



# Innovative Pedagogies: The Impact of Interactive Learning on EFL Students' Attitudes and Individualized Learning Opportunities in HE

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## Abstract:

The sudden transition from a face-to-face learning environment into a flipped classroom due to the COVID-19 pandemic has affected the education process (Fanounna, 2021). This study aims to examine the impact of adopting innovative pedagogies and interactive learning on developing EFL students' attitudes toward learning the English language and to investigate how students feel about the effectiveness of interactive learning in developing individualized learning and a good learning process. In addition, the study aims to identify the most common challenges, that students face when using educational technology. To achieve the purposes of this study, the researcher developed a 5 Likert scale questionnaire consisting of three parts. The validity and the reliability of this instrument were tested and assured. The selected sample consisted of 112 freshman students distributed randomly in the two available sections at the Nablus branch of Al-Quds Open University during the second semester of the academic year 2022-2023. These two sections were randomly distributed into two groups, control and experimental. Therefore, the quasi-experimental method was used. The results of the study revealed that the interactive teaching/learning method had positively influenced students' attitudes towards the English language. In addition, the results showed that the use of educational technologies offers a better opportunity to support individualized learning processes. Moreover, the results of the study revealed the most common difficulties and challenges associated with adopting interactive learning. Finally, the study recommended developing and including more interactive content and adopting new methodologies that focus on boosting language proficiency in HE in Palestine.

**Keywords:** *innovative pedagogy; attitudes; language proficiency; EFL; blended learning; interactive learning; individualized Learning.*

## طرق التدريس المبتكرة: تأثير التعلم التفاعلي على مواقف طلاب اللغة الإنجليزية كلغة أجنبية

### وفرص التعلم الفردية في التعليم العالي

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#### ملخص:

لقد أثر التحول المفاجئ من بيئة التعلم وجهاً لوجه إلى الفصل الدراسي المقلوب بسبب جائحة كوفيد-19 على العملية التعليمية (Fanounna, 2021). تهدف هذه الدراسة إلى دراسة تأثير اعتماد طرق تدريس مبتكرة والتعلم التفاعلي على تطوير اتجاهات طلاب اللغة الإنجليزية كلغة أجنبية نحو تعلم اللغة الإنجليزية والتحقق في شعور الطلاب تجاه فعالية التعلم التفاعلي في تطوير التعلم الفردي وعملية التعلم الجيدة. بالإضافة إلى ذلك، تهدف الدراسة إلى التعرف على أبرز التحديات التي يواجهها الطلاب عند استخدام تكنولوجيا التعليم. ولتحقيق أهداف هذه الدراسة قامت الباحثة بتطوير استبانة. وتم اختبار صدق وثبات هذه الأداة والتأكد منها. تكونت العينة المختارة من (112) طالباً وطالبة موزعين عشوائياً على الشعبتين المتاحتين في فرع جامعة القدس المفتوحة في نابلس خلال الفصل الدراسي الثاني من العام الدراسي 2022-2023. وقد تم توزيع هذين القسمين عشوائياً إلى مجموعتين ضابطة وتجريبية. ولذلك تم استخدام المنهج شبه التجريبي. وأظهرت نتائج الدراسة أن أسلوب التدريس/التعلم التفاعلي كان له تأثير إيجابي على اتجاهات الطلاب نحو اللغة الإنجليزية. بالإضافة إلى ذلك، أظهرت النتائج أن استخدام التقنيات التعليمية يوفر فرصة أفضل لدعم عمليات التعلم الفردية. علاوة على ذلك، كشفت نتائج الدراسة عن أبرز الصعوبات والتحديات المرتبطة باعتماد التعلم التفاعلي. وأخيراً، أوصت الدراسة بتطوير وإدراج المزيد من المحتوى التفاعلي واعتماد منهجيات جديدة تركز على تعزيز الكفاءة اللغوية في التعليم العالي في فلسطين.

**الكلمات المفتاحية:** طرق التدريس المبتكرة؛ الاتجاهات؛ إجادة اللغة؛ اللغة الإنجليزية كلغة أجنبية؛ التعلم المختلط؛ التعلم التفاعلي؛ التعلم الفردي.

## 1. Introduction

The role of universities in the 21st century has evolved to meet the challenges and demands of the rapidly changing world. Universities must equip students with the skills and knowledge necessary to navigate the complexities of modern society, succeed in the workforce, and contribute to the future. This requires a shift towards a new model of learning that emphasizes the specific competencies and skills needed to thrive in the 21st century. One key aspect of this new model of learning is the reorganization of university curricula. Traditional educational approaches may no longer be sufficient to prepare students for the challenges ahead. Universities should embrace innovative pedagogies that encourage collaboration, critical thinking, and problem-solving. By structuring curriculum to promote these skills, universities can better prepare students to tackle complex problems and succeed in various fields. By improving learning processes, universities can promote personalization in language learning, communication skills, and holistic language development.

