

**PEOPLE'S DEMOCRATIC REPUBLIC OF ALGERIA**

*Ministry of Higher Education and Scientific Research*

*Belhadj Bouchaib University - Ain Temouchent*



**Faculty of Letters, Languages, and Social Sciences**  
**Department of Letters and English Language**

**Investigating the Impact of Digital Technology on EFL Teaching and Learning**

**The Case of First Year Master Students of Didactics and Applied Languages**

*An Extended Essay Submitted in Partial Fulfilment of the Requirement for a Master's Degree in Didactics and Applied Languages*

**Submitted by:**

**Ms. Kaoutar BELLOUATI**

**Ms. Fatima Zahra BELROUL**

**Supervised by:**

**Dr. Hassiba KORICHE**

**Board of Examiners**

<b>President</b>	<b>Mrs. Fatima YAHIA</b>	<b>MAA</b>	<b>Belhadj Bouchaib Ain Temouchent University</b>
<b>Supervisor</b>	<b>Dr. Hassiba KORICHE</b>	<b>MCA</b>	<b>Belhadj Bouchaib Ain Temouchent University</b>
<b>Examiner</b>	<b>Dr. Boualem BENGHALEM</b>	<b>MCA</b>	<b>Belhadj Bouchaib Ain Temouchent University</b>

**Academic Year: 2022 – 2023**

## Dedications

---

*This work is dedicated to*

*The light of my life, my mother, for her endless love and support.*

*No words can describe my gratitude for all the things that you have  
done for me*

*My lovely partner **Fatima** for making this an enjoyable journey to share*

*My older sister **Ghaoutia** for her love and prayers, which gave me the  
strength to accomplish this work*

*My beloved aunt **Kheira** for her continuous motivation to pursue my studies,*

*I hope that that you are proud, you are always in my heart.*

*My sweet sister **Bouchera** for being the best sister I could ask for*

*My uncle for helping me and his wife, my grandmother, my aunt and my  
cousins **Bachir, Farouk, Ilham** and **Nbia** for their continuous  
encouragement and support*

*To all my friends who encouraged and supported me all the way along to  
achieve this work*

*To all who love me*

**Bellouati Kaoutar**

## Dedications

---

*I dedicate this work to:*

*My parents for their love, unwavering encouragement, support, and endless sacrifices, and for being particular parents and making me unique.*

*I want to express my sincere gratitude to my beloved friend and partner, Kaoutar, who helped me supplement this research work. I am very thankful for the contribution and the excellent support through all the years together.*

*All my family members, my sister **Meryem** and my best friend **Fathi** and my cousins and everyone who helped me in my educational process.*

***Belroul Fatima Zahra***

## Acknowledgments

---

*We would like to express the deepest appreciation to our supervisor **Dr.***

***Hassiba KORICHE** for her patience, advice and guidance.*

*Also, we would like to express our gratitude to the members of jury **Dr.***

***Boualem BENGHALEM** and **Mrs. Fatima YAHIA** for their great efforts to  
make this work better*

*We wish to offer thanks to the teachers and learners who accepted to  
participate in answering the questionnaire and the interview*

*Finally, special thanks goes to all teachers of the English department at*

*Belhaj Bouchaib University*

## Abstract

---

Technology advancement has led to new developments in the field of education. Several technological tools available today can be used to support learning and facilitate teaching. This research aims to provide information on the use of educational technology and its significance on EFL teaching and learning. It begins by determining how teachers and learners view incorporating digital technology into the classroom. Additionally, it investigates how digital technology helps learners increase their learner autonomy. In order to create this piece of work, a case study was carried out at Ain Temouchent University, particularly in the English department, where Master One EFL learners and teachers of Belhadj Bouchaib university were chosen as the sample population. Data was gathered using a variety of study tools. The learners were the target audience for the questionnaire, while teachers were the target audience for the interview. Both qualitative and quantitative analyses of the data gathered were done. The study's conclusion showed that teachers and students favour using educational technology. The teachers confirmed that they used it as a valuable instrument to support their teaching without ignoring the use of conventional techniques. On the other hand, the students thought that its use greatly helped them. Furthermore, they all agreed that using modern technology is crucial in the EFL teaching and learning process.

## Liste of Tables

---

Table 3.1:	Teachers' years of experience of teaching .....	41
Table 3.2:	Teachers' opinion about the importance of EFL teaching and learning	42
Table 3.3:	Teachers' use of technology in class .....	42
Table 3.4:	Teachers' preference of the most useful way of teaching .....	43
Table 3.5:	Teachers' challenges in the use of technology .....	44
Table 3.6:	Teachers' perspective about technology misleading students .....	45
Table 3.7:	The role of technology in increasing student's engagement in the classroom .....	47
Table 3.8:	Teachers' preference of using internet or books while planning lessons .....	48
Table 3.9:	The way educational technologies facilitates teaching and learning ...	49

## Liste of figures

---

Figure 3.1:	Figure 3.1: Students' Preference of Education.....	29
Figure 3.2:	Figure 3.2: Students' use of technology for learning .....	30
Figure 3.3:	Figure 3.3: Learners' impression towards digital technology.....	30
Figure 3.4:	Figure 3.4: The different technological tools used by students .....	31
Figure 3.5:	Figure 3.5: Learners' use of technology in the classroom .....	32
Figure 3.6:	Figure 3.6: Students technology use aims.....	33
Figure 3.7:	Figure 3.7: Students' frequency rates of dictionaries and internet use....	34
Figure 3.8:	Figure 3.8: Time attributed to technology use in the classroom.....	35
Figure 3.9:	Figure 3.9: Reliance of the students' preferences in having explanations.	36
Figure 3.10:	Figure 3.10: The advantages of using digital technology in education....	38
Figure 3.11:	Figure 3.11: The disadvantages of using digital technology in education.	38
Figure 3.12:	Figure 3.12: Students' satisfaction with the technological tools available in the English department.....	39

## List of Abbreviations and Acronyms

---

**CLT:** Clinical Laboratory Technologist

**COTS:** Commercial-Off-The-Shelf

**DGBLL:** Digital Game-Based Language Learning

**EFL:** English as a Foreign Language

**ICT:** Information and Communication Technology

**STEM:** Science, Technology, Engineering, and Mathematics

**TBLT:** Task-Based Language Teaching

# Table of Contents

---

<b>Dedications.....</b>	<b>I</b>
<b>Acknowledgements.....</b>	<b>III</b>
<b>Abstract.....</b>	<b>IV</b>
<b>List of Tables.....</b>	<b>V</b>
<b>List of Figures.....</b>	<b>VI</b>
<b>List of Abbreviations and Acronyms.....</b>	<b>VII</b>
<b>Table of Contents.....</b>	<b>VIII</b>
<b>General Introduction.....</b>	<b>1</b>

## **Chapter One: The Impact of Digital Technology on Teaching and Learning.**

1.1	Introduction.....	3
1.2	Digital Education.....	4
1.2.1	Digital Games in Education.....	6
1.2.2	Digital Game-Based Language Learning.....	8
1.3	The Value of Digital Technology in Fostering Learner Autonomy.....	11
1.4	The Role of Educational Reforms in Technology Development.....	12
1.5	Teachers' Perception.....	13
1.6	Learners' Perception.....	16
1.7	Benefits of Using Educational Technology.....	17
1.8	Conclusion.....	18

## **Chapter Two : Methodology**

2.1	Introduction.....	20
2.2	Research Design.....	20

---

2.3	Sample Population.....	21
2.3.1	Learners' Profile.....	21
2.3.2	Teachers' Profile .....	22
2.4	The Research Instruments.....	22
2.4.1	The Questionnaire.....	23
2.4.2	The Interview.....	24
2.5	Data Collection Procedures.....	25
2.6	Data Analysis.....	25
2.6.1	The Questionnaire Analysis.....	26
2.6.2	The Interview Analysis .....	26
2.7	Conclusion .....	27

**Chapter Three: Data Analysis, Suggestions and Recommendations**

3.1	Introduction.....	28
3.2	Results of The Research Instruments.....	28
3.2.1	Results of The Questionnaire.....	28
3.2.2	Results of The Interview.....	40
3.3	Interpretation of The Students' Questionnaire.....	50
3.4	Interpretation of The Teachers' Interview.....	52
3.5	Findings and Discussion.....	53
3.6	Recommendations and Suggestions.....	54
3.7	Limitations of The Study.....	55
3.8	Conclusion.....	55
	General Conclusion.....	57

---

References.....	59
Appendix I.....	67
Appendix II.....	70
Résumé (Frensh and Arabic).....	73

# General Introduction

# General Introduction

---

Digital technology has altered the world with its continuous development. It concerns computers, mobile phones, tablets, the internet and more that significantly contributed to education. Therefore, the use of digital technology for EFL teaching and learning is rapidly becoming successful and significant in that it offers an effective learning and teaching process.

Integrating digital technology in teaching and learning English has succeeded in developing a vital position in this domain. Indeed, there are various perceptions of how digital technology can enhance learning and teaching in education. Hence, the current study aims to demonstrate the impact of digital technology on raising the quality of EFL teaching and learning. First, it attempts to identify teachers' and learners' perception about integrating digital technology into education. To add more, it studies how learners improve their learner autonomy through the use of digital technology.

Several questions were raised in order to find a valid answer to the problem of the research:

1- What are the learners' and teachers' perception about digital technology integration in the teaching / learning process?

2 - How can digital technology develop learning autonomy and learners' engagement in the classroom?

As a result, the following hypotheses are assumed:

1- Both of the teachers and learners are more dependent on technology in the teaching and learning process.

## General Introduction

---

2- The integration of upgraded digital technology facilitates learning, enhances autonomy and makes the learner more involved in class.

The researchers designed an exploratory case study of research with EFL teachers and master one EFL students at Ain Temouchent University to validate the accuracy of the hypotheses. Two research instruments were used as a requirement for the researchers to gather the required data; an interview with teachers and a questionnaire with students. The results were analysed through mixed methods; quantitative and qualitative.

The present research is divided into three chapters. The first chapter consists of a theoretical background of digital technology as it provides different perceptions about its integration into education and its relationship with teaching and learning methods. In addition, it describes the role of digital technology in enhancing learner autonomy and motivation. The research design and methodology are covered in the second chapter. It presents the research tools and provides an overview of the informants' profile, research methodologies, and data processing techniques. The third chapter addresses the examination of the data that was gathered and interprets results of the findings as well as providing some suggestions and recommendations for both of the teachers and learners. The most significant findings are described towards the conclusion.

# Chapter One : The impact of digital technology on teaching and learning

## **Chapter One : The Impact of Digital Technology on Teaching and Learning .**

1.1	Introduction.....	3
1.2	Digital Education.....	4
1.2.1	Digital Games in Education.....	6
1.2.2	Digital Game-Based Language Learning.....	8
1.2.3	The Value of Digital Technology in Fostering Learner Autonomy.....	11
1.4	The Role of Educational Reforms in Technology Development.....	12
1.5	Teachers' Perception.....	13
1.6	Learners' Perception.....	16
1.7	Benefits of Using Educational Technology.....	17
1.8	Conclusion.....	18

### 1.1 Introduction

Thanks to technology, which is subsequently altering and transforming lifestyles, all world nations are now developing and making steady growth. It is well recognized that digital technology is a component of globalization and acts as a network for discovering and exchanging all types of information and knowledge in many cultural settings of human existence. Information and communication technologies (ICT) have helped society as a whole and benefited our individual lives in some ways. ICT has also become vital for gaining knowledge, facilitating instruction and learning, and solving problems. In addition, ICT, in all of its forms, plays a significant role in both our personal and professional lives. It is becoming a significant factor in higher education. Studying how digital technology is used and how it affects teaching and learning EFL is an excellent motive that encourages researchers to examine the subject from various angles. As a result, this chapter emphasizes how digital technology is being adopted in the field of education and how it is being used as a new tool to support and improve English learning and teaching. As it relates to the use of digital technology in learning and teaching foreign languages, it instead focuses on giving a background on digital education. This includes using games for educational purposes and digital game-based language learning, which is also an effective tool for improving the teaching and learning process, which plays a significant role in enhancing the teaching and learning process and boosting learners' autonomy and motivation. Teachers' and learners' perception of integrating digital technology in education provides excellent feedback to develop better circumstances for teaching and learning.

### 1.2. Digital Education

A common explanation for the current gap between students and learning in formal educational contexts is the strict adherence to prescriptive modes of teaching and the emergence of product-oriented or "high stakes" educational testing. The emergence of applications from the second generation of the web, such as blogs, wikis, podcasting, social networking, video sharing, and photo sharing, as well as what some have perceived as the potential for user-generated content and education that is process-focused rather than solely product-oriented, at the same time with the widespread adoption of digital technologies. This disconnect occurred at the same time. The so-called "industrial model" of education has been questioned by students and educators who support using digital media applications and developing related media literacy skills. The main criticism focuses on how little has changed in the past 100 years in terms of the delivery method, the core curriculum's content, and the classrooms' physical design. This paradigm is founded on an antiquated view of literacy, which Luke (2003) describes as a "static print/book culture where learning is geographically bound to a desk and an old-style transmission and surveillance pedagogy."

