative ways making the learning process exciting and inspiring. By using mobile devices or smart glasses, users can see an enhanced interface of the real world with virtual elements such as graphics, texts, and additional information.

#### **4. Short Story**

Using literature to teach second or foreign languages goes back more than one hundred years. Before that, Grammar Translation Method was used to teach foreign languages. In this method, the students are asked to translate literary texts from the second language to their mother language. This method was replaced by other methods that emphasized structure and vocabulary, literature was no longer used. However, for the past two decades or so on literature has found its way back into the teaching of foreign languages. Researchers have realized that teaching literature is an important part of foreign language teaching. Since literature is a reflection of the society in which the language is spoken, it should be included in all curricula. It provides students with an understanding of another culture (March-Russell, 2009).

Short story is one of the most distinctive forms of literary expression. It is often set apart from the novel and other longer narratives because of its brevity and focus. It should be valued for its unique characteristics, especially its brevity, intensity, and ability to capture fragmented experience of life. Unlike novel, it does not attempt to provide a comprehensive view of life but rather evokes meaning through limitation. Brander Mathews, in his work, *The Philosophy of Short-Story*, emphasizes that short story is about focus and intensity: it shows "one action, in one place, on one day" (Mathews, 2009) and focuses on a single character, event, or emotion.

Short story also holds educational value. Scholars argue that incorporating literary texts into foreign language teaching makes lessons more engaging and authentic compared to traditional textbooks. Students encounter real-life uses of language, observe words and structures in their proper contexts, and gain opportunities to broaden their cultural horizons and critical thinking skills as it is suggested by a study entitled "The Use of Short Stories in English Language Teaching and its Benefits on Grammar Learning" by Seval Şentürk & Ayhan Kahraman who argues that "by this way, teachers can use their time more effectively and the students enjoy the lesson. Teachers can use this opportunity to develop language skills." (Şentürk & Kahraman, 2020).

Among literary forms, short stories receive a unique place in both literary studies and classrooms. Many writers and critics attempt to give definitions of short story, among them is Edgar Allan Poe. In his essay "The Philosophy of Composition" he says that short story requires "from half an hour to one or two hours in its perusal". According to Poe, A short story should be read in one sitting, which might take anywhere from half an hour to two hours. The goal is to have a "single effect" on the reader. A short story in modern fiction might be anywhere from 1,000 to 20,000 words long. Every aspect of the story, in his opinion, should support this impact, making the short narrative into a highly focused work of fiction. On the same vein, Anton Chekhov, the American master of short story asserts that a short story should be brief, with every part having a specific function and staying clear of unnecessary details or remarks. He concentrates on portraying life as it is, frequently leaving the narrative unfinished or open-ended so that readers may make their own judgments (Mathews, 2009).

Short stories, in particular, are highly effective for language learning because they are concise, captivating, and manageable within a classroom setting. As in his thesis, "Teaching Short Stories: Challenge and Issues". Kabiraj Upreti notes, literature exposes learners to complex themes and unexpected uses of language, while a good short story can grip learners with the suspense of its unraveling plot (Upti, 2012). This makes short story not only a literary form of great artistic value but also a powerful educational tool, therefore, learning becomes more efficient, enjoyable, and ultimately more successful.

#### ***4.1. The Significance of Short Story***

In teaching process, short stories have several benefits that other types of fiction do not. They play a vital role because of their brevity which makes them suitable for classroom use. Teachers can use short stories to design varied classroom activities, including comprehension questions, discussions, creative rewriting, or dramatization. Such tasks integrate the four skills (reading, writing, listening, and speaking). Short stories teach students the basic parts of a story, like plot, character, setting, and point of view, which is a good start for studying literature. According to Şentürk & Kahraman(2020) short stories are the best method for

teaching literature to students (Mathews, 2009). Short story is considered an important part of any language and plays a significant role in the educational process. It contributes to improving the four language skills, so its understanding is essential for mastering English language (March-Russell, 2009).

Last but not least, Human struggles and a variety of cultural situations are frequently reflected in short stories. As a result, Students learn about many cultures, values, and viewpoints through them, which promotes empathy and intercultural understanding (Şentürk & Kahraman, 2020). Reading literature in general and short stories in particular, shows students a new and complex syntax as well as subtle vocabulary usage, which helps them expand their language usage and knowledge. According to Povey (1972), the encouragement of language use or communication, particularly in EFL contexts, is another benefit of introducing literature into language classes. According to McKay (1982), literary works can be used to raise students' awareness of language use because role relationships are predetermined and social context is taken into account. The experiential and motivational elements that literature offers, as well as their impact on students' reading proficiency, are the additional ways that literature contributes to education. If reading is thought of as the exchange between readers (March-Russell, 2009).

