



**An-Najah National University  
Faculty of Graduate Studies**

**THE EFFECTEVNESS OF USING 3D VIRTUAL  
REALITY IN IMPROVING THE TENTH GRADE  
STUDENTS' COMMUNICATIVE COMPETENCE  
IN SALFEET CITY SCHOOLS**

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**This Thesis is Submitted in Partial Fulfillment of the Requirements for the Degree  
of Master of Methods of Teaching English Language, Faculty of Graduate Studies,  
An-Najah National University, Nablus - Palestine.**

**2023**

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## **Dedication**

I heartedly dedicate this work to Allah, the Almighty, the source of inspiration and strength who answers my prayers and paves the path for me, the soul of my dad, my adored mother for her love and support, my beloved husband, my respectful parents in law and my adorable daughter.

## **Acknowledgements**

At first, I profoundly appreciate my supervisor Dr. Ahmed Awad for his great endeavor as he directed me to the right path for writing this work. He accepted my mistakes and corrected them humbly and kindly. I am proud of being a student of such a person with a sharp mind and tremendous abilities.

I send my gratitude to the Committee members for guiding me in writing the thesis. The instructors of English Teaching Method Department for their significant assistance in passing their knowledge and experience.

I am appreciated to all of my family members who kindly supported me with words and believed in me.

Last but not least, I would like to send my regards to my bleeding country, the martyrs' souls, prisoners and every human who fights for his country's pride and salvation.

## Declaration

I, the undersigned, declare that I submitted the thesis entitled:

### **THE EFFECTEVNESS OF USING 3D VIRTUAL REALITY IN IMPROVING THE TENTH GRADE STUDENTS' COMMUNICATIVE COMPETENCE IN SALFEET CITY SCHOOLS**

I declare that the work provided in this thesis, unless otherwise referenced, is the researcher's own work, and has not been submitted elsewhere for any other degree or qualification.

**Student's Name:**

Aya Mohammad Abu Karaz

**Signature:**

  
\_\_\_\_\_

**Date:**

03/06/2023

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# **THE EFFECTIVENESS OF USING 3D VIRTUAL REALITY IN IMPROVING THE TENTH GRADE STUDENTS' COMMUNICATIVE COMPETENCE IN SALFEET CITY SCHOOLS**

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## **Abstract**

This study aims to inspect the effect of using 3D virtual reality on enhancing the tenth grade students' communicative competence. It also attempts to track the effect of the creation of a 3D virtual environment inside the classroom on students' performance. In order to achieve the current study goals, mixed-method is used. Pretest and posttest were given to 50 EFL students at Salfeet secondary schools. The sample was divided into two groups according to their learning through the study strategy or not. The test consists of 20 items divided into 3 sections, which are grammatical competence, sociolinguistic competence and discourse competence. In addition to the pretest and posttest, a classroom observation was used to track students' progress during the application of the study technique to provide additional data that supports the test results. The results of the study revealed that students' overall communicative competence was improved according to the statistical significance at ( $\alpha \leq 0.05$ ) between the experimental group pretest and posttest results. Nevertheless, students' grammatical competence was not improved. The researcher summarized the main effect of creating a 3D virtual environment on students' performance according to the classroom observation results. The main focus was on the students' self-confidence, their immersion in the instructional material and their English pronunciation. In the light of the results, the researcher recommends that EFL teachers' focus on developing learners' communicative competence through the implementation of various effective techniques. Furthermore, the researcher suggests the utilization of technological devices to increase the quality of learning and achieve the desired outcomes.

**Keywords:** 3D virtual reality; communicative competence; EFL.

# **Chapter One**

## **Introduction and Theoretical Background**

### **1.1 Introduction and background**

This chapter includes introduction and theoretical framework about communicative competence, sociolinguistic theory, social constructivism theory, integrating technology in teaching English and the use of 3D virtual reality as well. Moreover, it presents previous practical studies, which are classified chronologically, about communicative competence and the use of technology in teaching English. However, it does not contain practical studies about 3D virtual reality. Finally, the researcher reviews the related literature and elucidates the study relationship with the previous studies in the literature review.

#### **1.1.1 Preludes**

In a world that is inhabited by people from different backgrounds, ethnicities, cultures and languages, people face a barrier of interacting with each other among the existence of these differences. Here comes the need for humans to interact using a common language that facilitates their access to a variety of life sectors through exchanging knowledge and experiences for the sake of advancement. Apparently, English is the international language of communication since it widely predominates various of life sectors such as technology, science, medicine, business etc due to some historical factors (Rao, 2019).

Hence, learning English considered to be an indispensable part of the field of education, especially, acquiring the ability to communicate in English in a functional content. Furthermore, naturalizing the use of English language and including authentic topics for the purpose of communication has become a must. When it comes to the Palestinian context, teaching and learning English have gone through a paradigm shift from adopting traditional approaches such as Grammar Translation Method to including more innovative and effective ones such as communicative approach in the curriculum (Fattash, 2010).

Since the overall purpose of using a language is to deliver messages and express thoughts, teaching it in authentic and real-life situations considered to be more efficient. This demands a full comprehension and knowledge of ‘cultural references and expressions’ (Abdulrahman & Abu-Ayyash, 2019 p.70). In this sense, communicative competence was introduced to the field of second language learning and teaching as the concept that enables learners to interactionally participate in communicational situations and practices.

The capacity to use a language in a way that is suitable and consistent with social and conversational norms is referred to it as communicative competence (Hymes, 1972). It also refers to the ability to use the language properly as a means of expressing adequate behavior in cultural context which requires having grammatical, sociolinguistic and discourse competencies (Canale & Swain, 1980). Both definitions indicate to sociolinguistic as a supportive theory of communicative competence and highlight the significant role of mastering communicative competence as it comprises the main components of communication competences.

Jawabreh (2015) claims that marginalizing EFL teachers in Palestine the actual implementation of real communicative approaches in social context has resulted in lack the ability of producing appropriate utterances for the EFL students, even though, the Palestinian curriculum’s design is aimed to be taught communicatively. This actively demonstrates the existence of a gap between the curriculum intended goals and the teaching practices inside the classroom that do not lead toward achieving these goals. Therefore, there is a persistent need for EFL teachers in Palestine to come up with efficient techniques to maximize students’ potential in communicating and interacting in English at a large scale and in a variety of circumstances.

According to mental and physical variations, the selection of a study group should be based upon the group’s ability, aptitude and age (Dewaele, 2008). The minimal exposure of primary students to the target language and limited knowledge of many advanced linguistic features of the language have led to conducting the study on Secondary students. Tenth grade is a stage in which students have been already exposed to an adequate number of communicative situations of the target language. Furthermore, this

age group can still be motivated to actively engage with enjoyable techniques, especially, the ones that employ new means of technology.

Apparently, trending towards blending technology in teaching is not brand new since it has started in early 1960s and 1970s (Kuning, 2019). However, the technological devices have evolved constantly over time from using tape recorders, communication laboratory to personal computers, overhead projectors and smart board. Therefore, employing technology in teaching English is not only one of the fundamental requirements of the previous and current centuries, but it also an effective tool to upgrade and promote teaching methods in order to attain the overall teaching objectives. Furthermore, it breaks the boredom that is usually created by a teacher-centered and traditional classroom environment through generating an interactive and enthusiastic one in which students are intensively involved.

The physical limitation of the classroom environment hinders the creation of real-life situations that simulate authentic events. Hence, 3D virtual reality provides the opportunity in generating an appropriate sphere that simulates real life experiences that would be inaccessible in reality (Antigoni, 2020). In addition, it makes it possible for the viewers to experience the full location and to engage further with the material presented (Reyna, 2018). Not only this enables students to be exposed to the target language in a real event, but it also provides them with the opportunity to play the desired role using the appropriate expressions.

This study investigated the effect of using 3D virtual reality for the purpose of enhancing tenth graders' communicative competence by implementing two tools to meet this goal. Also, only theoretical background of the use of 3D virtual reality technique is presented due to lack of practical previous studies and surveys of using this technique according to the researcher's best knowledge.

### **1.1.2 Communicative competence**

The concept of communicative competence was first introduced by Dell Hymes in 1966 (Ahmed & Pawar, 2018). Hyme (1972) emphasized on the existence of several components of communicative competence such as grammatical and behavioral

competences. He indicated to the correspondence of linguistic theory and communication and culture by illustrating the characteristics of acceptable communicative performance such as “appropriateness” (p.281). This refers to the sociolinguistic use of the language in terms of possessing the ability to accommodate the language into its appropriate use of its community. Furthermore, Canale & Swain (1980) asserted that in order to improve one’s second language communicative competence, “grammatical competence, discourse competence and sociolinguistic competence” are essential components of communicative competence need to be taken into consideration (p.45).

However, Chomsky (1965) referred to the linguistic competence as the capacity to only produce “grammatically correct sentences” regardless to the language use in social context.(p.3) He defined the concept of competence as the systems that includes the rules which represent the structure of a sentence along with its phonology, semantics and syntax (Crystal, 1987). Moreover, Chomsky differentiates between the notions of competence and performance as he claimed that the former refers to the one’s knowledge of the language rules and the later concerns with the one’s capacity to produce correct utterances and speech in different situations. (Bagarić & Djigunović, 2007). Accordingly, to Chomsky the concept of linguistic competence is widely discussed and has multiple variations so that being linguistically competent requires a deep knowledge of language rules and disciplines.

When it comes to describing grammatical competence, Chomsky (1971) defined it as the ability to produce limitless number of grammatically correct sentences. Also, he defined it as the understanding of a group of grammatical rules both theoretically and practically. Canale & Swain (1980) distinguished between grammatical and communicative competence. They stated that communicative competence is based on communicative function which is the ability to recognize the way in which a specific grammatical form used to produce a group of functions properly such as “apologizing, describing, inviting, promising” (p.2). This indicates to the use of the language in a situational context, in which the learner uses the appropriate expressions to a particular communicative need. As for grammatical competence, Canale & Swain described it as the capacity of generating correct utterances. Accordingly, grammatical competence is considered

important for mastering communicative competence since producing correctly formed sentences makes the speech more explicit to the recipients.

Discourse competence is defined as the capacity to comprehend, compose and extend forms of language beyond simple phrases such as narrating stories and making conversations with proper use of both cohesion and coherence (Sáez & Martín, 2005). The primary components of discourse competency is coherence and cohesion (Murcia et al., 1995). Cohesion is the process of connecting ideas with linking expressions such as conjunctions and phrasal verbs. Coherence is defined as the interpretative experience of describing the relationship between concepts and explaining textual relatedness (Navratilova et al., 2017). Hence, being able to create generally related and rational text using appropriate language forms means having a discourse competence.

In the light of the above definitions, the concept of communicative competence is defined from different perspectives referring to its primary components and the essential requirements for being communicatively competent. All of the definitions include the mastery of the structural features and cultural and functional contexts of the target language. Also, the main components of communicative competence are rationally correspondent and compatible with the overall requirement of developing appropriate language. As a result, a thorough understanding of the concept of communicative competence and its vital parts assists in developing the proper tools to master it.

### **1.1.3 Sociolinguistic theory**

Sociolinguistic theory describes how a language is related to the society by referring to the language function and structure as a way to gain a better understanding of a certain speech of a community (Syafiyah, 2010). In addition, it investigates three main orientations of ‘social and linguistics’, ‘socially realistic linguistic’ and ‘socially constituted linguistic’ (Hymes, 1974 p.196). These orientations demonstrate the goals of sociolinguistic toward referring to education or language policies and disciplines. In other word, sociolinguistic highlights the importance of studying a language in its social context which is needed in order to obtain one’s ability to communicate using proper and adequate language for various circumstances.

