Ministry of Higher Education and Scientific Research University
of Akli Mouhand Oulhadj, Bouira
Department of English Language and Literature

Exploring the Educational Impact Of Integrating Online Learning Platforms:

A Case Study Of First Year Secondary School Students

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Candidates

Hanane Benbouabdallah
Hadil Haddad

Supervisor

Hafsa Namani

Board of Examiners

Dr. Nassera Sanhadji	**University of Bouira**	**President**
Pr. Hafsa Namani	**University of Bouira**	**Supervisor**
Mrs. Chaima Kacimi	**University of Bouira**	**Examiner**

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DEDICATION

I dedicate this work to :

The pillars of my Soul

To those who stood with me when I was strong and especially when I wasn't …

To the ones who carried me through the storms ;

To the souls who held my heart when I couldn't hold it my self ;

To the light that never left me in the dark ;

To my father ,the quiet strength behind every step I took . your sacrifices are written in invisible ink on every page of my life . I saw them , I felt them , and I carry them with honor .

To my mother , the warmth of my world . your prayers were my light in the dark , your my safest place , you believed in me when I couldn't breathe under the weight of it all – and somehow , your love made it bearable .

To my dear sister , my angle on earth - Sirine – you were not just present , you were there – in every late night breakdown , in every anxious moment , in every tired sigh I tried hide ; you were my second mother , my best friend , my home .

You gave me without asking , loved without limits , and stood taller than anyone beside me . this journey…I could not have walked it without you . your love was my strength , and your presence was my peace . if am here , it because you never let me fall .

To my brother Ghani , the quiet comfort of your belief in me was enough to keep me grounded , you never needed to say much , your presence alone reminded me I wasn't alone . thank you for being my calm in the storm .

To my little light , Wafaa , your laugher healed more than you will ever know . in the midst of pressure and pain , your tiny hugs were the whole world .

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To my besties , Hadil and Racha , my second family – thank u for the laughter through tears , for staying up with me when sleep was impossible , for reminding me who I am when I forgot . you loved me from the bottom of your hearts and you never let me go. I will never forget !

To my friends , thank you for walking with me when the path was unclear , for understanding my silence , and for celebrating even the smallest wins . you reminded me that I was not alone.

Thank you !

الحمد لله التي بنعمته تتم الصالحات

Miss Hanane Benbouabdallah

Praise be to ALLAH

I dedicate my work

To my parents , my anchors , this success is yours ,thank you for being my supporters , my silent strength and greatest teachers .

To my three brothers ,my protectors , thank you for always being

there , in your own ways .

To my beautiful sister , thank you for being part of my journey , and for standing beside me even when I didn’t ask out loud .

To my little nieces and nephews , from whom I take joy , warmth, and a sweet nostalgia for the simplest moments .

To my Twins , Chaki , Hanane and Racha . I love you girls .

To the one who helped me without hesitation , in the early mornings and late nights , i will never forget , thank you .

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"Everyone who remembers his own education remembers teachers, not methods and techniques. The teacher is the heart of the educational system".

We should never forget to thank students of master's degree of the English department for their valuable contribution

ABSTRACT

This study explores the educational impact of integrating online learning platforms into Algerian secondary schools, with a particular focus on first-year students. It adopts a mixed-methods approach to examine the perceptions of both students and teachers regarding the use of e-learning tools in classrooms that are still largely governed by traditional instructional practices. Data were collected via questionnaires, and the findings reveal that while digital platforms offer greater flexibility, accessibility, and engagement, their full potential is constrained by infrastructural deficiencies, unequal digital access, and a lack of training for both educators and learners. The study advocates for a blended learning approach, which combines traditional teaching with online tools, and provides practical recommendations to enhance the implementation of e-learning in the Algerian educational system.

Keywords: E-learning ; online learning platforms ; digital education ; secondary education ; students' perceptions.

ملخص

أسهم إقحام منصات التعّلم الإلكتروني بشكل كبير في تغيير هيكلة التعليم خصوصا في التعليم الثانوي. وتفحص هذه الدراسة الأثر التعليمي الناتج عن إقحام منصّات التعلّم الإلكتروني في عمليتي التعليم والتعلّم مركّزة على فعاليتها وتحدياتها وتأثيرها على تجارب التعلّم لدى طلاب هذه المرحلة. وتعترف هذه الدراسة بالاعتماد المتزايد على التعلم الإلكتروني بالوقوف على كيفية تعزيز منصات التعلم الإلكتروني اكتساب المعرفة والتفاعل وتحسين الأداء الأكاديمي في هذا الوسط الطلابي. واعتمدت الدراسة المنهج الوصفي مدعوما بمقاربة نوعية لدراسة تصورات طلاب السنة الأولى من المرحلة الثانوية حول استخدام منصات التعلم الإلكتروني. وتم جمع المعطيات بواسطة استِبيانَين تم توزيعهما على معلمي المرحلة الثانوية وطلبة مستوى السنة الأولى ثانوي. وتشير الدراسة إلى أن للتعلم الإلكتروني عدة محاسن منها: المرونة بقدر أكبر وسهولة الوصول إلى المعلومة وإمكانية تعلّم كل شخص حسب وتيرته. وعلى الرغم من ذلك، فإن الطلاب يواجهون أيضا تحديات كالمشكلات التقنية وقلة التفاعل وتفاوت مستويات المعرفة الرقمية. ويسهِم هذا العمل في إثراء النقاشات الدائرة حول التعليم الرقمي من خلال التطرق إلى مزايا وعيوب استخدام منصات التعلم الإلكتروني في التعليم الثانوي. وتقدّم النتائج رؤى قيّمة للمعلمين وصانعي السياسات والمؤسسات التي تسعى إلى تعزيز فعالية التعلم عبر خط الانترنت .

الكلمات المفتاحية: التعلم الإلكتروني؛ منصات التعلم عبر الإنترنت؛ التعليم الرقمي؛ التعليم الثانوي؛ تصورات الطلاب.

Content

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Charts :

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List of abbreviations

AP : Associated **P**ress.

AR : **A**ugmented **R**eality .

BAC : Baccalauréat.

CBT : Computer-**B**ased **T**raining.

E-Learning : Electronic **L**earning.

LMD : License, **M**aster, **D**octorate.

LMS : Learning **M**anagement **S**ystem.

MOOCs : **M**assive **O**pen **O**nline **C**ourses .

PEU : Perceived **E**ase of **U**se

PLATO : Programmed **L**ogic for **A**utomatic **T**eaching **O**perations.

PU: Perceived **U**sefulness

TAM : Technology **A**cceptance **M**odel

UK : United **K**ingdom .

USA : United **S**tates of **A**merica .

VR : **V**irtual **R**eality .

General Introduction

General Introduction

The gradual integration of digital technologies has fundamentally altered the educational scene in recent years. The development and growing popularity of e-learning platforms have changed the way knowledge is provided and absorbed in both formal and informal learning settings. These platforms—which range from formal Learning Management Systems (LMS) to a variety of interactive digital tools—have enabled instructors and students to have more flexible, autonomous, and individualized educational experiences.

As educational institutions around the world adopt new tools, concerns regarding their impact on traditional classroom practices emerge, particularly in contexts where technological integration is still in its early phases. In Algeria, the transition to digital learning is still underway. While significant progress has been made in incorporating technology into the educational system, many public secondary schools still rely primarily on conventional, teacher-centered methods of instruction.

The limited use of e-learning platforms raises concerns about their effectiveness, accessibility, and relevance to the local environment. Challenges such as intermittent internet access, restricted availability of technological equipment, insufficient training, and unequal resource distribution all pose substantial impediments to the effective adoption of e-learning in Algerian schools.

Previous research highlights that in contexts where digital infrastructure is underdeveloped, the successful implementation of online learning platforms is often hindered by both technological and pedagogical factors. Studies (e.g., Adedoyin & Soykan) have shown that students and teachers in developing countries frequently encounter difficulties related to digital literacy, lack of motivation, unfamiliarity with online tools, and a general skepticism about the pedagogical value of e-learning. Moreover, the absence of localized content and support structures exacerbates the gap between technology availability and its actual classroom use.

Therefore, there is a growing need to comprehend not just the usage of these technologies but also how students and teachers perceive their roles in the teaching and learning process.

statement of the problem

The growing reliance on online learning platforms has transformed traditional education, raising questions about their effectiveness in first-year secondary school classrooms. While e-learning offers numerous advantages, such as flexibility, interactive content, and personalized

learning experiences, its integration into the educational system has also introduced challenges. Concerns persist regarding its impact on teacher-student interaction, student engagement, and the effectiveness of conventional teaching methodologies that rely on face-to-face instruction and structured classroom environments.

This study aims to explore how online learning platforms influence first-year secondary school students' learning experiences and academic performance. It seeks to determine whether these platforms enhance or hinder students' engagement and comprehension compared to traditional methods. Additionally, the research will investigate teachers' perspectives on the integration of e-learning, analyzing both its benefits and limitations in secondary school education.

By examining these factors, this study hopes to provide insights into the evolving role of digital platforms in education and their implications for future teaching practices. This raises a fundamental question: Can online learning platforms effectively support the educational needs of both students and teachers in Algerian secondary schools?

Research Questions

This study is guided by two primary sub-questions that aim to examine the integration and effectiveness of online learning platforms in the Algerian secondary school context:

How does the absence of e-learning impact students' academic performance in Algerian secondary schools?

What are the main barriers preventing the adoption of e-learning in public secondary schools?

Hypothesis

The integration of e-learning platforms is expected to positively influence student engagement and academic performance. However, the extent of their effectiveness is constrained by various technical difficulties and infrastructural limitations within the educational environment.

Rational of the study

The integration of e-learning platforms into secondary school education has become an essential topic in the modernization of teaching methods. As digital tools continue to shape global education, their role in the Algerian secondary school system remains a critical area of study. Despite the growing presence of technology in classrooms, traditional teaching methods

still dominate, and the effectiveness of e-learning platforms in supporting student learning requires further exploration.

This study aims to investigate the educational impact of integrating e-learning platforms into Algerian secondary schools, focusing on their effectiveness in enhancing students' learning experiences. E-learning platforms offer several advantages, including increased accessibility to educational resources, flexibility in learning, and interactive content that can complement traditional teaching methods. However, the success of these platforms depends on various factors, such as students' digital literacy, teachers' ability to integrate technology effectively, and the availability of necessary technological infrastructure.

By examining the current use of e-learning platforms in Algerian secondary schools, this research seeks to identify both the benefits and challenges associated with their implementation. Additionally, it aims to provide insights into how these platforms can be optimized to enhance student engagement and academic performance. The findings of this study will contribute to a better understanding of the role of e-learning in secondary education and offer recommendations for improving its integration within the Algerian educational system.

Purpose of the study

This research examines the perceived effectiveness of e-learning platforms in secondary education, with a specific focus on first-year secondary school students in Algeria. It aims to explore how these platforms influence students' learning experiences, engagement, and academic performance. The study investigates students' attitudes toward e-learning, identifying both its potential benefits and the challenges that may hinder its effectiveness. Additionally, it seeks to propose solutions to improve the integration of e-learning platforms in Algerian secondary schools, ensuring a more effective and accessible digital learning environment.

Organization of the dissertation

This dissertation is structured into two main chapters:

-The first chapter, titled **Literature Review**, is divided into three sections: the first explores the structure of the Algerian educational system, the second deals with the most taught foreign languages in Algeria, while the third section sheds light on the types of teaching and concentrates on online teaching.

-The second chapter adopts a practical approach and is divided into two sections: The first outlines the research methodology, detailing the methods and procedures employed in the study. The second section focuses on the analysis and discussion of the findings. Followed by the third section which includes a set of tentative suggestions , discussion of the study's limitation , and recommendations for future research ..The dissertation concludes with a general conclusion .

Chapter one

Literature review

Introduction

The rapid evolution of technology has significantly influenced the education sector, particularly with the integration of online learning platforms. Digital tools have reshaped traditional teaching and learning methodologies, offering flexibility, accessibility, and interactive experiences. Among these platforms, e-learning platforms have emerged as widely used virtual learning tools, especially in response to the increasing demand for remote education. As educational institutions continue to adapt to digital transformation, understanding the implications of such integration becomes crucial.

To provide a comprehensive understanding of how and why e-learning platforms are adopted and used by students, this research is grounded in the Technology Acceptance Model (TAM). TAM, developed by Davis (1986), serves as a theoretical framework that explains users' acceptance of technology based on two key variables: Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). These constructs help predict students' behavioral intentions toward using digital platforms, which in turn influence their actual usage behavior. In this context, TAM is particularly relevant for assessing how first-year secondary school students perceive and interact with online learning technologies, and how these perceptions shape their educational experiences.

This chapter is divided into three sections: The first section is dedicated to the educational system in Algeria, providing an overview of its structure. The second section sheds light on the adoption of French and English in the Algerian educational system since independence, with a particular focus on the status of English. This part aims to contextualize the learning environment in which online platforms are integrated. The third section presents the theoretical background related to the key variables of this research. It explores the integration of e-learning platforms within education, particularly in the context of their use as tools for instruction. It examines the impact of online learning on the educational process, its advantages, and the challenges it poses. Additionally, a comparison between traditional and online learning will be discussed to highlight the effectiveness and limitations of each approach.

Furthermore, this section delves into the concept of e-learning, detailing its different types, forms, and historical development. It also explores how TAM provides insights into users' motivation to engage with e-learning systems, especially in resource-constrained environments like Algerian public schools, where infrastructural and technical challenges may affect technology acceptance. Finally, the chapter concludes with an analysis of students' perceptions

regarding the use of e-learning platforms, shedding light on their experiences, challenges, and attitudes toward digital education.

1.1.The structure of educational system in Algeria

Algeria's education system is structured into five levels: preparatory education, primary education, middle education, secondary education, and higher education. It is governed by the Ministry of National Education for pre-university levels and the Ministry of Higher Education and Scientific Research for universities. The system is free and compulsory until the age of 16, but traditional teaching methods remain dominant, with limited use of e-learning outside higher education. This lack of digital integration at the secondary school level presents a significant gap, which this dissertation aims to address.

1.1.1 **Preparatory** Education

Preparatory education (pre-school) is available for children aged five but remains non-compulsory. While its role is to prepare these children for primary school, early exposure to digital tools is rare, as traditional teaching dominates. If technology were integrated at this stage, it could enhance early language learning, including phonemic awareness—an essential foundation for learning English.