Traditional transmission pedagogies from the pre-digital era are based on linear hierarchies of power and information access, which are supported by linear modalities of learning. According to this perspective, it is still typical to observe students obediently seated behind rows of straight desks listening to a teacher address the class from the front of the room, determining the course of education and upholding discipline. In this case, the teacher serves as the aforementioned "sage on the stage," student engagement is minimal, and the "drill and kill" method is crucial (Norton, Tilley, Newstead, & FranklynStokes, 2001). Prensky claims that this is true (2007); this situation has

## Chapter One: The impact of digital technology on teaching and learning

prompted young people to apply their creative talents to the use of new technologies in out-of-school activities, the division of the younger "digital native" generation from the adult "immigrants," and the resulting demand for a "new pedagogy" in which children tutor themselves with the educator acting as a "guide" to student-centred discovery (see also, Mitra et al., 2005).

Thus, in opposition to the "syllabus-bound" understanding of learning (Norton et al., 2001), proponents of digital technologies (such as social media, virtual worlds, and video games) have recently outlined a vision of education based on cooperative and participatory classroom communities where critical thinking and problem-solving activities engage discontended and inactive students. Prensky (2001b), who is heavily investing in this technological vision, anticipates a seemingly inevitable future in which game-based learning will re-engage a generation of learners: "The days of sitting bored to tears in classrooms or front of a boring computer or Web-based training systems are numbered." (p. 34). The twenty-first-century abilities that school dropouts and graduates are expected to possess to advance in the information economy are at the centre of this discussion of "new" technology and a "new generation" of learners:

Knowledge creation depends on personal skills of information access, location, analysis, and evaluation, which involve manipulating sophisticated and ever-developing software applications and human 'conversational networks' performance.(Goodfellow, 2006, p. 69). Nevertheless, it is also evident that this discourse has a strong foundation in a particular social and economic context:

The emphasis on collaboration, new technologies, and competition as the key driver is highly typical of the discourse of what Gee and others have called 'fast capitalism' ... and is paradigmatic of an approach to educational opportunity which is

oriented simultaneously to participation in social order and to individual competitive advantage.(Goodfellow, 2006, p. 69)

In addition to the integration of digital technologies in specific classrooms, as these passages from Goodfellow imply, there are broader interests at stake, and in identifying the discourses that support it, it is also necessary to note how digital technologies are "intertwined deeply with globalization, the rise of neo-liberalism, and the celebration of technology consumption" (Brown & Murray, 2005, p. 84)

Game-based learning is attached to a fundamental paradigm shift or radical discontinuity in teaching and learning to accomplish this goal (de Freitas &Maharg, 2011, p. 18). Digital technologies are frequently promoted as a "fix" for an existing system or as a rejection of traditional education in favour of an idealized version that emphasizes play, pleasure, and fun (Ito, 2009), but on a larger scale, they are also aligned with an important strategic role for the overall economy. Examples of this broader strategic relevance include the "Digital Education Revolution" project financed by the Australian Government, the "Intelligent Nation 2015" project in Singapore, and the "Digital Strategy" effort in New Zealand (Selwyn, 2011). One simply needs to look to interactive whiteboards in the UK to see how the Blair government supported a similar digital "revolution" in the classroom (Thomas &CutrimSchmid, 2010).

### **1.3. Digital games in education**

Over the past three decades, demand for commercial off-the-shelf (COTS) digital games geared at the entertainment and leisure industry has exploded thanks to the development of personal computers and specialized gaming consoles (Ito et al., 2010). Digital games target a wide range of audiences and generate ever-increasing revenues. For instance, some games, like The Sims, tend to draw girls and women users even

## Chapter One: The impact of digital technology on teaching and learning

though the stereotypical image of the average gamer is 34 and male (Entertainment Software Association, 2010). (Gee & Hayes, 2011). Digital game technologies, simulations, and virtual worlds have been employed increasingly frequently by the military, business, and medical fields in addition to for pleasure and relaxation (de Freitas & Maharg, 2011)

The commercial sector often creates digital games with an emphasis on amusement; very few, if any, companies have established a business model to support significant investment in the education-only industry (Prensky, 2007). The immersive environments of digital games, whether rooted in reality or imagination, offer plenty of opportunities to examine learners' skills and engage them more effectively in learning, especially as there is an increasing focus on genuine task-based learning in language acquisition (Squire, 2007). advancing Gee's research (2007)

Education professionals have been emphasizing the potential of digital games in more general research during the past five years (Gee, 2007), primarily but mainly because of the claims that they can increase engagement they draw young people for more extended periods than other popular media like television, movies, and, of course, traditional reading material in the form of books. These adjustments reflect broader social and cultural movements in addition to a specific identifiable group.

As with traditional games, research on digital games has emphasized: "play" as a crucial component of learning (Shaffer, Squire, Halverson, & Gee, 2005) and the chance to "revisit core thinking around "learning as experience" " (de Freitas & Maharg, 2011, p. 5). The predominance of the "experiential" learning approach is linked to the promotion of deeper learning and increasing learner motivation through personalization (Gee, 2007). The method criticizes the preconceived, usually linear, nature of current curriculum

formats and instead emphasizes the role of "learning as experience," in which learning pathways are "choreographed and re-sequenced according to the personalised and specified requirements of the learner" (de Freitas & Maharg, 2011, p. 18).

### **1.4. Digital game-based language learning**

One critical justification for the shift to digital games has been the need to re-engage unmotivated and underachieving students who have lost interest in learning because of a formal educational system that has not altered much over the past century. In particular, studies by Gee (2008), Black (2008), and Martin and Steinkuehler (2010) emphasize the plight of young males (who appear to have rejected print-based reading activities) and the necessity of re-engaging them by promoting reading in ways connected with their particular interests or "passionate affinity spaces" (Gee, 2011, n.p.), for instance, in connection to manuals for video games or fan fiction. In Gee's 36 learning principles based on the usage of video games (2007) and his more recent 17 principles for creating contextual learning environments, such a justification is evident (2011). The key concepts in Gee's earlier use of terminology, including "Active, Critical Learning Principle," "Committed Learning Principle," "Self-Knowledge Principle," "Ongoing Learning Principle," "Practice Principle," and "Discovery Principle," are still relevant today (2007, pp. 221–227). Also, his 17 principles demonstrate this concentration, which places a strong emphasis on a "lifetime of learning," "all learners are well prepared to be active, thoughtful, engaged members of the public sphere," a variety of feedback mechanisms, "tight integration" of learning and assessment, using failure as a "learning device," and the notion that "all learners are well prepared to be active, thoughtful, engaged members of the public sphere" (2011, n.p.).

## Chapter One: The impact of digital technology on teaching and learning

Looking back at language instruction over the past three decades, we may still be able to identify the exact physical classroom arrangement as those from more than a century before, with the appearance of the dedicated language laboratory or networked computer room being the only alteration. However, while looking at methodology, a few characteristics reflect the emphasis the majority of the Gee put forth, as mentioned earlier, learning concepts. When learning a language more than a century ago, students frequently used grammatical translation techniques based on professors' directions; today's students are considerably more likely to participate in small group activities, usually in pairs, and to communicate in the target language with both the teacher and their peers.

Although we cannot always follow a linear growth pattern, language learning approaches have moved from behaviourism and cognitivism to more constructivist and collaborative modes of learning (Kolb, 1984). As with computer tutoring, language learning systems have evolved into tools for learning and research (Beatty, 2010; Levy & Stockwell, 2006). In light of the general shift in language learning methodology over the past three decades toward both the communicative language teaching (CLT) and task-based language teaching (TBLT) approaches (Ellis, 2003; Van den Branden, 2006; Van den Branden, Bygate, & Norris, 2009), educators need to make the drastic changes that other educational disciplines which rely on a transmission or lecture-based format.

These adjustments are seen in Purushotma, Thorne, and Wheatley's (2008) discussion, which argues that DGBLL offers an alternative model for achievement-oriented learning by adopting a task-based approach, undermining the broader educational trend of centralized testing. These 'goal-directed gaming environments' draw students digital literacy and gaming expertise but also 'give feedback at the level of

## Chapter One: The impact of digital technology on teaching and learning

linguistic form and expose students to a variety of communication genres, including those most closely related to traditional literacies, and help them become aware of them before they are eventually able to master them' (p. 33). Based on these goals, a "three-point sequence" method should be utilized to create digital language learning games that take a task-based approach. The three components are real player needs, linguistic assistance, and creative feedback. Therefore, games do not just aim to reproduce conventional language learning activities in a brand-new digital environment.

On the other hand, the affordances of digital games should also be used to add new elements to learning a language. Purushotma, Thorne, and Wheatley describe looking for elements of the language acquisition process that "are already present within contemporary video game genres and use them as the basis for further development." (p. 7). They use ten fundamental concepts to build digital game-based places using this task-oriented strategy, many of which are influenced by Gee (2007, 2011).

Based on these guiding principles, language teaching methodology has developed to accept the goal-oriented approach; activities should be centred on communicative tasks, communicative tasks should be based on authentic activities, and learners should participate in collaborative activities. These ten guidelines align with a task-based approach to teaching languages (Ellis, 2003). A task-based method involves exercises incorporating intercultural communication, vocabulary, and grammar learning processes. The definition of a task given by Bygate and Samuda (2008) is "a holistic activity which uses language use to attain some non-linguistic objective while meeting a linguistic challenge, with the ultimate aim of increasing language learning, through process or product or both." (p. 69).

Creating increasingly challenging and integrated assignments for language learners has become a goal, and new technologies are making this possible (Thomas &Reinders, 2010). In the past, tasks have frequently consisted of simple activities like jigsaw puzzles, mix-and-match games, or tasks focused on comparison. With these new approaches to task-based language instruction, students participate as characters in more interactive stories or storylines. These assignments also entail more complex negotiations between students who have taken on specific roles and help students develop their characters creatively by generating additional activities, they feel more personally invested.

### **1.4. The Value of Digital Technology in Fostering Learner Autonomy**

Many academics and linguists in the field have begun to focus on learner autonomy, an essential aspect of language learning. Referring to Lai ( 2017 ), the digital generation are less dependent on in-class learning than they once were, technology's emergence and development presents an opportunity in fostering learner autonomy not only in the classroom, but also outside of it. Instead, learners need a new language learning experience outside of the classroom where they can enjoy what they are doing, feel at ease, and use what they know—their knowledge of technology.

Additionally, regarding the use of social media as a tool for English language learning, "... we may argue that success in reaching actual connection, collaboration, and self-direction happens when learners take over the use of the sources, that is, when they are granted autonomy." (Nunan and Richards, 2015, p. 92). In other words, students learn best when they handle their independent study. Because of this, it is our educators' responsibility to encourage students to take an active role in their education and assume

responsibility for their learning so they can fully engage in their coursework and grow as independent language learners.

In addition, Lai (2017) proposed a process-oriented framework to direct teachers to use efficient methods to support students' development of self-regulation outside of the classroom, according to Lee (2019: 41) in her review of Lai's book. Teachers must be trained to achieve the goals of the learner-centeredness approach, to support their students' independent work while they are online. In this way, learners gradually develop their autonomy. As a result of the interaction between the teacher and his students, autonomy could be achieved by giving them more control over their education method and subject matter (Little, 2007). As a result, the teacher must encourage his students to participate in their education and give them the tools they need to decide how they want to proceed.

Technological advancements have given instructors the best chance to engage with their students and inspire them to participate in the learning process since they are the first leaders who will build their learners' metacognitive and language skills. In light of the adage, "You may lead a horse to water, but you cannot force him to drink," learning can only occur when learners are actively engaged.

### **1.5. The Role of educational reforms in technology development**

Technology's role in education is constantly evolving. Technology is a relatively new phenomenon, and it can motivate students, differentiate instruction, and give them new opportunities for success. According to Johnson (2003), technology and computers can "evoke dreams in the minds of visionary educators who saw the boundless opportunity for revolutionizing traditional conceptions of teaching and learning" when they are used correctly. Two past presidents saw the need for fundamental change in

## Chapter One: The impact of digital technology on teaching and learning

education to keep American students in competition with technology with other students worldwide. 1994 President Bill Clinton signed The Goals 2000: Educate America Act (Goals 2000: Educate America Act, 1994). The Goals 2000: Educate America Act requires the Department of Education to create a national strategy for integrating technology in all educational programs and the state and local school systems. This strategy will help improve teaching and learning by making students more aware of the benefits of technology in their education. (c) demonstrate how technology can be used to meet government educational requirements and give every student an equal chance of success; and (g) provide educators who are capable of incorporating technology into their classrooms with high-quality professional training opportunities (Goals 2000: 1994 Education for America Act). President Obama signed the American Recovery and Reinvestment Act in 2009, allocating \$4.35 billion for the Race to the Top Fund for educational innovation and reform (Race to the Top Program Executive Summary, 2009). In an article outlining the most outstanding unconstrained fund for education in American history, Race to the Top, Spears (2012) cites Duncan (2009), the United States Secretary of Education, who calls it "education reform's moonshot." Spears (2012) claims that the rigorous preparation of pupils in science, technology, engineering, and mathematics is the focus of Race to the Top's Priority 2 (Race to the Top Executive Summary, 2009, p. 1). (STEM). The President's Council of Advisors on Science and Technology gave the president a report in 2010. According to this research, it is vital to provide American children with a solid background in science, technology, engineering, and mathematics to apply this knowledge to their personal and professional lives, which will impact American society as a whole. According to Spears (2012, p. 4), The Council recognizes that the creation of high-quality assessments using ICT can be a stimulus for educational

innovation that demonstrate student learning, the improvement of instructional material quality, and the increased use of data to give students, teachers, and schools rich feedback. (President's Council of Advisors on Science and Technology, 2010, p. 73.).