Sociolinguistic competence considered a significant aspect of a second language learning that includes the knowledge of the cultural norms of using the language in a particular community which considered to be hard to conduct inside a classroom (Eli, 2001). Having a capacity of using the TL in variety of ways in order to be on accordance with diverse social settings is more important than producing merely grammatically perfect utterances for the purpose of delivering the intended message of speakers as Mede & Dikilitaş (2015) state. They also claim that sociolinguistic is divided into two areas, the first is form-appropriacy which defined according to Leech (1985) as the knowledge of norms and values when communicating in specific illocution. The other one is meaning-appropriacy which refers to considering the norms and values of communicative acts in a sociocultural convention (Martinez, 2019).

To come up with, sociolinguistic theory is related to this study because the main concern of this theory is deciphering the cultural codes of a specific community through deeply immersing in the cultural principles and virtues that enable the conveying of appropriate messages of the TL. However, this requires the cultural interaction with the TL society within unrestricted spatial environment. Accordingly, it can be suggested that students' immersion in a cross-cultural content without being constrained within the school structures increases their potential of acquiring sociolinguistic competence.

#### **1.1.4 Social Constructivism theory**

Constructivism theory emerged to explain the ways knowledge is acquainted and that is why it is viewed as a leading theory of education. It posits that people build their own comprehension of the world via personal experience and reflection (Mvududu & Thiel-Burgess, 2012). Learners are compelled to question their prior assumptions and understanding when being exposed to the new environment. Furthermore, students adapt their comprehension to the new experience when it contradicts their what they already know (Hoover, 1996). Accordingly, when learners are exposed to a new form of knowledge and experience, their ability to adjust to the new concepts increases since their intellectual capacity improves.

However, Vygotsky (1978) assumed that learning entailed more than just the integration and adaptation of new knowledge by learners, but rather, it is the process by which learners are incorporated in the knowledge of community. He also confirmed that ‘social interactions’ are the source of all ‘cognitive functions’(p. 57) In addition, Vygotsky illustrated that language and culture are crucial for the mental growth of people as well as for how they view the world since they are socially imposed by the outside environment. In other words, the frames through which people experience, communicate, and comprehend reality are language and culture.

Hence, social constructivism concerns with linking peoples’ knowledge and comprehension with what the society provides in the light of cultural developments and exchanges of other communities (Amineh & Hanieh, 2015). Moreover, it views learning as a contextualized process that connects knowledge with authentic experiences within social setting (McMahon, 1997). As Gray (1997) clarified, internalizing new concepts needs to take place in an interactional environment where intensive immersion with the material occurs and interpersonal reflection takes part in perceiving and producing knowledge. So, learning process occurs in both isolated and social situations, individually or collaboratively, however, it is more promoted when being linked to interactional environment, especially when it comes to language learning.

To conclude, both constructivism and social constructivism view learning as a process that triggers thinking and increases the intellectual ability through the exposure of new experiences and settings. They also associate learning with the environmental forces that affect perceiving knowledge through the adaptation of new concepts related to the community. Hence, this theory is related to this study by introducing the relationship between learning, especially language learning, and the cultural aspects of the community. It also explains how exposing learners to new experiences and situations triggers their senses and encourages them to impart knowledge.

### **1.1.5 Technology integration in teaching English**

Integrating technology into education has become a necessity in the current century with the rise of innovative technological devices that provide the users with multiple language

learning options. For instance, personal computers were first introduced in tutoring in 1980s to practice communicative exercises to increase accuracy and fluency through exposing learners to authentic language (Cherly, 2018). Another recent promotion of incorporated digital devices into English learning and teaching is using smartphones, podcast, notebooks and MP3s that assist in enhancing the quality of learning and acquiring English as a second language (Kim & Bae, 2020).

Not only technology facilitates learning, but also creates an attractive and encouraging environment for learners. It offers worthy educational chances and creates opportunities for practical learning that can be integrated into a variety of subjects taught in school including English language (Mofareh, 2019). Furthermore, technology can benefit learning environments by promoting inquiry, facilitating communication, producing educational materials, and boosting students' self-expression (Levin & Bruce, 2001). Subsequently, technology assists in generating positive attitudes of students towards learning in general and especially second language learning since it creates an intriguing atmosphere.

Teachers, nowadays, should be informed with the recent technological equipment and developments to employ them in their classes (Ammade et al., 2018). Furthermore, they should direct the use of technology toward concentrating on student-centered, learning constructivist and progressive approaches (Adeoye, 2015). Thus, technology offers a radical transformation from traditional classroom settings to more flexible and convenient ones where learners can be independent in their learning. This resulted in escalating both learning and teaching with the proper employment of technology in order to attain the ILO.

To summarize, technology considered an indispensable part of education due to its vital role of supplying learning process and increasing students' comprehension of the material. It also reduces the boredom that is usually created by the application of traditional learning activities and settings through importing vivacity into the classroom.

### **1.1.6 The use of 3D virtual reality in education**

The application of virtual reality has captured the educators' attention ever since it was introduced to the market (Panagiotidis, 2021). Therefore, the use of this type of technology is not new in the field of education and it is spreading rapidly at a wide range. It is considered to be a remarkably advantageous tool to be applied inside the classroom since it attracts students' interest and enhance their creativity through individualizing learning and facilitating the grasp of difficult concepts (Yildirim et al., 2020).

Gadelah (2018) defined VR as a computer technology that is associated with headsets that "display immersive virtual environment" (p.40). He also demonstrated how this feature allows the learners to delve deeply in the desired settings in order to actively interact and connect them with the material by blocking out any physical distractions inside the classroom. Christou (2010) also defined it as a three-dimensional environment that portrays imaginary or realistic settings that give students the chance to interact with the content which is challenging and difficult to be demonstrated through merely using traditional methods. Both definitions emphasize on the use of 3D environment as a promising and conventional tool to utilize in education.

It should be noted that VR and AR are two different terms that can be overlapped. VR main features are presenting immersive experiences within high-resolution monitors that intensifies the feeling of the presence inside the target environment (Mazuryk & Gervautz, 2014). Moreover, VR can be supported by audio and sensory interfaces with 360-degree orientation scene in the accordance with the user's position and mobility. However, AR or augmented reality renders 3D virtual objects from 2D images which they can be both combined by posing the camera track and minimizing the distance of both images (Carmigniani & Furht, 2011). In other word, VR generates a full virtual environment in which the user is surrounded by from all of the directions and positions that are disconnected from the real world, whereas AR creates 3D virtual objects with a combination of real ones.

To come up with, this type of technology allows English learners to experience real-life situations without being bound by time and place such as going to the restaurant, making

a job interview, going to the airport etc. Moreover, it enables them to practice communication skill through role playing by using appropriate and correct expressions in each situation. This may eventually help EFL students master their communicative competence in English and increase their chances to be involved in any conversation that requires using particular phrases and expressions.

## **1.2 Review of related literature**

### **1.2.1 Communicative competence**

Naturalizing the use of English inside the classroom is essential. MartÃ-nez & CalderÃ (2013) inspected the effect of developing business competencies in improving learners' communicative competence in English through practicing real-life communicative activities in the classroom and creating learning portfolio. The researchers emphasized that the implication of the study strategy enabled learners to enhance their English communication skills and competencies through building their capacity of analyzing and making decisions in business situations. So, as the researchers elucidated, acquiring analyses skills and self-evaluating lead to increase learners' metacognition which results in developing learning independency. Furthermore, the researchers concluded that mastering communication skills in real-life situations depends on coping with the most contemporary changes of community and life fields such as business in order to bridge the cultural gap of the TL.

Learning English communicative competence can be best improved with the consistent practice of acting roles using English in different situations. Ampatuan & Jose (2016) conducted a study on first year students adopting role-play as an approach to enhance students' communicative competence. They asserted that role-play enabled students to interact comprehensively and meaningfully in English through practicing fluency and accuracy in multiple situations. In addition, the researchers deduced that students' social behavior and self-confidence were significantly increased through simulating reality and taking parts of various characters for communicative purposes.

When it comes to oral communication skills, learners' integration with the material and the reduction of teacher's role can achieve better outcomes. As pointed out by Inkaew &

Thumawongsa (2018) teachers' role in developing students' communicative competence and their sovereignty in class affects the learning process in a negative way. They implemented the study on 89 English major students from a Thai University who differed in their English proficiency level. The researchers concluded that teachers should emphasize on learning-center activities and apply them frequently in the lectures in order to implant an integrative motivation in students.

Since grammatical competence considered one of the communicative competence components, teacher should direct their attention towards improving it for students. Estrella & Presley (2018) proposed a supplementary material as a tool to develop learners' grammatical competence such as the exposure to different types of media along with deep involvement in both books and TVs. The study consisted of Junior High School students who were tested before and after the application of the study technique. The results showed that students' grammatical competence was average and was significant according to sex, age and level. Therefore, the researchers recommended further exposure to a variety of online supplementary material considering learners' sex, age and level variables in order to enhance their grammatical competence above the level of average.

Applying communication activities inside the classroom setting can increase tension and anxiety for some students, especially the ones with low communication abilities. Therefore, Noguchi (2019) suggested that changing students' location through implementing English communication tasks and activities in an English summer camp helps in reducing their apprehension. He pointed out that surrounding students with an English environment that included various communicative oriented tasks such as narrating stories, filming, performing plays using only English changed learners' attitudes towards English communication. As the researcher emphasized, students' tension and perplex were reduced since they were more confident to speak in English without worrying about school grading system or the competitive environment inside that usually takes place inside the classroom.

English curricula should be enriched with international and native-like topics. Tumansery & Hilary (2020) investigated the effectiveness of employing linguistics & communicative

competence in the content of the Indonesian curriculum by selecting formal curriculum of two different upper secondary schools. The procedure was based on mimicking of the speech of each curriculum, in which one was translated into English and the other was British content-based. The researchers concluded that speech act and functional text play a major role in the content. Moreover, the curriculum lacks both sociolinguistic and pragmatic functions that are essential to improve attitudes and personalities. Therefore, the researchers recommended carrying out some modifications to the curriculum to contain additional dimensions concerned in interpersonal communication skills.

Educating EFL learners about the culture of the TL helps in increasing their potential of communication skills. Moyi & Galadima (2020) conducted a study on the effectiveness of reading culture and conscious efforts in improving students' English communicative competence of Nigeria Universities. The study sample consisted of 50 students of different age groups and from a number of various courses in which their responses to the questionnaire about their frequent engagement in reading and speaking about the culture of the target language were collected. The researchers concluded that most students have seldom or almost no involvement in cultural reading and speaking activities. Therefore, they recommended teachers to motivate their students to read about the target language culture in order to expand their vocabulary knowledge which assist in improving their communicative competence.

Concentrating on the pedagogical aspects of teaching foreign languages is crucial in the implementation of teaching methods as emphasized by Yuzkiv (2021). The researchers pointed out to the development of both teachers and learners' English socio-communicative skills through internalizing their knowledge of sociolinguistic principles. They also claimed that through introducing learners to the customs and traditions of the TL and directing them towards the acceptance of the views and beliefs of the TL users increase their motivation and readiness to communicate and interact in language discourses. Furthermore, the researchers recommended stakeholders to consider the geographical and political factors when structuring and forming foreign language tasks and discourses in order to establish better connection between pupils' engagement and foreign social and cultural practices.

Ironsi (2021) probed into the use of spoken-reflection instruction as a way to develop learners' English communicative competence. He selected a number of participants of English as Foreign Language learners who voluntarily applied in the 3-credit unit language and reflective course. The study's goal was to inspect students' perspectives about using the spoken-reflection strategy in improving their speaking and communication skills. The students' speeches were recorded and sent to their teachers in order to pursue their improvement. The researcher deduced that most students approved the strategy as a convenient and interesting way to communicate and deliver their speeches in English.

Upgrading educators' performances and adjusting their teaching practices can affect students' learning process including their communication skills. Noviyenty (2022) investigated lecturers' efforts of enriching their lessons with the use of communicative competence dimensions such as linguistics, sociolinguistics and discourse competencies as a way to develop learners' communication abilities. The study's participants were 2 lecturers and 10 students from an Indonesian University. The purpose of the study was to overcome some communication barriers by using several communication dimensions by lecturers in diverse settings such as comprehending spoken texts and recorded ones. The outcomes revealed that lecturers' performance had a positive impact on students' communication abilities, however, there were few who provided some negative comments about native-like topics and the researcher referred this to the difficulty of the some terminological and linguistics variations of the dialect and register of the language.