1.1.2 Primary School Education

In Algeria, five years of primary education are required, with an emphasis on fundamental disciplines such as Arabic, mathematics, sciences and Islamic education. French was traditionally taught as the first foreign language in third grade. However, beginning with the 2022–2023 school year, third-grade pupils started studying English in addition to French. In order to better match Algeria with international linguistic trends, this program symbolizes a deliberate move to modernize the educational system and lessen the historical dominance of French. President Abdelmadjid Tebboune emphasized that *"English is the international language, also the language of science and technology"* (AP News, 2022). At this point, the introduction of English offers a chance to include digital resources to improve language learning. However, the majority of teaching strategies are still conventional, depending on rote memorization and textbooks, with little to no use of technology. A passive learning style that lasts into secondary school may be influenced by this

conventional method. The present dearth of digital integration in early education emphasizes the need for secondary level reform, especially as this dissertation scrutinizes how e-learning might increase engagement and improve English acquisition.

1.1.3 Middle School Education

In Algeria, learners between the age of 11 and 15 get middle school for four years. The traditional Grade 7–9 system has been replaced with this phase, which consists of four middle school levels: first, second, third, and fourth. Core disciplines like math, sciences, history, French, and English are all included in the curriculum. Previously, under the Fundamental Education system, English was taught at grade 7, the first year of middle school. However, as a result of the educational reforms implemented in 2022–2023, English instruction now starts in the third year of primary school, (Ministry of National Education, 2022). This change aims to strengthen learners' linguistic foundation before they reach secondary education, aligning Algeria's education system with global trends. Despite these developments, middle school English instruction still mostly uses grammar-focused courses and word translation into Arabic or even Tamazight to help students learn vocabulary, rather than interactive or conversational methods. Including e-learning resources could lead to the introduction of creative tactics such as:

• Gamified learning applications for vocabulary development.

• Online pronunciation platforms to improve phonetic skills.

• Virtual classrooms that promote speaking practice and interactive learning.

However, the adoption of these strategies is hindered by Algerian secondary schools' i.
The research will investigate how incorporating new technologies can improve English instructions and bridge existing learning gaps

1.1.4 Secondary School Education

After three years of secondary school education (age 15 , 18) , students must pass the Baccalaureate (BAC) exam , which is a crucial step in gaining admission to university . Students choose from literature , science or foreign languages. Even though English is a required subject at this level , students still struggle with fluency and communication skills due to:

A focus on theoretical knowledge rather than practical use

Limited classroom time for speaking practice

An absence of digital learning tools to enhance engagement

Since this dissertation explores how e-learning can enhance English education, secondary school is the ideal focus point for implementing digital tools. If platforms like interactive learning apps, video lessons, and online assessments were introduced, students could develop stronger language skills beyond traditional classroom limits.

1.1.5 Higher Education

Higher education follows the LMD system (License-Master-Doctorate**)** and offers programs in various disciplines. Unlike secondary schools, some universities have started integrating e-learning platforms, proving the effectiveness of technology in education.

The digital divide that this research aims to bridge is highlighted by the difference between secondary and higher education. The fact that Moodle, Google Classroom, and other technologies are currently in use in Algerian universities, why are not secondary schools taking advantage of these advancements? This study argues for immediate implementation of e-learning at the secondary level by demonstrating its efficacy in higher education.

1.2 French and English as primary foreign languages in Algeria

Language policy in Algeria has been shaped by historical**,** political**,** and social factors. While Modern Standard Arabic is the official language of instruction, foreign languages play a critical role in education and career opportunities. However, traditional methods dominate foreign language teaching, limiting learner engagement and real-world proficiency—a key issue this dissertation seeks to address through e-learning.

1.2.1 French: The Dominant Foreign Language

Introduced during the colonial period, French remains the primary foreign language in education.

It is compulsory from primary school and is the main language of instruction in scientific and technical fields at university.

1.2.2 English: The Emerging Competitor

Introduced in Grade 3 , English is taught as a second foreign language but lacks the same institutional support as French.

Government policies now aim to increase English usage, particularly in higher education and scientific fields.

Though these efforts, English remains poorly taught due to outdated methods. If e-learning tools were integrated into English classrooms, learners could:

*Access authentic English materials (videos, podcasts, and articles)

*Practice speaking through AI-powered pronunciation tools

*Engage in interactive language exercises and quizzes .

This research argues that digital technologies can help close the gap between how English is taught and how it is used in real-world contexts.

1.2.3. Status of English in Algeria

French colonists steadily built their educational system in Algeria with the intention of eliminating Arabic and reducing it to a secondary language (Benrabah, 1999, pp. 155–164). Following more than 130 years of colonization, the government launched a campaign known as "Arabization" after obtaining independence, with the goal of making Arabic the national language and eradicating all traces of French influence in Algeria. According to Benrabah (1999, pp. 155-164), the Algerian government, which inherited the remnants of an education system oriented on European material and taught in a foreign language by foreign professors, decided to gradually expand the frequency of Arabic sessions at all levels beginning in 1962. All topics were taught in Arabic, and the time spent on French was reduced. This strategy, of course, helped not only the university but also the country's integrity and togetherness. Due to a lack of teaching personnel and the linguistic diversity of the population, the government employed 1000 Egyptians to teach Arabic in 1964, resulting in widespread condemnation of the "Arabization" campaign (Benrabah, 2004, pp . 155-164). Furthermore, it was widely known in 2002 that this program failed poorly in Algeria for a variety of reasons (Benrabah, 2007). The Algerian government reportedly reconsidered the policy, employed 1500 new French teachers, and made French the first foreign language required beginning in grade two.

According to Mize (1978, pp. 180-182), the founding of the General Inspectorate of English in 1969 marked the beginning of the nine English language promotions. During this time, the ministry of education brought in some foreign teachers to fill a deficit of English language instructors. Since 1980, Algeria has had to integrate English in order to broaden its commercial markets to include various Western countries, like the United Kingdom and the United States. This resulted in a number of changes and an extend of the training and teaching period for instructors. By that point, more English-speaking university departments had opened. Rezig (2011 , pp. 1327–1333) . Despite the fact that French is still widely used in Algeria, English appears to have more advantages in our country because it is the dominant international language. According to Crystal (1997, pp. 61-68), a language is considered global if it is recognized as having a distinct function in each country. Despite the fact that it is not an official language, many countries, including Algeria, prioritize English in foreign language training. Crandall (2003, p. 159) regarded English a priority in foreign language learning due to its prominence as an international language. Lekhal (2008) and Harrison (1974, p. 13) reported that "*in many countries where English is not the mother tongue, it is the most commonly taught foreign language*."

1.3 Types of Learning

Nowadays, we have two types of learning :

1.3.1.Traditional learning

Traditional learning refers to the conventional method of education that takes place within a physical classroom setting, where a teacher or instructor leads the process of knowledge transmission. This approach relies heavily on face-to-face interaction, structured schedules, and a standardized curriculum. Learners are generally expected to follow a teacher-centered model, where the educator is the primary source of information and guidance. While this method has been criticized for its lack of flexibility, it remains effective in promoting discipline, consistent engagement, and direct feedback. Furthermore, the presence of a physical learning environment fosters social interaction and the development of communication skills, both of which are vital to a learner's personal and academic growth.

Despite the rise of digital tools and platforms, traditional learning continues to hold a central place in many educational systems due to its long-standing structure, cultural familiarity, and the value placed on in-person experiences

1.3.2 Online learning

Online learning is defined as a learning process that occurs without a face-to-face meeting. Instead, it is a medium that delivers content over the internet. According to Chiu chiu and Chang (2007, pp. 133-145), online learning is web-based learning that is offered via the internet or accessed via an intranet or extranet. According to Arora and Dhull (2017), online learning is a type of remote learning that includes the development and spread of the personal computer, the globalization of the concept of other human acts, and increased access to more individuals. Online learning is defined as a learning process facilitated and supported by information and communication technology (Retnoningsih, 2017).

Online learning now plays a far larger role in modern education than it did previously. What was once regarded a supplementary or emergency answer is now recognized as a viable and frequently effective method of teaching and learning. With the increasing availability of internet connection and digital tools, learning is no longer limited to a physical classroom environment. Especially in higher education Platforms such as Moodle, Google Classroom, Blackboard, and Microsoft Teams have enabled professors and students to stay connected, complete their work, and experiment with more flexible and individualized educational techniques.

1.3.2.1 The Evolution of Online Learning in Modern Education

Online learning originated in the 1960s, with the development of computer-based training (CBT) systems. These early systems used mainframe computers and dial-up connections to provide educational content to students. The University of Illinois developed the PLATO (Programmed Logic for Automatic Teaching Operations) system, which was a pioneering endeavor. PLATO enabled students to access classes, contact with instructors, and even take part in online conversations, providing the groundwork for the dynamic character of current online learning. In the 1970s and 1980s, the introduction of personal computers and the growing use of the internet accelerated the growth of online learning. Distance education programs began to harness these technology by offering courses and degree programs. to students who were unable to attend regular, on-campus colleges. The University of Phoenix, founded in 1976, was a pioneer in this field, offering working adults the option to acquire degrees via distant learning. The 1990s were a watershed moment in the history of online learning. With the broad use of the World Wide Web, the internet became more accessible and user-friendly, making it easier for educational institutions to create and distribute online courses. The development of web-based learning management systems (LMS) like Blackboard and Moodle transformed the

way instructors created, distributed, and managed course content, assessments, and student interactions. During this period, many traditional institutions and colleges began to offer online degree programs, which allowed students to gain credentials. Without the requirement for physical classroom attendance. The University of Phoenix continued to set the standard, with its online programs increasing popularity among working people. Furthermore, the rise of massive open online courses (MOOCs) in the late 2000s, spearheaded by platforms such as Coursera and edX, democratized access to higher education by providing free, online courses to millions of students worldwide. Today, online learning is a pervasive element of the educational environment, providing a wide range of options for students of all ages and backgrounds. From undergraduate and graduate degrees to professional development courses and certificates, online learning platforms meet a wide range of educational requirements. Furthermore, the incorporation of developing technologies, such as virtual reality, artificial intelligence, and adaptive learning. Algorithms have improved the online learning experience, making it more engaging, personalized, and efficient.

1.3.2.2 Benefits of Online Learning

Educational institutions have increasingly adopted online learning as a method for delivering instructional materials , transitioning to the use of the internet to deliver information and learning content to students . Boroup and Evmenova (2019) emphasize the critical role of skilled online instructions in insuring the effectiveness of this approach . Similarly , Scagnoli (2009) highlights the need to consider the advantages of online learning from both organizational and students perspectives. Ally (2004 , pp.34-41) argues that synchronous online learning where students access content and interact with instructors in real time is particularly effective . Gibbons (2007 , pp. 21-42) also sees online learning as a vital space for examining , critiquing , and shaping the environments in which care and educational subjects are developed

1.3.2.3 Student Engagement in an Online Learning Environment

Maintaining student participation in online learning presents a big problem. The absence of a regular classroom structure and social interaction might result in diminished concentration and motivation. However, many e-learning platforms have tools to combat this. For example, Google Classroom allows for real-time interaction through questions and interactive projects, whereas Moodle offers forums, peer review assignments, and gamified quizzes. Breakout rooms, polls, and shared whiteboards are features of platforms such as Zoom and Google Meet that increase live interaction. Prompt communication and individualized feedback are critical

for strengthening connections and increasing engagement, and platforms such as Blackboard facilitate this with extensive rubrics and annotations. Furthermore, combining multimedia features, such as movies and interactive simulations, can result in dynamic learning experiences that appeal to a variety of learning preferences.

1.4 Comparison Between Traditional and Online Learning

In traditional classrooms, students can engage in face-to-face discussions, participate in group activities for spontaneous interaction, and experience social learning through direct interaction with peers. This atmosphere in traditional classrooms enhances students' focus by providing a structured environment, boosts their drive through peer interactions, and increases confidence by fostering social connections. In contrast, online learning empowers students to review lessons as needed, progress according to individual learning speeds, and engage with diverse multimedia resources that enhance understanding beyond traditional classroom boundaries. It necessitates a greater level of self-control and independence.

1.5 E-Learning Platforms

Many researchers define and view e-learning from distinct angles. E-learning is a sort of online distance learning that utilizes the Internet and new digital technology to improve learning processes. This method of instruction allows students to train remotely at any time and from any location, with access to a wide range of educational information available around the clock. In some definitions, e-learning includes more than just the provision of entirely online courses. According to Oblinger and Hawkins (2005), e-learning has evolved from a fully online course to leveraging technology to offer part or all of a course regardless of time and location. Similarly, the European Commission (2001) defines e-learning as the use of modern multimedia technologies and the Internet to improve learning quality by making facilities and services more accessible, as well as facilitating remote exchanges and cooperation. The following are some alternative definitions of e-learning. E-learning is the use of information and communication technology to provide access to online learning and teaching resources. According to Abbad et al. (2009), E-learning encompasses all learning that is enabled electronically. They narrowed this concept to include learning that is facilitated by the use of digital technologies. Some scholars reduce the term to include any learning that is internet-enabled or web-based (LaRose et al., 1998; Keller and Cernerud, 2002). In addition, (Nichols 2003) defines e-learning as *"the use of various technological tools web based, web-distributed or web-capable for the purpose of education"* . Moreover , Alarifi (2003) sees E-learning as a way to deliver educational

content , explanation , exercises , and interactions , followed up comprehensively in classrooms or remotely by advanced programs stored on computers or through networks to present the broader domain of development research activities on the application of technologies to education .

1.5.1 Historical Development of E-Learning

In the 1840s, Isaac Pitman taught his students shorthand through correspondence. Shorthand, which was designed to improve writing speed, was a popular and in-demand skill at the time. It was popular among secretaries, journalists, and anyone who took notes or wrote. Pitman, a trained teacher, received completed assignments by mail. He would then give his students back more work to complete using the same technique. In 1924, the first testing machine was created to allow pupils to evaluate themselves. Thirty years later, a Harvard professor named B. F. Skinner created the "teaching machine." This enabled schools to provide children with self-paced learning experiences through programmed educational materials. In 1960, the first computerized training program was introduced. PLATO (Programmed Logic for Automated Teaching Operations) was originally intended for University of Illinois students but has since been used in schools throughout the area. The initial online learning systems were only designed to provide pupils with information. However, in the 1970s, online learning became more interactive. The Open University in Britain was eager to embrace eLearning. Its educational system has long emphasized distance learning. Course materials and correspondence with tutors were provided and received via letter. However, with the advent of the internet, the Open University was able to expand its choice of interactive educational experiences and contact with students via email. With the advent of computers and the internet in the late twentieth century, eLearning technologies and delivery techniques evolved. People began to use computers in their homes once the Mac computer was invented in the 1980s. This made it easier for them to learn and develop specific skill sets. This also helped to set the stage for a larger emphasis on workplace learning. A decade later, virtual learning environments began to prosper. People had access to a multitude of internet information and e-learning options. Several educational institutions began to provide courses exclusively online. This provided education to persons who would not otherwise have been able to attend college owing to geographical or temporal constraints. Technological improvements have also helped educational institutions cut the cost of online learning. This also made education accessible to a wider audience. Cut to the 2000s, when businesses began to adopt eLearning to teach their workforce. During this time, both new and seasoned personnel had the opportunity to broaden their sector knowledge and skill sets.