### **1.6. Teachers' Perceptions**

Weinstein asserts that attitudes about teaching started to emerge by the time a student enrolls in college (as cited in Williams & Burden, 1997, p. 56). These are closely tied to what they believe they know, but they also serve as a filter for the effect that screens, redefines, distorts, or transforms upcoming thought and information processing. The worldviews and values of the teachers will also influence these opinions. Williams and Burden (1997) claim that teachers' attitudes about learning will impact all of their classroom actions. So, teachers' beliefs about how a language is learnt are more effective than choosing a specific methodology.

The education system has changed tremendously due to the emergence of learning technology in the late 20th century. This results from technology's ability to offer a proactive, convenient, and complete teaching and learning environment. To improve the use of cutting-edge technology in the countries' teaching and learning processes, the Ministry of Education today provides many facilities and training. A large amount has been allocated to give instructors the tools they need to strengthen the educational system. Despite their best efforts, teachers in most countries still fail to use available technologies (Albirini, 2006) fully. This failure has become a severe issue as numerous earlier studies have shown that integrating ICT into teaching and learning can raise students' achievement (Nakayima, 2011, Jamieson-Proctor et al., 2013). To add more, numerous investigations have examined the variables influencing teachers' acceptability of ICT usage in the classroom (Capan, 2012; Virkus, 2008; Zhang, 2013; Dudeney,

## Chapter One: The impact of digital technology on teaching and learning

2010). It demonstrates that the main obstacle to implementation was teachers' beliefs that they were the ones who should be implementing changes to their teaching and learning methods. Additionally, prior research (Cassim&Obono, 2011) demonstrates the strong association between instructors' beliefs and ICT use. The role of teachers is becoming increasingly crucial, mainly when using ICT in pedagogy to raise student accomplishment and foster their creativity and critical thinking abilities.

Younger kids have higher expectations for ICT integration in the classroom. In addition, a study by Chien, Wu, and Hsu (2014) revealed that students in schools have high expectations for the use of ICT in the classroom because the new generation was raised using technology and is considered to be a phenomenon known as "digital natives.", they discovered that teachers' attitudes, abilities, and confidence levels are the main obstacles to ICT integration in the classroom. Additionally, it demonstrated how much personal aspects, or what we would refer to as self-perceptions, influence ICT integration.

According to previous research (Cox & Marshall, 2007), teachers only need to adopt traditionally central strategies to teach ICT skills. The teacher is very competent and confident when using it in the classroom, even if it is not an accurate reflection of the type of ICT used by her. This situation is due to the belief that ICT is a tool that can support the learning process. This element has changed the educational approach to incorporate ICT to generate and construct knowledge for the pupils. According to the study, the balance between pedagogically focused approaches and training in ICT professional development may be reflected in the relationship between competency and confidence. With this, the school administration should ensure enough support for the instructors to incorporate ICT into the classroom.

However, teacher effectiveness in urban schools varies with the years of work experience and the teacher's age (Cuban, 2001). It shows that teacher effectiveness decreases as years of experience and age increase, but somehow the decline and belief in effectiveness depends on the management of teachers in schools. School administration here means the openings for collegial interaction and the utilisation of the directions assets. Schools may give openings for instructors to reflect on educating and learning with their colleagues and for directors and instructors to collaborate and communicate, as well as support the use of guidelines assets.

### **1.7. Learners' perception**

The goal of technology education should be able to help them understand how to adapt to changes and use different types of technology instead of only teaching students how to use one type of technology (Kärkkäinen&Keinonen, 2010). Once they graduate, students can take advantage of technology advancements they will encounter at any point in their social lives. In contrast, technology education looks for supporting students in developing ethical, spiritual and equal rights decisions (Kärkkäinen&Keinonen, 2010). Even though technology may not be their primary emphasis in their future careers, people should be able to use technology and its effects later in life, make technological decisions, and control technology. To add more, how teachers view technology and their technical expertise and experience will influence how their students use technology. Therefore, they must receive training and positive technological experiences to pass those on to their students (Kalonde&Mousa, 2016).

Individuals may view technology differently, which could lead to several issues. According to Jarvis and Rennie (1998), some teachers see technology as scientific practices, whereas others see it as modelling. This view influences both their use and

## Chapter One: The impact of digital technology on teaching and learning

regulations of technology in the classrooms, their decisions around technology, and how they interact with their colleagues. Woolnough (1990) states that girls and boys view technology differently. Boys have more positive attitudes toward technology and its effects on the environment rather than girls (cited in McRobbie, Ginns, & Stein, 2000). Vries (1986) also reported that learners are conscious of the variety of technology (cited in McRobbie, Ginns, & Stein, 2000). These studies show that pupils may acquire a specific understanding of technology and its impacts. It depends on the teacher and family for this knowledge and experience to be interpreted positively. For instance, Woolnough (1990) and Vries (1986) claimed that students' attitudes toward technology were more favourable when a member of their family had a job related to technology (cited in McRobbie, Ginns, & Stein, 2000).

### **1.8. Benefits of Using Educational Technology**

Technology's impact on EFL teaching and learning has had a lot of good results. The learners can communicate more effectively when technological tools are used in learning. The World Wide Web, for instance, eliminates the requirement for students to go to a location where the target language is spoken as a first language. Multimedia is used to create real-world scenarios that can aid with language practice. This form of communication is appropriate for students who find speaking intimidating. (Rodinadze and Zarbazoa, 2012). Technology in the classroom have advantages for both teachers and students. For example, online chatting might provide a beneficial linguistic environment for the students to practice speaking and listening. Learners may enhance their communication skills in this way. The internet and social media, such as Facebook and chat rooms, can be used by learners to learn more about the cultures and communities of English speakers. The use of social media will help them improve their productive

## Chapter One: The impact of digital technology on teaching and learning

skills and understanding of the target language. (Rodinadze and Zarbazoia, 2012). Futhermore, with the internet, students can learn even without any guidance.

Using technology can make studying easier. The ability to use a computer will be important for the learners so that they may take charge of their education. Students can also search online for the necessary information to complete their homework. Due to the abundance of visuals and graphics that a computer can supply, it can encourage an engaging learning method (Rodinadze&Zarbazoia, 2012). Technology has enhanced the educational process and resulted in a shift in the educational system from a teacher-centred to a student-centred learning environment. According to Rodinadze and Zarbazoia (2012), teaching English fosters a learning atmosphere where students are encouraged to think critically and solve problems. The pupils were largely absent from the learning process and were merely passive consumers of the knowledge.

### **1.8. Conclusion**

To sum up, digital technology and its resources have made teaching and learning in the classroom more innovative, effective, and efficient. They have also improved teaching practices by inspiring and involving students in them. The effects of using digital technology in EFL teaching and learning and its worth in enhancing learning and teaching English have been addressed in this chapter. To add more, ICTs have a significant impacted on the educational practices, the teaching and learning process, quality, accessibility, and student motivation to learn under better conditions and improve their academic achievement, as evidenced by the use of ICTs in educational settings. Digital technology helps students and professors study and conduct research in productive ways. It improves learners' adaptability and responsibility, expands their

## Chapter One: The impact of digital technology on teaching and learning

options, influences their motivation, and helps them learn and acquire language more effectively and efficiently.

# Chapter Two :

## Methodology

## Chapter Two: Methodology

1.2	Introduction.....	20
2.2	Research Design.....	20
2.3	Sample Population.....	21
2.3.1	Learners' Profile.....	21
2.3.2	Teachers' Profile .....	22
2.4	The Research Instrument.....	22
2.4.1	The Questionnaire.....	23
2.4.2	The Interview.....	24
2.5	Data Collection Procedures.....	25
2.6	Data Analysis.....	25
2.6.1	The Questionnaire Analysis.....	26
2.6.2	The Interview Analysis .....	26
2.7	Conclusion .....	27

## Chapter Two: Methodology

---

### **2.1 Introduction**

The second chapter is dedicated to describing the research technique and design, focusing on data gathering and analysis. It serves as a description of a case study examining the effects of using technology in education. It begins with details on the research tools employed and the research design. The sample population is introduced, and the data analysis techniques and instruments employed are covered in this case study.

### **2.2 Research Design**

Any proposed research must have a good research plan to be successful. The research design serves as a framework for organizing the research project; it establishes the scope of the study and the standards by which the researcher evaluates the findings and makes judgments (McCombes, 2019). The process of acquiring information to address issues or provide responses to questions is referred to as research.

The research design establishes the framework for gathering, analyzing, and processing information, ensuring that the researcher effectively addresses the research problem. Organizing the research framework entails incorporating the proper data collection techniques to ensure validity and reliability during data analysis.

In the current research, the researchers used mixed methods core design, which we incorporated in order to provide a better understanding of investigating the influence of digital technology on EFL teaching and learning in education, which involves the case study of first year Master students of Didactics and Applied Languages at Belhadj Bouchaib University in Ain Temouchent. Thus, the research instruments will provide

## Chapter Two : Methodology

---

different types of information for data collection, measurement, and analysis due to the mixing of data (open-ended data for qualitative data and closed-ended data for quantitative data).

In this regard, research was defined by Leedy and Ormrod (2001) as a technique for gathering, analyzing, and interpreting data in order to comprehend a phenomenon. So we consider research as a planned process of identifying questions, formulating hypotheses and gathering evidence or statistics, analyzing data, and drawing conclusions that can resolve the problem or some assumptions for a particular empirical formulation.

A mixed-method model offers a more comprehensive, complex, and advanced approach to the research problem. Additionally, the researcher can explore, combine, and explain his qualitative and quantitative findings using a mixed-method research. Furthermore, a mixed-method approach enables a more comprehensive understanding of different research problems, which the quantitative and qualitative offer.

### **2.3 The sample population**

EFL teachers and students from Belhadj Bouchaib University served as the sources. They were chosen to reply to the questionnaire and the interview questions sent to them. However, the researchers selected a sample group of five (05) teachers and thirty (30) students from this sizable population because each respondent was randomly selected to represent the entire community.

#### **2.3.1 Learners' Profile**

The participants in this research were Master one students in Belhadj Bouchaib University's English department. Thirty (30) students were randomly chosen to respond

## Chapter Two : Methodology

---

to a questionnaire about their thoughts on using instructional technology for learning the English language and whether or not they had implemented it in their classroom. The researchers' decision to select Master One EFL students was motivated by several factors. First of all, these students were familiar with using technological tools, using visual aids and language laboratories to study English. They had also used such technological instruments in their previous years at university, so they already had experience with using them. Because of this, they were aware of the impact of using technology to acquire English.

### **2.3.2 Teachers' Profile**

Five EFL teachers, one male and four females, participated in this study research in addition to Master One EFL students. While the other teachers all possessed a doctorate, only one had a Master's degree, three instructors had linguistics specializations, and the other two had literature and civilisation specialization. These instructors were chosen because they were already experienced with using technological resources. They had different experiences using the ICT rooms, audio-visual aids, and language labs in the English department.

### **2.4 The Research Instruments**

Various research instruments must be used in the study to provide accurate research results; according to Takona (2002, p. 73), questionnaires and interviews are valuable tools for doing educational research since they can be used to measure factors like opinion, attitudes, concepts, composition, and so on. A questionnaire and an

## Chapter Two : Methodology

---

interview were employed as research tools in this study. Both of them were directed at the science and technology faculty's instructors.

### 2.4.1 The Questionnaire

According to Brown (2001), questionnaires are any written instruments that present users with a list of questions to be answered by creating their own responses or selecting preexisting ones.

The most popular tool for gathering data is the questionnaire. It may take the form of questions that a researcher writes and then sends to a sample population for the response. By presenting users with a list of questions to be addressed, either by making their responses or choosing responses from the preexisting ones, Brown (2001) defined questionnaires as any written instrument. Due to these benefits, it is a tool that is employed in the majority of research projects. It can assist the researcher in gathering information that cannot be witnessed.

Thirty (30) Master one EFL students were the target audience for the questionnaire in this research project. It aimed to learn what they thought of using instructional technology and whether or not it raised their language proficiency. Thus, thirty (30) students responded to the survey.

Students were handed a questionnaire by the researchers, and they were instructed to complete it. All the questions, except for a few open-ended ones, have answers. The questionnaire was distributed in March 2023.