## 5. Methodology

In the current study, the researcher has adopted a mixed-methods approach, based on combining both qualitative and quantitative methods. This approach utilizes two or more data collection methods and employs both quantitative and qualitative data simultaneously, followed by an analysis of the obtained data, leading to the conclusions drawn for deeper and more accurate interpretations. The descriptive survey method was used to review the literature and previous studies related to the topic of the study that dealt with the AR technologies in teaching.

### 5.1 Study Design

The nature of the present study requires the use of an experimental method with a quasi-experimental design including experimental and control groups in order to measure the impact of AR technologies on the secondary school students' achievement in short story for. The test has applied to the study sample, and the instrument has re-applied again, aiming to know the differences between the pretest and posttest of the students' achievement as illustrated in figure (1):

Figure (1): study design

Groups	Pre- Instrument	Variables	Post- Instrument
Experimental	Pre-Test	by AR technologies	Post-Test
Control		Without AR technologies	

Constructed by the researcher

### 5.2 Population and Sample of the Study

The study population consists of all English teachers who teach secondary school students in Habaniya city during the second semester of the academic year 2024-2025. Their total number is about (66) teachers as well as the 3<sup>rd</sup> intermediate students of Ababil secondary school in Habaniya which their number is about (60) students. The sample of teachers has

consisted of (33) teachers, representing 50% of the study population. Ababil secondary school for girls in Habaniya city has been deliberately chosen to implement the study since it has the necessary resources such as a language lab, big halls and internet service. The number of 3<sup>rd</sup> intermediate grade in the school was two sections, with (30) students each section, and one of them was randomly selected. The researcher has divided the sample into two groups, consisting of (15) students in the control group who have been taught by using the conventional method, and (15) students in the experimental group who have been taught by using AR technologies, taking into account the students' levels to ensure equivalence between the two groups as shown in table (1):

**Table (1): Students' Sample**

School	Groups	No. of Students	No. of Repeaters	Final Number of Students
Ababil Secondary School	Experimental	17	2	15
	Control	18	3	15
	Total	35	5	30

Constructed by the researcher

### 5.3 Study Instruments

To achieve the aims of the study, the researcher has constructed two instruments:

#### 1. Questionnaire

In light of the aims and depending on the nature of data to be collected and the methodology followed in the study, the researcher has utilized a questionnaire as an instrument for data collection, aiming to understand AR technologies in teaching at secondary grade in Habaniya. Additionally, to understand the extent of using AR technologies in their teaching and teachers' attitude.

##### 1.1. Validity of the questionnaire

Validity is considered a fundamental requirement for any study instrument. In the current study the validity has been assessed in two ways:

##### a. Face Validity

The researcher has exposed the instrument to jury members who are specialists in the field of English language teaching. They have been asked to express their opinions and comments regarding all items of the questionnaire in terms of their appropriateness, clarity, the relevance of each item to the field, the soundness of their linguistic formulation, and their suitability to achieve the intended purpose, as well as to suggest ways to improve them.

##### b. Validity of the Internal Consistency

The validity of the questionnaire items has been confirmed, and the correlation of each item with the total score has established by calculating Pearson correlation coefficient. Depending on the obtained data, all statements are significant indicating that all the items constituting the questionnaire possess a high degree of validity which makes suitable for application. The reliability of all dimensions of the study is high, as Cronbach's alpha reliability coefficient ranged between (0.873 - 0.934), and the overall reliability coefficient reached (0.889), which is a high reliability value indicating the appropriateness of the study tool for field application.

#### 2. Achievement Test

In the light of the behavioural objectives of the material the researcher has constructed the test items. It consists of (15) various items including MCQ, TRUE/FALSE, completion, and open answer questions.

## **2.1. Validity and Reliability of the Test**

The researcher has exposed all the items of the test to some experts who are specialized in the field of ELT and literature. After that, data has been processed by statistical means. Some modifications have been done according to the experts' notes and the test has become in its final form gaining its general consensus and has (0.89) agreement of the jury members.