Individuals at home were given access to programs that allowed them to get online degrees and enrich their life with new knowledge.

1.5.3 Forms of E-Learning

The forms of e-learning are classified into two forms: synchronous ; and asynchronous learning.

1.5.3.1 Synchronous learning

It refers to any type in which students and teachers can interact with one another at the same time and place. It is more similar to traditional teaching because in this mode the communication is carried out in real time (Hrastinski, 2007; Rydberg Fahræus, 2008). Keegan et 16 al (2005) argue that synchronous communication enables students to watch teachers' presentations and verbally interact with the teachers during learning sessions. Similarly, Niehues, (2007) says that because the synchronous communication mode is carried out in real times, discussions become more dynamic compared to using solely asynchronous communication. Additionally, it is claimed that participants log in at a set time and interact directly with the instructor and with other class participants (Kalpana, 2010).

1.5.3.2 Asynchronous learning

It is more learner-centered, it enables the learners to complete courses without being in a certain place at a certain time. This mode refers to online learning situations where students interact with one another, over time gap, with the help of tools such as discussion forums, e-mail and bulletin boards (Oye, Salleh and Iahad, 2012). It is viewed that asynchronous communication better supports cognitive participation because of the increased reflection and ability to exchange complex information (Hrastinki 2007 p. 102). In addition, asynchronous learning involves self-contained learning and offers more flexibility than the synchronous learning mode as it is claimed by Kocur and Kosc, (2009) that this flexibility gives participants a variety of options, allowing them to learn at their own pace and in their own time. Similarly, Kalpana (2010) stated that this form of learning links participants to referenced materials instead of live, real-time instructors.

1.5.4 E-Learning Purpose and the Importance

Anyone can benefit from eLearning content. It is a more relaxed way of learning that is appealing and useful to all age groups. eLearning is popular with those who work full or part-

time, as the courses can comfortably be taken at any time and any place rather than having to attend a particular venue at a specified time. Furthermore, compared to traditional methods of learning, e-learning saves a significant amount of time. Consider classroom learning: a lecture may last an hour one week, requiring participants to wait another week for the next hour. A lecture may last an hour one week, and participants have to wait another week for the next session. E-learning enables students to study at their own pace , whenever and however it suits them. Most courses are designed so that learners can go back to the material at any time they need. This is helpful , especially when they find difficulties in consecrating when they read for the first time through the content and need to review it .

1.5.4.1 E-Learning Advantages

E-learning has various features that make it an effective method of delivering education. One of its primary advantages is flexibility, as students can access learning materials at any time and from any location, which is especially beneficial for individuals who have hectic schedules or live in remote areas. It also allows students to study at their own speed, providing them with greater control over their learning experience. E-learning allows users easy access to a variety of resources and current information, which can improve learning quality and promote deeper understanding. Furthermore, online platforms often include discussion boards and interactive tools that foster collaboration and communication among students, allowing them to share ideas and learn from one another. E-learning can be more cost-effective than traditional education because it reduces the need for travel, printed materials, and physical classroom space. According to some researchers, it supports customized learning by focusing more on the needs of individual learners rather than those of institutions or teachers. Overall, e-learning is a modern and efficient method that supports both independent learning and digital skill development. According to some experts, it promotes individualized learning by prioritizing the demands of individual learners over those of institutions or teachers. Overall, e-learning is a modern and efficient method for both autonomous learning and digital skill development.

1.5.4.2 E-Learning Disadvantages

Despite the numerous advantages of e-learning, there are a few drawbacks that can have an impact on educational quality. One significant challenge is the absence of face-to-face interaction, which can lead to students feeling isolated. Students who do not have direct interaction with their teachers or classmates may feel disconnected and lack motivation to participate. E-learning requires learners to be highly self-disciplined and manage their time

effectively, which can be challenging for many of them, especially younger ones who need more guidance. In addition, not all pupils have equal access to technology and online services, resulting in a digital divide. Students in remote or low-income locations may struggle to keep up due to inadequate internet access or a lack of necessary gear. Technical challenges, such as login problems, software faults, or unfamiliarity with online platforms, can all disrupt learning and generate irritation. Furthermore, online learning may hinder the development of communication skills because learners have fewer opportunities to engage in real-time conversations, presentations, and interactions. Finally, it is more difficult to prevent cheating during online tests since these learners can seek outside assistance or have someone else take the test for them. These problems underline the importance of careful planning, teacher training, and technology assistance when implementing e-learning in education.

1.5.6 The future of E-learning platforms

The future outlook for E-learning is positive, with significant growth expected in the coming years. The market is projected to expand, driven by increased investment and adoption, particularly in Asia. Online education is likely to become an integral part of the education system, complementing traditional classroom learning. Moreover, the future of e-learning platforms will undoubtedly involve more seamless integration with other educational technologies. Virtual reality (VR), augmented reality (AR), and gamification are already making their way into the classroom, and these immersive tools could become standard in future e-learning models. This integration could bridge the gap between the digital and physical worlds, allowing for more hands-on, experiential learning opportunities that were once difficult to replicate in an online setting.

3.Students' perception

Many scholars have investigated online learning by concentrating on student perspectives. According to Oinam (2017), student perspectives are significant because they contribute to learner-centered education, in which students assume greater responsibility for their own learning. Learner-centered education involves students interacting and collaborating with their teachers. E-learning tools and platforms have interactive elements. These elements enable two-way communication between students and teachers, as well as among students themselves. This interaction can increase social learning as students encourage one another and receive feedback from teachers, fostering a collaborative learning environment (Hartshorne & Ajjan, 2009; Vygotsky, 1978). In their responses, students in the study also mentioned other benefits of e-

learning, such as the ability to learn independently and engage more during lectures. Mislinawati and Nurmasyitah (2018) discovered that students perceive e-learning as useful for developing knowledge. motivation, self-discipline, independence, and communication with others.

Conclusion

This chapter was based on two separated sections. In the first one, we presented the educational system in Algeria, and the second section provided theoretical background of our research variables. It also presented our understanding of the impact of digital technologies on traditional teaching methods, and the purpose and importance of e-learning platforms.

Chapter two

Research Methodology and Findings

Introduction

This chapter presents the adopted methodology in this research study, which includes research methods, sampling techniques, research design framework, research approaches, theoretical framework, data collection procedures, mixed analysis approaches, ethical considerations, and interpretation of the findings. The goal is to provide a detailed explanation of how the study was conducted and how the data were analyzed to ensure validity and reliability.

2.1 Research methods

This study adopts a mixed-methods research design in order to obtain a thorough grasp of how digital technologies are affecting conventional teaching techniques in secondary schools in Algeria. In particular, the qualitative component enables a more thorough investigation of the viewpoints of teachers and students on the use of digital tools in the classroom. In order to capture the intricacy of participants' experiences, attitudes, and expectations ; all of which are influenced by institutional, pedagogical, and individual factors; this approach was selected. According to Creswell (2014), qualitative research is useful when attempting to comprehend human experiences from the perspective of the participants, particularly when addressing changes in education. In a similar vein, Corbin and Strauss (2008) point out that qualitative approaches allow researchers to understand how people interpret novel practices in their own cultural and educational contexts. In order to give a more complete picture of the present and future roles of digital technologies in Algerian classrooms, the qualitative data in this study is used to supplement the quantitative findings.

2.2 Sampling techniques

Since this study uses a mixed-methods approach, various sampling strategies were used for every participant group. A non-probability convenience sampling method was used to distribute an online questionnaire to the students, and all first-year secondary school students in Bouira were able to voluntarily participate. Because of its accessibility and usefulness, particularly when it comes to digital data collection, this approach was selected.

A purposive sampling strategy was applied to the teachers. Based on their background in teaching English and their familiarity with utilizing digital tools in the classroom, fifteen (15) secondary school teachers were chosen. This enabled us to collect knowledgeable viewpoints that were directly relevant to the study's subject.

The study's sampling strategies were chosen to guarantee the participants' accessibility and relevance. For the students, convenience sampling was selected because it enables the researcher to swiftly and effectively reach a large number of participants, particularly through online distribution. Targeting a particular group, like first-year secondary school students, within a constrained time frame and with the resources at hand makes this approach feasible. However, in order to choose participants who have firsthand knowledge of integrating digital technologies into the classroom, purposive sampling was used for the teachers. Because it focuses on people who can offer knowledgeable insights into the subject being studied, this method guarantees that the collected data are rich, pertinent, and in line with the study's goals.

2.3 Research design framework

The success and effectiveness of a study depend on a well-designed research design because all of its parts must line up and work in unison. On the other hand, any design flaws or weaknesses may result in failure or ineffective results (Maxwell, 2012). The "interactive or systemic model" was developed by Maxwell (2012) to assist researchers in planning and carrying out their research efficiently. Each of the five main parts of this model addresses a crucial facet of the research process, guaranteeing its success and coherence. These elements are as follows:

2.3.1Objectives:

This aspect focuses on the purpose of the study. It asks why the research is important, what specific issues need to be clarified, and what practices or policies the study aims to influence. It also inquires into the motivations behind conducting the research and the potential value of the results.

2.3.2-Theoretical Framework:

This component involves understanding the context of the study—whether it's the people, setting, or issues being examined. It draws upon relevant theories, prior research, and personal experience to guide the research process and shape its interpretation.

2.3.3Research Questions:

Here, the study focuses on the specific aspects the researcher aims to explore about the participants and setting. It clearly outlines the questions the research seeks to answer and how these questions relate to each other within the broader context of the study.

2.3.4-Methodology:

This element addresses the practical side of the research, detailing the approaches and techniques used to gather and analyze data. It also emphasizes how these methods form an integrated strategy to address the research questions effectively.

2.3.5Reliability and Validity:

This component concerns the accuracy of the results. It examines potential threats to validity, including alternative interpretations of the data. It also explores how the data may either support or challenge the researcher's hypotheses and understanding of the research topic.

These five components work together and are interrelated, forming a cohesive framework that drives the research process. Interaction among these components ensures the overall integrity of the study, which is visually represented in the accompanying figure :

Figure* 1 *: an interactive model of research design (Maxwell , 2012)

2.4 Research approaches

This section outlines the main research approaches that guide the design and methodology of the study

2.4.1 Positivism

According to the French philosopher Auguste Comte, The philosophy of positivism avoids a priori or metaphysical theories and limits itself to the facts of experience. According to positivism, all knowledge about factual issues is derived from "positive" experience data.

Pure logic and mathematics, which are regarded as purely formal sciences, are found beyond the domain of fact.

2.4.2.Interpretivism

Interpretivism is a philosophical approach that emphasizes understanding the meanings and intentions behind human actions. It suggests that human behavior is not just a series of observable events but is deeply rooted in cultural and social contexts that give it meaning. It is often associated with social sciences, where understanding the subjective experiences and cultural contexts of individuals is crucial. It involves analyzing beliefs, ideas, and meanings, whether conscious or unconscious, to explain human actions. Interpretive studies often explore how these meanings are constructed and transformed over time, emphasizing the role of culture, language, and social interactions in shaping human behavior.

Four primary methods for interpretivist research were proposed by Bryman:

2.4.3.The Experimental Approach

In the experimental approach , the researcher deliberately changes one factor to see how it impacts another in a controlled setting. As Creswell (2012) explains , *“ In experimental research , the investigator manipulates one or more variables to determinate their effect on another variable* ".

2.4.4.Statistical Method

This method involves collecting, organizing, analyzing, and interpreting numerical data to discover patterns or relationships. “*Statistical methods are essential for making decisions based on data, especially when variability is involved”* (Bluman, 2018, *Elementary Statistics*).

2.4.5.Case Study Method

In order to examine complicated issues in their actual context, the case study method entails a thorough examination of a single unit (such as an individual, group, or institution).

"*A case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context*" (Yin, 2018, Case Study Research and Applications).

2.4.6.Comparative Method

This method compares two or more cases to identify patterns, differences, or similarities, often used in social sciences and education. *"The comparative method seeks to explain similarities and differences among cases by identifying key variables and their relationships*" (Lijphart, 1971).

Our research study is based on interpretivism theory, since the intention is to understand the subjective experiences and views of the students in relation to the use of online learning of English. Instead of attempting to assess invariant variables, this research examines the individual meanings, attitudes, and emotions that the students brought to their learning of English on digital platforms. Interpretivism is appropriate, as the researcher can concentrate on the particular realities that are influenced by each student's individual circumstances, learning setting and access to technology. This method will help contribute to the study's purpose of learning more about the impact of online learning on student attitudes, engagement, and perceived challenges for learning English .

2.5..Theoretical Frame Work

This research is based on the Technology Acceptance Model (TAM) (Davis, 1986) that provides a basis for understanding technology acceptance and use. Whilst initially developed to explain technology use in work environments, TAM has been extensively utilized in educational studies to understand how learners perceive these tools, and how these perceptions have an impact upon behavior .

TAM proposes two core determinants of technology acceptance : Perceived Usefulness (PU) and Perceived Ease of Use (PEU) .

As Davis (1989) explains, "*Perceived usefulness is the degree to which a person believes that using a particular system would enhance his or her job performance," and "perceived ease of use refers to the degree to which a person believes that using a system would be free of effort*" (p. 320).

For the purpose of the current investigation, this construct was operationalized as the students' and teachers' opinions about whether digital learning platforms facilitate the learning of English positively or not (relative to traditional face-to-face practices).

PEU refers to the usability of the technology for the students and teachers at these schools, how easy they can deal with the technology, without having any technical background .

The study investigates the differences in learning process, engagement and results of the first year secondary school in teaching-learning practices as affected by the new technological approaches or traditional teaching models.

TAM offers implications for educational transitions since attitudes and intentions are based on perceptions and experiences (Ajzen & Fishbein, 2000).