Emphasizing freedom and individuality in education is another crucial aspect of the new model of learning. To prepare students for the rapidly changing employment landscape, universities must foster an environment that encourages creativity, innovation, and adaptability. By allowing students to explore their interests and pursue their passions, universities can help them develop a strong sense of identity and direction. This will enable students to navigate the uncertainties of the future with confidence and resilience. Responding to changing employment requirements is also essential for universities in the 21st century. The job market is constantly evolving, with new skills and competencies in high demand. Universities need to keep a pulse on these changes and adapt their curricula accordingly. This could include incorporating industry partnerships, internships, and practical experiences into the learning process. By bridging the gap between academia and the professional world, universities can better prepare students for successful careers. In the modern world, universities play a crucial role in the 21st century by equipping students with the skills, knowledge, and competencies needed to succeed in a rapidly changing world. By reorganizing their curricula, emphasizing freedom and individuality, and responding to changing employment requirements, universities can provide a new model of learning that prepares students for the challenges and opportunities of the future. Through these efforts, universities can empower students to thrive in their societies, enter the workforce, and make a positive impact on the world.

### 1.1 Statement of the problem

Learning English as a foreign language faces several difficulties and challenges in Palestine. The reviewed literature revealed that these difficulties and challenges may include outdated irrelevant curriculum that has failed to meet students' interests and needs, methods of assessment, and old-fashioned methodologies that are teacher-centered and neglect student integration, negative attitudes toward the English language, lack of technology integration and the limited exposure to the language (Bakeer, 2018). Similarly, with the unforeseen switch to technology integration in education during Covid 19 pandemic, many educational institutions in Palestine faced challenges and issues in teaching and learning continuity including limited resources and resource constraints, in addition to a lack of updated textbooks, technology, and other teaching materials, not all students had equal access to the necessary technology and internet connectivity, in addition to creating disparities in their ability to participate in online learning. The issue addressed in this study entails tackling the impact of adopting innovative pedagogies on students' attitudes and implementing interactive learning and personalized learning on students' learning practices and language competence in HE in Palestine. Serious reforms in the educational system should consider the shortage of digital resources, ICT tools, and infrastructure, and the unavailability of content that actively engages and involves the students,

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allowing them to interact, participate, and make choices, (Ramahi, 2015). This indicates that there is a demand to create interactive content that promotes user experience, captures attention, increases engagement, and provides personalized and dynamic interactions. The unplanned shift to blended learning during the COVID-19 pandemic exposed various challenges and opportunities for improvement in the education sector (Aisha & Ratra, 2022).

It prompted a reevaluation of educational practices, with a focus on technology integration, professional development, and a more inclusive approach to address the diverse needs of students. This study continues the critical analysis and examination of the impact of innovative pedagogies on language learning in higher education in Palestine, it also addresses the unique challenges that Palestinian students face when using ICT tools for digital learning in higher education and examines how they feel about innovative pedagogy and the aspects it serves to promote communication skills and develop the holistic language acquisition and learning.

### **1.2 The Questions of the Study**

The current study aims to answer the following questions:

1. How does adopting innovative pedagogies and interactive learning affect students' attitudes toward learning the English language?
2. How do EFL students feel about the effectiveness of technology integration in providing better opportunities for individualized learning?
3. What are the most common challenges that EFL students face in using educational technology in higher education in Palestine, and how can they be mitigated?

### **1.3 Objectives of the Study**

The main objective of the present semi-experimental study is to examine the impact of innovative pedagogies and interactive learning on developing students' attitudes towards learning the English language and enhancing individualized learning opportunities in higher education in Palestine. With an emphasis on adopting innovative pedagogies and implementing interactive learning and individualized learning, this study seeks to highlight learning practices that proved to have an impact on EFL students' attitudes toward learning the language.

The following are the research's particular goals:

1. To give a general assessment of EFL students' attitudes toward learning the English language in higher educational institutions in Palestine.
2. To examine EFL students' attitudes towards the effectiveness of technology integration in education, with an emphasis on students' experiences of innovative pedagogy and learning practices.
3. To highlight the challenges associated with digital learning and interactive learning in higher education in Palestine.
4. To suggest solutions to overcome these challenges.
5. To offer recommendations to stakeholders, educators, and other decision-makers for improving language competencies and skills by adopting innovative pedagogies in Palestine.

### **1.4 The Hypothesis of the Study**

The current study aims to test the following hypothesis: There are no statistically significant differences at the level of ( $\alpha \leq 0.05$ ) in the EFL students' attitudes toward learning English that could be attributed to the teaching method (interactive learning).

### 1.5 The significance of the study

The significance of this study appears in different aspects. First, this study aims to add to the body of knowledge on EFL students' attitudes toward learning the language and the impact of innovative pedagogies and interactive learning on developing more positive attitudes toward the language in higher education in Palestine, and it offers a thorough analysis of the problem and recommendations for ensuring quality education by equipping students with 21st-century skills including critical thinking, collaboration, communication, global awareness, and digital literacy (Pinkerton, 2023). Second, the study offers a quantitative examination of the elements that should be considered when preparing future education plans and education programs in Palestine, particularly about language competency. Third, the research's findings may be utilized to pinpoint areas of competencies and practices for interactive digital where English language courses and programs need to be developed to enhance language learning and performance. Fourth, by offering knowledge on the effectiveness of developing language competencies and 21st-century skills. The study adds to the areas of innovative pedagogies more broadly by fostering the implementation of interactive learning and personalized learning in classrooms and schools.