### **1.2.2 Technology integration in enhancing English communicative competence**

Lawns (2015) Introduced the employment of online service as a tool to increase students' communicative competence by making the service a part of ESL course in a blended-learning format. In his study, he suggested some advantages of E-learning by explaining how students' interaction increased and forged more friendship relationship which allowed them to delve into conversations and eventually enhanced their confidence. The study designated 33 postgraduate students who were exposed to online interviews and conversations. Lawn came up with positive outcomes of using such tools by

demonstrating the positive feedback from students, in which they believed that e-learning gave them an opportunity to engage with their peers and forged the sense of autonomy.

Technological devices that have multiple uses such as mobile phone which can be implied to assist in learning English. Loganathan (2017) detected the effect of utilizing mobile as an assisted tool for the purpose of improving learners' English communication and speaking skills. The study was implemented on technical students of Coimbatore University. All of the speaking activities were carried out through Whatsapp application including presentation, distance interview, story narrating by using emotions. The study findings revealed positive results in increasing learners' speaking skills along with their sense of expression and confidence.

The recent inventions of the fields of technology opened the gates for a promising future to enhance education and instructions. For instance, smartboard considered a high qualified tool that facilitates the teaching process through presenting the material in an effective and attractive way. Malkawi (2017) pointed to the effectiveness of using smartboard in developing students' skills in English including verbal and nonverbal communication. Students were selected randomly and divided into two groups. The researcher concluded that learners' verbal and nonverbal communication were enhanced due to the teachers' direct speech through smartboard. In addition, the results showed that using smartboard for instruction reduced the amount of chaos in the classroom and shifted students' focus towards leaning. Hence, the researcher recommended teachers to apply the use of smartboard in their classes to boost learning.

According to spatial limitation of classrooms, multi-media and platforms assist in exposing English learners to real-life events in a comforting way. Sevy-Biloon & Chroman (2019) addressed the issue of inadequate teaching practices that led to students' lack of exposure to practice English in authentic situations outside of the classroom. Therefore, they suggested the use of an international program that provides students with the opportunity to practice English communication skill through video chat platforms. The program included 17 students who participated in the video chat. The study's findings

clarified the program's effectiveness in enhancing students' confidence in speaking along with their overall communication skills.

Furthermore, learners can produce more advanced utterances by listening and then recording their speeches through digital devices. Hansson (2020) attempted to improve students' proficiency level in communication skill by going through phases of listening, criticizing, analyzing and finally producing Obama's and Trump's presidential speeches by using digital devices. The study was applied in Upper Secondary School students. Hansson concluded that taking parts of iconic speeches assisted students to attain metaphorical and rhetorical ability which enabled them to produce unified spoken texts.

Suryana (2020) employed English learning websites as tools to enhance students' speaking skills. She attempted to inspect teachers' perspectives about the advantages of using websites in increasing learners' communication and speaking skills through direct personal interview. The researchers collected data through a survey that consists of twelve questions under different categories which took place in eighth grade. As showed by teachers, they approved on using the recommended websites by the researcher since these websites proved to have an effective and positive impact on students' speaking skills.

The expansion of social media and online websites use has increased the opportunity for learners to socialize and interact with their peers using English. Zaitun (2021) conducted a study about the efficacy of using TikTok as a learning media to develop students' speaking skills through practicing related daily activities. The study collected data by applying pre-post speaking tests on 36 students from 8<sup>th</sup> grade in Nigerian schools. The findings revealed an increase in the speaking posttest in a comparison to the pretest. This resulted in improving students' performance in speaking skills through expressing their thoughts and experiences freely on TikTok.

### **1.3 Statement of the problem**

Most teachers in Palestine neglect the implementation of English-speaking activities in the classroom and other oral communication skills. Jawabreh (2015). Subsequently, students lack the ability to produce proper utterances, expressions, pronunciation and with limited knowledge of vocabulary words. In addition, the limitation of interacting and

conversing with native speakers on a variety of situations has created a communicative and cultural barrier with the authentic use of the target language.(Al-Muhtaseb, 2015). In addition, classroom settings restrict the internalization of sociolinguistic rules needed to generate appropriate forms and this is hard to accomplish inside a traditional classroom construction (Mede & Dikilitaş, 2015).

The researcher has noticed during the classroom communicative activities that most students hesitate and have long pauses during their speech time. Moreover, students are usually distracted and can easily lose interest since the implemented techniques are not captivating and tempting enough to catch their attention. Hence, there is a need to bring a strategy that attracts learners and improves their communicative performance through involving them in an authentic material.

### **1.3.1 Aim and objectives**

**Overall aim:** To investigate the effect of using 3D virtual reality as a tool to develop 10<sup>th</sup> grade EFL students' communicative competence of Salfeet schools in Palestine.

#### **Objectives**

1. To track the effect of applying 3D virtual reality on 10<sup>th</sup> grade EFL students' communicative competence and sub-competencies of Salfeet schools in Palestine.
2. To provide recommendations for EFL teachers to increase students' communicative competence through using effective and interesting techniques.

### **1.3.2 Questions of the study**

**The first question:** What is the effect of 3D virtual reality on tenth grade students' communicative competence in Salfeet schools?

#### **Sub-questions emerged from the first question:**

- What is the effect of 3D virtual reality on tenth grade students' grammatical competence?
- What is the effect of 3D virtual reality on tenth grade students' sociolinguistic competence?

- What is the effect of 3D virtual reality on tenth grade students' discourse competence?

**The second question:** What are the differences between the control and the experimental groups at ( $\alpha \leq 0.05$ ) in the communicative competence pretest and posttest?

**The third question:** What is the effect of 3D virtual reality environment on students' performance?

### **1.3.3 Hypotheses of the study**

1. There is no statistical significance at ( $\alpha \leq 0.05$ ) between the control group and the experimental group in the communicative competence pretest result.
2. There is no statistical significance at ( $\alpha \leq 0.05$ ) between the control group and the experimental group in the communicative competence posttest result.

### **1.3.4 Significance of the study**

The significance of the study is divided into theoretical, practical and research significance.

### **1.3.5 The theoretical significance**

Communicative competence considered to be essential in language learning as it enables learners to use the language functionally. Since it demands an intensive effort to be mastered, the researcher looks for paving the way for EFL teachers to expand their use of creative approaches over the traditional and tedious ones in order to attain more meaningful outputs.

Therefore, this study provides some data about the impact of using 3D virtual reality on EFL tenth grade students in Salfeet schools and their ability to communicate and produce proper expressions when being exposed to a versatile of circumstances. As a result, it provides information whether the study's strategy is worthy to be recommended or not.

### **1.3.6 The practical significance**

Practically, there is lack of practical application of 3D virtual technique of previous study cases and surveys according to the researcher present knowledge. Therefore, study's outcomes will assist teachers in improving students' performance in communicating in English by applying modern techniques and creating proper learning environment to obtain the desired learning objectives.

### **1.3.7 The research significance**

The research findings may facilitate the way for the researchers of the field in the future to conduct new studies related to this study's subject. Moreover, the study enhances the opportunities for researchers to investigate more issues concerning the acquisition of communicative competence and the difficulties that students may encounter acquiring it.

### **1.3.8 Limitations of the study**

This thesis considers these limitations:

- Locative limitations: the study was confined to Salfeet schools in Salfeet-Palestine.
- Temporal limitations: It was conducted during the first scholastic semester of the year 2022/2023.
- Population limitation: The population was confined to 10<sup>th</sup> grade students of Salfeet schools which are (263) according to Salfeet Directorate's statistics.
- Topical limitation: The effect of 3D virtual reality on improving the 10<sup>th</sup> grade EFL Palestinian students' communicative competence.

### **1.3.9 Definition of terms**

#### **Literal**

**Communicative competence:** It refers to a person's ability to adapt their language use to varied interlocutors by broadening their cultural contexts of language experience. (Hansson, 2020)

### **Operational**

**Communicative competence:** It is the learner's capacity of interacting and communicating in the target language through the appropriate use of expressions in both situational and behavioral context.

### **Literal**

**Grammatical competence:** A developed understanding of the grammar principles that govern how a foreign language's lexical components are combined to create a meaningful speech (Mukhtarovna & Borisovna, 2020).

### **Operational**

**Grammatical competence:** The ability to produce a wide range of correctly formed utterances through the in-depth knowledge of grammatical principles in a communicative act.

### **Literal**

**Sociolinguistic competence:** The ability to recognize and use context to make socially suitable language (Lyster, 1994).

### **Operational**

**Sociolinguistic competence:** The ability to comprehend and generate a group of adequate phrases and expressions within a social context.

### **Literal**

**Discourse competence:** The ability to masterfully mix grammatical forms and meanings to produce coherent written language in a variety of genres. (Mede & Dikilitaş, 2015)

### **Operational**

**Discourse competence:** The ability to extend the foreign language use into more than mere sentences by combining both grammatical structures and meanings.

## **Literal**

- **3D virtual reality:** A simulated, artificial or computer-generated environment that successfully presents the desired setting. (Kessler, 2018)

## **Operational**

- **3D virtual reality:** A technological tool that used to create a desired environment of real-life settings without being bound by time and place.

### **1.4 The relationship between the present study and the related studies in the literature review**

After reviewing the previous and related studies, the researcher found Arabic and foreign studies about communicative competence and technology integration into English teaching. The studies varied according to their aims, statistical process, variables. Hence, they provided a deep understanding of the concept of communicative competence and suggested several techniques to tackle the issue of acquiring it. Furthermore, the relevant studies paved the way for the researcher to use the appropriate statistical process and tools and define the required objectives for this study.

By scanning thoroughly through the previous studies, the researcher noted that some of the studies' objective was to concentrate on learners' independency in the learning process such as Thumawongsa & Inkaew (2018) in order to obtain better outcomes. They believe that learners' interaction should be increased through various activities that involve students in peer conversation so that their communicative competence will eventually be enhanced. On the other hand, other studies like Noviyenty, Morganna & Fakhruddin (2022), focused on the educators' practices and illustrated how it can affect students' performance in acquiring their communication skills. As for this study, the objective is to enhance students' communicative competence through focusing on both of students' independency and teacher's practices.

Another valuable study that aimed at naturalizing the process of teaching English and suggested native-like topics to be included in English curriculum is Silvana & Hilary (2020) which enriched the current study with a critical issue to be discussed when it comes

to students' communicative competence development. Moreover, a study such as Moyi & Galadima (2020) who pointed out to the importance of educating learners about the culture of the TL and how this fostered their communication skills shows how this is related to the sociolinguistic theory mentioned in the related literature.

Studies like concerned with deploying technology in enhancing learners' communicative competence, especially, using well-known apps and websites such as Saranraj & Kumar (2017) and Zaitun, Hadi & Indriani (2021). These studies provided a beneficial strategy that assists in involving learners into real-life events that related to their own experiences by expressing their thoughts and writing their diaries through the aforementioned apps. This creates a great opportunity for the learners to practice and then increase their communicative competence in different real-life situations. Hence, the current study also attempts to improve learners' communicative competence through establishing real-life and authentic experiences.

Yuzkiv Roman, & Lazareva (2021) and Zaitun, Hadi & Indriani (2021) method was implementing pretest and posttest on the students to check their progress after applying the studies' strategies which is similar to the recent study. Nevertheless, other studies such as Oktavianti (2021) and Lawn (2015) used a questionnaire as a qualitative tool to collect data. Oktavianti's study method is similar to this study's which employed pre-post achievement tests and classroom naturalistic observation that considered to be suitable tools since the researcher will be able to pursue and observe students' progress before, during and after the implementation of the study strategy.