As Smart (2006) emphasizes: "*Understanding stakeholders' perceptions is vital to effectively integrating e-learning and improving educational delivery."*

Moreover, this model is consistent with the interpretivist paradigm of the research that seeks to examine not only how students utilized the platforms, but also how they felt about moving from face to face to online learning.

"*TAM remains one of the most effective models to evaluate how students perceive the benefits and barriers of e-learning environments in education*" (Jung et al., 2008).

Drawing on TAM, the study aims at explaining how technology perceptions mediate teaching transformation and how much students are predisposed to accept or reject such transformation in the way they are taught.

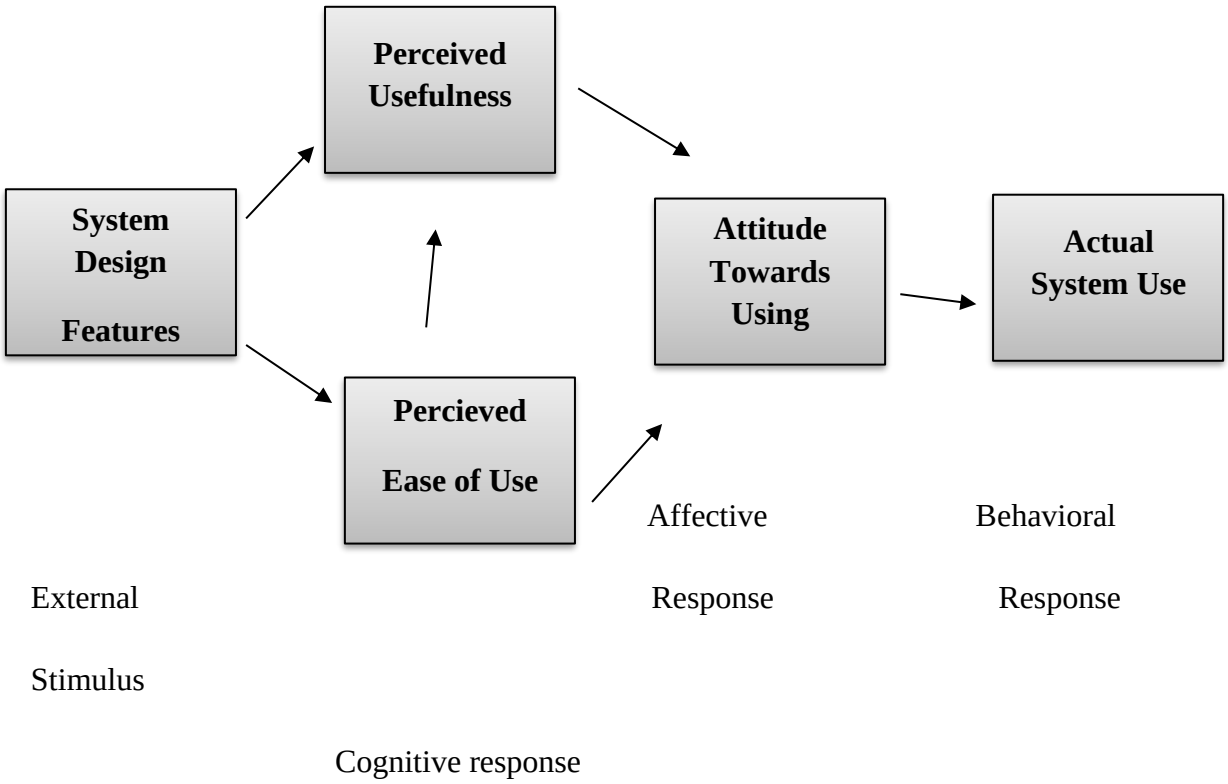

Figure 2 : Technology Acceptance Model (TAM)

2.6.Data Collection Methods and Procedures

Through this survey, we would like to uncover if the use of digital tools has transformed the way classes were usually conducted, particularly for first-year secondary students in Bouira. To collect the data that can confirm these changes, we have used an online questionnaire as a research instrument. This choice was motivated by the need to touch as many students as possible within a limited time span and to gather all the relevant information we were looking for.

This online questionnaire was administered to the first-year secondary school students in Bouira to investigate their experiences of working with, their attitude towards the use of, and their perceptions of the contribution of e-learning tools in their learning process. The fact that participation in the survey was totally on a voluntary basis and without the obligation of revealing their identity, led to students' willingness to express their real thoughts honestly and without any fear of being judged. This helped us get varied and sincere views on how and to what extent digital tools have changed some of the habits in the classroom.

2.6.1.Questionnaire

As for the current research, the questionnaire was the data collection tool mainly because it was the most feasible and reached the largest number of subjects in the shortest time. It was constructed to investigate how upper-secondary students' perceive and live the use of e-learning platforms like Google Meet and educational websites in their classrooms .

The questionnaire was created with Google Forms and was sent out through Google Classroom to be convenient to the students who had devices and internet access. It was a mix of closed and semi-open questions which were easy to understand and age-appropriate. It was inventory-like as it dealt with the students' understanding of some online learning tools, the frequency that they have them used, their opinions on the pros and cons of e-learning, and the next steps that need to take place for its more effective use in high schools.

2.6.2.Questionnaire Advantages

O'Leary (2014) asserts that administering a questionnaire gives researchers access to insights that might not otherwise be available and enables them to provide data unique to their particular study. According to him, a survey can reach a sizable number of people and is representative of a much wider community. Open-ended inquiries, which might be anonymous or confidential, can be used to produce qualitative data. Moreover, Bell (1999) says : "*if administered properly, questionnaires can prove to be an excellent method 29 to obtain quantitative data about people's attitude, values, experiences and past behavior*"

According to Gilberts (2001), another benefit of questionnaires is that they enable researchers to collect a sizable amount of data at a comparatively low cost. Additionally, he mentioned that the two primary forms of questionnaires, descriptive and exploratory, enable the researcher to collect information in order to either explain various phenomena or the cause-and-effect link between various variables (Gilberts, 2001).

2.7 Approaches to qualitative analysis

This study explores the perspectives of first-year secondary school students in Bouira about the integration of modern technology into traditional teaching techniques. The qualitative component of a mixed-methods study design uses a descriptive approach to collect in-depth participant insights. Bradshaw et al. (2017), Kim et al. (2016), and Sadlowski (2000) have all affirmed that a qualitative descriptive design is especially well-suited for investigating intricate

educational problems and gathering pertinent information from students. This approach allows for a more thorough comprehension of how students view and feel about the impact of technology, such Google Meet, on traditional teaching methods.

2.8.Ethics

Best and Kahn (2006) argue that ethics are the core of qualitative research with human participants. Informed consent, confidentiality, and anonymity are among the most important ethical standards. Informed consent ensures that participants agree to take part in the study after understanding its purpose, methods, risks, and benefits. This idea has three main components: ability, comprehension, and voluntariness. Capacity refers to the participant's understanding of the provided information; therefore, the researcher should use clear and simple language to promote comprehension. Drew and Hardman (2007) define voluntariness as the right of participants to choose whether or not to engage without being pressured or coerced. While related, anonymity and confidentiality are distinct concepts. Anonymity is defined as *"being" without a name,"* which means that a person's identity is unknown (Soanes & Stevenson, 2006, p. 47). Soanes and Stevenson (2006) describe confidentiality as *"spoken or written in confidence; entrusted with secrets"* (p. 308). Oliver and Gregory (2003) highlight the close connection between confidentiality and privacy. In this study, all participants were thoroughly briefed on the research goals and procedures. Participants chose to join the study willingly and anonymously, with the assurance that they could withdraw without any adverse consequences. These steps guaranteed that ethical standards were upheld throughout the research process.

Analysis and Discussion of the findings

Analysis and discussion of the findings

2.9 Student Questionnaire Results

This part of the research provides an analysis and discussion of the findings obtained from the students' questionnaire. The analysis aims to evaluate the data based on the research objectives, with a focus on students' opinions and experiences using e-learning platforms. The findings provide a better grasp of how digital tools have impacted students' learning processes.

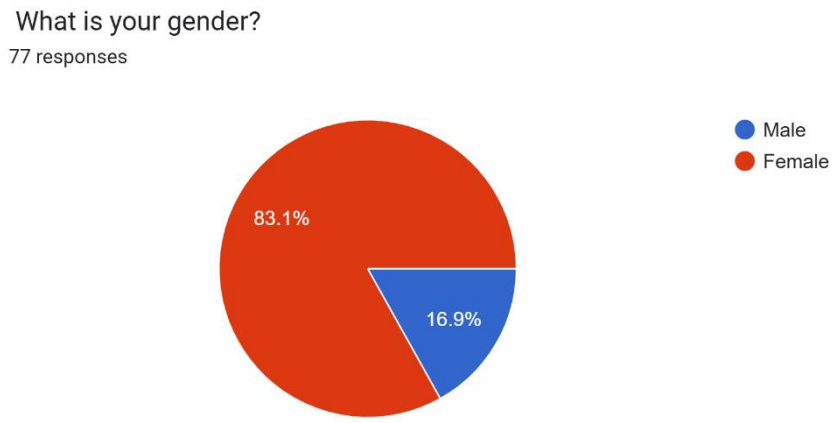

Chart 01 *:* Distribution of Survey Respondents by Gender

Out of the seventy-seven respondents, only sixteen percent identified as male, while eighty-three percent identified as female. This equates to roughly 64 female participants and 13 male participants. This disparity is clearly visible from the graphic representation, which also suggests that the sample is heavily skewed toward female respondents. This discrepancy may result from the survey distribution strategy, the demographic makeup of the population surveyed, or the response patterns of the different genders. It is crucial to consider this imbalance when interpreting the results because it may limit the generalizability of the findings and introduce gender-related biases into the conclusions drawn from the data.

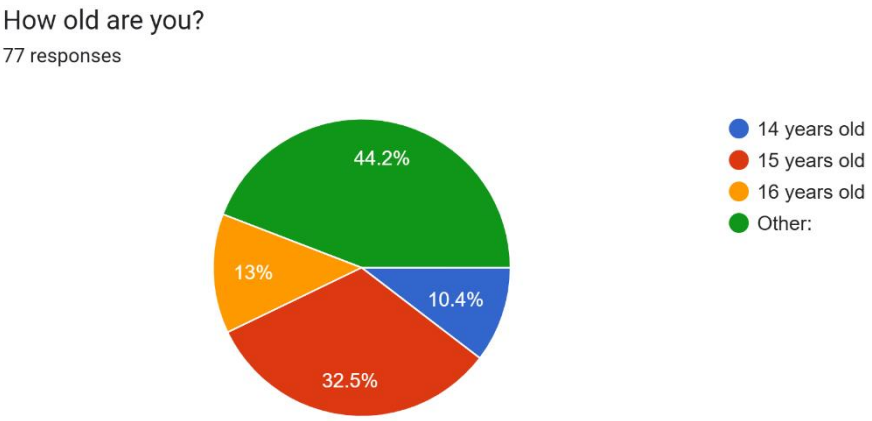

Chart 02 : Participant's Age Distribution

The majority of survey participants were of different ages, and a sizable percentage—more than 44% (34 participants)—were categorized as "Other," which may indicate that they were not between the ages of 14 and 16. The second-largest group of students was made up of 32.5% (25 participants) 15-year-olds, followed by 13% (10 participants)16-year-olds, and 10.4% (8 participants) 14-year-old . Because of this age diversity, the survey included a wide range of viewpoints, which enhanced the findings and represented various phases of English language learning.

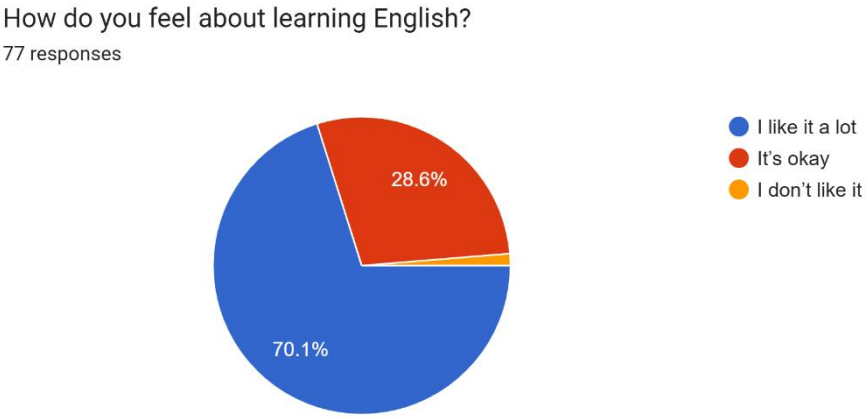

Chart 03 : Perceptions of Learning English

With 70.1% (54 participants) stating that they enjoyed learning English, the majority of students demonstrated a strong enthusiasm for the subject. A tiny minority said they didn't like it, while 28.6% (22 participants) thought it was "okay" or acceptable. This general

upbeat attitude shows that students are willing and eager to interact with English, which, if properly fostered, can serve as a solid basis for language development.

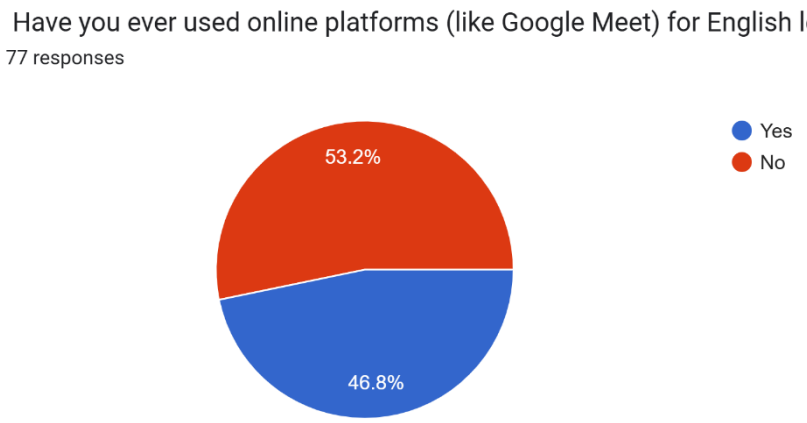

Chart 04 : Using Internet Resources to Teach English

According to the responses, the percentage of people who have and have not used online resources like Google Meet for English language learning is almost equal. 46.8% (36 participants)said they had used them, compared to 53.2% (41 participants)who said they had never used them. This balance indicates a digital divide or a variety of teaching philosophies, as digital tools are becoming more widely available but are still not consistently incorporated into all students' educational experiences.