As for the questions employed in this research, the researchers have used closed-ended, multiple-choice, and open-ended questions. The responders can only provide a limited

## Chapter Two : Methodology

---

number of replies, frequently (yes) or (no). The respondents must select the best response from various options for the multiple-choice questions. The respondents are free to respond without restriction to the open-ended questions.

### **2.4.2 The Interview**

In addition to using the questionnaire as a research tool in this study, the researchers also relied on using interviews, which are research tools used by researchers in the form of conversations with informants to gather information. Gillham (2000:1) states it is: "typically two persons having a conversation. Yet in this particular interaction, the interviewer is asking the respondent for an answer to achieve a specific goal".

In addition to other research methods, the researcher might use interviews to learn more about the topic under investigation. When other research tools seem inappropriate, interviews are used, according to Wilkinson and Birmingham (2003:43). There are three interview models: organized, semi-structured, and unstructured. The oral questionnaire that makes up the structured interview is conducted. The questions that make up the semi-structured interview are predetermined. The informal interview resembles a group conversation (Seliger and Shohamy, 1989).

Nine questions are included in this research investigation interview. Four questions in the first segment explore the teachers' opinions on using technology for teaching. The researcher utilized five other questions to gather information from the teachers about their experience with technology in education and how it affects their students. The purpose of the first question in this section is to provide information about the problems that the teachers encounter while using technology, and the following two

## Chapter Two : Methodology

---

questions are meant to know the teacher's perspective on the effect of technology on their students. The last two questions are meant to acknowledge the teacher's technology preference.

### **2.5.Data Collection Procedures**

Collecting data for the research study involves systematically gathering quantitative and qualitative data types or both. Kabir (2016) defines data collection as the systematic process of acquiring information from relevant sources to respond to research questions, test hypotheses, and accomplish the project's goals. Several techniques can be used to gather data. Structured interviews were used in this research investigation. The researcher evaluates the hypothesis and data and checks dependability using the knowledge gained during data collection. In order to obtain both quantitative and qualitative data, the researcher used a mixed data collection technique.

In order to find out more about how digital technology affects EFL learning and teaching, the researcher handed out a questionnaire with several questions to thirty participants at the English department of the Institute of Letters and Foreign Languages, Belhadj Bouchaib University, Ain Temouchent, in addition to sending the interview questions to five EFL teachers from the same research setting via e-mail.

### **2.6 Data Analysis**

According to Kothari (2004), data analysis is the process of organizing, manipulating, and taking into account the significance of data that has been collected. This process consists of analyzing, evaluating, and summarizing the data acquired to meet the study's objectives and respond to the research questions while using the

## Chapter Two : Methodology

---

appropriate research instruments and gathering the required data. The researcher carefully arranges the data by classifying it to offer order, structure, and explanation to the obtained data. After classifying the data, the researcher compares the data with the knowledge acquired from the literature review. Two different forms of data analysis are used in this research study. Data analysis was required for both of the research instruments the researchers used: the questionnaire and the interview. Hence, the researchers mainly used the qualitative data analysis approach to assess the interview, while they used both quantitative and qualitative data analysis techniques when analyzing the questionnaire.

### **2.6.1 Questionnaire analysis**

The results from a sample population are generalized using quantitative data analysis. Measurable and verifiable data are collected and evaluated systematically in quantitative data analysis. It includes a statistical approach for assessing or evaluating quantitative data (Creswell, 2007). The researcher can use it to classify, summarize, and systematically illustrate observations. Also, it enables the researcher to comprehend and draw conclusions about an investigation examined in a defined, constrained group. The sample is always carefully selected from a much larger group so that the results drawn can be applied to the entire population (Cowles, 2005). This procedure prepares a researcher to conclude the logical analysis.

### **2.6.2 Interview analysis**

On the other hand, qualitative data analysis focuses on interpreting the numerous, diverse, and generally non-numeric forms of information collected in the research.

## Chapter Two : Methodology

---

Attride-Stirling (2001) divided the qualitative analysis process into three primary steps: text reduction, text exploration, and text integration. It should be highlighted that qualitative analyses can be carried out in various methods, not only the typical three-stage procedure (Attride-Stirling, 2001; Braun & Clarke, 2006). This research has followed Attride-Stirling's steps in analysing the qualitative data collected from the interview.

### **2.7 Conclusion**

The measures taken in the methodological procedure of this study effort are clearly described in this chapter. The research design, the goals, and the sample population are all given in a broad overview. Also, the research settings and the tools used are revealed in this chapter. It serves as an example of the data collection process and analysis.

Chapter Three : Data  
analysis,  
suggestions and  
recommendations

**Chapter Three: Data Analysis, Suggestions and Recommendations**

3.1	Introduction.....	28
3.2	Results of The Research Instruments.....	28
3.2.1	Results of The Questionnaire.....	28
3.2.2	Results of The Interview.....	40
3.3	Interpretation of The Students' Questionnaire.....	49
3.4	Interpretation of The Teachers' Interview.....	51
3.5	Findings and Discussion.....	52
3.6	Recommendations and Suggestions.....	53
3.7	Limitations of The Study.....	54
3.8	Conclusion.....	55

### **3.1 Introduction**

The data analysis and discussion of the findings are covered in the current chapter, which includes quantitative and qualitative analyses of the questionnaire and interview results. Then some valuable recommendations and suggestions for resolving the research study's issues are given. Lastly, the study's limitations affected how the current research findings were interpreted.

### **3.2 Results of the Research Instruments**

The information gathered through the questionnaire and interview is analyzed in this section of the study. This research section will assist in analyzing, interpreting, and determining solutions demonstrating how digital technology affects EFL teaching and learning.

#### **3.2.1 Results of the Questionnaire**

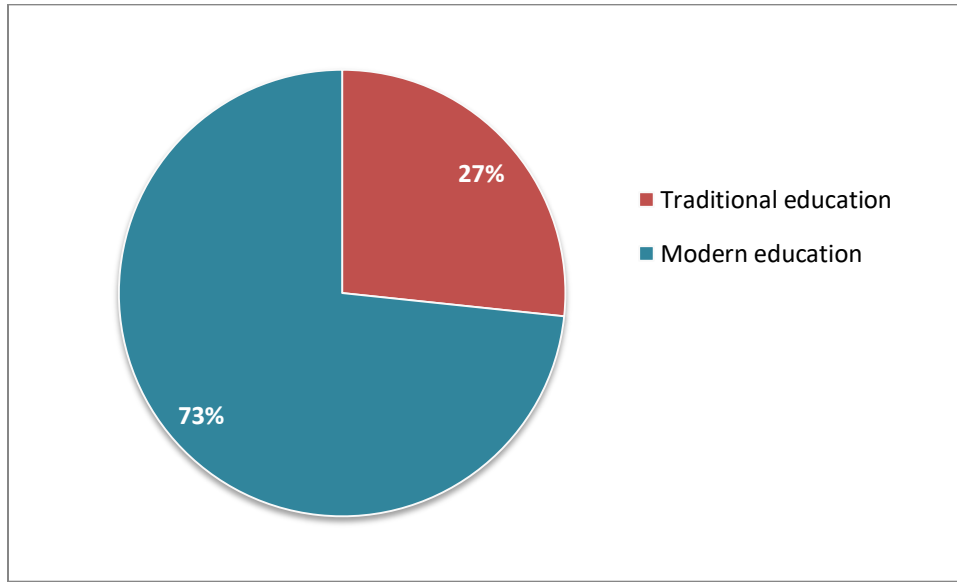
This research study aimed to examine the students' views and perspectives on integrating digital technology in the teaching and learning process. Thirty students who were studying Didactics and Applied Languages answered the questionnaire. A total of 13 closed-ended and open-ended questions were included in the questionnaire.

##### **Question one : What do you prefer?**

Twenty-two (22) respondents, representing a percentage of (73.33%), said they preferred the use of modern education over traditional education, while eight (08) students—representing a percentage of (26,66%)—said they preferred traditional education when asked whether they preferred learning through the traditional way or

using new technological tools. The replies from the pupils are shown in the following pie chart.

**Figure 3.1: Students' Preference for Education**

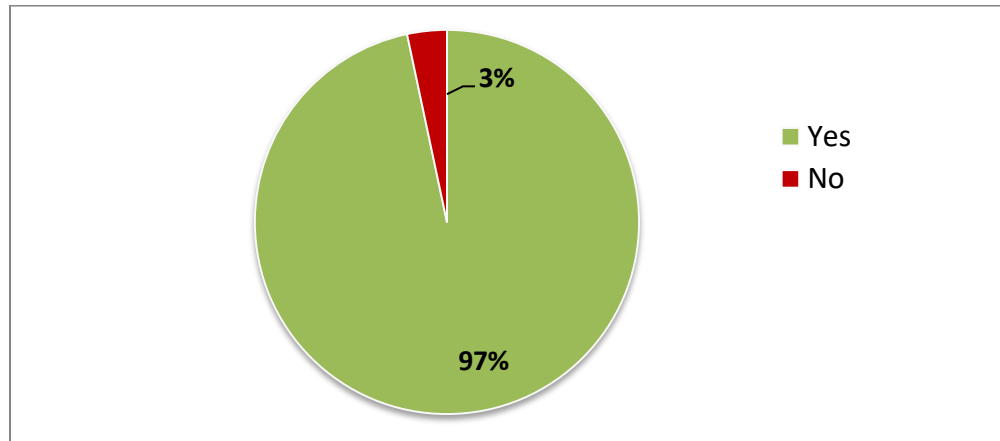


One can observe from the pie chart above that most respondents enjoy using educational technology when they are studying. Nevertheless, they do not neglect using the conventional approach.

### **Question two: Do you use technology for learning?**

The second question concerns whether Master one students use materials to gain information and develop their English vocabulary and pronunciation knowledge.

**Figure 3.2: Students' use of technology for learning**

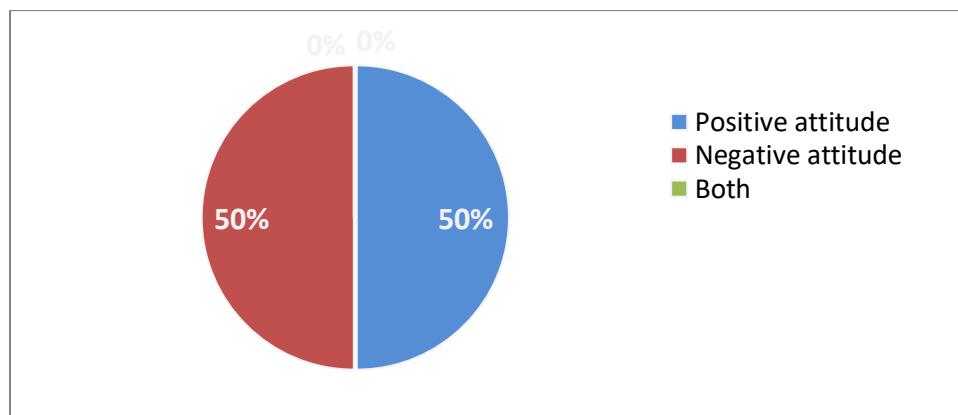


This question was developed to determine how many students use digital technology to study English or whether they do not. Digital technology is used by 96.66% of our representatives, while 3.33 % of them claim not to use it.

**Question three: What impression do you have towards digital technology?**

The following question aims to learn how students feel about using digital technology during the learning process. Positivity, negativity or both can serve as examples of this.

**Figure 3.3: Learners' impression towards digital technology**



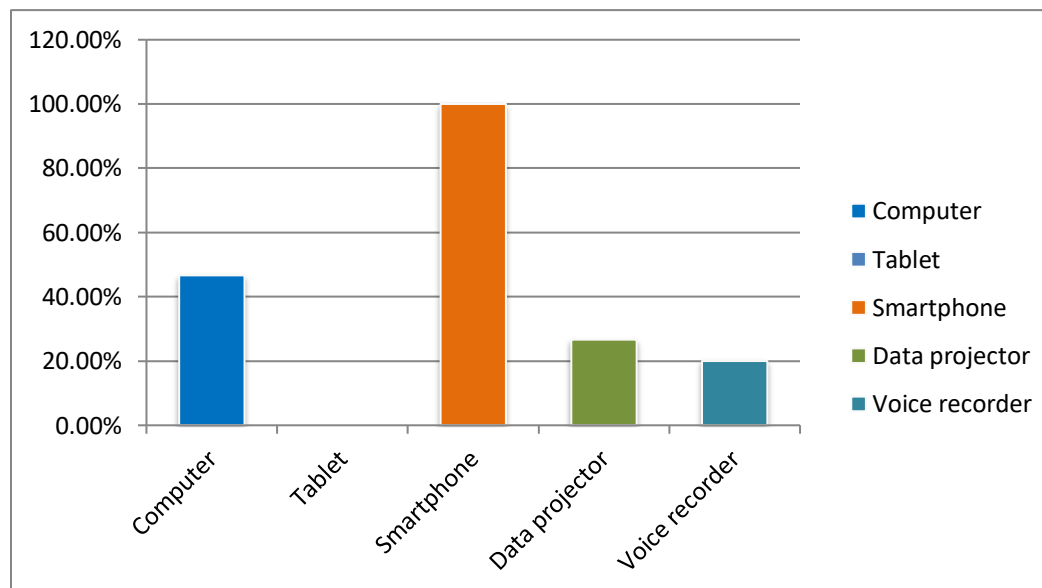
Half of the respondents (50%) selected option one to indicate positive attitudes toward using technology in education. Equally, (50%) of respondents showed a negative attitude toward using technology. However, none (0%) have assumed that they use both.