By reviewing the results of the previous studies, Sevy-Biloon & Chroman (2019) and Noviyenty, Morganna & Fakhrudin (2022) have similar results to the current study which revealed that students' some communicative competence skills were improved, however, some other skills showed no obvious improvement due to, as Morganna & Fakhrudin also claim, the difficulty of native-like topics and some lingua cultural issues that students lack.

When it comes to the use of 3D virtual reality, the researcher did not find any direct experimental study that used such technique. Therefore, the researcher made use of the

previous studies in utilizing the general use of technology and other techniques in identifying the steps to be taken in order to increase learners' communicative competence. Furthermore, she benefited from the studies' results and how learners were differently affected by each study and what modifications must be done in order get better outcomes.

To the researcher's knowledge, this study is unique since it is the first in Palestine to introduce the technique of 3D virtual reality in affecting learners' communicative competence. Therefore, it provides valuable data about the use of such new technique and how it contributes in improving the quality of education. In addition, it sheds the light on English communication skills which students required to have in order to overcome the barrier of a foreign culture and be able to express their thoughts effortlessly.

## **Chapter Two**

### **Methodology**

This chapter presents the detail of the methodology used, population, sample, instruments and materials of the study in addition to the tools' validity and reliability. Moreover, the researcher illustrates the study design, study procedure along with statistical treatments.

#### **2.1 Methodology**

The researcher uses the descriptive-analytical methodology to examine the effect of 3D virtual reality on 10<sup>th</sup> grade students' communicative competence in Salfeet Schools. Hence, the researcher inspected the effect of one independent variable over one dependent variable. Here comes an embedded urge to demonstrate the relationship between them. An experimental method is used in order to attain the study's objectives. Thus, 3D virtual reality is implemented on the experimental group whereas a traditional method is used on the control group. The tools of the study include the classroom observation and the pretest and posttest. As a result, this methodology was appropriate for the type of this study which depends on studying the topic as it is in reality through describing and analyzing it precisely.

#### **2.2 Design of the study**

An experimental design was adopted. The 50 participants were divided into two groups due to their learning through 3D virtual reality or not. The experimental group that learned through 3D virtual reality consisted of 25 students and the control group that did not learn through 3D virtual reality included 25 students. The design is as follow:

EG: Experimental group.

CG: Control group.

01: Communicative competence tests.

02: Observation.

X: Experimental treatments (Teaching through 3D virtual reality).

EG: 01x02

CG: 01\_02

### **2.3 Population of the study**

The study population comprises all of the 10<sup>th</sup> grade students of Salfeet schools during the scholastic year of (2022/2023). According to Salfeet Directorate's statistics, Salfeet schools tenth grade students are in a count of (263) male and female students.

### **2.4 Sample of the study**

The sample size included 50 students from 10<sup>th</sup> classes with stratified random sampling. The students were selected from different 10<sup>th</sup> classes and included students who varied in their levels. They were divided into two groups; the control group and the experimental group.

### **2.5 Variables of the study**

1. The dependent variable:
  - Communicative competence.
2. The independent variable:
  - 3D virtual reality.

### **2.6 Materials of the study**

The materials were chosen from two different resources:

1. 'Immerse me' website that includes the situations used in the study that are available in 360-degree videos. <https://immerseme.co/>
2. Tenth Grade English for Palestine books A & B (Manassra & Ayoush, 2011), pages (64, 70).

### **2.7 Instrumentations of the study**

In order to be on accordance with the chosen study methodology, both qualitative and quantitative tools were used to gather data to achieve research objectives. Communicative competence pretest and posttests were used to assess students' performance along with classroom observation to ensure both validity and credibility of the research.

### **2.7.1 The English communicative competence test**

In order to determine English communicative competence skills and the degree to which each skill is attained, a communicative competence test was designed with rubrics to identify the categories of students' scores. There were six classifications of seven items according to the rubrics in appendix(A) for both grammatical and sociolinguistic competences as follows:

- a. 6.5-7 as excellent.
- b. 5.5-6.4 as very good.
- c. 4.5-5.4 as good.
- d. 3.5-4.4 as fair.
- e. 1-3.4 as poor.

As for discourse competence, there were six classifications of six items as follows:

- a. 5.5-6 as excellent.
- b. 4.5-5.4 as very good.
- c. 3.6-4.6 as good.
- d. 2.6, 3.5 as fair.
- e. 1-2.5 as poor.

The communicative competence was divided according to (Canale & Swain, 1980) into three sub-skills or components that were defined as follows:

1. Grammatical competence which includes the use of appropriate structures.
2. Sociolinguistic competence which includes the use of a wide range of appropriate vocabulary and expressions for each situation.
3. Discourse competence which includes the textual relatedness and connected ideas.

The questions were distributed according to each competence by including a number of items to the three competences as showed in the table below.

**Table (1)***Distribution of the Questions*

<b>Skill</b>	<b>The number of items</b>
Grammatical competence	7 items
Sociolinguistic competence	7 items
Discourse competence	6 items

**2.7.2 Classroom observation**

To observe students' behavior and progress during the implementation of the study, the researcher recorded the results of classroom observation according to the following rubrics in appendix (B). The researcher used classroom observation since it is considered to be a crucial teaching assessment tool since it gauges and evaluates the quality of teaching and instruction (MacDonald, 2016). Furthermore, it provides evidence that is more specific and accurate than that from other sources and confirms that change took place and the progress is attained (Zaare, 2013). Thus, Classroom observation helped in providing additional data for ensuring research credibility through recording students' behavior and development. As a result, the researcher benefited in creating in-depth inspection of the implemented technique and its findings.

**2.7.3 Validity**

Both of the study tools were presented to eight specialists and experts in teaching the English language and Education Sciences and Teachers training Faculty. The specialists' names were added by the researcher. As for the test, 2 items were added and 2 were reformulated by two of the specialists according to appendix (F). Classroom observation rubrics also was checked and approved on by the eight specialists.

**2.7.4 Reliability of the test**

Cronbach's Alpha was used in order to reveal the instruments' reliability.  $\alpha = \frac{Nc}{v+(N-1)c}$

The reliability of the test and the internal consistency between its items were high according to the calculation of Cronbach's Alpha reliability coefficient. The researcher selected 15 students as a sample to check the reliability of the test using 10 items. As a

result, the test was valid for implementation and effective in gathering and analyzing the data, responding to the research questions and eventually achieving its goals.

**Table (2)**

*Cronbach's Alpha for Testing the Reliability of The Study Tool*

<b>Sample</b>	<b>Test items</b>	<b>Result</b>
15	10	0.726

It can be referred from the table above that the value of ( $\text{Alpha} = 0.726$ ) is an acceptable value and this indicates to the high reliability of the test.

## **2.8 Procedures of the study**

**1. The sources of literature review:** From articles, journals, books, theses, reports.

### **2. Pretest**

- a- The study population and sample were determined.
- b- By studying and revising the theoretical literature in accordance with the advice of the experts, the researcher created the communicative competence pretest and posttest, according to appendixes (D, E).
- c- Students were divided into control and experimental groups.
- e- The researcher distributed the questions to the both groups.
- f- The results were collected and analyzed.

### **3. Treatment**

The researcher applied the study strategy according to lessons plans appendix (C) as follows:

- a. Students were exposed to 3D virtual environment to six different situations.
- b. The teacher presented 3D virtual videos about each situation.
- c. Students chose the correct expressions for each situation.
- d. They pronounced the expressions.
- e. They wrote the expressions.

- f. They created extra expressions of their owns.
- g. They played multiple roles.
- h. They did an assignment at the end of each lesson.

**4. Classroom observation procedures**

The researcher recorded notes during the classroom observation according to the criteria in the appendix (B) and the following focal points:

1. Students' interaction with the study technique.
2. Students' pronunciation development.
3. Students' naturalized language development.
4. Students' immersion with the material.
5. Students' self-confidence development.
6. Students' speaking time expansion.

**Classroom observation procedures**

Rating students' strengths, areas for improvement, and recommendations for improvement:

Needs improvement: 1      Good: 2      Very good: 3      Excellent: 4

**The focal point:**

**Student's interaction with the study technique:**

Keeps his attention high during the class 1 2 3 4

Shows high participation 1 2 3 4

**Comments:**.....

**The focal point:**

**Student's pronunciation development:**

Has proper pronunciation of separate words 1 2 3 4

Has proper pronunciation of sentences 1 2 3 4

**Comments:**.....

**The focal point:**

**Students' naturalized language development.**

Creates extra expressions and phrases 1 2 3 4

Creates native-like expressions and phrases 1 2 3 4

**Comments:**.....

**The focal point:**

**Student's immersion with the material**

Uses only English during the class 1 2 3 4

Understands native speakers 1 2 3 4

**Comments:**.....

**The focal point:**

**Students' self-confidence development.**

Produces expressions confidently 1 2 3 4

He is not afraid of making mistakes 1 2 3 4

**Comments:**.....

**The focal point:**

**Student's speaking time expansion:**

Gets additional time to speak 1 2 3 4

**Comments:**.....

**4. Posttest**

- a. The researcher distributed the questions for both control and experimental groups.
- b. The results were collected and then procced statistically using a program Statistical Package for Social Sciences (SPSS).
- 6. The researcher summarized the results, discussed them and then presented them and made comparisons with the previous studies' results.
- 7. Finally, the researcher presented the findings and recommendations of the study in the light of final results.

**2.8.1 Statistical treatments**

The collected data was entered into the computer to be converted through the statistical package for social science (SPSS).

- 1. Descriptive statistics ( arithmetic mean, standard deviation, percentages, frequency) in order to find out the means of the sub-skill of the tests, and to determine the degree of each of them.
- 2. A paired-samples T-test was used to test the first study hypothesis.
- 3. A paired-samples T-test was used to test the second study hypothesis.

## Chapter Three

### Results of the study

In this chapter, the researcher presents the results of the study according to the two tools; the pretest posttest and the classroom observation that were designed and applied.

#### 3.1 Results related to the questions of the study

##### Results related to the first question: What is the effect of 3D virtual reality on the 10<sup>th</sup> grade students' communicative competence?

Pretest and posttest were designed and applied before and after the teaching procedure to show the significance between the results of the experimental group in both tests.

**Table (3)**

*The Mean and Standard Deviation of the Experimental Group's Communicative Competence of the Pretest and Posttest*

Tests	N	Mean	St. deviation	T	Sig
Pretest	25	10.84	4.761	6.93	0.000
Posttest	25	15.60	2.661		

The table above illustrates that the T value (6.93) which is a high value and this means there is a statistical significance at ( $\alpha \leq 0.05$ ) between both tests. The arithmetic mean of the pretest is (10.84) with a standard deviation of (4.761) whereas the arithmetic mean of the posttest is higher at (15.600) with a standard deviation of (2.661).

In order to respond to the sub questions of the first question, the researcher extracted the arithmetic mean, standard deviation, and ranks for each sub-skill.

##### First sub-skill: Grammatical competence

**Table (4)**

*The Mean and Standard Deviation of the Experimental Group's Grammatical Competence of the Pretest and Posttest.*

Test	N	Mean	St. deviation	T	Sig
Pre	25	3.62	1.68	1.69	0.10
Post	25	3.94	1.30		

Table (4) shows that the (T) value is low at (1.69) which means there is no statistical significance at ( $\alpha \leq 0.05$ ) between the pretest and posttest in the grammatical skill of group A. The mean of the pretest is (3.62) and standard deviation is (1.68) and the arithmetic mean of the posttest is (3.94) with a standard deviation of (1.30).

**Table (5)**

*Frequency and Rate Percentage of Students' Grammatical Competence*

No	Score	Category	Pretest		Posttest	
			Frequency	Percentage	Frequency	percentage
1.	1-3.4	Poor	9	36%	7	28%
2.	3.5-4.4	Fair	7	28%	8	32%
3.	4.5-5.4	Good	5	20%	5	20%
4.	5.5-6.4	Very good	4	16%	2	12%
5	6.5-7	Excellent	-	-	3	8%

The table above demonstrates that in the pretest, the number of students classified as 'poor' is (9) with a percentage of (36%), the number of students scored as 'fair' is (7) or (28%) and (5) students were under the category of 'Good' with a percentage of (20%). On the other hand, only (4) students categorized as 'very good' with a percentage of (16%) and there were no students classified as 'Excellent'.