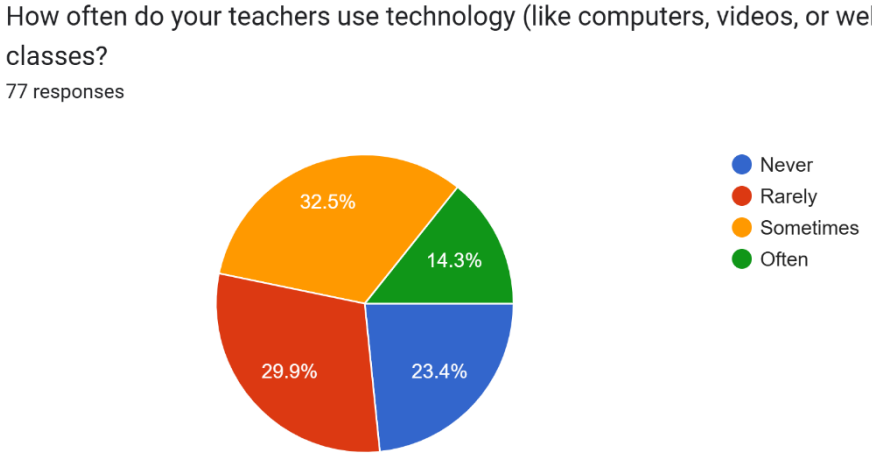

Chart 05 : The Frequency Of Using Technology in English Classes

The way that technology is incorporated into the classroom seems to be uneven: Some pupils reported frequent use, while others said it is either nonexistent or very infrequent . For example, 32.5% (25 participants) of respondents said they hardly ever use technology, whereas others said they use it more often or never. This range shows that although some educators use digital tools to improve student learning, others might not be doing so yet because of a lack of resources or different teaching philosophies.

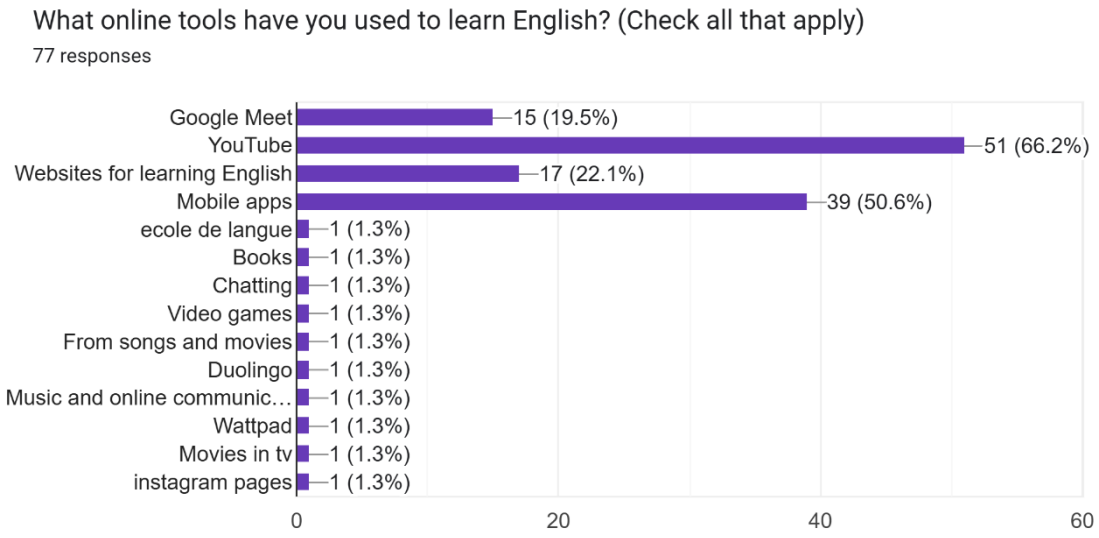

Chart 06 : The Most Popular Online Resources for Learning English

The online resources that students most frequently use to learn English are displayed in this chart. Websites for learning English (66.2% - 51 participants) and mobile apps (50.6% - 39 participants) are the most commonly used resources, according to 77 respondents. While tools like Duolingo, books, chat, and music platforms are only slightly used (each at 1.3% - 1 participant), YouTube (22.1% - 17 participants) and Google Meet (19.5% - 15 participants) come next. This reveals a trend: instead of using conventional or social approaches, students mainly rely on interactive and specialized platforms. A preference for learning while on the go is also indicated by the popularity of mobile apps.

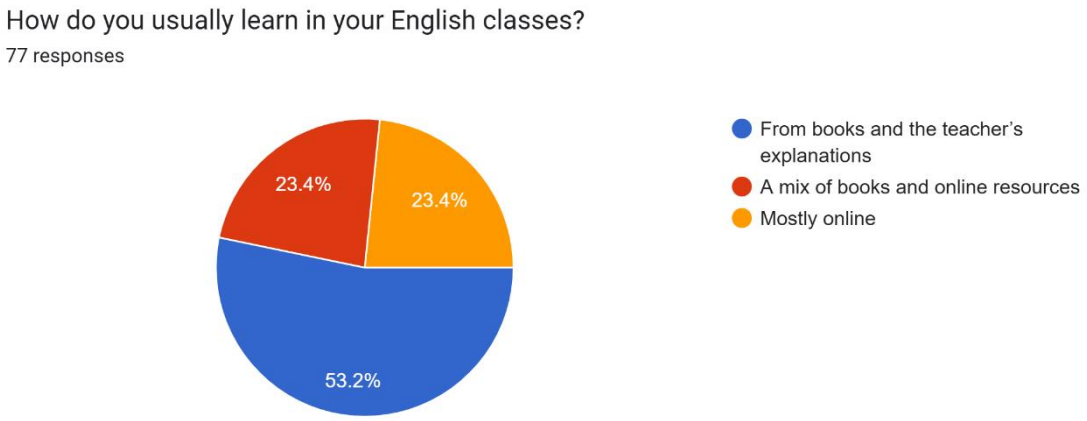

Chart 07 : Methods Used in English Classrooms

The way that students usually learn in English classes is examined in this pie chart.

More than half (53.2% - 41 participants) said that books and teacher explanations are the main ways they learn. In contrast, 23.4% (18 participants) of respondents said they either relied mostly on online techniques or used a combination of books and online resources. This shows that while traditional teaching is still the most common approach, a significant percentage of students use hybrid or fully online learning, which reflects a trend toward the use of digital tools in the classroom.

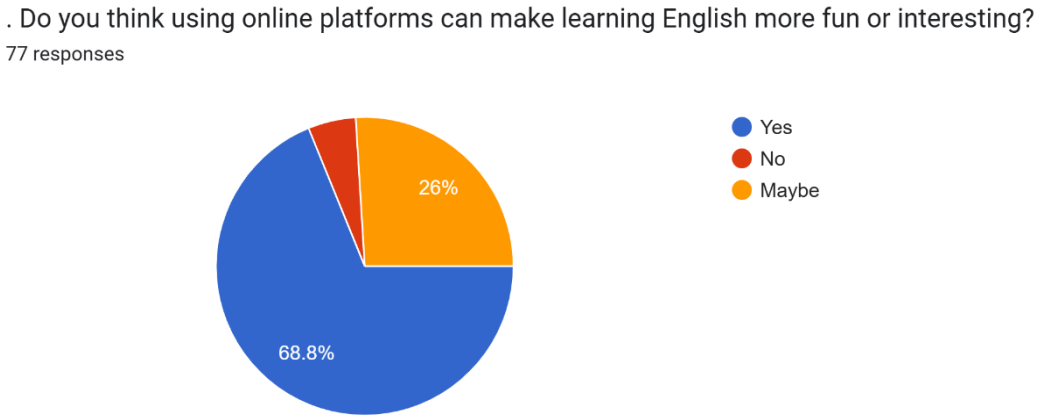

chart 08 : Students believe that online platforms make learning English more fun and interesting.

While 26% (20 participants) are unsure and only 5.2% (4 participants) disagree, the vast majority (68.8% - 53 participants) think that online platforms can make learning English more engaging or enjoyable. This shows that the majority of students believe that digital learning approaches have the potential to increase student engagement. The overwhelming number of positive answers answers further supports the value of using online resources to supplement conventional teaching methods.

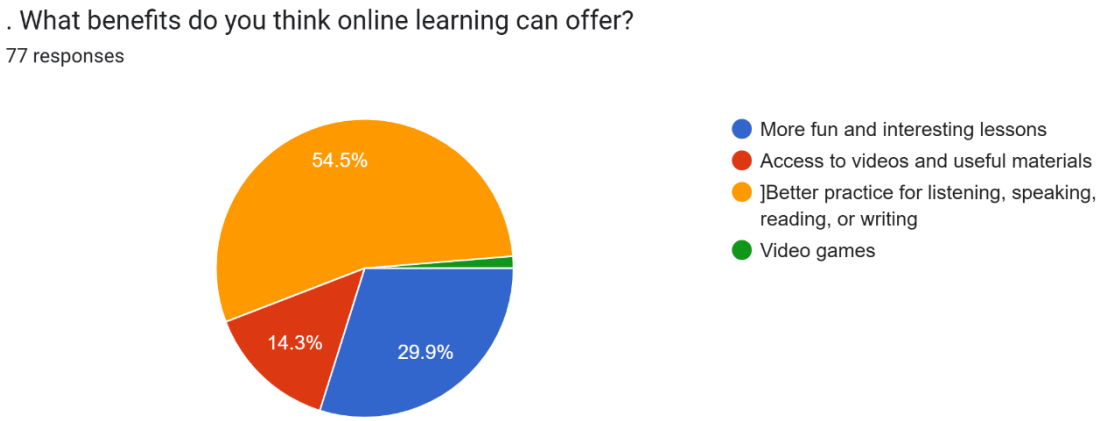

Chart 09 :Perceived Benefits Of Learning English Online

Students who were asked about the advantages of online learning cited three main benefits: access to videos and helpful materials (14.3% - 11 participants) , more enjoyable and engaging lessons (29.9% - 23 participants), and improved practice for speaking, , listening, reading, or writing (54.5% - 42 participants). Curiously, video games weren't regarded as a legitimate teaching tool. These findings demonstrate the importance that students place on useful, skill-focused, and interesting material in their educational experiences. The results lend credence to the notion that interactive language practice should be the primary focus of online resources.

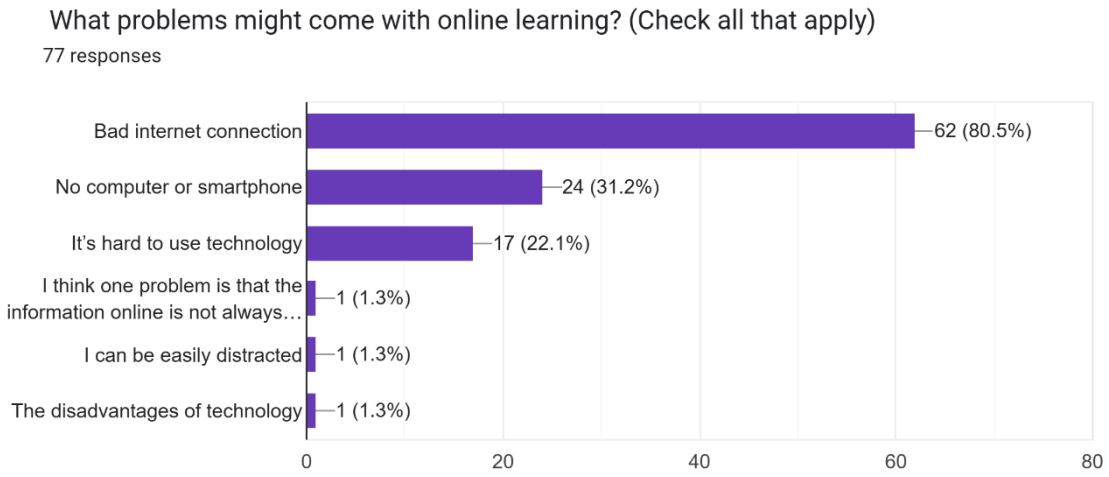

Chart 10 : Common Problems Faced in Online Learning

The most important difficulties that students face when learning online are highlighted in this chart. A noteworthy 80.5% of the 77 responses indicated that their biggest challenge was a poor internet connection. 31.2% of people who don't have access to a computer or smartphone came next. Remarkably, 22.1% have trouble using the necessary technology. Just a small percentage of students (1.3% each) mentioned issues like being easily distracted or not believing information they found online. These results unequivocally indicate that infrastructure support—in particular, dependable internet and device access—must be given top priority if online learning is to be successful.

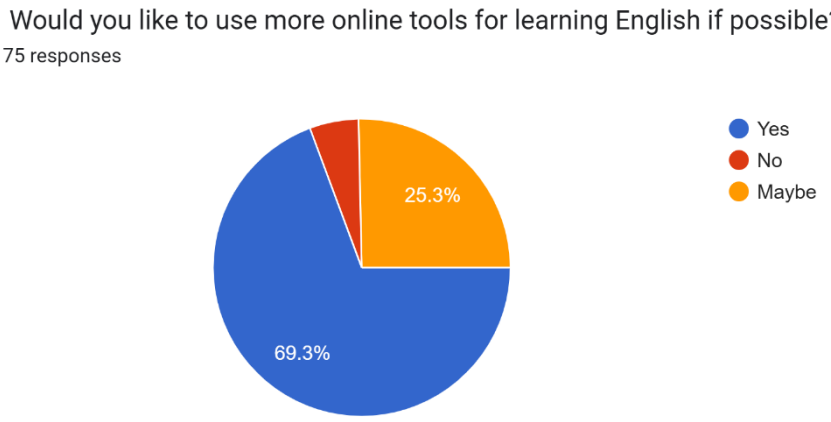

Chart 11 : Student's Interest in Using More Online Tools for Learning English

Students' interest in adding more online resources to their English language learning process is depicted in this pie chart. 69.3% (52 participants) of the 75 respondents said "Yes," indicating a definite willingness to adopt digital learning techniques. In contrast, 25.3% (19 participants) responded "Maybe," indicating a possible willingness contingent on the situation. Just 5.3% (4 participants) of people rejected the idea outright. This shows that, with the correct support networks in place, students are generally prepared to move toward or improve their learning through online resources.