### 1.6 Definitions

**Innovative Pedagogy** is the process of proactively introducing new teaching strategies and methods into the classroom to improve academic outcomes and address real problems to promote equitable learning.

**The New Normal:** While the term has no definitive meaning, it has been assumed by many to be a more technology-driven teaching and learning in a post-COVID context.

**Flexible Learning** is a combination of digital and non-digital technology that ensures the continuity of inclusive and accessible education in the form of traditional learning, blended learning, and learning modes of teaching and learning processes (Ulanday et al., 2021).

**Digital Learning** is "learning facilitated by technology that gives students some element of control over time, place, path and/or pace.

**The digital approach** is our thoughtful integration of technology into our teaching and our students' learning experiences.

**Interactive learning** is a technique that seeks to get students actively engaged in the learning process, often through the use of technology. It is interactive learning is learning that requires student participation. This participation can come through class and small group discussions as well as through exploration of the interactive learning materials they're given in a digital classroom.

**Individualized/Personalized instruction:** tailor lessons to address the diverse learning needs and abilities of students.

**Problem-solving:** content-based learning promotes critical thinking as students engage with meaningful tasks and projects.

**Project-based learning:** implement projects that require students to apply English language skills in researching, presenting, and collaborating.

**Integration of skills:** integrating language learning with content allows for the development of not only language skills but also critical thinking, creativity, and collaboration.

**Relevance:** linking language learning to real-world content and personal interests enhances student motivation and engagement.

**Good learning process:** is collaborative and social, not competitive and isolated. Working with others often increases involvement in learning. Sharing one's ideas and responding to others' reactions improves thinking and deepens understanding.

**TEFL-ePAL project** is a 3-year capacity building project in higher education in Palestine. It aimed to enhance freedom in learning English as a foreign language through developing interactive content and flexible learning that employ new methodologies that focus on integrating technology aiming to bridge the existing gap. The project consortium consisted of nine partners representing nine higher educational institutions in Palestine and Europe, who collaborated to develop a series of four English courses and establish the required platforms. The project was funded by the Erasmus+ program of the European Commission.

## **2. Background**

Over the last decade, technological advancements have significantly transformed educational practices, and hence, the world has experienced a rapidly changing landscape in educational policies. The debate about education in Palestine has indeed been ongoing for many years, and there has been a tendency to shift towards a more critical analysis of the deep structures of learning and schooling. This analysis took into account the political and socioeconomic challenges and demands within the colonial context of the Occupied Palestinian Territories. One key issue highlighted by available data was that the curriculum content and modes of assessment in formal education did not adequately address these challenges. This context resulted in students being taught to passively receive pre-packaged knowledge, rather than encouraging critical thinking, creativity, and active engagement with the world around them. The outdated pedagogy and old methods of teaching were seen as a contributing factor. It created inequities and hindered the development of independent thinking and problem-solving skills among students. This has led to calls for educational reforms that prioritize the needs and aspirations of Palestinian students, taking into account their cultural, social, and political contexts. Efforts have been made to promote alternative educational pedagogical approaches that aim to customize learning for each student's strengths, needs, skills, and interests, and that emphasize critical thinking, student-centered learning, and engagement. These approaches aim to empower students to become active participants in their learning and to equip them with the skills and knowledge they need to navigate the complex realities they face. Consequently, there were some interventions to reform the educational systems in some countries, but the anticipated change was not possible or profound till the breakout of the COVID-19 pandemic when schools, colleges, and universities were closed to control the spread of the coronavirus.

Historically, the COVID-19 pandemic affected educational systems across the world, and many educational institutions and universities underwent closure, which had an enormous impact on the educational processes (Lennox & Taulo, 2022).

The lockdown of schools and campuses impacted a massive number of students, estimated to be 1.5 billion in approximately 165 nations. In March 2020, worldwide educational institutions, including Palestine, experienced a change in education from traditional to eLearning (blended and online learning), (UNESCO, 2020; Ahmad & Zabadi, 2020). Universities and public schools were forced to provide alternatives to keep learners in touch and continue their education from home, physically distancing, using various platforms or Learning Management Systems including Microsoft Teams, Zoom, Google Classrooms, and Google Meet. The situation has created a large-scale and very sudden use of ICT used in learning practices, (Sahin & Shelley, 2020; Yang, 2020). This sudden transition and unplanned shift to online instruction was seen as a huge challenge to the education systems (Daniel, 2020; Osman, 2020). However, the pandemic has profoundly changed education for the better (Baker, 2020) as students can now access huge knowledge on the internet leaving room for innovation if digital approaches and resources are used appropriately and meaningfully, (European

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Commission), and where new perspectives policies and strategies existed rapidly and examined the readiness of HIEs for digital transfer in many fields mainly in education (Pacheco, 2021). The COVID-19 pandemic had the potential to serve the shift to innovative pedagogies and new methods of teaching as it provided a lot of opportunities and challenges to our era including education and accelerated the tendency toward technologization.