When it comes to the posttest results, there are (7) students with a percentage of (28%) under the category of 'Poor' and (8) students or (32%) classified as 'Fair'. Moreover, there are (5) students who scored 'Good' with a percentage of (20%) and (2) students or (8%) are under the category of 'Very good'. Finally, only (3) students classified as 'Excellent' with a percentage of (8%).

### **Second sub-competence: Sociolinguistic competence**

**Table (6)**

*The Mean and Standard Deviation of the Experimental Group's Sociolinguistic Competence of the Pretest and Posttest*

Test	N	Mean	St. deviation	T	Sig
Pre	25	3.48	1.89	9.42	0.0
Post	25	5.32	1.21		

The table above illustrates that there is a statistical significance at ( $\alpha \leq 0.05$ ) of the sociolinguistic pretest and posttest since T is (9.42) which is a high value. The mean of the pretest is (3.48) and the standard deviation is (1.89), whereas the mean of the posttest is higher at (5.32) and with standard deviation at (1.21).

**Table (7)**

*Frequency and Rate Percentage of Students' Sociolinguistic Competence*

No.	Score	Category	Pretest		Posttest	
			Frequency	Percentage	Frequency	Percentage
1.	1-3.4	Poor	8	32%	2	8%
2.	3.5-4.4	Fair	9	36%	2	8%
3.	4.5-5.4	Good	4	16%	7	28%
4.	5.5-6.4	Very good	4	16%	9	36%
5	6.5-7	Excellent	-	-	5	20%

The table above shows that in the pretest, the number of students who scored under the category of 'Poor' is (8) or (32%) and there are (9) students classified as 'Fair' with a percentage of (36%). In addition, there are (4) students categorized as 'Good' with a percentage of (16%) and (4) students with 'Very good' scores or a percentage of (16%). Finally, there were no students classified as 'Excellent'.

For the posttest, the number of students with 'Poor' category is lower at (2) or (8%) and there are (2) students who scored under the category of 'Fair' with a percentage of (8%). Also, there are (7) students or (28%) categorized as 'Good' and (9) students classified as 'Very good' with a percentage of (36%). At last, (5) students categorized as 'Excellent' or (20%).

**Table (8)**

*The Mean and Standard Deviation of the Experimental Group's Discourse Competence of the Pretest and Posttest*

Test	N	Mean	St. deviation	T	Sig
Pre	25	2.44	1.46	9.85	0.0
Post	25	4.21	0.98		

The table above shows that there is a statistical significance at ( $\alpha \leq 0.05$ ) and the T value is (9.85) which is a high value. The mean of the pretest is (2.44) with a standard deviation at (1.46) whereas the mean of posttest is higher at (4.21) and the standard deviation is (0.98).

**Table (9)**

*Frequency and Rate Percentage of Students' Discourse Competence*

No.	Score	Category	Pretest		Posttest	
			Frequency	Percentage	Frequency	Percentage
1.	1-2.5	Poor	10	40%	4	16%
2.	2.6-3.5	Fair	8	32%	3	12%
3.	3.6-4.4	Good	5	20%	8	32%
4.	4.5- 5.4	Very good	2	8%	9	36%
5	5.5- 6	Excellent	-		1	4%

The table above shows that in the pretest, the number of students who scored under the category of 'Poor' is (10) or (40%) and there are (8) students classified as 'Fair' with a percentage of (32%). In addition, there are (5) students categorized as 'Good' with a percentage of (20%) and (2) students with 'Very good' scores or a percentage of (8%). Finally, There were no students classified as 'Excellent'.

For the posttest, the number of students with 'Poor' category is lower at (4) or (16%) and there are (3) students who scored under the category of 'Fair' with a percentage of (12%).Also, there are (8) students or (32%) categorized as 'Good' and (9) students classified as 'Very good' with a percentage of (36%). At last, (1) student categorized as 'Excellent' or (4%).

### 3.2 Results related to the first null hypothesis

**Table (10)**

*The Mean and Standard Deviation of the Pretest Results for the Control and the Experimental Groups*

Group	N	Mean	St. deviation	T	Sig
Control	25	10.44	4.76	0.43	0.095
Experimental	25	10.84	2.86		

The table above demonstrates that  $T$  is (0.43) which is a low value and there is no statistical significance at ( $\alpha \leq 0.05$ ) between the experimental and the control groups in the pretest and the two groups were similar. The mean of the control group is (10.44) and the standard deviation equals (4.76). The mean of the experimental group is (10.84) with standard deviation at (2.86).

H1: There is not statistical significance at ( $\alpha \leq 0.05$ ) between the experimental and control groups in the pretest.

### **Results related to the second null hypothesis**

The table (11) see appendix (I) shows that  $T$  is (4.46) which is a high value and this means there is a statistical significance at ( $\alpha \leq 0.05$ ) between the experimental and control groups. The mean of the control group is (11.44) and the standard deviation equals (3.86), whereas the mean of the experimental group is (15.60) which is higher with standard deviation at (2.66).

H2: There is a statistical significance at ( $\alpha \leq 0.05$ ) between the experimental and control group in the posttest.

### **3.3 Classroom observation results**

#### **Results of the third question: What is the effect of 3D virtual reality environment on students' performance?**

The students were exposed to six different situations according to appendix (C). In each situation, they were asked to use appropriate expressions by choosing the correct expression in a multiple-choice exercise then pronouncing it correctly and finally writing it. Hence, 3D virtual reality provided students with several real-life situations without being restricted by being the place of each situation, instead they were all implemented inside the classroom. The process for each situation was repeated multiple times so that students internalized the expressions which enabled them to produce them easily and freely. However, the researcher noticed that there were some students who still needed extra practice to enhance their familiarization with the situations and production of proper expressions. In addition, the researcher saw that there was still lack of experiencing of

many other essential situations and conversations as a student stated '*I love playing football and I like to practice a conversation related to it*'. According the overall results of students' internalization of expressions in appendix (B), 36% percent classified as 'Excellent' and only 4% as 'Needs improvement'. In addition, the percentage of students affected as 'Very good' and 'Good' were 32% and 16% respectively.

When it comes to the effect of 3D environment on students' self-confidence, they varied due to the students' English level and personalities. At the beginning, the researcher noticed that most students tended to hesitate when they were exposed to the 3D virtual reality technique since it was a new one that they had never experienced. Moreover, the students reacted differently to each situation in which they were more confident in the one they were familiar with the expressions used in it. For instance, in the situation 'Going to the restaurant', many students showed readiness to start the conversation with full-confidence while in the situation 'Having a job interview' the majority of students did not dare to converse on their own. However, by reaching the final phase of practicing the same expressions, students' overall confidence increased with 44% of students categorized as 'Excellent' and only 12% as 'Needs improvement'. See appendix (B).

Another effect of 3D environment was immersing students with the material. The researcher noticed that the students being involved in a 3D environment and with the constant use of the target language led them to be intensively immersed in the material. For example, in the situation 'Having a job interview', students were required to use many expressions related to the business field which provided a good opportunity for the students to expand their vocabulary knowledge and expressions not only in the business field, but also in all of the other used situations. Also, since students were not allowed to use Arabic during the time of practice, the researcher noticed that students attempted to use as much English words as they could and asked for the teacher's help for translating some words. Therefore, the improvement of the students' use of different sentences and expressions in English was noticeable since the percentage of students' immersion in the material classified as 'Excellent' was 56% which is the highest among all of other effects of 3D environment on students' performance. See appendix (B).

Since the study technique created a learning environment with the assist of technology, students knew how to deal with the 3D virtual glasses because they were familiar with using for other purposes such as video games. Accordingly, the researcher noticed that many students were attracted to the 3D environment to be applied for their learning and showed enthusiasm to start practicing their English through it. However, few students had some difficulties dealing with this technology but at the same time they showed readiness to attempt this experience because they thought it was encouraging. For instance, one of the students said: *'I do not have a computer in my house and I was not sure how to use 3D glasses but now I think it is an easy technique and I would love to use it again and again.'* The overall results of 3D environment's effect on attracting students' attention were 40% classified as 'Excellent', 20% as 'Very good', 16% as 'Good' and 24% as 'Needs improvement'. See appendix (B).

In each situation, students were required to pronounce the expressions multiple times after listening to +them from native speakers' recordings until they manage to pronounce them correctly. At the beginning, many students complained that these expressions were hard to pronounce, especially, in the situations they were not familiar with. For example, in the situation 'Having a job interview', word such as 'newbie' and 'appointment' were difficult for many students, especially, when attempting to imitate native-like accent. Another example of words used in the situation 'Checking in to a hotel' such as 'reservation', 'brochure' and 'intersection' also hindered some students' pronunciation of the expressions. Nevertheless, at the end of the experiment, the overall results of students' improvement in pronunciation showed that 8%students classified as 'Excellent', 24% as 'Very good', 44% as 'Good' and 32% as 'Need improvement'.

As for naturalizing students' speech, the expressions and phrases used were commonly used by native speakers on daily basis. Therefore, using them enabled students to produce more natural speech. On the other hand, this was not the case when students were asked to produce phrases and expressions on their owns since they originally had poor natural language. Thus, few students had the ability to produce additional expressions and phrases with only (20%) students classified as 'Excellent' in using natural language and (28%) as 'Needs improvement'. For example, in the situation 'Planning a birthday party',

one of students added an extra expression to the original one that said. 'We are having pizza and chocolate for dessert'. He added. *'And why don't we have lemonade? It is refreshing in this boiling weather.'* However, when other students were asked to add more phrases, they either could not add any or added unrelated ones.

Although time was distributed equally between the students, only few minutes for each student were available to speak along with practicing other skills during the class time. The researcher noticed that this caused some reduction in some students' speaking time, especially for students who had many long pauses before producing their speeches. On the other hand, some students who had high abilities were eager to speak more and tried to take more time on account of other students' time. Therefore, as the researcher observed, speaking time in a 3D virtual environment was negatively impacted since only (12%) of students' speaking time expansion classified as 'Excellent' which was much lower than the classification of 'Needs improvement' at (48%).

### **3.4 Summary of the results**

To sum up, the above results showed that students were improved in some skills and some parts of their performance were also enhanced. As for students' pretest results, there was no statistical significance between the control and experimental groups and the two groups were similar at a significance of (0.95) and the T value was (0.43). However, the results changed in the posttest and showed that both groups were significant at (0.0) and the T value was (4.46). Also, the experimental group's result was higher at a mean of (15.60). Furthermore, the results of the experimental group varied between the pretest and posttest results at a statistical significance of (0.0). This indicated to the effectiveness of the study technique on the experimental group.

Classroom observation also showed the effect of the study technique on students' performance that they were affected in different aspects. For instance, students' self-confidence was increased with 44% of students classified as 'Excellent' since they showed readiness to interact with the conversations and situations. Also, their immersion with the material was enhanced at 56% classified as 'Excellent' which was the highest among all other impacts. However, naturalizing students' language and speech varied and

was not enhanced for some students with (28%) classified as 'Needs improvement' and only (20%) as 'Excellent'. Besides, speaking time was not expanded for many students with a percentage of (48%) categorized as 'Needs improvement'.

## **Chapter Four**

### **Discussion of results and recommendations**

This chapter presents the discussion of the results of the first, second and third questions of the study along with the hypotheses of the second question. It also provides some recommendations related to the questions of the study.

#### **4.1 Discussion of the results related to the first question of the study**

What is the effect of 3D virtual reality on the 10<sup>th</sup> grade students' communicative competence?

The first question is divided into three sub-questions as follows:

##### **Discussion of results related to the first sub-question**

What is the effect of 3D virtual reality on students' grammatical competence?