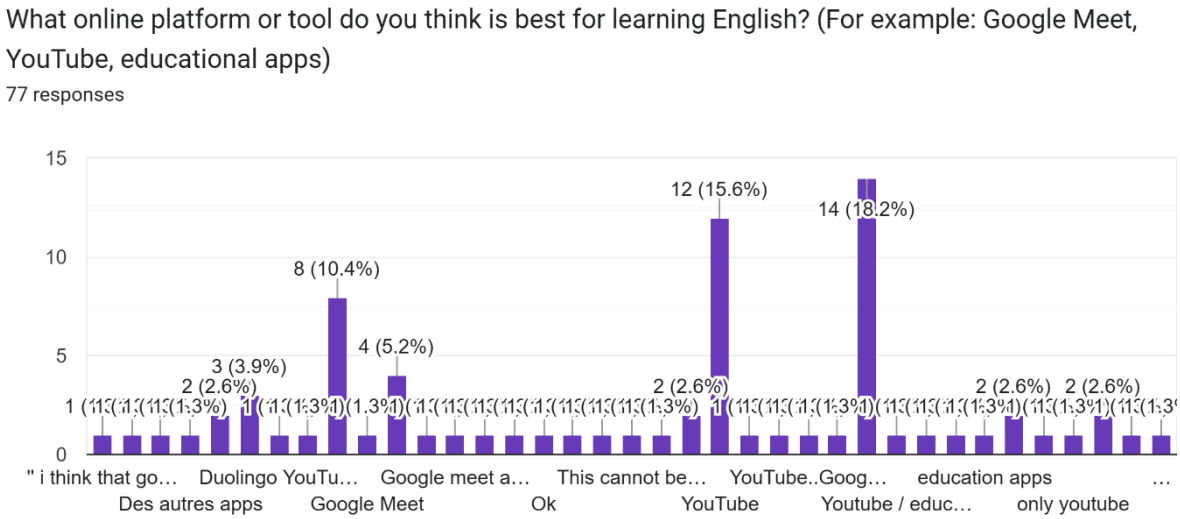

Chart 12 : Preferred Online Tools and Platforms for Learning English

The platforms that students think are best for learning English are shown in the bar chart. YouTube and educational apps (18.2% - 14 participants) and YouTube alone (15.6% - 12 participants) have the highest preferences, which reflects the popularity of the platform because of its rich multimedia content and ease of use. Google Meet, Duolingo, and a variety of individual recommendations are among the other resources mentioned. The range of answers also suggests that students value different tools based on their technological proficiency and preferred methods of learning. These results highlight how crucial interactive and multimedia content is for language learning.

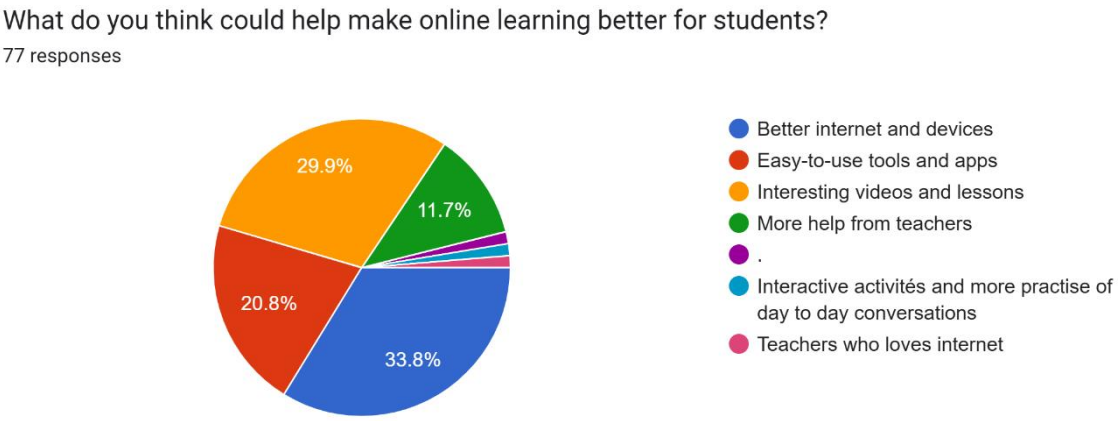

Chart 13 : Ways to Improve Online Learning for Students

Students' suggestions for improving their online education are examined in this pie chart. Better devices and internet access are the top recommendation, chosen by 33.8% (26 participants) of participants. This is consistent with previous research that highlighted technical difficulties as a significant obstacle. The fact that interactive content and conversation practice (20.8% - 16 participants) and easy-to-use tools and apps (29.9% - 23 participants) were also emphasized demonstrates how important usability and engagement are. Surprisingly, 11.7% (9 participants) demanded greater teacher participation, highlighting the continued need for human interaction and direction in online environments.

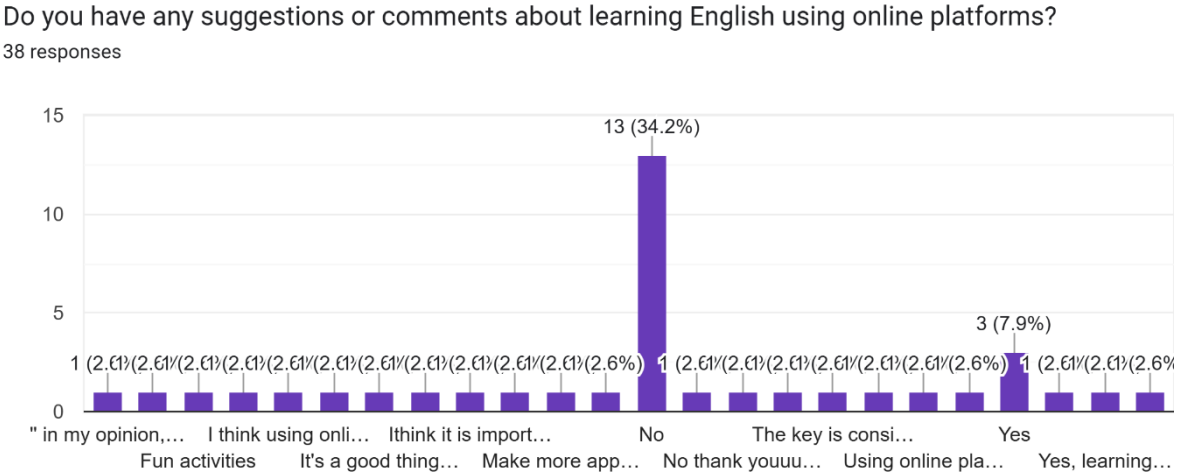

Chart 14 : Student Suggestions and Comments On Learning English Online

38 students' open-ended responses are compiled in this final chart, which provides us with an insight into their individual ideas and opinions. Although the feedback is varied, a sizable percentage (34.2% - 13 participants) provided ambiguous or neutral answers such as "No" or "Ok." Others underlined the necessity of entertaining activities, regularity, or the development of additional apps. Despite its fragmentation, this dissemination of ideas represents the various needs and viewpoints of students. Crucially, it emphasizes that any approach to enhancing online English instruction needs to take into account both useful resources and the individual experiences and expectations of the students.

Teacher's Questionnaire Results

This part of the dissertation contains a full analysis and discussion of the findings obtained from the teachers' questionnaire. The analysis explores instructors' perspectives and experiences with e-learning platforms, offering valuable insights into how digital technologies have influenced their instructional approaches and classroom practices.

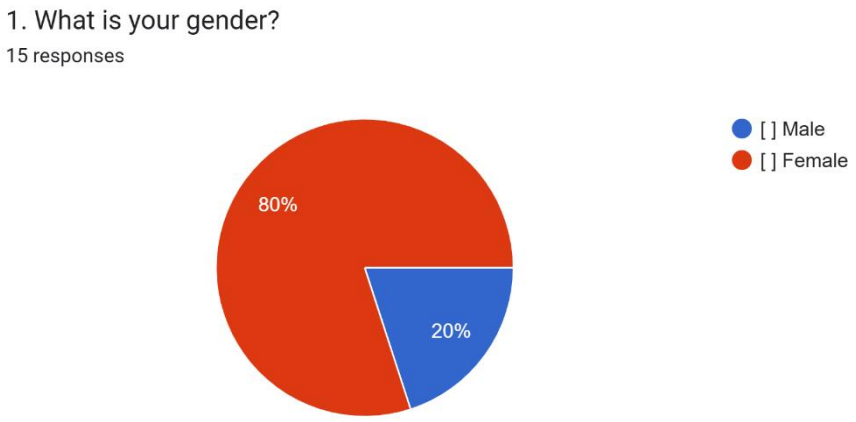

Chart 15 : Gender Distribution of Respondents

20 % (3 teachers) of the 15 teacher respondents identified as male, and 80% (12 teachers) as female. According to this gender distribution, the majority of the sample's teaching staff is female, which might be indicative of larger demographic patterns in the area's educational system.

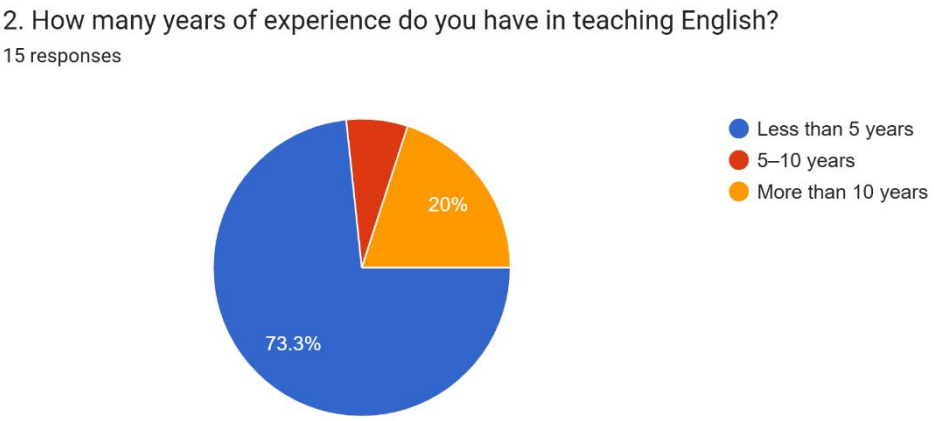

Chart 16 : Years of Experience in Teaching English

The bulk of responders (73.3%, 11 teachers) said they had fewer than 5 years of experience teaching English. Meanwhile, 20% (3 teachers) stated that they had more than 10 years of experience, while 6.7% (1 teacher) had 5 to 10 years of experience. These findings indicate that the teaching cohort is primarily made up of early-career educators, which may impact their adaptability to new teaching tools and approaches.

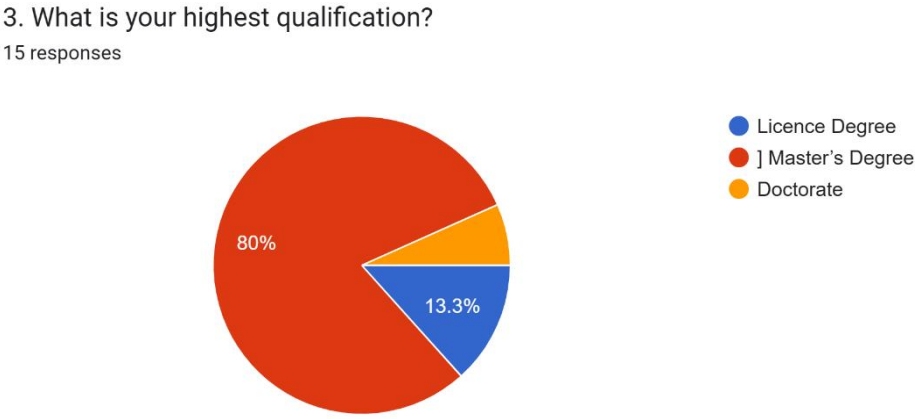

Chart 17 : Highest Qualification Attained

When teachers were asked about their highest academic qualification, 80% (12 teachers) answered that they had a Master's degree, followed by 13.3% (2 teachers) with a License degree, and 6.7% (1 teacher) with a Doctorate. This suggests that the majority of participants are well-educated, with postgraduate-level credentials, which may influence their willingness to pursue professional development options, such as technology integration in the classroom.

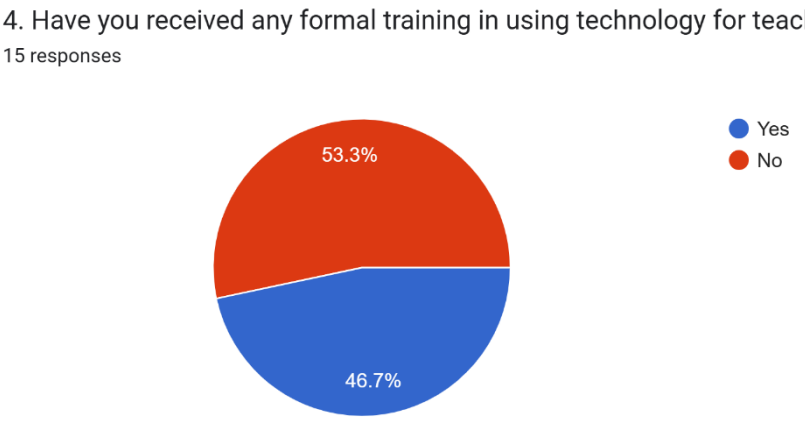

Chart 18 : Formal Training in Educational Technology

In terms of preparedness for incorporating technology into teaching, 53.3% (8 teachers) stated that they had not gotten any formal training, while 46.7% (7 teachers) indicated they had. This near-even split reveals a crucial gap in professional development, implying that many instructors may lack the skills or confidence to properly incorporate digital resources into teaching without further training and institutional support.

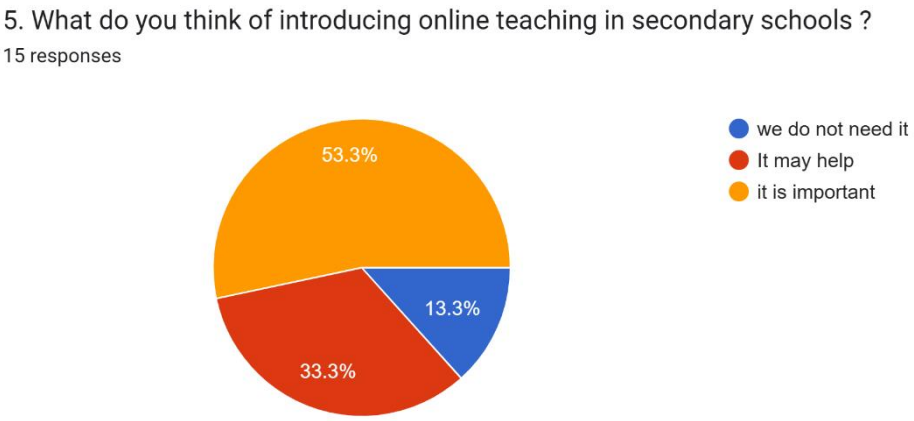

Chart 19 : Introducing Online Teaching in Secondary Schools

33.3% (5 teachers) of participants think it would be beneficial, and more than half 53.3% (8 teachers) think it is crucial to provide online instruction. Just 13.3% (2 teachers) of people believe that online instruction is superfluous. This shows that most teachers have a positive attitude about incorporating digital resources into the curriculum, but others are still apprehensive, perhaps because they lack the necessary skills or confidence in technology.