New digital approaches emerged to serve the shift and accelerate the realization of the anticipated change and there is a demand to understand how these technologies reshape educational norms (Grassini, 2023). Technology-driven teaching and learning in a post-COVID context is now known as the 'new normal' since the educational technology post-COVID-19 pandemic could provide a lot of opportunities and challenges to our era as it has the potential to serve the accelerated tendency toward technologization.

## **2.1 Context in Palestine**

The COVID-19 pandemic had a profound impact on education, leading to an abrupt shift to blended learning, and highlighting both the strengths and weaknesses of higher educational institutions' readiness in Palestine. Teaching English in Palestine, like in many other countries in the region, presents unique challenges and opportunities (Barrot et al., 2021). Here are some of the difficulties and challenges faced, as well as potential solutions and benefits associated with innovative pedagogy, interactive learning, blended learning, and personalized learning. In addition, EFL traditional methodology and teaching practices fail to keep students' interest alive or to keep their cognitive development stable and sustainable (Bakeer, 2018). There are some key points to be considered for future education plans. The sudden transition to digital learning exposed the digital divide among students. Many schools in Palestine may face limited resources and resource constraints, including a lack of updated textbooks, technology, and other teaching materials; not all students have equal access to the necessary technology and internet connectivity, creating disparities in their ability to participate in online learning (Barri, 2017; Ramahi, 2015; Bianchi & Abdel Razeq, 2016). In addition, many educational institutions were not fully equipped with the necessary infrastructure, tools, and training to transition smoothly to online or blended learning. This highlighted the importance of investing in technology and providing professional development for educators to effectively use online platforms. Moreover, the shift to blended learning required educators to adapt quickly to new teaching methods, online tools, and digital platforms. Some teachers faced challenges in navigating these changes, emphasizing the need for ongoing professional development and support. Another significant challenge is maintaining student engagement in a virtual or blended learning environment. Educators had to find creative ways to keep students motivated and actively participating in the learning process, considering the limitations of remote communication. Also, traditional assessment methods faced limitations in an online environment. Therefore, educational institutions had to explore alternative ways of evaluating student learning, such as online assessments, project-based assessments, and open-book exams. shift to blended learning also highlighted the importance of addressing students' social and emotional well-being. Unfortunately, many students missed the social interactions and support systems provided by traditional in-person classrooms. This situation necessitates developing more positive attitudes towards the language and providing better opportunities for student-student interaction and student-teacher communication. This means that effective communication between teachers, students, and parents has become crucial in digital and interactive learning settings. Educational institutions needed to establish clear communication channels and facilitate collaboration among stakeholders to ensure a smooth transition (Harrysub, 2023).

Educational institutions have to set robust contingency plans and policies in place for unforeseen circumstances to be able to review and update their crisis management plans to better handle future disruptions to traditional learning models. Incorporate interactive and communicative activities should be provided to encourage students to use English in real-life situations.

## **2.2 Innovative pedagogies in teaching/learning English language in higher education in Palestine**

The adoption of innovative pedagogies in teaching and learning the English language in higher education in Palestine, as in many other regions, is driven by various compelling rationales. Innovative pedagogies, such as active learning techniques, project-based learning, and technology integration, can make the learning process more engaging and motivating for students (Sinha, 2021). This is particularly important in higher education where students may benefit from a more self-directed and participatory approach to learning.

English language proficiency is often crucial for success in the global job market. Innovative pedagogies can help students develop not only language skills but also critical thinking, problem-solving, and communication skills that are highly valued by employers on a global scale. Innovative pedagogies focus on developing skills that are relevant to the 21st century, such as digital literacy, creativity, and collaboration (Ferguson et al., 2019). These skills are essential for students to thrive in a rapidly changing world and contribute meaningfully to society. Different students have different learning styles and preferences. Innovative pedagogies provide a variety of approaches, allowing instructors to cater to diverse learning needs. This inclusivity can enhance the overall effectiveness of language instruction. In the context of learning English, this can involve analyzing and interpreting texts, engaging in discussions, and applying language skills to real-world scenarios.

Innovative pedagogies can be designed to incorporate cultural sensitivity and awareness in language teaching. This is especially important in the Palestinian context, where cultural nuances and contexts play a significant role in language use. Incorporating technology in language teaching can provide students with access to a wealth of authentic language resources, multimedia content, and communication tools (Sanako, 2023). This exposure to diverse language forms and contexts can contribute to a more comprehensive understanding of the English language.