The researcher has also utilized Alpha Cronbach equation to measure the reliability test which is (0.83). Thus, it is regarded as a high indicator for the test reliability.

## **2.2. Pilot Administration of the Test**

After achieving the face validity of the test, on Sunday 3<sup>rd</sup> of March.2024 the test has given it to 10 students from Al-Bawasil secondary school to check the required time and the appropriateness of the items. The findings have revealed that all the items are very clear to the students have no any ambiguity concerning its instructions and the needed time to answer is between 30 to 40 minutes.

## **5.4 Study Equipment**

To achieve the study aims, the researcher has utilized many technological tools and aids in teaching the experimental and control groups such as smart board, laptops, recorder, charts, drawings, chairs, tables and internet service. A secured place is needed for both groups in which there is the same circumstances.

## **5.5 The Material**

Two short stories (" A powerful Lessons for Everyone " & " Hard Work Pays") have been taken in the current study. The two stories have been included in the book entitled "English for Iraq" which is prescribed for teaching 3<sup>rd</sup> intermediate students in Iraqi schools.

## **5.6 Applying Scoring the Test**

The post achievement test has been conducted to both groups; the experimental and the controls groups on 7<sup>th</sup> of April 2024. Students have been informed concerning the date of test two weeks before. Under the same procedures the test has been conducted to avoid any extraneous variables that might affect the findings. With the help of English teachers, the has been conducted in a comfortable environment. After answer the questions, the researchers collected the test sheet scoring them to know the students' development after exposing the independent variable. Two marks have been given for each correct items, so the total mark has been (30).

## **6. Data Analysis and Findings:**

### **6.1 The result of question one "What is the extent of knowledge and skill of English language teachers for using AR technologies?"**

To identify the extent of knowledge and skill of English language teachers for using AR technologies, the researcher has calculated the means and standard deviations of the items in this section as shown in table (2):

**Table (2) The mean and standard deviation of the sample regarding the use level of AR technologies**

Level	Item	M	S D.	Practice	Order
8	I received training on using AR techniques at work.	2.73	0.65	High	1
1	I am familiar with the concepts and terms related to AR technologies.	2.51	0.61	High	2
5	I follow a systematic plan to ensure the effectiveness of using AR applications.	2.28	0.64	Middle	3
7	I can solve the technical problems I encounter when using AR applications.	2.23	0.70	Middle	4
3	I trust my ability to identify a range of AR applications that can be used in teaching.	2.12	0.70	Middle	5
4	I know how to use many AR applications to assist my students.	2.03	0.55	Middle	6
2	I trust my ability to recognize AR applications and employ them in teaching.	1.98	0.82	Middle	7
6	I have the ability to find development resources related to AR technologies.	1.47	0.41	Weak	8
<b>Total Mean</b>		<b>2.17</b>	<b>0.54</b>	<b>Middle</b>	

Constructed by the researcher

The result has shown that English teachers in Habaniya city have an average level of skill and knowledge in using AR technologies with a mean score of (2.17) which falls into the second category of the three-point scale indicating that the level of skill and knowledge refers to a moderate degree regarding the study instrument. It has also been shown that there is variation in the opinions of the study sample regarding the extent of knowledge and skill of teachers in using AR technologies with mean scores ranging from (1.47) to (2.73), which fall within the first, second, and third categories indicating levels of low , medium , and high.

The result also indicates that the most knowledge and skills of teachers regarding the uses of AR applications have been represented in receiving the necessary training for using AR technologies during work, and understanding the concepts and terminology related to these technologies. This shows the commitment of educational leaders to provide an adequate number of training courses for teachers to enhance their experiences and skills on how to use and employ AR technologies in education.

### **6.2 The result of question two "What is the importance of using AR technologies for English language teachers?"**

To know the importance of using AR applications for English teachers, the researcher has calculated the means and standard deviations of the items in the questionnaire regarding the significance of using these applications in education as illustrated in table (3):

**Table (3) The mean and standard deviation of the sample regarding the Importance of AR use**

Level	Item	Mean	S D	Importance	Order
10	AR technologies motivate students to increase their level of motivation towards the process of education and learning.	2.75	0.55	High	1