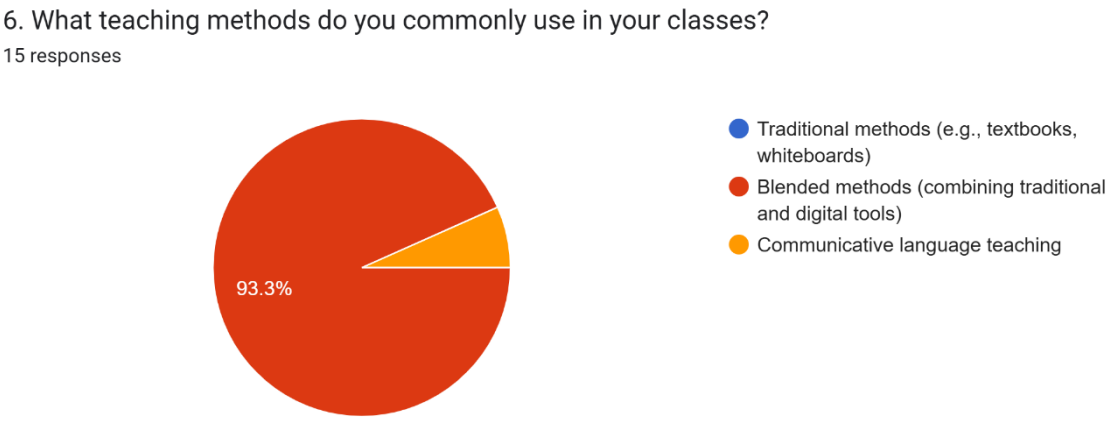

Chart 20 :Teaching Methods Commonly Used

Although the value of online instruction is acknowledged, 93.3% (14 teachers) of respondents currently employ a combination of conventional and digital teaching methods, with only a small percentage appearing to rely solely on traditional or communicative approaches. This suggests that even if educators are aware of the potential of digital tools, they still primarily base their practices on traditional methods, maybe as a result of a lack of institutional support or infrastructure for complete e-learning integration.

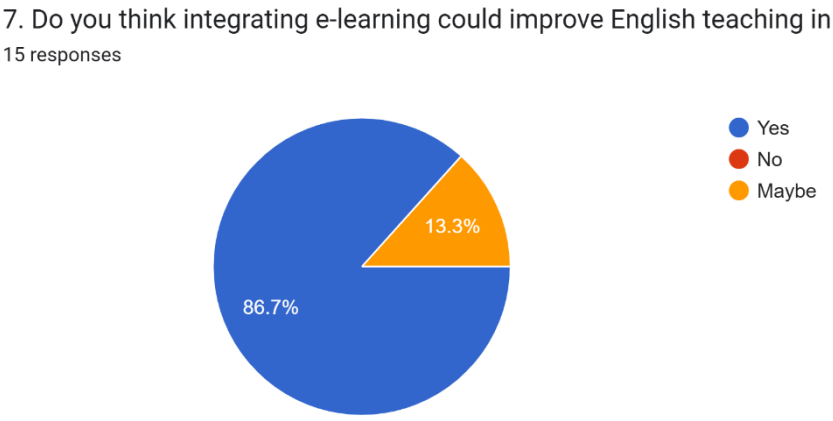

Chart 21 : Perceived Impact of E-learning on English Teaching

In contrast to 13.3% (2 teachers)who are undecided, a startling 86.7% (13 teachers) of teachers think that using e-learning can enhance English instruction in high schools. Not a single respondent explicitly rejected. This high degree of agreement indicates that more people are becoming aware of how digital instruction can improve student engagement and pedagogical efficacy in English language instruction.

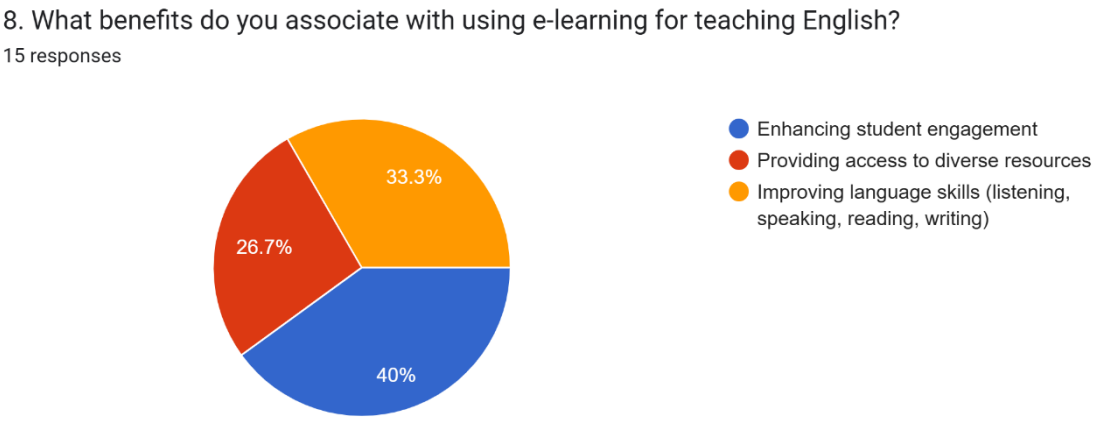

Chart 22 : Perceived Benefits of E-learning

According to respondents, e-learning has a number of advantages, including increased student involvement 40% (6 teachers), greater access to materials 26.7% (4 teachers), and enhanced language proficiency (reading, writing, and speaking) 33.3% (5 teachers). These findings support the idea that digital learning is a pedagogical asset rather than merely a convenience by indicating that teachers recognize the cognitive and practical benefits of utilizing technology in language instruction.

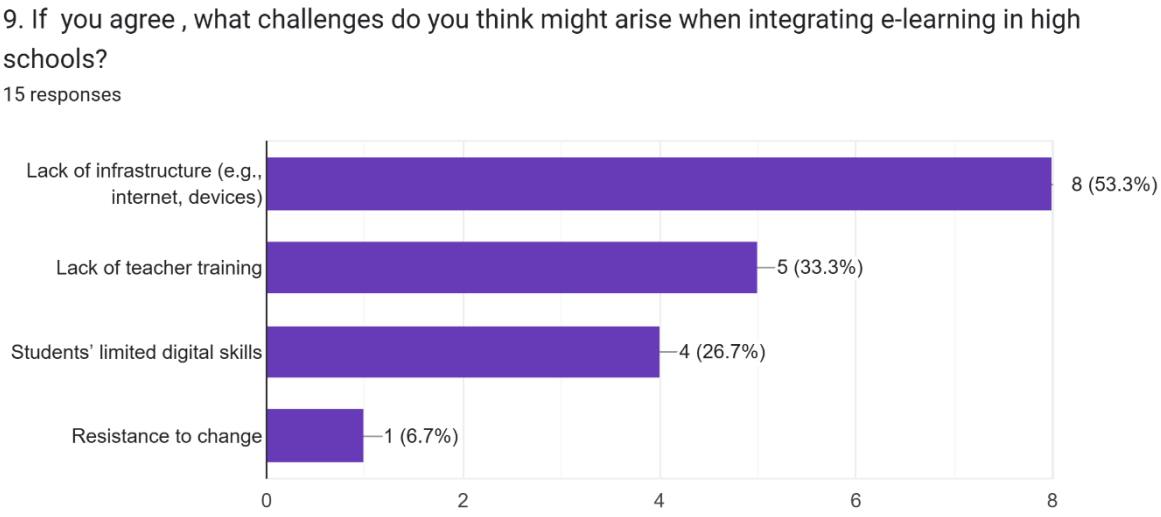

Chart 23 : Challenges of Integrating E-learning in High Schools

According to the responses, 60% of teachers (9 teachers) stated that a lack of infrastructure, such as internet connectivity and required gadgets, is the biggest obstacle to implementing e-learning in Algerian secondary schools. This research highlights a significant obstacle to fair

digital inclusion. Furthermore, 26.7% (4 teachers) expressed concern about kids' inadequate digital skills, while 33.3% (5 teachers) cited a lack of teacher training. One respondent, or just 6.7%, mentioned aversion to change as a barrier. These findings suggest that although there is a willingness to embrace e-learning, there are still major obstacles that need to be overcome first, including systemic and technological ones.

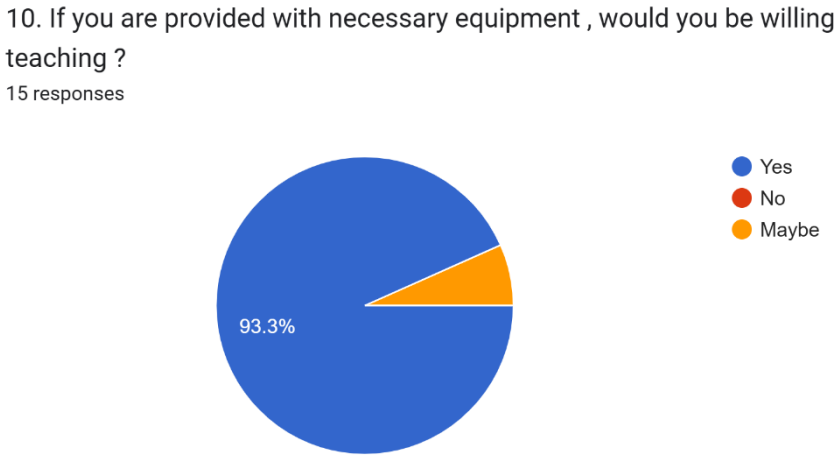

Chart 24 : Willingness to Use E-learning if Equipment is Provided

The vast majority of participants—93.3% (14 of 15)—said they would use e-learning tools if they were provided with the necessary equipment. Only one respondent answered "Maybe," and none rejected the idea outright. This large majority indicates that a lack of resources, rather than an unwillingness, is the primary impediment to technology use in the classroom.

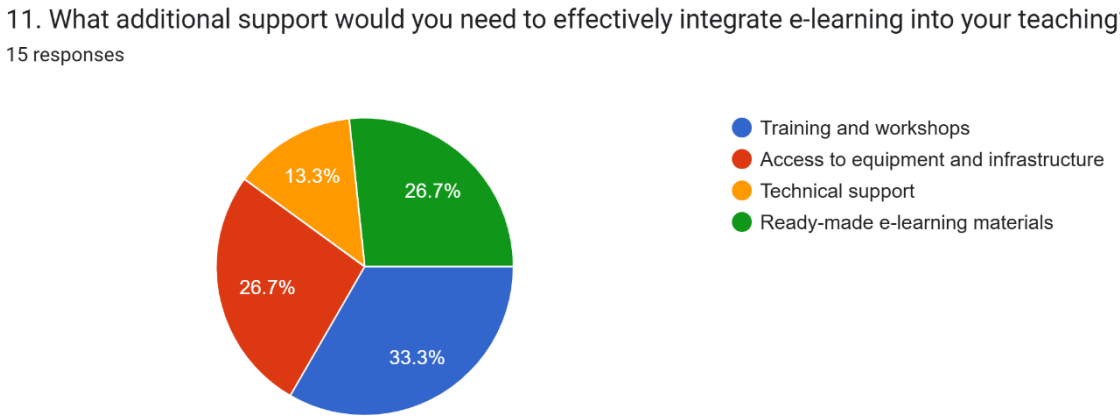

Chart 25 : Support Needed to Integrate E-learning

14 out of 15 participants, or 93.3% of the total, said they would be open to using e-learning resources if given the required instruments. None of the respondents flatly rejected the idea, and only one said, "Maybe." The majority's strong opinion indicates that the main barrier to classroom technology adoption is not a lack of resources but rather a lack of desire.

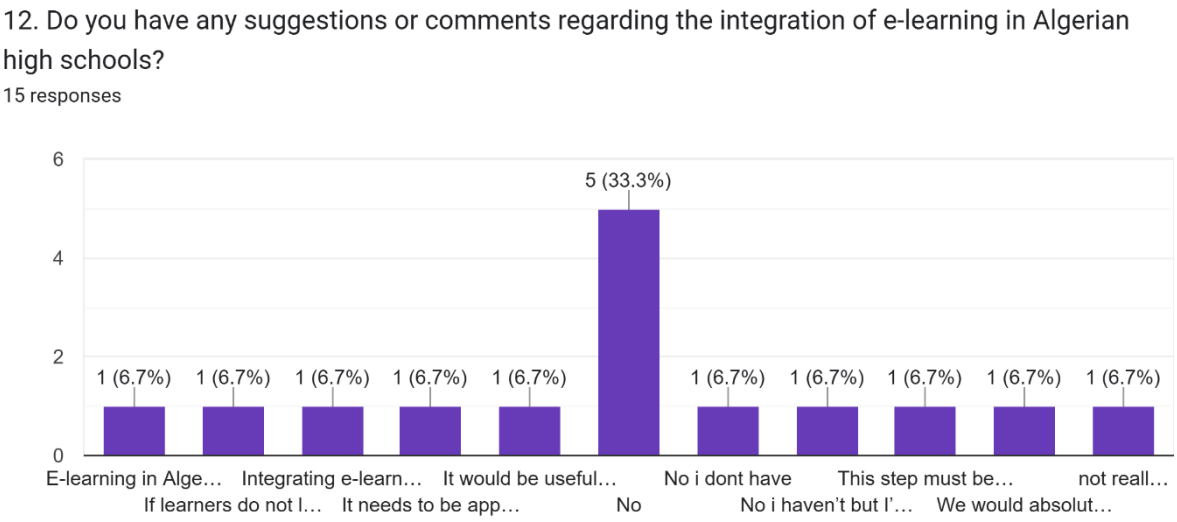

Chart 26: Suggestions and Comments regarding the integration of e-learning in Algerian high schools

The remaining 66.7% (10 teachers) of respondents offered a wide range of recommendations, however 33.3% of respondents (5 teachers) had no further remarks. Since only one respondent 6.7% (1 teacher) provided each of these, the viewpoints were distinct but legitimate. The necessity of thorough planning, improving the applicability and utility of e-learning, and the significance of teacher and student preparedness were recurring themes. The complexity and diversity of digital integration across various instructional environments are reflected in these disparate insights.