This finding supports one of the objectives of the current research by demonstrating the significant influence of technology on students' attitudes.

### **Question four: What kind of digital technological tools do you use in the classroom?**

In this question, students are asked to identify the types of technology they use as practical tools in the classroom. It attempts to determine the most popular or widely available forms so that they can concentrate on during the classroom.

**Figure 3.4 The different technological tools used by students**



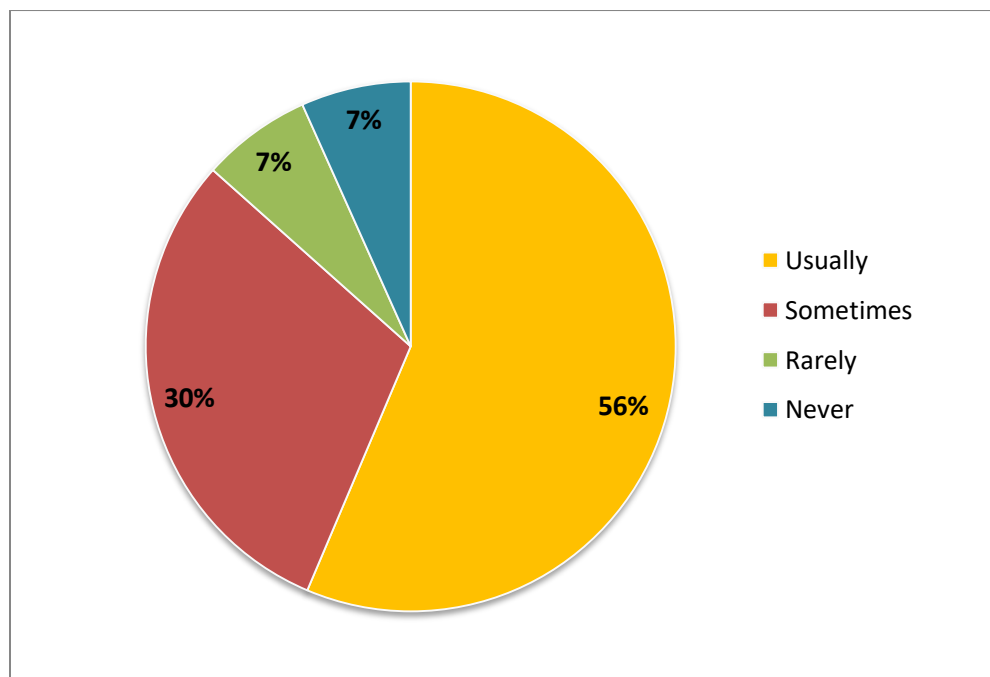
Concerning this question, respondents are given the freedom to choose multiple answers. All of the respondents (30), i.e. (100%), use smartphones and less than half

(46.66%) use computers, and (26.66) use data projectors. At the same time, no one (0%) preferred tablets, and audio recorders were preferred by others (20%).

**Question five: To what extent do you use dictionaries or the internet on your phone/tablet as a support in your class?**

This question aimed to find out how frequently students used their personal technology in class. Over half of the students ( 17), or 56% of the group, acknowledged that they occasionally used technology in the classroom. However, nine ( 9 ) students or (30%) said that they sometimes used it in the classroom. However, two (2) students who represented the percentage of (6.66 %) claimed that they had rarely used it, which was the same case for the "never" option. The following pie chart provides an overview of the various responses provided by the informants:

**Figure 3.5: Learners' use of technology in the classroom**

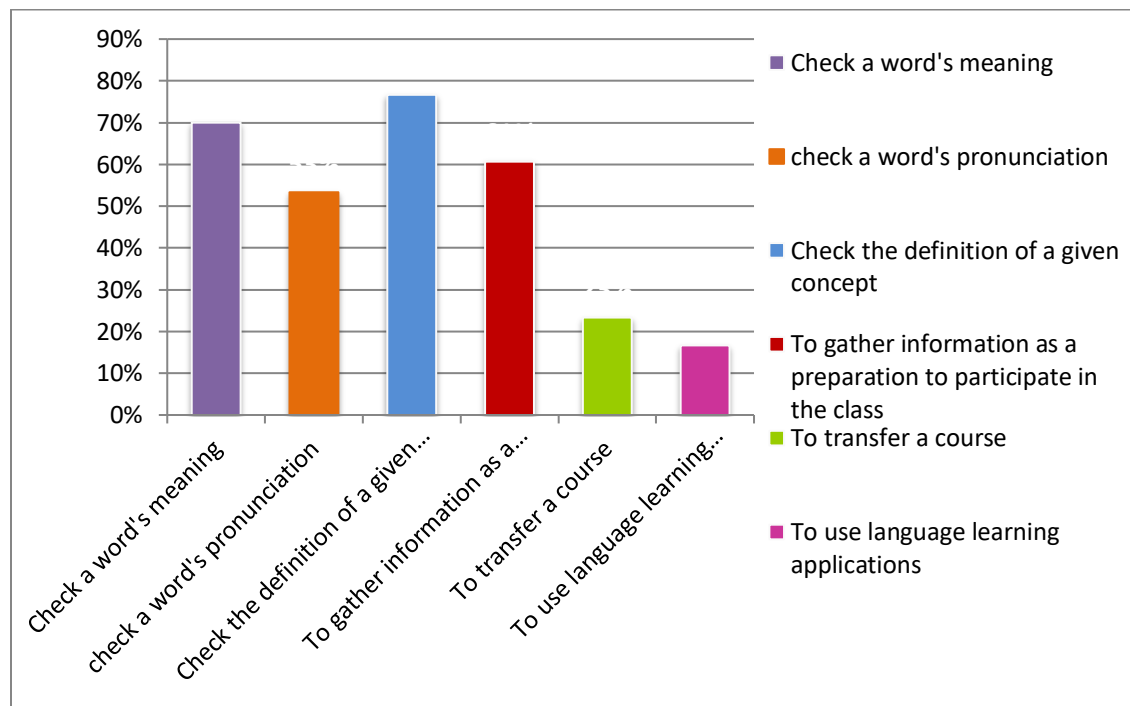


The above pie chart shows that half of the students use educational technology, whereas a few use it seldom.

### Question six: Why do you use such technologies?

This question was developed to know the aim of using technology for students in learning, in which they were allowed to choose more than one answer.

**Figure 3.6: Students technology use aims**



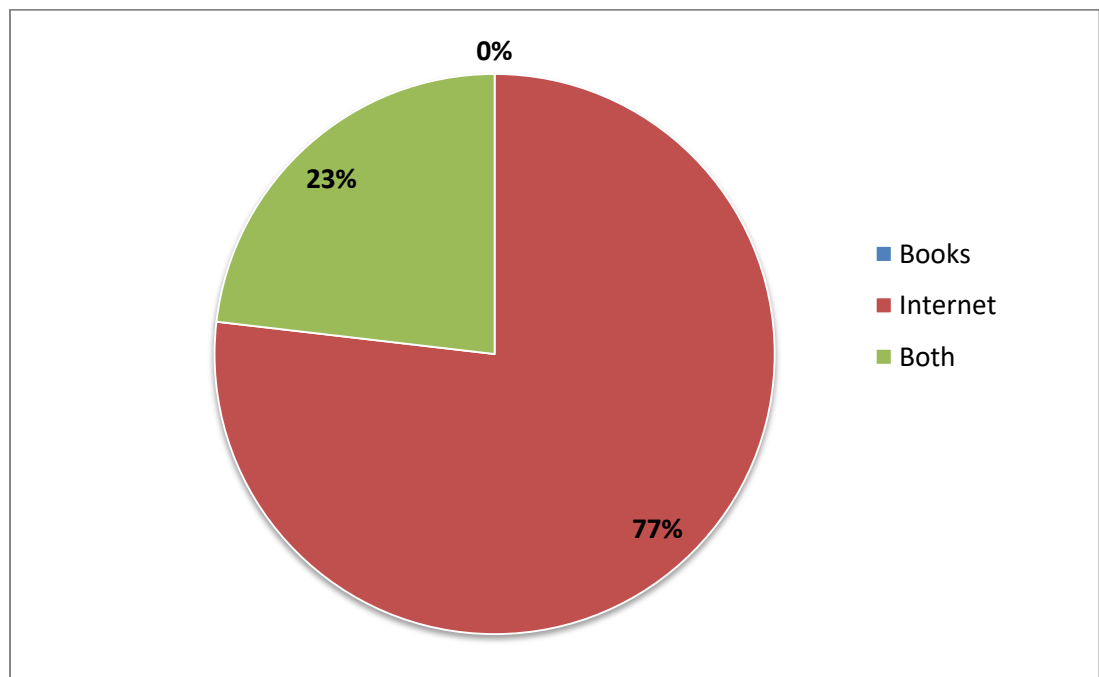
The results showed that 70% use technologies in order to check a word's meaning, 53.33% use them to check the pronunciation of a word, the next option got a percentage of 76.66% use them to check a definition of a given concept, 60.66% used them to gather information as a preparation to participate in the class, and 23.33% used them for transferring a course, in addition, 16.66% utilize them to use language learning applications, and 60% of the students use them to share information. This indicated that

most of the research participants used it to check the pronunciation of words and to gather data to be active in the class.

### **Question seven: While doing a research what do you use the most?**

In order to determine whether the students still use books to conduct their study or if they primarily rely on the internet, question seven was posed. The central majority of the students (22), or 77%, stated that they only used the internet. Eight students, or 23% of the sample, said they used books and the internet to conduct their study, while zero respondents (0%) said they did not rely entirely on books. The accompanying pie chart provides details about the responses.

**Figure 3.7: Students' frequency rates of dictionaries and Internet use**

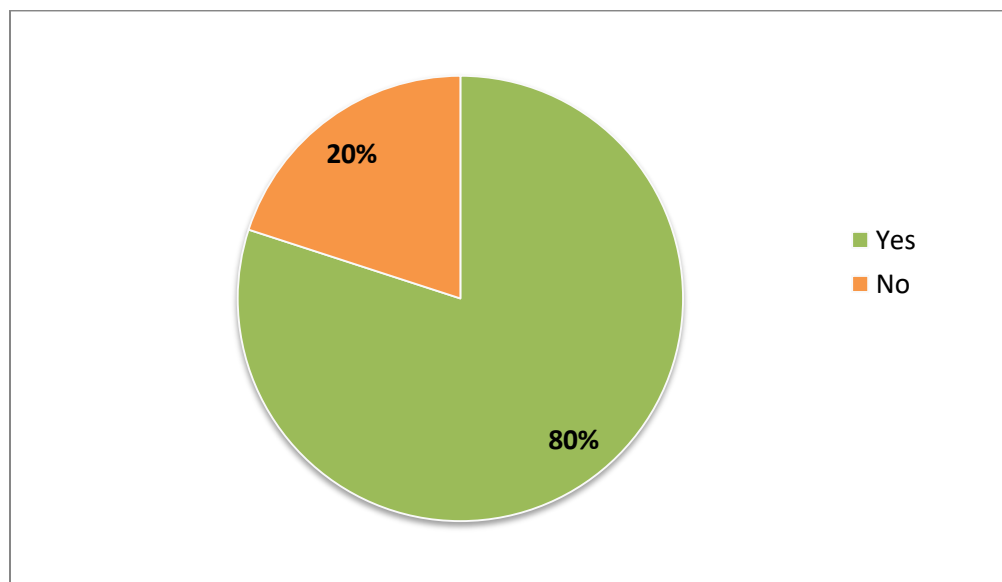


As a result, most respondents rely exclusively on online tools, which provide users with information without demanding effort or time.