The table (4) demonstrated that there was no arithmetic significance at ( $\alpha \leq 0.05$ ) between the pretest and posttest results and the T value was (1.69) with a significant degree at (0.10) which means there was no development in students' grammatical competence between pretest and posttest results. The degree of improvement was low with an arithmetic mean (3.94) and the standard deviation was (1.30) in the posttest. Moreover, the frequency of students who classified as 'Poor' in the grammatical competence posttest was (28%) which was a high degree comparing to the students categorized as 'Excellent' at only (8%).

The above results revealed that students' grammatical competence was not affected by the study strategy which answered the first sub-question. The researcher believes that this was related to two main reasons. At first, although students were supposed to use the appropriate expressions with correct structure, the grammatical rules related to them were not explained separately since the exercises and the assignments focused on fluency rather than the accuracy. Another reason that related to the difficulty of the expressions in which students could not produce some of them in a correct form but only had general understanding of their meanings.

These results resembled the ones for Karimy & Pishkar (2017) whose study findings revealed that due to the difficulty of the language structures and grammatical rules the concentration was more on the fluency. Therefore, fluency tasks' results were more reliable unlike accuracy tasks which students found them frustrating and had negative comments on them. Sioco & De Vera (2018) also came up with the result that the vast majority of students were assessed as 'Average' with (90.4 percent) in their grammatical competence and only few scored as 'Moving toward mastery' with (9.6 percent). Hence, grammatical competence considered to be a hard task for students to accomplish and requires a lot of extra effort and consistent practice in order to be mastered.

### **Discussion of results related to the second sub-question**

What is the effect of 3D virtual reality on students' sociolinguistic competence?

The table (6) showed that there was an arithmetic significance between the pretest and posttest results at T (9.42) which is a high value with a significant degree at (0.0) and this means there was an improvement in students' sociolinguistic competence. The table also illustrated that the degree of advancement in students' sociolinguistic competence was high with an arithmetic mean (5.32) and the standard deviation was (1.21) in the posttest. Furthermore, according to table (7), the frequency of students who classified as 'Poor' in the posttest was (8%) which was a low degree comparing to the students categorized as 'Very good' at (36%). In addition, 20% of students were classified as 'Excellent' in the posttest which was significantly high comparing to pretest as no one scored under this category.

The results above showed the effectiveness of the study technique on students' sociolinguistic competence which was enhanced and this answered the second sub-question. The researcher found the results were logical since students showed a good potential of being involved in the cultural context of the language and produce naturalized speech during the classroom observation with 12 students assessed as 'Excellent'. The researcher also deduced that the compatibility between the students' performance and students' test results was high which asserts that there was a confidentiality of results and students' improvement was tangible.

Ritchie (2018) came up with that immersing student with the target language environment via a technological mediation was effective in maximizing students' potential in communicating. Furthermore, Yuzkiv (2021) also indicated to the success of including the socio-communicative contexts into English courses that contributed in increasing students' sociolinguistic competence by 8%. This actively demonstrates the embedded urge to imply several effective techniques to develop students' sociolinguistic competence as a complement of their overall communicative competence.

### **Discussion of results related to the third sub-question**

What is the effect of 3D virtual reality on students' discourse competence?

The table (8) showed that there was an arithmetic significance between the pretest and posttest results at T (9.85) with which is a high value with a significant degree at (0.0) and this indicates to the development in students' discourse competence. Besides, the table demonstrated that the degree of students' improvement in their discourse competence was high with an arithmetic mean (4.21) and the standard deviation was (0.98) in the posttest. Also, table (9) shows that the number of students who assessed as 'Poor' in the posttest was (16%) which was a low degree comparing to the students categorized as 'Very good at (36%).

The results above asserted the effectiveness of the study technique on students' discourse competence which was improved and this answered the third sub-question. The researcher anticipated this result and thought it was logical. Students practiced during the experiment how to produce expressions that are related to the presented topics and with the focus on the both coherence and cohesion of the language produced. Moreover, they had the opportunity to create extra expressions and phrases to extend their talk which enabled to expand their potential and invention. Saighi (2015) stated that in order to improve students' discourse competence, they should be ingrained with functional, social, structural and cultural context. And this what the researcher tended to apply for the sake of better comprehension of both cultural and structural aspects and context of the TL which led to better production of well-made structurally and functionally language.

## **4.2 Discussion of the results related to the second question and its hypothesis**

### **Discussion of results related to the first null hypothesis**

As table (10) illustrated, there was no statistical significance at ( $\alpha \leq 0.05$ ) between the experimental and control group in the pretest results and the T value was (0.43) with a significant degree of (0.095) This means that the first hypothesis was accepted and the groups are similar. The researcher believes that this result is acceptable since the students were randomly selected from both groups and they varied in their levels. Moreover, the test had different question types which varied in their degree of difficulty from being easy, medium and hard. This assisted in creating a valid and reliable test in order to obtain objective results.

The arithmetic means for both groups were low at (10.44) and (10.84) respectively. The researcher believes that this result was logical since students of both groups did not have adequate practice of their communication skills in English classes. This is due to neglecting the real application of communicative approaches in cultural and social context by Palestinian EFL teachers. (Jawabreh, 2015). Therefore, the focus in English classes should be shifted towards using more communicative activities and exercises in real-life contexts so that better results of communication tests will be obtained.

### **Discussion of results related to the second null hypothesis**

According to table (11) see appendix (I), there was an arithmetic significance at ( $\alpha \leq 0.05$ ) between the experimental and control groups and the T value was (4.46) with a significant degree of (0.00) in the posttest results which means the second null hypothesis was rejected. The mean for the control group was (11.44) while for the experimental group was higher at (15.60). This means that the experimental group's results was affected by the study technique while the control group did not show a difference between the pretest and posttest since they were not taught through the study technique.

The above results seemed logical to the researcher due to the differentiation of teaching methodologies that were implemented on both groups. Since the study technique focused more on improving students' communicative competence and its sub competencies through creating a real-life material within a virtual environment, students of the

experimental group had a better opportunity to practice their communicative competence in a variety of situations. On the other hand, students of the control group were taught through a traditional method which was practicing the expressions inside the classroom in fictional setting.

The results of the previous studies also asserted that implying motivating and interactive techniques can lead to positive results such as the results of Noviyenty (2022) who confirmed of the effectiveness of their techniques on their students' performance. Besides, overcoming the barriers of learning and teaching communication skills such as spatial limitation and communicating with native speakers can also result in increasing students' potential as Sevy-Biloon & Chroman (2019) concluded. Accordingly, when students are exposed more to the actual use of the target language and with the persistent change of traditional methods, both of their performance and test results will be enhanced.

#### **4.3 Discussion related to the results of the third question**

It can be referred from the classroom observation results that students' performance was upgraded in some aspects and was not affected in the others. At first, 3D environment provided students with the opportunity to delve intensively in the culture of the target language along with expressions used in a variety of situations. This increased students' awareness of the appropriateness of acceptable communicative performance as Hyme (1972) pointed related to the communicative competence definition. Furthermore, 3D environment brought authentic material to the students to practice daily bases communication acts which considered to be necessary in naturalizing students' speech as MartÃ-nez & CalderÃ (2013) also claimed.

Students' self-confidence was generally increased due to several factors according to the results. To begin with, 3D virtual reality was a convenient environment since students were detached from reality and did have to compete with their peers inside the classroom borders. Therefore, the barrier of shyness was broken and students' participation enhanced. Ali (2020) stated according to his study results that a supportive and encouraging learning atmosphere helps maintain students' motivation in participating in various communicative activities. Moreover, students were allowed to speak freely and

create extra expressions of their own without correcting them on every single mistake which helped in decreasing their fear of making mistakes and encouraging them to freely produce their speeches. As Richards (2006) pointed to the development of communicative approaches that shifted from accuracy towards fluency so that learners' self-confidence in communicating and interaction in the second language are arisen.

3D virtual environment created an attractive atmosphere as demonstrated in the results. The researcher believes that students were tempted toward using this type of technology refers to their familiarity with the technological devices in general. Ullah & Farzana (2020) came up with similar results that 66% of students agreed that technology makes the language classroom interesting and attracts their attention since it promotes their communication skills. Furthermore, technology has brought about a paradigm shift in many aspects of life including education. As Kim & Bae (2020) confirmed that incorporating digital devices assist in improving the quality of learning. Therefore, the researcher deduced that implying 3D virtual environment using 3D glasses was highly tempting and enabled students to enjoy the experiment.

As illustrated in the results, interacting with native speakers within the 3D environment promoted the opportunity for the students to improve their pronunciation. It can be seen that students listened multiple times to the correct pronunciation before they speak which enabled them to get familiarized with the sound of the expressions. The results showed that the number of students classified as 'Excellent' went up throughout the treatment at a percentage of 32%. This resembled the results of Anugrah (2019) whose study findings revealed that students' pronunciation developed through the use of native-speaking software by showing an increase in students' score of the posttest results. Accordingly, familiarizing students with native speakers' pronunciation paves their way to produce correct sounds.

According to naturalizing students' language, the results presented that there was a fluctuation between students' performance since 3D environment did not affect a number of them while few others were improved. The percentages of students who performed as 'Excellent' and 'Very good' were not high at only 20% and 28% in many situations. (see

appendix (B)). The researcher refers this to the type of conversations and situations that students were exposed to which were directly related to daily life activities with commonly used phrases. As a result, students' ability to produce more naturalized speech was boosted for some and was not affect to others. Similar results showed by MartÃ-nez & CalderÃ (2013) that integrating students with rea-life communicative activities led to strengthen their analytical ability and creating additional expressions in the multiple fields but with some difficulties faced by other students and did not lead to their actual improvement.

Since 3D virtual environment requires a lot of time to be intensively delved into, expanding speaking and writing time for students was an issue as illustrated in the result. Since there were a lot of students in the experiment, time distribution between each of them was restricted in only few minutes in each class. Moreover, the differentiation between students' interactivity and levels caused the active students to participate more on the count of others. Therefore, speaking and writing time was constrained for many students and expanded for few. Correspondingly, Mohammad (2020) concluded that the mean difference of students' talking time was to some extent increased for some topics in the favor of other ones.

#### **4.4 Conclusion**

To come up with, communicative competence is one of the crucial requirements for the learners of a foreign language to master in order to deliver their thoughts to the native speakers appropriately and clearly. Moreover, it is considered a priority to develop in the educational field in order to overcome the cultural barriers through the utilization of modern technologies.(Dubinka & Hushcha, 2020). Hence, this study focused on increasing learners' communicative competence through the creation of a 3D virtual environment that included multiple simulated real-life situations. This technique substitutes a physical input taken from the real world with a physical input simulated by computers.(Christou, 2010).As a result, it enabled students to be intensively involved in real-life setting within their existence inside the border of the classroom.

The results of the study showed that students' overall communicative competence was enhanced and their performance was generally praised. However, the study technique needs to be modified since it did not achieve all of the desired outcomes because students' grammatical competence was not increased and some aspects of their performance were not positively affected. For instance, time limitation was one of the main issues that negatively affected some students' speaking time and the researcher suggested expanding the time to tackle this issue. It can be deduced that improving one's communicative competence requires a lot of time and dedicated effort with the assistance of highly effective strategies and tools in order to eventually obtain the desired objectives.

## **4.5 Recommendations**

### **4.5.1 Recommendations related to the first question of the study and its sub questions**

- Applying 3D virtual reality as a tool to enhance students' communicative competence.
- Creating other effective techniques to increase learners' communicative competence.
- Tackling the issue of increasing students' grammatical competence by suggesting other effective ways.
- Providing students with the opportunity to interact with the cultural context of English language to increase their sociolinguistic competence.
- Enabling students to experience several real-life conversations and situations to enhance their discourse competence.

### **4.5.2 Recommendations related to the second question of the study**

- Focusing more on conducting several communication activities inside the classroom.

### **4.5.3 Recommendations related to the third question of the study**

- Creating an attractive and intriguing learning environment to appeal students' attention.
- Providing students with a convenient atmosphere to enhance their self-confidence.