Innovative pedagogies aim to cultivate a mindset of lifelong learning. By encouraging students to explore, question, and adapt, these pedagogies contribute to the development of skills that extend beyond the classroom and support continuous learning throughout one's life. Innovative pedagogies can better prepare students for academic success by fostering critical thinking and research skills. Scholars declared that merging technology in teaching can be a method for adding to the effectiveness of educators' teaching and learners' learning (Zhang, 2022). Educators who combine academic technology with in-class instruction have a deep effect on their education efficiency and learner success, particularly in instructing English students (Jabbari et al., 2017)

This is particularly relevant in higher education, where students are expected to engage with complex texts, conduct research, and express their ideas effectively. The adoption of innovative pedagogies aligns with broader educational trends that emphasize student-centered learning, active engagement, and the integration of technology. Staying current with these trends ensures that English language education remains relevant and effective. To summarize, the rationale for adopting innovative pedagogies in teaching and learning English in higher education in Palestine is multifaceted, encompassing engagement, global readiness, skill development, cultural sensitivity, and alignment with contemporary educational principles.

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### **2.3 Integrating Technology in EFL Education in Palestine**

Ultimately, English classes in Palestine aim to ensure that students develop basic proficiency in the target language so that they can communicate orally and in writing in context-specific English, understand foreign languages, and create context-specific English (Alquds Open University, 2009). In general, this goal is not achieved. There is a continuing dissatisfaction with the overall performance and proficiency of students in the English language and students' inability to communicate using English appropriately in real-life situations. The results of the studies and research conducted to identify the problem argue that the educational curricula and the learning outcomes are unsatisfactory regarding the capacity building of English as an academic language (Barri, 2017). They attribute the challenges that teaching English faces to some factors, including poor outdated curricula, missing modern learning spaces, and lack of professional educators in TEFL to integrate educational technology (Bianchi & Abdel Razeq, 2016), the low quality of training due to a lack of technology and unappealing materials, as well as a lack of motivation (Shraim & Crompton, 2020; Bakeer, 2018). In addition, EFL teachers' traditional teaching practices fail to keep students' interests alive or to keep their cognitive development stable and sustainable (Bakeer, 2018). Integrating technology in education was one of the solutions suggested to improve students' linguistic competencies and develop 21st-century skills and lifelong learning. (Bakeer, 2019). In Palestine, schools and HEIs were forced to utilize e-learning and blended learning methods due to strict social distancing measures. Both the assessment process and education in Palestine had to adapt to this change, as in other countries, using different Learning Management Systems known to them, but not experienced in. As a result, academics and students have faced various obstacles (UNESCO, 2020), such as a lack of possibilities to support teachers in better using technology in remote teaching, or teachers being unprepared to deal with the abrupt transition in educational delivery as a result of COVID-19. They haven't been able to learn new ways to teach children how to communicate more effectively, think creatively, and work together more productively. In addition, there are shortcomings in well-prepared flexible curricula to be accessed online to ensure the quality of learning.

The above studies highlight the need to find practical solutions to overcome the barriers to teaching English. Integrating technology, learners' needs and attitudes, and flexible content are important elements to keep in mind when planning for the change. In Palestine, this interest-discussions with teachers over time indicated that using different learning management systems in education can be challenging at times. This prompted researchers to investigate the problems, needs, and attitudes of learners toward effective technology-based instruction.

## **3. Methodology and Research Design**

Within this part of the study, the research methodology, sample, instrument, and data collection are presented. In addition, it presents the study design including the field study, instruments, validity and reliability, and data analysis techniques.

### **3.1 Methodology**

This study employed the quasi-experimental approach. In this study, the two available sections for the remedial course in the Nablus branch consisted of the sample of the study. The two sections were chosen randomly: a control group, that was taught the content using the conventional teaching method, and an experimental group, that was taught the same content by employing innovative pedagogies and interactive learning. The first part of the questionnaire was administered to both groups to measure the attitudes of the selected sample toward learning the English language and the methodology used during the course. The same test was administered as a posttest to both groups to assess the differences in

students' attitudes between the study groups (the first part of the questionnaire was administered to both groups before and after the experiment, at the beginning and the end of the course).

Two post-tests were employed at the end of the course for the experimental group only; part two and part three of the developed questionnaire were handed out to them. Part two was used as a post-test to assess the effectiveness of implementing innovative pedagogy and interactive learning in developing personalized learning and good learning processes; part three is a self-completed questionnaire that was used to reveal the problems and challenges associated with accessing interactive modules and online activities. The independent variable of the study includes the method of teaching (conventional method; innovative teaching method). The dependent variables of the study include students' attitudes in the pre and post-tests.

### **3.2 The Experiment**

To achieve the study objective, the researcher used the pre-intermediate remedial English course, that was developed as an output of the TEFL ePAL project. The content of the course was tailored to flexible learning and consisted of a textbook and an interactive module. The content of this course was chosen carefully to fit students' interests and needs. The activities were chosen purposefully to fit digital learning aiming to enhance personalized learning and good learning practice. The content and the associated digital materials and activities were validated by a panel of project partners (coming from Europe and Palestine) who are curriculum and pedagogical experts. In addition, some modifications were made based on the results of the pilot study to produce the final version of the pre-intermediate textbook used for the remedial English course.

For the control group, the researcher delivered the content of the textbook using the conventional method of teaching. For the experimental group, the researcher used the content of the textbook and the interactive module (digital and online resources, and interactive materials and activities). The content was delivered through adopting innovative pedagogy and implementing new methodologies. The learning content was taught to the experimental group through blended and interactive learning.