**Question eight: Do you wish to spend more time using technology in your classroom?**

The purpose of question eight was to determine if the students liked using technology in the classroom more frequently. The majority of the informants (24), covering a percentage of (80%), responded "yes," and the remaining six students (06), representing a percentage of (20%), said they did not want to use technology in the classroom more often. The accompanying table provides a summary of the responses from the informants:

**Figure 3.8: Time Attributed to technology use in the Classroom**

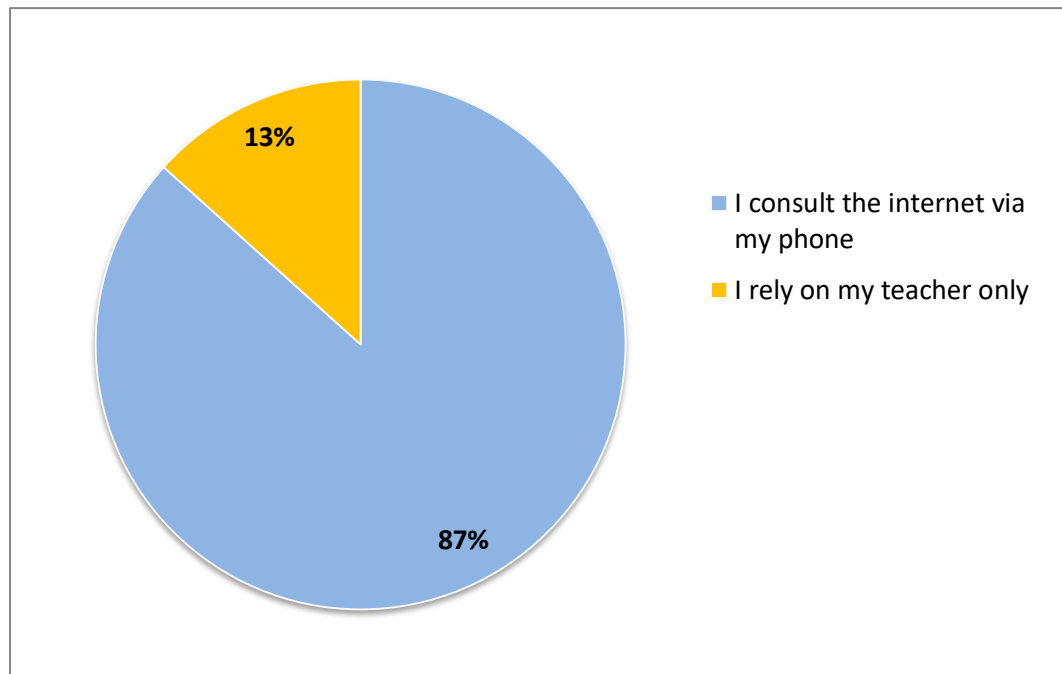


Most informants, therefore, want to use technology in their classes more frequently.

**Question nine: If you need an explanation or a clarification do you rely on your teacher or consult the internet via your phone?**

This question was proposed to determine whether students rely on their teacher for clarifications and explanations or surf the internet via their phones.

**Figure 3.9: Reliance of the students' preferences in having explanations**



According to the figure, 86.66% of participants preferred using their mobile devices with access to the internet to look for information and clarifications, whereas 13.33% chose to rely on their teacher. This shows that most students are fans of using the internet via their phones instead of depending on the teacher which makes them autonomous learners as a result.

**Question ten: How can the use of digital technology enhance learners' autonomy?**

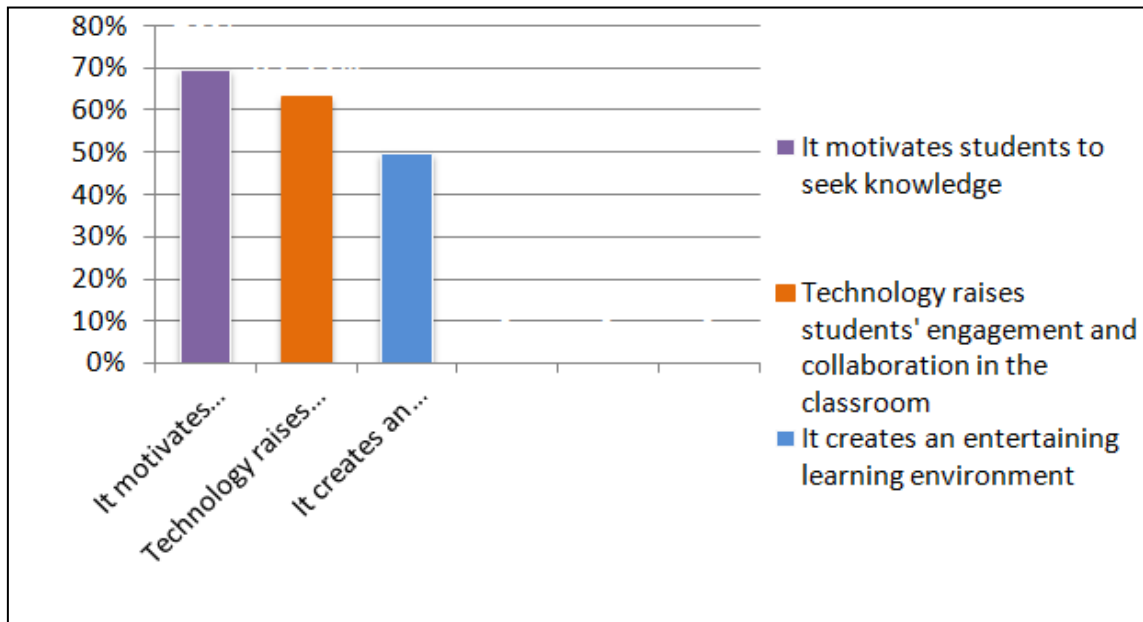
The tenth question was made to know the students' perspective on how digital technology increases learner autonomy. Participants' answers varied in words but agreed on the same idea. Most students said that technology is a wide gate of knowledge that offers students endless information; this includes reliable resources and easy access to compelling data. The latter promotes learners to seek knowledge on the internet and entirely depend on themselves while doing presentations or research.

On the other hand, many participants did not find a suitable answer. Also, six students did not provide an answer.

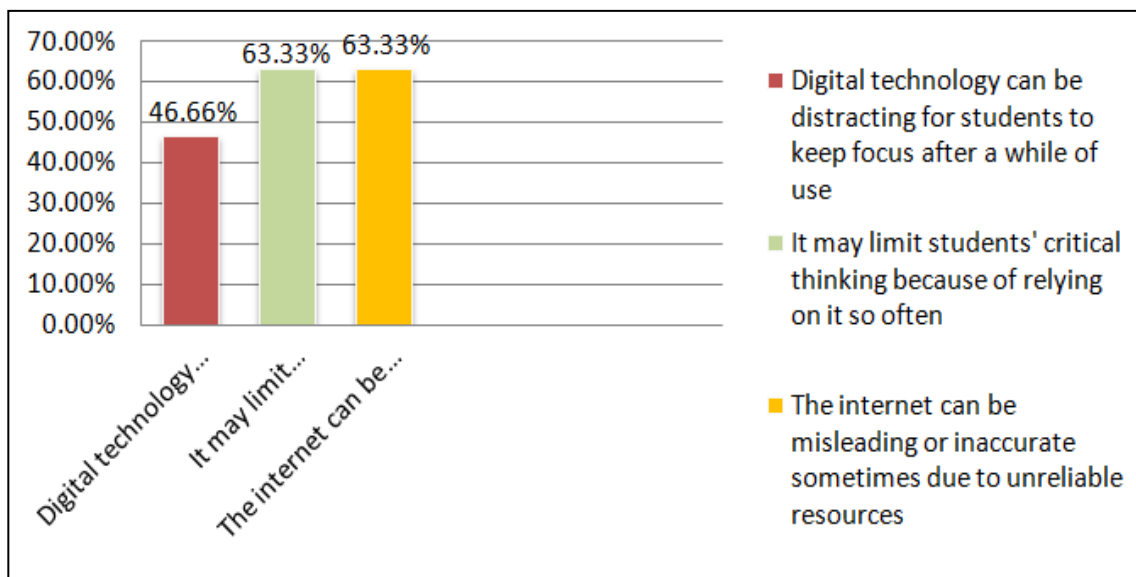
**Question eleven: According to you, what are the benefits and the negative points of digital technology?**

The eleventh question was made to know digital technology's benefits and negative points. The given results showed that among the thirty participants, there was 70% of students who said that digital technology motivates them to seek knowledge, 63.33% stated that technology raises students' engagement and collaboration in the classroom, 50% selected the third option in which it creates an entertaining learning environment, a percentage of 46.66% agreed that digital technology could be distracting for the students to keep focus after a while of use, 63.33% confirmed that technology might limit students' critical thinking because of relying on it so often, at last, 30% emphasized that the internet can be misleading or inaccurate sometimes due to unreliable resources.

**Figure 3.10: The advantages of using digital technology in education**



**Figure 3.11: The disadvantages of using digital technology in education**

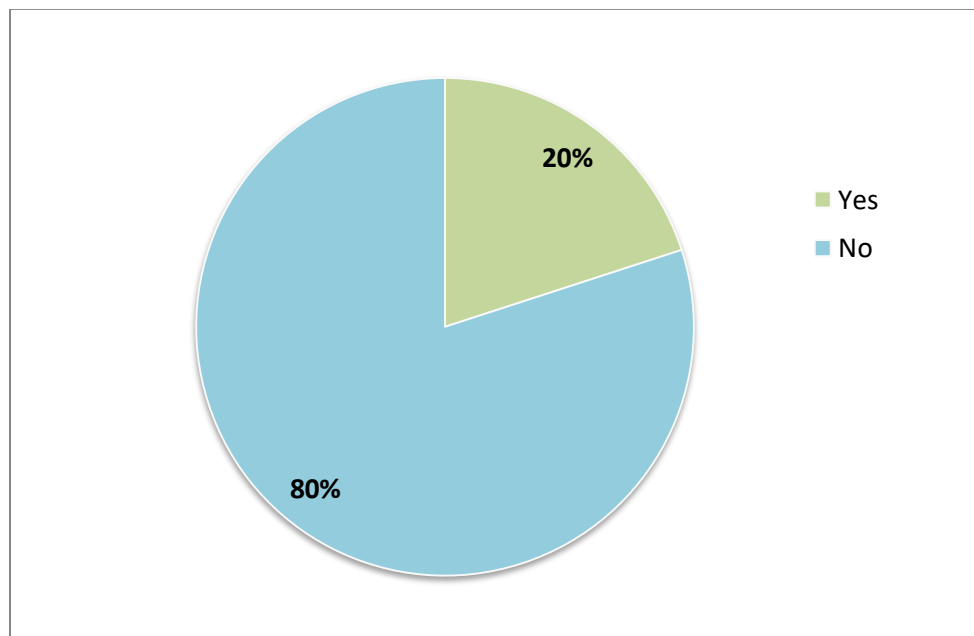


This showed that technology has a non-balanced range of advantages and disadvantages. The shown results demonstrate that the benefits of technology are slightly more.

**Question twelve: Do you think that the English department is equipped with enough technological materials?**

The twelfth question was asked to acknowledge if the students were satisfied with the available technological materials that the English department has or not. Furthermore, when the students were asked if their English department had enough technical tools, the majority of them (26), or 80%, responded that it was not the case, and three respondents, representing the percentage of (20%) said the English department had sufficient technological resources. In the following table, their responses are shown.

**Figure 3.12: Students' satisfaction with the technological tools available in the English department**



Thus, The majority of respondents believe that the English department lacks adequate technological materials.

### **Question thirteen: Do you have any suggestions to improve the teaching and learning situation at your university?**

The thirteenth question was designed to gather different suggestions that the students can offer to improve the teaching and learning situation at their university.

The results showed that the participants suggested for the university to offer internet and advanced technological tools in addition to adopting new techniques such as using digital resources in the classroom. Another category said that it is preferable to include online courses and develop the E-learning approach. To add more, it was mentioned that the university should create clubs for cultural activities and make open discussions for language and culture exchange. Besides, eight students did not find any suitable suggestions to offer. However, most of the participants said the university should provide internet and modern technological tools for improving learning and teaching.

### **3.2.2 Results of the Interview**

The interview consisted of nine (09) key questions to elicit information about how digital technology has affected teaching and learning. Five master's degree teachers at Ain Temouchent University were the interview subjects. To collect accurate data, the researchers emailed the teachers the interview questions.

The questions from the interview were analyzed and are listed below.

#### **Question 01: How long have you been teaching English?**

**Table 3.1: Teachers' years of experience of teaching**

<b>Teacher One</b>	06 years.
<b>Teacher Two</b>	16 years.
<b>Teacher Three</b>	Ten years at the university and ten years in the other levels of education (middle and high schools).
<b>Teacher Four</b>	13 years.
<b>Teacher Five</b>	Ten years.

The duration of the interviewees' time spent teaching English is inquired about in this question. Therefore, it seeks to learn about their teaching experience that might indicate whether or not they use modern teaching tools like digital technology or more traditional teaching methods.

According to the findings presented in the table above, one teacher in the study population has six years of experience, two teachers have ten years of experience, one teacher has more than thirteen years of teaching experience, and another teacher has sixteen years of experience.

**Question 02: Do you think technology is necessary nowadays for EFL teaching and learning?**

**Table 3.2: Teachers' opinion about the importance of EFL teaching and learning.**

<b>Teacher One</b>	Yes, I believe it is a necessity.
<b>Teacher Two</b>	Of course, it is crucial.
<b>Teacher Three</b>	Yes.
<b>Teacher Four</b>	Yes, I believe it is a necessity.
<b>Teacher Five</b>	Definitely, I agree with the use of technology and its necessity for EFL teaching and learning.