2.10 Discussion and Findings

From the student questionnaire and the classroom observations during internships, we got some key insights into how teaching and learning are changing in Algerian secondary schools. These findings are especially useful for understanding digital technology is reshaping traditional education.

To begin with, students generally had a positive perception of digital learning tools. A lot of them felt that online platforms helped them review lessons, find resources, and connect with

teachers even after school hours. This shows how important is to have flexible learning options, particularly in situations where time and other challenges can make things tough. As Davis et al. (1989) point out in their Technology Acceptance Model (TAM), how useful and easy people think a system is can really impact their willingness to use it—and that's something we definitely saw in our participants' feedback.

When analyzing the questionnaire results, we find that students prefer using digital tools, even that students' experiences were quite different from one another. This was mostly because some schools didn't have enough technology, teachers didn't always use the same platforms, and there wasn't enough training for both of them . we have seen the same thing during our internships , many teachers had a hard time keeping up with paperwork and grading because of all the strikes and their busy schedules

These findings demonstrate how Inno Vent and similar tools could be a valuable tool in filling in some of the gaps in our current educational system. Even when classes aren't held in person, teachers can use these platforms to upload resources, assign homework, and exchange feedback. Some of the issues with conventional classroom instruction might be resolved by this. Additionally, it allows students to learn independently. which is really important when they can't be in class for any reason

Digital tools can provide more individualized feedback and continuous assessment, which is another crucial point. In the more inflexible educational system of today, that is difficult to accomplish. All things considered, it appears that digital technology can complement traditional teaching methods to enhance instruction and maintain student interest rather than taking their place.

Based on data analysis , and the new found resaults This study indicates that the lack of e-learning in Algerian secondary schools negatively affects students' academic performance through various channels. Initially, the lack of digital platform access deprives students of interactive and engaging learning experiences that enhance motivation and participation. This is demonstrated by the high percentage of students who believe that online platforms make studying English more enjoyable and successful. Moreover, the absence of e-learning tools restricts students from accessing various educational materials like videos, programs, and online exercises, crucial for improving language skills and understanding. Additionally, students lack the flexibility and independence offered by digital learning, such as self-paced learning and revisiting topics, which significantly enhance academic achievements. As a result,

continuing to rely solely on traditional approaches limits students' prospects for academic and personal growth. Moreover, the study identifies several obstacles to the integration of e-learning in public secondary schools. The absence of infrastructure, especially inadequate internet connectivity and limited access to digital devices, is the most significant barrier to students and instructors properly engaging with online platforms. Moreover, numerous teachers do not have adequate training in educational technology, which restricts their ability to integrate digital tools into their teaching methods. Additionally, students' limited digital skills impede the effective utilization of e-learning, particularly in environments with minimal support and supervision. Ultimately, the absence of administrative planning and institutional support presents a major obstacle. to ensure the long-term success of e-learning in public schools. Given these challenges, successful e-learning implementation demands a comprehensive approach involving infrastructure development, teacher training, and policy reform.

2.11 Tentative suggestions

In light of students' answers, the study recommends that administration should:

- Promote the technical side in universities by enhancing the use of the platform e learning

. • Provide a strong internet connection at the national level.

- Employ a mix of synchronous and asynchronous classes.

- Create a working group at all the universities that studies the use of e-learning and its application.

- Create lectures for the students-teachers interaction that may help them for better understanding as well as remove students' feelings of isolation.

- Organize and manage time for online sessions a long with traditional ones.

- Reduce the number of the courses and assignments that make student under pressure.

- Provide a feedback during the online process to engage and motivate students.

Moreover, the study recommends that the students should:

- Integrate with the online learning environment.

- Have to investigate more about how the platform e-learning works.

- Be Familiar with the merge of information communication technologies (ICT) in the educational system.

2.12 limitation of the study

Any research work is faced by numerous limitations , researchers may face a lot of problems that prevent them from achieving the goals they have planned in the beginning of their investigation . the first limitation we have faced in our study is the lack of sources (books) and libraries . we encountered difficulties on working on this study . In addition to this , due to the limited deadline , we could not add another procedure for collecting data (interview) with both students and teachers in order to gather more data in depth about our research study .

2.13 Recommendation and suggestions for future research

Based on the review of literature and the results of current studies, future research can include a larger number of schools from various regions across Algeria to obtain more generalizable and representative results. It would also be useful to study the long-term effects of using digital tools in classrooms, particularly in relation to students' academic performance, motivation, and digital literacy development. Additionally, more emphasis should be placed on exploring teachers' experiences, perceptions, and the challenges they face during the integration of online learning tools, including professional development needs and resistance to change.

Future studies should also investigate the issues of unequal access to technology among students, especially those from rural or under-resourced areas, to better understand the digital divide and propose context-specific solutions. Researchers could explore how blended learning models function within Algerian schools and how they impact teaching strategies, student engagement, and overall educational outcomes.

Moreover, further research could examine the role of institutional policies, leadership support, and government initiatives in shaping the adoption and sustainability of e-learning platforms. Investigating the effectiveness of localized and culturally relevant digital content would also provide insights into how digital tools can be adapted to suit the Algerian educational context. Lastly, longitudinal studies that track the evolution of digital integration over time would be beneficial for understanding patterns of adoption, resistance, and innovation in secondary education.

General conclusion

General conclusion

This study looks at first-year secondary students' experiences with e-learning platforms and the impact of these technologies on traditional teaching approaches in Algerian public schools. Set inside a system that has traditionally valued face-to-face instruction, the study analyzes how digital education can transform the classroom experience in Algerian public schools. The study gives a full grasp of the potential benefits of e-learning, as well as the numerous constraints that prevent efficient adoption. The findings show that, when used properly, digital platforms can considerably improve the learning process. Multimedia elements, interactive exercises, and asynchronous learning opportunities enhance the educational experience. These tools support personalized learning by enabling students to learn at their own pace, review material as needed, and delve deeper into topics, catering to various learning styles and needs. E-learning also encourages greater student autonomy and active engagement, which is consistent with global trends toward student-centered and experiential learning models that value independence, problem-solving, and digital literacy.

At the same time, the study recognizes the numerous structural and contextual constraints that prevent widespread adoption of e-learning in Algerian secondary schools. Among the difficulties are infrastructure shortcomings, particularly in rural regions where internet connectivity is patchy and digital gadgets are limited. Socioeconomic disparities increase the digital divide, depriving many children of access to essential tools at home. In addition to technological limitations, the report reveals a shortage of professional development opportunities for teachers, many of whom have received inadequate training in the use of educational technology. This lack of preparation leads to reluctance and inefficiency when bringing digital tools into the classroom. Students frequently experience obstacles linked to digital literacy, particularly when there is little supervision or institutional assistance. The absence of nationally standardized e-learning platforms results in fragmented implementation, delivery discrepancies, and confusion for both learners and instructors. These findings highlight the critical need for integrated policy actions that include infrastructural investment, teacher training programs, curriculum changes, and the creation of unified digital platforms to promote a consistent and equal learning experience across the country.

Rather than suggesting a complete replacement of traditional classroom methods, the study calls for a blended learning strategy that combines the benefits of in-person instruction with the flexibility and resource richness of digital resources. This hybrid approach enhances the

educational experience by promoting engagement, self-directed learning, and access to a broader range of educational resources. It also accords with international best practices in modern education, which place a greater emphasis on adaptation, inclusion, and lifelong learning. The dissertation is structured into two main parts: theoretical foundations and practical findings from fieldwork. The first portion examines the research's theoretical foundations, which include relevant models, literature, and conceptual frameworks, while the second section discusses the practical findings from fieldwork. Each segment is divided into three well-defined components that, when combined, paint a complete picture of the existing condition of e-learning in Algerian secondary schools, as well as its potential for future expansion.

While offering valuable insights, the study also has certain drawbacks. The geographical reach was limited, with data collected from a small number of schools, and there were no in-depth qualitative interviews to help us comprehend individual perspectives and lived experiences. These limits create potential for future research, particularly studies that combine bigger regional samples and employ mixed-methods approaches to investigate the nuanced effects of e-learning on both instructional methods and student outcomes. Future research could explore adapting blended learning models to the Algerian context, especially in underprivileged communities facing various challenges.

Importantly, this study was motivated not only by academic curiosity but also by personal reflections on the abrupt and widespread shift to online learning during the COVID-19 pandemic—a period that exposed the flaws of traditional education systems and highlighted the critical need for innovation. The crisis served as a wake-up call, revealing that digital learning is no longer an option but rather a requirement for developing a resilient and inclusive educational system. The study contributes to the expanding body of evidence advocating for the careful integration of technology in education by addressing both the potential and the risks of e-learning. Algeria has the opportunity to use e-learning as a catalyst for genuine educational transformation if authorities invest in it strategically and with dedication. Finally, this dissertation is expected to inform scholarly discourse and inspire collaboration among educators, administrators, and decision-makers to create a more responsive, equitable, and forward-thinking education system.

These findings are consistent with previous studies that have explored the challenges and opportunities of integrating digital technologies in education, particularly within developing

countries. Research by Adedoyin and Soykan (2020) emphasized the difficulties faced by both students and teachers in transitioning to e-learning due to digital illiteracy, lack of infrastructure, and emotional strain caused by abrupt shifts in learning modalities. Similarly, Khalil et al. (2021) highlighted the importance of understanding user perceptions and the necessity for localized solutions tailored to specific educational contexts. In line with the Technology Acceptance Model (TAM), earlier works have shown that perceived usefulness and ease of use significantly affect students' willingness to engage with online learning tools.

This study reinforces those findings and confirms the hypothesis introduced in the beginning: that while e-learning platforms offer valuable support to the English learning process, their actual impact remains limited by systemic and contextual barriers that restrict their full potential in Algerian public secondary schools.

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Appendix

Appendix

Students' questionnaire

The full version of the students questionnaire used in this study is available at the following link:

https://forms.gle/tV6L8yo3Qa1vD3yw8

Dear Student,
This questionnaire is part of a study on how using online learning (like Google Meet) can help improve English classes in Algerian high schools. Your answers are very important and will remain private. Thank you for your help .

Section one: the students' opinions about the use of e-learning platform

What is your gender?
[ ] Male
[ ] Female

How old are you?
[ ] 14 years old
[ ] 15 years old
[ ] 16 years old
[ ] Other: _____

How do you feel about learning English?
[ ] I like it a lot
[ ] It's okay
[ ] I don't like it

Have you ever used online platforms (like Google Meet) for English lessons?
[ ] Yes
[ ] No

Appendix

How often do your teachers use technology (like computers, videos, or websites) in English classes?
[ ] Never
[ ] Rarely
[ ] Sometimes
[ ] Often

What online tools have you used to learn English? (Check all that apply)
[ ] Google Meet
[ ] YouTube
[ ] Websites for learning English
[ ] Mobile apps
[ ] Other: _____

How do you usually learn in your English classes?
[ ] From books and the teacher's explanations
[ ] A mix of books and online resources
[ ] Mostly online

Do you think using online platforms can make learning English more fun or interesting?
[ ] Yes
[ ] No
[ ] Not sure

What benefits do you think online learning can offer? (Check all that apply)
[ ] More fun and interesting lessons
[ ] Access to videos and useful materials
[ ] Better practice for listening, speaking, reading, or writing
[ ] Other: _____

Appendix

What problems might come with online learning? (Check all that apply)
[ ] Bad internet connection
[ ] No computer or smartphone
[ ] It’s hard to use technology
[ ] Other: _____

Would you like to use more online tools for learning English if possible?
[ ] Yes
[ ] No
[ ] Maybe

What online platform or tool do you think is best for learning English? (For example: Google Meet, YouTube, educational apps)
Answer: _____

What do you think could help make online learning better for students? (Check all that apply)
[ ] Better internet and devices
[ ] Easy-to-use tools and apps
[ ] Interesting videos and lessons
[ ] More help from teachers
[ ] Other: _____

Do you have any suggestions or comments about learning English using online platforms?
Answer: _____

Appendix

Teachers' questionnaire

The full version of the teachers questionnaire used in this study is available at the following link:

https://forms.gle/n1w5JsD5PX7fGC437

Dear Teacher,

This questionnaire is part of a research study on the potential impact of integrating e-learning in Algerian high schools, specifically in teaching English as a Foreign Language (EFL). Your opinion is valuable and you answers will remain confidential. Thank you for your cooperation!

1. What is your gender?

[ ] Male

[ ] Female

2. How many years of experience do you have in teaching English?

[ ] Less than 5 years

[ ] 5–10 years

[ ] More than 10 years

3. What is your highest qualification?

[ ] Licence Degree

[ ] Master's Degree

[ ] Doctorate

[ ] Other (please specify): _____

4. Have you received any formal training in using technology for teaching?

[ ] Yes

[ ] No

5. What do you think of introducing online teaching in secondary schools ?

[ ] we do not need it

[ ] It may help

[ ] it is important

6. What teaching methods do you commonly use in your classes?

[ ] Traditional methods (e.g., textbooks, whiteboards)

[ ] Blended methods (combining traditional and digital tools)

[ ] Other: _____

7. Do you think integrating e-learning could improve English teaching in high schools?

[ ] Yes

[ ] No

[ ] Not sure

8. What benefits do you associate with using e-learning for teaching English? (Check all that apply)

[ ] Enhancing student engagement

[ ] Providing access to diverse resources

[ ] Improving language skills (listening, speaking, reading, writing)

[ ] Other: _____

9. If you agree , what challenges do you think might arise when integrating e-learning in high schools?

[ ] Lack of infrastructure (e.g., internet, devices)

[ ] Lack of teacher training

[ ] Students' limited digital skills

[ ] Resistance to change

[ ] Other: _____

10. If you are provided with necessary equipment , would you be willing to use e-learning tools in teaching ?

- [ ] Yes
- [ ] No
- [ ] Maybe

11. What additional support would you need to effectively integrate e-learning into your teaching? (Check all that apply)

[ ] Training and workshops

[ ] Access to equipment and infrastructure

[ ] Technical support

[ ] Ready-made e-learning materials

[ ] Other: _____

12. Do you have any suggestions or comments regarding the integration of e-learning in Algerian high schools?

Appendix