- Inventing ways to immerse students with the material to obtain better results.
- Increasing students' interaction with native speakers inside the TL environment to improve their pronunciation.

#### **4.5.4 Recommendations related to the ministry of education**

- Adjusting English curricula to include more communicative activities and real-life content.
- Providing schools with multiple and various technological equipment such as computers and projectors compatible with 3D virtual glasses to employ them in education.
- Conducting training courses for both teachers and students to develop their technological potential in using 3D virtual environment.

## List of abbreviations

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<b>Abbreviation</b>	<b>Definition</b>
EFL	English as a foreign language
ILO	Intended learning outcomes
TL	Target language
3D	Three dimensional
ESL	English as a second language
VR	Virtual Reality

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## Appendices

### Appendix (A)

#### Communicative Competence Scoring Form

Communicative competence and its sub-competences test were designed and checked according to the following rubrics:

Excellent	Very good	Good	Fair	Poor
Score 6.5-7	Score 5.5-6.4	Score 4.5-5.4	Score 3.5- 4.4	Score 1-3.4

#### Grammatical competence

Score point	Description
6.5-7	The learner produces a wide range of complex compound sentences with appropriate structure.
5.5-6.4	The learner produces complex compound sentences with some appropriate structure.
4.5-5.4	The learner produces compound sentences with poor structure
3.5-4.4	The learner produces isolated sentences with poor structure.
1-3.4	The learner cannot produce basic sentences form.

#### Sociolinguistic competence

Score point	Description
6.5-7	The learner produces a wide range of appropriate words and expressions.
5.5-6.4	The learner produces a good number of appropriate words and expressions.
4.5-5.4	The learner produces a limited number of appropriate words and expressions.
3.5-4.4	The learner produces a limited number of words and expressions.
1-3.4	The learner produces only isolated words.

#### Discourse competence

Score point	Description
5.5-6	The learner produces a wide range of coherent and cohesive sentences.
4.5- 5.4	The learner produces a number of sentences with good coherence and cohesion.
3.5-4.4	The learner produces a number of sentences with some coherence and cohesion.
2.6- 3.4	The learner produces a limited number of unrelated sentences.
1-2.5	The learner produces unrelated words.

**Appendix (B)**  
**Classroom Observation Rubrics**

**The percentage of the effect of 3D environment on students according to the following criteria:**

<b>No</b>	<b>Statement</b>	<b>Excellent</b>	<b>Very Good</b>	<b>Good</b>	<b>Needs improvement</b>
1	3D Virtual reality enhances students' self-confidence	44%	32%	16%	12%
2	3D Virtual reality provides realistic environment which exposes students to a variety of situations.	36%	40%	20%	4%
3	3D Virtual reality immerses students with the material.	56%	32%	4%	8%
4	3D Virtual reality attracts students' attention.	40%	20%	16%	24%
5	3D Virtual reality improves students' pronunciation.	32%	24%	44%	8%
6	3D Virtual reality expands students' speaking time	12%	4%	32%	48%
7	3D Virtual reality enables students to produce correct expressions.	44%	28%	24%	16%
8	3D Virtual reality naturalizes students' speech.	20%	28%	32%	28%

## Appendix (C)

### Lessons Plans

#### Lesson Plan (1)

Topic: Checking in to a hotel	Time: 30 min.
Grade:10 <sup>th</sup> No. Class: 3 Classes	

#### Lesson Outcomes:

1.	To produce appropriate expressions related to the lesson topic.
2.	To create extra expressions of their own.

#### Lesson Structure:

Time	Introduction (Set):	Teaching Approaches
10 min	Watching a 3D video about a conversation between a customer and a receptionist.	
Time	Main Content:	Teaching Approaches
20	1. Acting the customer role. 2. Choosing the appropriate expression to ask for appetite, main meal, drink and dessert. 3. Using the models (May I/ Can I) 4. Pronouncing the expressions appropriately. 5. Writing the expressions appropriately. 6. Creating extra expressions.	Acting in a dialogue

#### Resources

(Include equipment required for class and/or for teacher preparation)

1. <a href="https://immerseme.co/">https://immerseme.co/</a>
2. Tenth Grade English for Palestine books A & B, pages (64, 70).

#### Assessment

Worksheets
Oral assessment

## Lesson Plan (2)

Topic: Going to the restaurant      Time: 30 min.

Grade:10<sup>th</sup> No. Class: 3 Classes

### LESSON OUTCOME:

3. To produce appropriate expressions related to the lesson topic.
4. To create extra expressions of their own.

### LESSON STRUCTURE:

Time	Introduction (Set):	Teaching Approaches
10 min	Watching a 3D video about a conversation between a customer and a waiter.	
Time	Main Content:	Teaching Approaches
20	<ol style="list-style-type: none"><li>1. Acting the customer role.</li><li>2. Choosing the appropriate expression to ask for appetite, desert, main meal and drink.</li><li>3. Using the models (eg. I would like to have/ Can I get...)</li><li>4. Pronouncing the expressions appropriately.</li><li>5. Writing the expressions appropriately.</li><li>6. Creating extra expressions.</li></ol>	Acting in a dialogue

### Resources

(Include equipment required for class and/or for teacher preparation)

1. <https://immerseme.co/>

2. Tenth Grade English for Palestine books A & B, pages (64, 70).

### ASSESSMENT

Worksheets

Oral assessment

### Lesson Plan (3)

Topic: Planning a birthday party	Time: 30 min.
Grade:10 <sup>th</sup> No. Class: 2 Classes	

#### LESSON OUTCOME:

5.	To produce appropriate expressions related to the lesson topic.
6.	To create extra expressions of their own.

#### LESSON STRUCTURE:

Time	Introduction (Set):	Teaching Approaches
10 min	Watching a 3D video about a conversation between two friends.	

Time	Main Content:	Teaching Approaches
20	1. Choosing the appropriate expression to talk about planning a birthday party. 2.Using future tense. (will/ going to) 3.Pronouncing the expressions appropriately. 5. Writing the expressions appropriately. 5.Creating extra expressions.	Acting in a dialogue

#### Resources

(Include equipment required for class and/or for teacher preparation)

1. <a href="https://immerseme.co/">https://immerseme.co/</a>
2.Tenth Grade English for Palestine books A & B, pages (64, 70).

#### ASSESSMENT

Worksheets
Oral assessment

## Lesson Plan (4)

Topic: Having a job interview	Time: 30 min.
Grade:10 <sup>th</sup> No. Class: 2 Classes	

### LESSON OUTCOME:

7.	To produce appropriate expressions related to the lesson topic.
8.	To create extra expressions of their own.

### LESSON STRUCTURE:

Time	Introduction (Set):	Teaching Approaches
10 min	Watching a 3D video about a conversation between the interviewer and the interviewee.	

Time	Main Content:	Teaching Approaches
20	<b>1. Choosing the appropriate expression to talk about one's skills and potentials.</b> <b>2.Using formal phrases. (eg. I'm looking forwards to hearing from you.)</b> <b>3.Pronouncing the expressions appropriately.</b> <b>5. Writing the expressions appropriately.</b> <b>5.Creating extra expressions.</b>	<b>Acting in a dialogue</b>

### Resources

(Include equipment required for class and/or for teacher preparation)

1. <a href="https://immerseme.co/">https://immerseme.co/</a>
2. Tenth Grade English for Palestine books A & B, pages (64, 70).

### ASSESSMENT

Worksheets
Oral assessment

### Lesson Plan (5)

Topic: Describing the weather	Time: 30 min.
Grade:10 <sup>th</sup> No. Class: 2 Classes	

### LESSON OUTCOME:

1.To produce appropriate expressions related to the lesson topic.
2. To create extra expressions of their own.

### LESSON STRUCTURE:

Time	Introduction (Set):	Teaching Approaches
10 min	Watching a 3D video about a weathercaster report.	

Time	Main Content:	Teaching Approaches
20	1. Choosing the appropriate expression to describe the climate. 2.Using comparison adjectives. (eg. The weather will be busier than ever.) 3.Pronouncing the expressions appropriately. 5. Writing the expressions appropriately. 5.Creating extra expressions.	Acting in a dialogue

### Resources

(Include equipment required for class and/or for teacher preparation)

1. <a href="https://immerseme.co/">https://immerseme.co/</a>
2.Tenth Grade English for Palestine books A & B, pages (64, 70).

### ASSESSMENT

Worksheets
Oral assessment

## Lesson Plan (6)

Topic: Telling a life story	Time: 30 min.
Grade: 10 <sup>th</sup> No. Class: 2 Classes	

### LESSON OUTCOME:

1.To produce appropriate expressions related to the lesson topic.
2.To create extra expressions of their own.

### LESSON STRUCTURE:

Time	Introduction (Set):	Teaching Approaches
10 min	Watching a 3D video about a telling a life story.	

Time	Main Content:	Teaching Approaches
20	1. Choosing the appropriate expression to talk about one's life story. 2.Using past simple and past perfect. (eg. By the time I was seven, I had experienced such an adventure.) 3.Pronouncing the expressions appropriately. 5. Writing the expressions appropriately. 5.Creating extra expressions.	Acting in a dialogue

### Resources

(Include equipment required for class and/or for teacher preparation)

1. <a href="https://immerseme.co/">https://immerseme.co/</a>
2.Tenth Grade English for Palestine books A & B, pages (64, 70).

### ASSESSMENT

Worksheets
Oral assessment

## Appendix (D)

### Pretest

This instrument is designed to collect the needed data for finalizing the MA thesis entitled “The Effect of Using 3D Virtual Reality in Improving the Tenth Grade Students’ Communicative Competence in Salfect City Schools”. Please be comfortable in doing the tests since your answers will be used for scientific purpose only. Thank you for your collaboration.

#### First section: Grammatical competence (7 marks)

##### Q1: Correct the verbs in the brackets:

1. I \_\_\_\_\_ (work) here for ten years.
2. By the time they finished preparing for the birthday party, I \_\_\_\_\_ (have) one hour to get there.
3. When I was a child I \_\_\_\_\_ (raise) by my grandma.

##### Q2: Rewrite the following sentences as required:

1. I think it was a great experience since we got to see the outside world. (Reported statement)

---

2. When the weather is bad, the trips usually cancelled. (If clause)

---

**Q3: Write a short paragraph about planning for near future using will/ passive future.**

.....

**Second section: Sociolinguistic competence (7 marks)**

**Q1: You are in a job interview and you are the interviewee. Use the appropriate words and expressions to complete the dialogue:**

Interviewer: Good morning. I am Mark, the owner of this company.

Interviewee: .....

Interviewer: I'd like you to take a seat.

Interviewee:.....

Interviewer: Could you please tell me a little about yourself?

Interviewee:.....

Interviewer: I notice you're a newbie. So, how are you going to deal with this situation?

Interviewee: .....

Interviewer: Then we must keep you on a trial basis for three months. We will appoint you if we think you are suitable.

Interviewee: .....

Interviewer: So, will you be able to join us next Sunday?

Interviewee:.....

**Q2: Circle the appropriate expression for each situation:**

1. You invite your friend to a meal. You say:

- a. eat!                      b. help yourself                      c. Com on!

2. One of these expressions means that someone is extremely tired:

- a. I'm upset                      b. I'm beat                      c. I'm pleased

3. You are in the antiques shop and you want to buy a vase but it's too expensive for you. You say:

- a. That's a rip-off      b. That's a reasonable price      c. I can afford that

**Third section: Discourse competence (6 marks)**

**Q1: Write three compound sentences of your own. Using (relative clauses, conjunctions)**

**Q2: Describe a role model (your teacher/ father/ boss etc.) who has a positive effect in your life. Use appropriate words and expressions with appropriate coherence and cohesion.**

.....

**Appendix (E)**

**Posttest**

**First section: Grammatical competence (7 marks)**

**Q1: Correct the verbs in the brackets:**

1. She \_\_\_\_\_ (live) here for a long time.
2. By the time they watched the movie together, he \_\_\_\_\_ (have) thirty minutes to submit his letter.
3. The man \_\_\_\_\_(chase) by a sniper.