This open-ended question was posed to learn more about the teachers' perspectives on the value of integrating digital technology into the classroom. The teachers highly supported this concept. As long as it offers something new and makes it easier for teachers and students to grasp and recall knowledge, they believe it to be vital in teaching and learning English.

**Question 03: Do you use technology in the classroom?**

**Table 3.3: Teachers' use of technology in class**

<b>Teacher One</b>	I do.
<b>Teacher Two</b>	I often use technology
<b>Teacher Three</b>	yes, I do.
<b>Teacher Four</b>	Sometimes.

<b>Teacher Five</b>	Sometimes.
---------------------	------------

This question aims to determine whether technological tools are used in teaching related to the prior one. That is if most lecturers concentrate on and depend on ICT tools for assured lesson plans and comprehension. Encourage pupils to interact and show interest in class as well. According to the table above, most instructors whose opinions were asked out genuinely use ICT to run their classes and lectures. However, two teachers do not frequently employ technology in the classroom.

**Question 04: Do you find it more useful than the traditional way of teaching?**

**Why?**

**Table 3.4: Teachers' preference of the most useful way of teaching**

<b>Teacher One</b>	Yes, I find it more beneficial because it facilitates teaching and learning.
<b>Teacher Two</b>	There is no way to compare the traditional and innovation in teaching; the former focuses on direct interaction between the teacher and the students; however, the latter complements the first.
<b>Teacher Three</b>	Yes, I do since it facilitates the teaching/learning process
<b>Teacher Four</b>	Yes, sure it is. Technology saves my time and facilities my role as a monitor. It provides me with a varied content than the textbook, for example. It motivates students and keeps them engaged. In the Traditional teaching, my work with my students ends when the

	session ends whereas with technology, we can continue working online at any time.
<b>Teacher Five</b>	Yes, I find it to be more beneficial because it facilitates the teaching/learning process

This question is intended to find out the teachers' beliefs about using technology if it is more effective than the traditional way of teaching. The five teachers' responses differed in language, but they all shared the same viewpoint. All teachers saw that it was useful indeed. Two teachers emphasized that integrating technology in the classroom helps simplify and facilitate learners' matters. Another participant stated that technology is time-saving as it provides a variety of information. It also motivates students to be focused and engaged in the class. Technology also keeps students and teachers connected, unlike the traditional method, which consists of face-to-face teaching only; this idea was supported by another teacher who confirmed that the comparison of the two methods is not possible. However, another participant found that technology is useful although it is difficult to use.

**Question 05: What kind of problems do you often encounter while using technology?**

**Table 3.5: Teachers' challenges in the use of technology**

<b>Teacher One</b>	Unfortunately, there are some issues with accessing and using technology in our country.
--------------------	--

<b>Teacher Two</b>	Teaching materials, electricity, weak internet, the student's interest.
<b>Teacher Three</b>	Problems with materials and internet connection.
<b>Teacher Four</b>	Generally, most teachers are not trained in technical problems and online classrooms.
<b>Teacher Five</b>	Lack of competence and knowledge.

In order to learn more about the difficulties that the teachers have encountered while using technology in the classroom, this question was created. All the teachers encountered issues with poor internet connection and electricity, lack of existing materials, and lack of professional training and knowledge, especially when facing technical problems in online courses. In short, teachers face many challenges while using technology in the classroom for teaching, which needs to be taken into consideration.

**Question 06: Do you think that technology is misleading students in their studies? How?**

**Table 3.6: Teachers' perspective about technology misleading students**

<b>Teacher One</b>	Whenever students use technology, there is a chance they get misled. It could be because of the wide range of uncontrolled unverified information. It is up to students to use technology appropriately.
<b>Teacher Two</b>	I agree because they do not employ it the right way.
<b>Teacher Three</b>	I think so. It is true when technology is badly used. Students do not

	make recommended achievements when they rely on ready-made answers to their homework. Thus, their critical thinking does not develop, so they usually cannot distinguish facts from opinions, valid from fake and unreliable information. They may become less creative and lazy students.
<b>Teacher Four</b>	There is a possibility that students might be misled when using technology. It can be due to the widespread availability of unregulated and unconfirmed information.
<b>Teacher Five</b>	No, it is motivating and helpful.

This question aims to determine whether teachers believe that technology can lead students to be misled. On all but one subject, the teachers agreed. The instructors underlined that if technology is misused, it might be misleading. Since ready-made data is available online, students tend to use technology excessively. This limits their creativity and critical thinking because it is uncontrolled. After all, they cannot tell the difference between trustworthy and unreliable sources. It also makes them lazy over time, so it is up to the students to decide how to use it to their benefit. The other participant's viewpoint argues that technology inspires and assists learners

**Question 07: According to you, does using technology motivate learners to be more engaged in the classroom?**

**Table 3.7: The role of technology in increasing students engagement in the classroom**

<b>Teacher One</b>	Yes, I believe it does, as it facilitates obtaining the information necessary to be engaged in the classroom.
<b>Teacher Two</b>	I think it does but with more control of the tutor.
<b>Teacher Three</b>	By experience, yes, it does. However, it depends a lot on the teacher's ICT skills and the extent to which he masters the technology in his hands.
<b>Teacher Four</b>	Yes, I think it does since it makes it easier to get the knowledge needed to participate in class.
<b>Teacher Five</b>	Yes, it is really an excellent motivating factor.

This question explores how the instructors feel about using technology in the classroom and whether it motivates students to participate more actively. The majority of the teachers agreed that it contributes in motivating the students. According to the participants, technology makes getting the knowledge needed to participate in class more accessible and acts as a powerful motivator. Students are likely to trust the process and participate in class if the teacher has strong ICT skills.

**Question 08: When planning a lesson or researching, which tool do you use most? Internet or Books?**

**Table 3.8: Teachers' preference of using internet or books while planning lessons**

<b>Teacher One</b>	Internet.
<b>Teacher Two</b>	I use the internet since it comprises various types of e-books and articles.
<b>Teacher Three</b>	Both are useful. I personally start my research with books in my bookcase and PC. Then I surf on the internet -for easy access, and when I do not find reliable data (books, articles, academic websites ..) I try with books in the university library...
<b>Teacher Four</b>	Both.
<b>Teacher Five</b>	Videos, listening and speaking tracks

The main objective of this question was to identify the best and most appropriate material (books or the internet) for teachers to use while planning classes or conducting research. Two participants clarified that they use both, beginning with books to gather information before moving on to the internet for broader access. Two other educators claimed that they exclusively use the internet since it contains a variety of e-books and articles. The last teacher mentioned using videos, listening, and speaking tracks, all classified as ICTs.

**Question nine: To what extent do you agree that new educational technologies facilitate the learning and teaching process? How?**

**Table 3.9: The way educational technologies facilitates teaching and learning**

<b>Teacher One</b>	Extremely agree. More access to information makes the process faster, better, more obtainable and even more interesting..
<b>Teacher Two</b>	It facilitates teaching by providing efficient equipment and documentation.
<b>Teacher Three</b>	<p>I strongly agree with that. In teaching, technology:</p> <ul style="list-style-type: none"> <li>* Helps me plan my lessons.</li> <li>* Saves my time of preparation</li> <li>* Keeps me in contact with my students</li> <li>* Facilitates the teaching process.</li> <li>* Helps me vary the content of my lessons</li> <li>* And display them in different forms (video, ppt, word)</li> <li>* Assures contact with my students</li> </ul> <p>- for the learning process, technology provides students with different tools to help them:</p> <ul style="list-style-type: none"> <li>* Do research at any time</li> <li>* Do and send homework in a short time</li> <li>* Enrich their knowledge about their lectures available via the internet (ebooks, electronic journals, websites, blogs..)</li> <li>* Contact the teachers at any time.</li> <li>* Plan and organise their time</li> <li>* Get acknowledged via different free apps and courses</li> </ul>

## Chapter three: Data analysis, suggestions and recommendations

---

	<ul style="list-style-type: none"><li>* Continue learning after class and outside the classroom and without the teacher.</li><li>* Develop further his own skills via apps and games..</li></ul>
<b>Teacher Four</b>	I do agree that it facilitates teaching/learning and makes it more interesting.
<b>Teacher Five</b>	They facilitate learning, but teachers generally need training to deal with technology devices.

This question seeks to understand how teachers view the potential of new educational technologies to improve teaching and learning. It is a fantastic facilitator for teachers and learners, and all of the participants in the discussion agreed.

Technology helps students in the educational process by allowing them to complete their homework at any time and conduct research on it. They now have more access to various information that can be presented in many ways. Additionally, it helps to speeds up the process by giving them more time and allowing them to stay in touch with their students.

Also, technology helps students to grasp online courses more deeply. (Blogs, webpages, e-books, electronic journals, etc.).

### **3.3 Interpretation of the students' questionnaire:**

The analysis of the collected data revealed that using technology while teaching and learning dramatically impact education and the development of learners' knowledge in general. The results of the first question demonstrate that most students admire

### Chapter three: Data analysis, suggestions and recommendations

---

learning English through technology. Learners nowadays prefer modern education over the traditional one. Modern education includes using technology, which significantly facilitates learning and teaching. It enables the students to have access to an unlimited variety of information. Furthermore, almost all students use technology in the classroom as it is an effective assisting tool in helping them look up anything that can be confusing or difficult to get.

In question (03), students picked equal sides concerning their attitude towards digital technology, in which half of the sample had a positive impression of using technology and the other half said the opposite. Technology can be seen from different perspectives where each student has his vision, experience and interpretation of dealing with it.

There are many technological tools that learners can use for studying. Smartphones as well as computers are widely spread among students which made them use it frequently and dependently. All students use smartphones since they are available for everyone and are easy to use. In addition, the rate of technology use by students has increased over the years with the development of many educational technologies. The main aim of using technology for students is to check a word's meaning or define a problematic word and collect information for class participation. This contributes in one way or another to enhancing learner autonomy through doing extra work and depending on their selves.

In question (07), students showed that they rely on the internet more than books, confirming the first question that they prefer modern education. E-books and articles are accessible in different forms, such as pdf, on the network. The latter attracts students to

look for information most easily and pleasingly. Also, most of the students supported students' desire to use technology in the classroom, where they liked to spend more time using it in class. It can be motivating and refreshing for students to break the routine occasionally.

### **3.4 Interpretation of the Teachers' Interview**

The teacher plays a huge role in the classroom that can not be replaced. However, most students use their phones to access the internet rather than rely on their teachers. The internet has gained the trust and loyalty of the students, which made them look for clarification and information over the net without referring back to the teacher; this emphasises the role of technology in motivating learners to depend on themselves and encourages autonomous learning.

Most students emphasised that technology contributes in one way or another to enhancing learner autonomy. The internet is a wide gate of knowledge that provides students infinite information, including simple access to helpful material and trustworthy resources. The latter encourages students to rely totally on themselves when conducting research or preparing presentations by encouraging them to seek information online.

No one can deny that technology has brought many valuable things that made an impressive impact in the process of learning and teaching, such as motivating the learners and making them more engaged in the classroom, yet it can limit the students' critical thinking and creates an opportunity for distraction if it is misused.

Despite the technology's disadvantages, students are interested in it, so they want to have more access to different technologies to use them for learning. Furthermore, the

majority of the students said that the English department does not have enough specialized learning materials. Furthermore, findings demonstrated that the university should provide advanced technology tools and internet access in addition to using new methods such as utilising digital materials in the classroom and improving the E-learning strategy and integrating online courses. Moreover, it was suggested that it is likely for the university to establish groups for cultural activities and hold open forums to exchange languages and cultures.

### **3.5 Findings and Discussion**

The researcher formulated a series of hypotheses forming this research investigation's basis. As an initial hypothesis, the researcher proposed that teachers and students are more dependent on technology in the process of teaching and learning. Data gathered from questionnaire responses and teacher interviews were analyzed afterwards. Since teachers and students approve that using digital technology makes learning languages more entertaining, the current research investigation revealed that this theory is correct. Accordingly, digital technology is frequently employed by students and teachers to study and teach languages.

Regarding the second hypothesis, the researcher proposed that using digital technology enhances learners' autonomy in various ways and increases learners' involvement in the classroom. This is so students can benefit from outstanding learning opportunities anytime. This research study showed that this hypothesis is supported by both teachers' and students' feedback. First, digital technology provides new learning styles outside of the school setting and a variety of learning resources, enhancing learners' autonomy. This is done so that the students can later collaborate with peers

using digital platforms, discover creativity through technological features, and adopt new standards and working procedures. Second, learning through technology makes students to be more engaged in the class. It is much simpler to learn using technology since it makes the process easier, enjoyable and very interesting, which motivates the learners to be focused and interested in the class, and that will be reflected in their positive behaviour in the class.

### **3.6 Recommendations and Suggestions**

The researcher has made some helpful recommendations and suggestions based on the findings from this research study that will serve both teachers and students who use technology in educational purposes. Also, provide instruction and suitable tech usage techniques for educating and learning.