### **3.3 Study Population and Sample**

The study population consists of the EFL freshman students enrolled in the remedial course at Al Quds Open University in the second semester of the academic year 2022/2023. The research targeted the Nablus branch where there were two available sections of the English language remedial course. The sample consisted of 112 male and female students divided randomly into two sections. These two sections were randomly distributed into two groups, control and experimental: a total of (55) students in the experimental group and (57) students in the control group.

### **3.4 Instruments and Data Collection**

To achieve the purposes of this study, the researcher developed a questionnaire consisting of three sections. The validity and reliability of this instrument were tested and assured. The methodology used in the study involved quantitative research utilizing this survey questionnaire as the main instrument to collect data, and the data collected were analyzed using the SPSS program. The first and the second parts of the questionnaires are based on a five-point-Likert instrument ranging from 'Strongly Agree' to 'Strongly Disagree' and they are coded as (Strongly agree=5; Agree=4; Neutral=3; Disagree=2; and Strongly Disagree=1). The first part of the questionnaire, which consisted of 20 items, was electronically delivered and was administered to both groups for the pretest to examine student's attitudes before the experiment. The same part was administered as a posttest to both groups before and after the end of the experiment, at the end of the semester to explore the differences in students'

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attitudes toward the English language between the study groups. Moreover, the second part of the questionnaire, which consisted of 15 items, was employed to measure students' attitudes toward the effectiveness of using interactive learning in learning the English language. The second part was used as a posttest and was administered to the experimental group only, after the experiment at the end of the course. The third part was a self-completed questionnaire used to reveal the most common challenges that the students in the experimental group faced associated with accessing interactive modules and online activities.

### 3.5 Data Analysis

To provide answers to the questions of the study, the researchers used (SPSS) to analyze participants' responses. Means, frequencies, standard deviations, and t-tests, for Independent Samples were used to find out descriptive statistical analysis. As for analyzing the results, the following scale was used to represent the estimation level of students' responses.

Table (1): The Scale Used to Represent the Estimation Level of Students' Responses

Score	Level of Students' Responses
1.00- 2.33	Low
2.34- 3.67	Medium
3.68- 5.00	High

The scale presented in Table 1 shows that the estimation level of students' responses is considered low for the means ranging from (1- 2.33); the estimation level of students' responses is considered medium for the means ranging from (2.34 3.67); the estimation level of students' responses are considered high for the means ranging from (3.68 5.00). These figures will be considered for estimating the level of students' references in this study.

Table (2): Experiment Design

Group	No. of Student	Section 1	Sections 2 & 3
Experimental Group	55	Pre-attitude Scale & Post-attitude Scale	Post-attitude scale
Control Group	57	Pre-attitude Scale & Post-attitude Scale	X

### 3.6 Validity and Reliability of the Attitude Questionnaire

To verify the validity of the attitudinal questionnaire, the researcher sent it to a panel of academics and educators participating in the TEF-ePAL project who are experts in TEFL, pedagogy, and curriculum, asking for their opinions and comments. The researcher considered their comments and revised the content of the last version of the questionnaire.

As for the reliability of the developed questionnaire, the value of Cronbach's  $\alpha$  for all attitudes toward English teaching was 0.83, which confirms an acceptable level of reliability.

1. How does adopting innovative pedagogies and interactive learning affect students' attitudes toward learning the English language?
2. How do EFL students feel about the effectiveness of technology integration in providing better opportunities for individualized learning?
3. What are the most common challenges that EFL students face in using educational technology in higher education in Palestine, and how can they be mitigated?

#### 4. Results and Discussion

To verify the homogeneity of control and experimental groups, the significance of differences between the mean values of pre-test scores of the groups are calculated by using t-test. The results are shown in table (3).

Table (3): The Differences of the Mean Scores between the Experimental and the Control Groups on the Pretest

Experimental Group		Control Group		T-value	Sig
Mean	SD	Mean	SD		
2.31	.251	2.35	.230	-.972	.327

The result in Table (2) shows slight apparent differences in students' attitude scores in the first part of the questionnaire between the two groups before the experiment intervention was performed. This slight difference indicates that students in the two groups have equivalent responses that indicate similar attitudes toward learning the English language. This result also suggests that any significant differences in the post-test between the experimental and the control groups in students' responses will be attributed to the impact of innovative pedagogy and interactive learning, and supports the validity of undertaking the intended intervention.

**First Question:** How does adopting innovative pedagogies and interactive learning affect students' attitudes in the experimental group toward learning the English language?