3	The use of AR technologies in learning enhances communication between the student and the teacher.	2.73	0.76	High	2
9	AR technologies add a sense of vitality and attractiveness to the presentation of educational material.	2.71	0.44	High	3
1	AR applications facilitate the completion of tasks with the least possible time and effort.	2.70	0.73	High	4
8	AR applications encourage students to collaborate by activating cooperative learning and active learning.	2.62	0.53	High	5
2	AR technologies contribute to change the role of the student from a receiver of knowledge to a seeker of knowledge.	2.57	0.60	High	6
6	AR technologies contribute to develop of students' thinking skills.	2.49	0.76	High	7
5	AR technologies contribute to develop of students' research skills.	2.44	0.75	High	8
7	AR technologies help to consider the individual differences among students.	2.39	0.71	High	9
4	AR technologies reduce the psychological barrier towards the learning process such as shyness.	2.35	0.74	High	10
<b>Total Mean</b>		<b>2.58</b>	<b>0.51</b>	<b>Middle</b>	

#### Constructed by the researcher

The results have shown that the importance of using AR applications in teaching received a high degree from the perspective of English language teachers in secondary schools of Habaniya city with a mean score (2.58) which falls within the third category of the three-point scale, indicating that the level of importance of these applications leads to a high degree in the study instrument.

It has been shown that there is an agreement among the study sample regarding the use of AR applications, with mean ranging from (2.35) to (2.75), which fall within the third category indicating a high degree.

The study has clarified that the most important aspects of using AR technologies are that they make students have high motivation towards teaching and learning processes. Additionally, they enable them to use these technologies for communication between students and teachers, adding a sense of vitality and appeal concerning presenting the instructional material through the elements of excitement they include. It also facilitates communication among all parties involved in the educational process.

#### **6.3. The result of question three "What are the attitudes of English teachers towards the use of AR technologies in teaching?"**

To know the attitude of English language teachers towards the use of AR techniques, the researcher has calculated the mean and standard deviations of the items that deal with their attitudes as shown in table (4):

**Table (4) The mean and standard deviation of the sample regarding their attitudes towards AR use**

Level	Item	Mean	S D	Agreement	Order
2	I believe that AR technologies will be a communication tool between me and my students.	2.60	0.59	Yes	1
1	I think that AR technologies will help me to monitor students' performance and accomplishments.	2.55	0.52	Yes	2
4	I like teaching using applications that rely on AR technologies.	2.45	0.60	Yes	3
3	I see that using AR technologies will make the teaching process more effective and interactive.	2.41	0.68	Yes	4
7	I advise my fellow teachers to use AR technologies in education because they are more than just a learning tool.	2.39	0.70	Yes	5
6	I believe that the current curriculum I am studying is designed to incorporate AR technologies in teaching.	2.38	0.65	Yes	6
5	I see that using AR technologies in education will help increase student motivation.	2.37	0.57	Yes	7
Total mean		2.17	0.54	Middle	

### Constructed by the researcher

It is clear from the previous table that English language teachers in Habaniya city have positive attitudes towards the use of AR applications, with a mean of (2.45). It falls into the third category of the three-point scale indicating that the teachers' attitudes towards the use of AR educational applications point to (Yes) in the study tool.

It has also been shown that there is an agreement in teachers' attitudes towards the use of AR applications, with mean scores ranging from (2.37) to (2.60), which are averages that fall within the third category indicating (Yes).

This result has indicated that most teachers' attitudes towards the use of AR applications are based on the belief that these technologies will serve as a communication tool between the teacher and their students, as well as help in monitoring students' performance. Teachers also prefer to use applications that rely on AR technologies in teaching, which reflect their awareness of these applications and their positive role in education. Furthermore, these applications enhance teachers' ability to monitor all students and assess their levels by enabling to give accurate evaluation.

#### **6.4 The result of question four "What is the impact of AR technologies on students' achievement in short stories?"**

To answer this question and investigate the impact of using these technologies on students' achievement, the researcher has put this hypothesis "There are no statistically significant differences between students' mean scores in the experimental group who have been taught by using AR technologies and the students in the control group who have been taught without using AR technologies in the post-test of short story."