**Q2: Rewrite the following sentences as required:**

1. She thinks it was a great idea to make the cake from the scratch. (Reported statement)

\_\_\_\_\_

2. You cannot commit a crime because you will have a death sentence. (If clause)

\_\_\_\_\_

**Q3: Write a short paragraph about predicting the future using will/ passive future.**

.....

**Second section: Sociolinguistic competence. (7)**

**Q1: You are in a restaurant and you are the costumer, use the appropriate words and expressions to complete the dialogue:**

Waiter: Hello! How can I help you?

Costumer: Hello!.....

Waiter: Of course. Please follow me! Here's a table for two.

Costumer: .....

Waiter: Yes, of course. Here is the menu.

Customer:.....

Waiter: Can I get you anything to drink?

Customer:.....

Waiter: Great! I'll be right back.

Waiter: Are you ready to order?

Customer: Yes,.....

Waiter: Would you like a starter, sir?

Customer:.....

Waiter: Excellent! I'll be right back.

Waiter: Did you enjoy your meal?

Customer:.....

Waiter: Would you like something for dessert?

Customer:.....

Waiter: Anything else?.

Customer:.....

Waiter: Ok sir, I'll be right back with the bill.

**Q2: Circle the correct expressions for each situation:**

1. Your friend's father passed away. You say to him:

- a. Congratulations
- b. Calm yourself
- c. Sorry for your loss

2. You want to tell your teacher about your latest updates of your project. You say:

- a. I'll hang up on you
- b. I'll pull it off
- c. I'll keep you posted

3. You want to express your opinion about a subject. You say:

a. As far as I'm concerned b. Pardon me c. Be my guest

**Third section: Discourse competence. (6)**

**Q1: Write three compound sentences of your own. Using (relative clauses, conjunctions).....**

**Q3: Imagine yourself a weathercaster; how would you describe the weather for the next few days? Use appropriate words and expressions with appropriate coherence and cohesion.**

.....

**Appendix (F)**  
**Validation Committee**

ame		
Dr. Suzzane Arafat	Instructor at An Najah National University	No answer
Dr. Mohammed Hamdan	Instructor at An Najah National University	No answer
Dr. Ayman Nazzal	Instructor at An Najah National University	No answer
Dr. Moneer Ismael	Instructor at Al-Quds Open University	Rewriting the following items: 1. Instead of saying 'If you were a weathercaster', use 'Imagine yourself'. 2. Instead of writing 'W and C', clarify using 'waiter and costumer'.
Dr. Khaled Dweikat	Instructor at the Al Quds Open University	Adding the following items: 1. Your friend's father passed away. You say to him: a. Congratulations b. Calm yourself c. Sorry for your loss. 2. You want to tell your teacher about your latest updates of your project. You say: a. I'll hang up on you b. I'll pull it off c. I'll keep you posted
Mrs. Lubna Al-Rabi	English Supervisor	Approved

## Appendix (G)

### Letter of Approval from An-Najah National University

7-45 2022/12/12

نموذج تحديد عنوان الأطروحة و المشرف

Reload Page

نموذج تحديد عنوان الأطروحة و المشرف

**\*\*\* يجب توفر جميع الشروط التالية لتحديد عنوان الأطروحة و المشرف :**

- أن يكون مسار الطالب لطروحة \*\* الشرط ملحق \*\*
- أن يتم الطالب 12 ساعة . \*\* الشرط ملحق \*\* \*\* عدد الفصول أقل أو يساوي 4 \*\*
- أن لا يكون الوضع الدراسي للطالب "مفصول من البرنامج" . \*\* الشرط ملحق \*\*
- المعدل التراكمي للطالب أكبر أو يساوي من 3.2 \*\* الشرط ملحق \*\*

اسم الطالب :	أيه محمد طه أبو كركر	رقم التسجيل :	11952080
اسم البرنامج :	ماجستير أساليب تدريس اللغة الإنجليزية	مسار الدراسة :	لطروحة
عدد الساعات المعتمدة التي تجزأت حتى الآن :	30	المعدل التراكمي :	3.53
الوضع الدراسي :	يدرس	رقم الهاتف المحمول :	0598913167
عنوان الطالب :	سلفيت	البريد الإلكتروني :	ayakrz1995@gmail.com
لغة الرسالة :	انجليزي	عنوان الأطروحة باللغة العربية :	اثر استخدام الواقع الافتراضي ثلاثي الأبعاد في تحسين كفاءة التواصل باللغة الإنجليزية لطلبة الصف العاشر في مدارس سلفيت
عنوان الأطروحة باللغة الإنجليزية :	The Effectiveness of Using 3D Virtual Reality in Improving the Tenth Grade Students' Communicative Competence in Salfet City Schools	النسخة الإلكترونية من مقترح الأطروحة :	docx.11952080-1

رقم المشرف الأول :	2411	اسم المشرف الأول :	أحمد عوض أمين محمود رباح
المشرف الثاني :	يعمل في جامعة النجاح :		

ملاحظة المشرف :	مع الموافقة	التاريخ :	2022-01-30
ملاحظة المنسق :	موافق	رأي المنسق :	موافق
ملاحظة رئيس القسم :	موافق	رأي رئيس القسم :	موافق
ملاحظة مدقق الدراسات :	بعرض على مجلس الكلية	رأي مدقق الدراسات :	موافق / عدم الاشراف : أدنى من الحد
ملاحظة عميد الدراسات العليا :	إملاع جلسة 415	رأي عميد الدراسات العليا :	موافق

تم تغيير العنوان من قبل مجلس الكلية :	قرار مجلس الكلية
عنوان الأطروحة باللغة العربية :	اثر استخدام الواقع الافتراضي ثلاثي الأبعاد في تحسين كفاءة التواصل باللغة الإنجليزية لطلبة الصف العاشر في مدارس سلفيت
عنوان الأطروحة باللغة الإنجليزية :	The Effectiveness of Using 3D Virtual Reality in Improving the Tenth Grade Students' Communicative Competence in Salfet City Schools
رقم المشرف :	2411 اسم المشرف : أحمد عوض أمين محمود رباح
المشرف الثاني :	يعمل في جامعة النجاح :

http://zajaleh.najah.edu/te/victopr/MarM

اثر استخدام الواقع الافتراضي ثلاثي الأبعاد في تحسين كفاءة التواصل باللغة الإنجليزية

## Appendix (H)

### Letter of Approval from Directorate of Education, Salfet

**دولة فلسطين**  
**وزارة التربية والتعليم**  
الوكيل المساعد لشؤون البحث والتطوير والتقييم

**State of Palestine**  
**Ministry of Education**  
Assistant Deputy for Research, Development and Evaluation



الرقم: ١٧٥/١٣  
التاريخ: 2022 / 03 / 16



الأخوة عمداء الدراسات العليا/ البحث العلمي في الجامعات الوطنية المحترمون

**الموضوع: تطبيق تجارب تعليمية واختبارات في المدارس الفلسطينية لباحثين خلال ساعات الدوام الرسمي**

تهنئكم وزارة التربية والتعليم أطيب التحية، وبالإشارة إلى الموضوع أعلاه، يتواصل العديد من الباحثين (طلبة ماجستير ودكتوراه) مع مركز البحث والتطوير التربوي بطلب تمويل مهمات بحثية تتضمن تطبيق تجارب تعليمية أثناء الحصص في المدارس بدلاً من المعلمين، وأصبحت أعداد هؤلاء الباحثين تتزايد بشكل كبير، كما يطلب بعضهم تطبيق اختبارات على عينات من الطلبة مما قد يسبب وقف أنشطة تعليم المعلم وفق البرنامج الدراسي اليومي.

وحفاظاً على الوقت المخصص للتعليم، وفي ظل جهود الوزارة للتعاظم مع الفاقد التعليمي، سيكون تنفيذ الأنشطة السابقة أيام العطل الرسمية أو خارج ساعات الدوام الرسمي لطلبة المدارس أو عبر تقنية Teams.

دولة فلسطين  
الوكيل المساعد لشؤون البحث والتطوير والتقييم

د. محمد عواد

/ الوكيل المساعد لشؤون البحث والتطوير والتقييم

نسخة: معالي وزير التربية والتعليم حفظه الله  
عطوفة وكيل الوزارة المحترم  
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١٧٥/١٣

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## Appendix (I)

### Table

**Table (11)**

*The Mean and Standard Deviation of the Students' Communicative Competence of the Posttest*

<b>Group</b>	<b>N</b>	<b>Mean</b>	<b>St. deviation</b>	<b>T</b>	<b>Sig</b>
<b>Control</b>	25	11.44	3.86	4.46	0.0
<b>Experimental</b>	25	15.60	2.66		



جامعة النجاح الوطنية  
كلية الدراسات العليا

## اثر استخدام الواقع الافتراضي ثلاثي الابعاد في تحسين كفاءة التواصل باللغة الإنجليزية لطلبة الصف العاشر في مدارس سلفيت

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د. أحمد عوض

قدمت هذه الرسالة استكمالاً لمتطلبات الحصول على درجة الماجستير في أساليب تدريس اللغة الإنجليزية، بكلية الدراسات العليا في جامعة النجاح الوطنية، نابلس - فلسطين.

2023

# أثر استخدام الواقع الافتراضي ثلاثي الأبعاد في تحسين كفاءة التواصل باللغة الإنجليزية لطلبة الصف العاشر في مدارس سلفيت

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## الملخص

تهدف هذه الدراسة إلى فحص تأثير استخدام الواقع الافتراضي ثلاثي الأبعاد على تعزيز الكفاءة التواصلية لطلاب الصف العاشر. كما تحاول أيضاً تتبع تأثير إنشاء بيئة افتراضية ثلاثية الأبعاد داخل الفصل الدراسي على أداء الطلاب. من أجل تحقيق أهداف الدراسة الحالية، تم استخدام أسلوب البحث المختلط من قبل الباحث. قام الباحث بإنشاء اختبار قبلي واختبار بعدي وتم اعطاؤه لـ 50 طالباً في مدارس سلفيت الثانوية ثم تم تقسيمهم إلى مجموعتين حسب تعلمهم من خلال استراتيجية الدراسة أم لا. يتكون الاختبار من 20 فقرة مقسمة على 3 أقسام وهي الكفاءة النحوية، الكفاءة اللغوية الاجتماعية، الكفاءة الخطابية. بالإضافة إلى الاختبار القبلي والبعدي، تم استخدام الملاحظة الصفية لتتبع تقدم الطلاب أثناء تطبيق استراتيجية الدراسة لتوفير بيانات إضافية تدعم نتائج الاختبار. أوضحت نتائج الدراسة أن الكفاءة الاتصالية الكلية لدى الطلاب قد زادت وفقاً للدلالة الإحصائية ( $\alpha \leq 0.05$ ) بين نتائج الاختبار القبلي والبعدي للمجموعة التجريبية. ومع ذلك، لم تتحسن الكفاءة النحوية للطلاب. لخصت الباحثة التأثير الرئيسي لإنشاء بيئة افتراضية ثلاثية الأبعاد على أداء الطلاب وفقاً لنتائج الملاحظة الصفية بما في ذلك ثقة الطلاب بأنفسهم وانغماسهم في المادة التعليمية ونطقهم باللغة الانجليزية. في ضوء النتائج، توصي الباحثة بتركيز معلمي اللغة الإنجليزية كلغة أجنبية إلى تطوير الكفاءة التواصلية للمتعلمين من خلال تطبيق تقنيات فعالة مختلفة. كما تقترح الباحثة استخدام الأجهزة التكنولوجية لزيادة جودة التعلم وتحقيق النتائج المرجوة.

**الكلمات المفتاحية:** كفاءة التواصل؛ الواقع الافتراضي ثلاثي الأبعاد؛ متعلمي اللغة الانجليزية كلغة اجنبية.