To answer this question and explore the impact of adopting innovative pedagogies and interactive learning on students' attitudes, the mean scores of students' responses to part one of the questionnaire were calculated. The first part was administered to the experimental group at the beginning of the study (pre-test) and at the end of the study (post-test). The results of the pre-test and the post-test for the experimental group are shown in the Table (4)

Table (4): Pre-Test & Post-Test Results of the Experimental Group; Experimental Group Students' Mean scores out of (5)

Experimental Group	Pre-Test Means			Post-Test Means		
	Mean	SD	Level	Mean	SD	Level
	2.31	.251	low	3.66	.78	medium

Results presented in Table 4 show that the mean score of students' responses in the pre-test is low, but the mean score of students' responses in the post-test is medium. The mean score of the pre-test is 2.31 which indicates a low level. However, the mean score of the post-test is 3.66 which indicates a high level. This result indicates that adopting an innovative approach for the experimental group impacted their attitudes toward learning the language positively, and developed more positive attitudes.

**Second Question:** How do EFL students feel about the effectiveness of technology integration in providing better opportunities for individualized learning?

To answer this question and explore the effectiveness of technology integration in providing better opportunities for individualized learning, the mean scores of students' responses to part two of the questionnaire were calculated. The second part was administered to the experimental group only at the end of the study (post-test). The results of the post-test for the experimental group are shown in Table (5).

Table (5): The Mean Scores of Students' Responses toward the Effectiveness of Technology Integration

Item	Questions	Mean	SD
1	The advantage of the digital materials helps make learning more tailored to my needs.	3.69	0.56
2	The communication between me and my classmates helped me do the activities required for the course.	3.87	0.76
3	The teacher adopted flipped classes to encourage us to participate.	3.94	0.72
4	Sharing knowledge, with my colleagues of the same course, made it easier for me to understand the content.	3.97	0.70
5	I think that digital materials uploaded to the platform helped me study at my own pace.	3.86	0.81
6	The digital materials provided in this course helped me understand the content more easily.	3.82	0.73
7	The digital materials provided in this course helped me develop effective communication skills in the English language.	3.61	0.72
8	The digital materials in this course provided me with videos on how the language is used in real-life situations.	4.52	0.54
9	The feedback I received from my teacher improved my performance.	3.66	0.82
10	Sharing information with my friends through using the platform enhanced my motivation to participate.	3.76	0.73
11	Using alternative evaluation methods encourages me to learn to apply knowledge rather than memorize material.	3.89	0.76
12	The interactive content helped to create a more personalized experience.	4.02	0.51
13	Interactive content increased my engagement during the course better than static content.	4.01	0.53
14	Interactive activities enhanced my attention while doing the activities.	4.12	0.52
15	Interactive activities increased my retention of the material.	3.85	0.42
The Overall Satisfaction		3.91	0.62

Results presented in Table (5) show that the total mean score of students' responses at the end of the course was 3.91 which indicates a high-level of mean score. These results indicate that adopting an innovative approach and implementing interactive learning provided students in the experimental group with better opportunities for personalized learning. The results in Table (5) reveal that interactive learning developed positive attitudes toward the opportunities provided by technology-based learning to encourage good practices and facilitate learning including communication with classmates with a mean score of 3,87. Sharing knowledge with colleagues to enhance understanding with a mean score of 3.97; adopting flipped classes to encourage students to participate with a mean score of 3.94; the availability of digital materials on how the language is used in real-life situations with a mean score of 4.52; sharing information enhances student motivation to participate with the mean score 3.76. The results explore students attitudes toward the effectiveness of technology-based learning in developing students' language competence and engagement as students thought that

interactive content and activities have the potential to enhance attention 4.12; create a more personalized experience 4.02; encourage engagement during the course 4.01; enhance retention of the material 3.85; find alternative evaluation methods to apply knowledge rather than memorize material 3.89.

**Third Question:** What are the most common challenges that EFL students face in using educational technology in higher education, and how can they be mitigated?

To answer this question, the researcher asked students in the experimental group to respond to the third part of the questionnaire. This post-test was demonstrated to students at the end of the course to reveal the most common challenges associated with implementing interactive learning. The means, standard deviation, and level of students' responses were calculated. Results are presented in Table (6).

Table (6): Means and Standard Deviations of EFL Students' Attitudes towards the most Common Difficulties and Challenges Associated with Interactive Learning

No	Difficulties / Challenges	Mean	SD	Level
1.	Digital Divide: Not all students had equal access to the necessary technology and internet connectivity	3.23	.71	Medium
2.	Technological Preparedness: The educational institutions were not fully equipped with the necessary infrastructure, tools, and training to transition smoothly to online or blended learning.	2.24	0.76	Low
3.	Adaptability of Educators: Teachers faced challenges in navigating these changes, emphasizing the need for ongoing professional development and support	2.02	0.54	Low
4.	Student Engagement: Maintaining student engagement in a virtual or blended learning environment posed a significant challenge.	3.71	0.72	High
	Technical Difficulties are equipment problems such as hardware failures or software bugs that make it difficult or impossible to perform a desired action.	3.31	0.73	Medium
5.	Assessment Methods: Traditional assessment methods faced limitations in an online environment.	2.41	0.57	Medium
6	Computer skills: the most common usages of a computer, including understanding the basic notions of computer manipulation; managing computer files, word processing, creating presentations; finding information, and communicating using computers.	3.61	0.95	Medium

Results presented in Table (6) show that students faced some problems in interactive learning. The highest level of students' responses was given to student engagement with a mean score of 3.71. The second problem, that students in this course faced, was the difficulty they had with dealing with the computer due to a lack of computer skills, with a mean score of 3.61. Students' responses toward 'technical difficulties' ranged thirdly, with a mean score of 3.31. The digital divide caused difficulty for students as not all students have equal access to technology and internet connectivity, with a mean score of 3.23 rated as a medium level. Another difficulty that the students considered in interactive learning was the assessment methods with a mean score of 2.41. Students' responses toward the

‘technological preparedness’ of the educational institution for interactive learning were of low level, with a mean score of 2.24. The lowest level of students’ responses was given to the ‘adaptability of teachers’ and their need for development and support, with a mean score of 2.02.