To verify the mention hypothesis earlier, the researcher has utilized t-test for two independent samples to compare the mean scores and standard deviation of the experimental and control groups. After collecting data and analyzing them statistically, the results have shown that there is a significant difference in the mean scores between the two groups for the favour of experimental one because the calculated t-value (5.635) is higher than the tabulated one (1.89). So, the null hypothesis should be rejected, see table3 :

**Table 3: The mean and standard deviation of students' sample**

Group	No.	M	SD	Calculated t - Value	Tabulated t - Value
Experimental	15	4.18	0.75	5.635	1.89
Control	15	3.04	0.52		

**Constructed by the researcher**

The result above indicates that the experimental treatment, AR technologies, effectively has enhanced students' achievement since there is a differential improvement in favor of the experimental group. The use of independent variable has proven its effectiveness in the post-test administered at the end of the experiment. The finding also shows a considerable improvement in all the students' four skills.

**6.5 Discussions of Results**

Based on the results, it is obvious that the students' achievement in experimental group is better than the students' achievement in the control group. The reason behind their improvement is the use of AR technologies which plays a vital role in engaging and motivating the students and makes their teaching enjoyable and interesting.

In the light of the results, there is an agreement between the results obtained in the current and most of the previous studies such as Sulaiman & Al-Sinay's study (2024) and the study of Sulaiman (2020) who state that there were significant differences between the mean scores of the experimental group and control group in favour of the experimental one. The results of the present study has agreed with Sakharna's study (2023), Binhomran's study (2021) and Shaman's study (2023) which showed the use of AR has an essential impact in motivating students and in acquiring vocabularies.

**7. Conclusions**

Based on the finding of the present study theoretically and practically, the researcher has concluded the following:

1. AR technologies give English teachers more opportunities and encourage them to utilize these technologies in teaching by which they can access huge information to their students.
2. AR technologies permit the teacher to be active and more engaged with the students by enforcing them with various technological means.
3. Teachers who use AR technologies become more continent and motivated because these technologies are considered an efficient mechanism that enable them to be responsible of teaching.
4. There is a considerable development in the 3<sup>rd</sup> intermediate students due to the use of AR technologies.
5. AR technologies can be very beneficial in the classroom if they are utilized well.
6. Using AR technologies motivate the students making the lesson more enjoyable and interesting.

**8. Recommendations**

In light of the results, the researcher has put some recommendations hoping that they will be valuable for teachers and students as follows:

1. Syllabus designers and teachers in ministry of education should focus on modern technologies to make use of them in teaching process.
2. Teachers can give more attention for student who are usually in need to use technologies in their learning utilizing the available technologies to enhance students' performance.
3. AR technologies should be applied in various instructional levels such as university one.
4. Students in advanced level should take into consideration these modern technologies that may improve their language skills.
5. The necessity of providing AR technologies that cope with secondary school students' characteristics.
6. The necessity of adopting awareness programs guide school managers about the importance of AR technologies.
7. Training courses should be open for teachers to use AR technologies and informing them about their importance and positive role in the educational process.

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## الكشف عن وجهة نظر مدرسي اللغة الإنجليزية تجاه استخدام تقنيات الواقع المعزز وتأثيرها على تحصيل الطلبة متعلمي اللغة الإنجليزية كلغة أجنبية في القصة القصيرة

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### المستخلص:

تهدف الدراسة الحالية إلى الكشف عن مدى معرفة ومهارات مدرسي اللغة الانكليزية بتقنيات الواقع المعزز، واهمية استخدامها في التدريس، ومواقف المدرسين تجاه استخدامها من جانب، بالإضافة إلى بيان أثر استخدامها على تحصيل طلبة المرحلة الثانوية في القصة القصيرة من جانب اخر. وتم اعتماد المنهج الوصفي وشبه التجريبي واستخدم الباحث الاستبانة والاختبار كأدوات دراسة لجمع البيانات اللازمة، وتم تطبيقهما على (٣٣) من مدرسي اللغة الإنكليزية في مدينة الحبانبة وكذلك على (٣٠) من طلبة ثانوية ابابيل التابعة الى المديرية العامة للتربية في محافظة الانبار ، وتم تقسيمهم إلى مجموعتين المجموعة الضابطة وعددها (١٥) والمجموعة التجريبية وعددها (١٥) طالباً، وتوصل الباحث الى بعض النتائج منها أن مدى معرفة ومهارات المدرسين بتقنيات الواقع المعزز جاءت بدرجة متوسطة، كما تبين أن لها أهمية كبيرة في التدريس، بالإضافة إلى وجود اتجاه إيجابية تجاه استخدامها في التدريس، كما تبين وجود أثر بدرجة كبيرة في تحصيل الطلبة في القصة القصيرة وهو يعزى الى استخدام تقنيات الواقع المعزز.