**Study Hypothesis:** There are no statistically significant differences at the level of ( $\alpha \leq 0.05$ ) in the EFL students’ attitudes toward learning English between the two groups that could be attributed to the teaching method (interactive learning).

To test this hypothesis, the differences in students’ responses between the two groups (the experimental and the control) means, standard deviations, and the t-test were used to measure the differences in students' responses to part one of the questionnaire after experimenting. The results are presented in

**Table (7): The Differences in the Mean Scores between the Experimental and the Control Groups on the Post-test**

Control Group		Experimental Group		T-value	Sig
Mean	SD	Mean	SD		
2.89	.54	3.69	.78	.435	.001

Table 7 shows that the difference between the control and experimental groups is significant as the mean score and standard deviation for the control group are 2.89 and .54 respectively while for the experimental group 3.66 and .78 respectively. The calculated value of the t-test is .746 which is statistically significant at the level .002. The result reveals that there is a statistically significant difference between the mean values of students of control and experimental groups in the post-test in favor of the experimental group. Hence the null hypothesis is rejected. This result indicates that the pedagogy of interactive learning has an effective impact in developing students’ positive attitudes than the traditional methodology.

## 5. Conclusion

The technological revolution in addition to the interventions and practices used during the Covid19 accelerated the emergence of innovative pedagogies that affected education drastically and made tremendous changes in pedagogy. For the implementation of innovative strategies, it is necessary to test the reality of the available opportunities and challenges that can support the adaptation of such interventions to facilitate the smooth shift to technology-based instruction. Hence, this research intended to explore the effectiveness of interactive learning packages on students’ attitudes toward learning the English language. The results revealed that students who learned through the interactive learning strategy developed more positive attitudes toward learning the language than students who learned through the traditional learning method. The differences were statistically significant between students’ attitudes in the experimental and the control groups. The interactive learning created positive attitudes toward interactive learning and developed positive attitudes toward the opportunities provided by technology-based learning to encourage good practices. Students’ responses revealed that communication with classmates, sharing knowledge with colleagues to enhance understanding, adopting flipped classes to encourage students to participate, getting a better understanding of how the language is used in real-life situations, and sharing information to enhance student motivation and participate are good opportunities provided by interactive learning. The results of the study also explore students’ attitudes toward the effectiveness of technology-based learning in developing students’ language competence and engagement. Students thought that interactive content and activities have the potential to enhance attention, create a more personalized experience, encourage

engagement during the course, enhance retention of the material, and find alternative evaluation methods to apply knowledge rather than memorize material.

Some suggestions can be made for stakeholders regarding technical equipment, interactive content, adequate resources, and internet connections as teaching/learning methods that fit technology-based instruction, are of no use when these elements are unavailable.

## **6. Recommendations**

The results of this study are crucial for further research, and subsequent work could be carried out to strengthen innovative pedagogy and technology-based instruction. Based on these results and the conclusions of this study, the following recommendations are prescribed:

1. Innovative pedagogy and interactive learning proved to be effective in developing positive attitudes toward EFL. Hence, stakeholders can benefit from recent technology-based instruction using the interactive learning method and introduce it to higher educational institutions.
2. Offer Interactive Learning as a compulsory component in higher education under theoretical and practical streams.
3. The Ministry of Higher Education and Research should rethink the usefulness of integrating technology into education reform, not only for future waves of the pandemic but also in the long term and on a large scale.
4. It is recommended that decision-makers conduct training workshops to develop their skills to implement interactive learning more effectively.
5. The stakeholders, in several higher educational institutions in Palestine, should collaboratively establish, implement, and monitor the usage of interactive learning strategies and provide proper feedback for students and teachers.
6. More research should be conducted to analyze the utilization of digital materials as well as supplementary technical support to ensure smooth and effective implementation of interactive learning.
7. Interactive learning materials and activities should be designed carefully to enhance students' involvement and enrich confidence.
8. Educators and policymakers should consider technology as a way to increase collaborative learning.
9. It is necessary to raise awareness among all stakeholders to facilitate the wider adoption of online learning and build bridges of communication among stakeholders via social media.
10. Stakeholders in higher education should consider the importance of building a network of public-private partnerships to boost technology integration.
11. There is a great need to launch a national society and strengthen shared commitment and social responsibility as all partners work together to narrow the student's digital divide.

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