Using digital technology in the classroom is crucial for EFL learning and teaching since it encourages student participation and encourages them to work hard. Thus, EFL teachers and students should use it to improve their proficiency in teaching and learning the target language. Here are some points that they can should have in mind:

- Technology fosters effective pedagogical behaviour and has a favourable impact on university students and faculty.
- Digital technology opens up new avenues for teaching and learning in the educational sector.
- Teachers would use various technological tools, including smartphones, computers, and audio recording, in their lessons to improve student participation, get better feedback, and help them grow as learners.

- Pupils should resist using digital technology as a means of plagiarism and cheating.
- Teachers should permit pupils to employ technological apps in their activities when they encounter challenges.
- Pupils can improve their vocabulary and pronunciation with the use of digital technology, which can offer audio messages and the ability to listen to native speakers to help with speaking and conversational skills.
- The possession of electronic books and papers by students can enhance engagement and facilitate study.

Technology allows pupils to improve their learning in many ways and discover what they need by overcoming challenges.

### **3.7 Limitations of the Study**

Like other research studies, this research had some design or methodology issues that impacted the research findings. It was challenging to have the teachers participate in interviews because some could not do so due to work commitments. Hence, we decided to email them the interview questions. The next barrier relates to the chosen population; because the sample was only 30 students and five teachers, it may be difficult to generalize from these findings. Finally, one of the limits can be attributed to the lack of prior research on the subject.

### **3.8 Conclusion**

The results obtained from the two primary research instruments, questionnaires and interviews, have been summarized in this chapter. Also, this chapter offers a

## Chapter three: Data analysis, suggestions and recommendations

---

thorough explanation and analysis of the key findings. Lastly, it makes some insightful suggestions for educators and students on properly using digital technology for learning and teaching.

# General Conclusion

## General Conclusion

---

Technology is increasingly being used in education nowadays. The use of technology in EFL classrooms has been an immense hit and its significance in education is expanding, particularly at universities. The teaching and learning process is continuously being simplified and improved as a result of the development of technology in educational settings, particularly in EFL. For the educational process to be effective, both EFL teachers and students rely on various technology tools. The investigation of the application of technology and its effects on EFL teaching and learning is the focus of the current study. It is important to point out, for instance, how new technology tools may enhance the teaching and learning environment and provide students the chance to explore and adopt the new learning environment.

This study aimed to determine whether students see technology effectively and whether it may increase learner autonomy. Data were gathered using two research instruments, and this study's findings answered the questions provided. The researchers have put forth two hypotheses that claim that technology is becoming increasingly crucial to the teaching and learning process, enhancing learners' autonomy and students' engagement in the classroom.

These hypotheses are valid because teachers and students agreed that they frequently employ technology while teaching and learning. After all, it serves as a time saver and an excellent facilitator. Furthermore, according to Belhoudjar's (2018) study, "Investigating the Use of ICT and its Role in EFL Learning and Teaching: The Case Study of Master One Students and Teachers at Mostaganem University of AbdelhamidIbnBadis,". She found out that students of English have positive attitudes towards the effectiveness of using ICT in learning.

## General Conclusion

---

Additionally, digital technology opens up new learning environments for language learning outside the classroom and shows how it can increase learner autonomy. Also, it is acknowledged that using technology to study increases student engagement in the classroom. In addition, technology-based learning is much easier since it inspires students to pay close attention in class and be interested in what is being taught.

To conclude, this research study was based on the findings and analysis of various studies investigating the idea that digital technology has a potential and significant role in EFL teaching and learning. However, despite the difficulties that both the teacher and the students will face, they should be able to overcome them because of their commitment to achieving the objectives.

This study has demonstrated how digital technology can offer students several possibilities to learn foreign languages, including English, and how using its resources both inside the classroom and outside of it can enhance learning. Digital technological tools are beneficial for both teaching and learning, as they promote success in class.

# References

## References

---

- Albirini, A. (2006). *Teachers' attitudes toward information and communication technologies: The case of Syrian EFL teachers*. *Computers & Education*, 47(4), 373-398.
- Attride-Stirling, J. (2001). *Thematic networks: an analytic tool for qualitative research*. *Qualitative Research*, 1(3), 385-405.
- Beatty, K. (2010). *Teaching and researching computer-assisted language learning* (2<sup>nd</sup>ed.). London: Pearson.
- Belhoudjar, H. (2018). *Investigating the Use of ICT and its Role in EFL Learning and Teaching, the Case Study of Master One Students and Teachers at Mostaganem University of AbdelhamidIbnBadis. A dissertation of MASTER « Science of Language »*. Mostaganem.
- Braun, V., & Clarke, V. (2006). *Using thematic analysis in psychology*. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Brown, J.D. (2001). *Using Surveys in Language Programs*. Cambridge, UK: Cambridge University Press.
- Brown, M., & Murray, F. (2005). *A culture of technology critique*. In M. Cooper (Ed.), *Proceedings of the 33rd annual Australian teacher education association conference*, Griffith University, centre for professional development. Brisbane: GriffithUniversity.
- Bygate, M., & Samuda, V. (2008). *Tasks in second language learning*. London & New York: Palgrave Macmillan.

## References

---

Capan, S.A. (2012). *Teacher Attitudes towards Computer Use in EFL Classrooms*. *Frontiers of Language and Teaching*, 3, 248-254.

Cassim, K. M., &Obono, S. E. (2011). *On the factors affecting the adoption of ICT for the teaching of wordproblems*. In *Proceedings of the World Congress on Engineering and Computer Science* (Vol. 1, pp. 19-21).

Chien, S.P., Wu, H.K., & Hsu, Y.S. (2014). *An investigation of teachers' beliefs and their use of technologybased assessments*. *Computers in Human Behavior*, 31, 198-210

Cowles, M. (2005). undefined. Psychology Press. Creswell, J. W. (2007). undefined. SAGE.

Cox, M. J., & Marshall, G. (2007). *Effects of ICT: Do we know what we should know?* *Education and information technologies*, 12(2), 59-70.

Cuban, L. (2001). *Oversold and Underused: Computers in the Classroom*. Cambridge, MA: Harvard University Press

De Freitas, S., &Maharg, P. (Eds.). (2011). *Digital games and learning*. London & NewYork: Continuum.

Dudeny, G. (2010). *The Internet and the language classroom* (Vol.X). Cambridge: Cambridge University Press.

Duncan, A. (2009). *Education reform's moon shot*. *The Washington Post*. Retrieved on 2023 from <http://www.washingtonpost.com>

## References

---

Ellis, R. (2003). *Task-based language learning and teaching*. Oxford: Oxford University Press.

Gee, J. P., & Hayes, E. R. (2011). *Language and learning in the digital age*. London & New York: Routledge.

Gillham, B. (2000). *The Research Interview*. New York Continuum.

Goals 2000: *Educate America Act*, H.R. 1804. (1994). Retrieved on 2023 from <http://www2ed.gov.legislation/GOALS2000/TheAct/index.htm>

Goodfellow, R. (2006). *From 'equal access' to 'widening participation': The discourse of equity in the age of e-learning*. In J. Lockard & M. Pegrum (Eds.), *Brave new classroom: Democratic education and the internet* (pp. 55–74). Bern & Frankfurt: Peter Lang.

Ito, M. (2009). *Engineering Play: A cultural history of children's software*. Cambridge, MA: MIT Press

Ito, M., Horst, H.A., Antin, J., Finn, M., Law, A., Manion, A., ... Yardi, S. (2010). *Hanging out, messing around, and geeking out: Kids living and learning with new Media*. Cambridge, MA: MIT Press.

Jamieson-Proctor, R., Albion, P., Finger, G., Cavanagh, R., Fitzgerald, R., Bond, T., & Grimbeek, P. (2013). *Development of the TTF TPACK Survey Instrument*. *Australian Educational Computing*, 27(3), 26-35.

## References

---

Jarvis, T., & Rennie, L. J. (1998). *Factors that influence children's developing perceptions of technology*. *International Journal of Technology and Design Education*, 8(3), 261-279.

Johnson, D. & Maddux, C. (2003). *Technology in education: A twenty-year retrospective*. *Computers in the Schools*, 20(1/2), 1-186.

Kabir, S. (2016). *Methods of Data Collection*. Retrieved March 2, 2022, from: <https://www.researchgate.net/publication/325846997>

Kalonde, G., & Mousa, R. (2016). *Technology Familiarization to Preservice Teachers: Factors that Influence Teacher Educators' Technology Decisions*. *Journal of Educational Technology Systems*, 45(2), 236-255.

Kärkkäinen, S., & Keinonen, T. (2010). *Primary School Teacher Students' perceptions Of Technology*. *Problems of Education in the 21st Century*, 19.

Kolb, D. A. (1984). *Experiential learning*. Englewood Cliffs, NJ: Prentice Hall.

Kothari, C. (2004). *Research methodology: methods and techniques*. U.S.A: New Age International.

Lai Chun (2017), *Autonomous language learning with technology: Beyond the classroom*. Bloomsbury Publishing.

Lee Lina, ( 2019 ), *Review of Autonomous learning with Technology Beyond the Classroom*. *Language Learning & Technology*. Vol. 23, No. 1, pp. 40-43.

## References

---

Leedy, P. and Ormrod, J. (2001) *Practical Research: Planning and Design*. 7th Edition, Merrill Prentice Hall and SAGE Publications, Upper Saddle River, NJ and Thousand Oaks, CA.

Levy, M., & Stockwell, G. (2006). *CALL dimensions: Options and issues in computer-assisted language learning*. Mahwah, NJ: Lawrence Erlbaum Associates.

Little David, (2007), *Language learner autonomy: Some fundamental considerations revisited*. *Innovation in Language Learning and Teaching*, Vol. 1, No.1, pp.14–29.

Luke, C. (2003). *Pedagogy, connectivity, multimodality, and interdisciplinarity*.

*Reading Research Quarterly*, 38(3), 397–413.

Martin, C., & Steinkuehler, C. (2010). *Collective information literacy in massively multiplayer online games*. *eLearning and Digital Media*, 7(4), 355–365

McCombes, S. (2019). *How to Create a Research Design*.

<http://www.scribbr.com/research-process/research-design>

McRobbie, C. J., Ginns, I. S., & Stein, S. J. (2000). Preservice primary teachers' thinking about technology and technology education. *International Journal of Technology and Design Education*, 10(1), 81-101.

Mitra S., Dangwal R., Chatterjee S., Jha S., Bisht, R. S., & Kapur, P. (2005). Acquisition of computer literacy on shared public computers: Children and the 'Hole in the wall'. *Australasian Journal of Educational Technology*, 21(3), 407–426.

## References

---

Nakayima, J. K. (2011). *Perceived usefulness, perceived ease of use, behavioural intention to use and actual system usage in Centenary Bank* (Doctoral dissertation, Makerere University).

Norton, L., Tilley, A., Newstead, S., & Franklyn-Stokes, A. (2001). *The pressure of assessment in undergraduate courses and their effects on student behaviours*. *Assessment and Evaluation in Higher Education*, 26, 269–284.

Nunan David & Richards Jack. C (Eds.), (2015), *Language learning beyond the classroom*. Routledge.

Prensky, M. (2001b). *Digital game-based learning* (1st ed.). St. Paul, MN: Paragon House

Prensky, M. (2007). *Digital game-based learning* (2nd ed.). St. Paul, MN: Paragon House

President's Council of Advisors on Science and Technology. (2010). *Report to the president. Prepare and inspire: K-12 education in science, technology, engineering, and math (STEM) for America's future*. Retrieved on 22 February 2016 from <http://www.whitehouse.gov/sites/default/files/microsites/ostp/pcast-stemed-report.pdf>

Purushotma, R., Thorne, S. L., & Wheatley, J. (2008). *10 key principles for designing*

*Video games for foreign language learning*. Retrieved from <http://knol.google.com/>

[k/10-key-principles-for-designing-video-games-for-foreign-language-learning#](#)

## References

---

*Race to the Top Program Executive Summary*. (2009). Retrieved on 22 February 2016 from <http://www2ed.gov/programs/racetothetop/executive-summary.pdf>

Rodinadze, S. &Zarbazoia, K. (2012). *The Advantages of Information Technology in Teaching English Language: Frontiers of Language and Teaching*, 3. 271-275.

Seliger, H. W. &Shohamy, E. (1989). *Second Language Research Methods*. Oxford: Oxford University Press.

Selwyn, N. (2011). *Schools and schooling in the digital age: A critical analysis*. London & New York: Routledge.

Shaffer, D. W., Squire, K. D., Halverson, R., & Gee, J. P. (2005). *Video games and The future of learning*. Phi Delta Kappan, 87(2), 105–111.

Spears, S. A. (2012). *Technology-enhanced learning: The effects of 1:1 technology on student performance and motivation (Doctoral thesis)*. University of West Florida.

Squire, K. (2007). *Open-ended video games: A model for developing learning for an interactive age*. In K. Salen (Ed.), *The ecology of games: Connecting youth, games and learning* (pp. 167–198). Cambridge, MA: MIT Press.

Takona, J. P. (2002). *Educational research: principles and practice*. iUniverse.

Thomas, M., &CutrimSchmid, E. (Eds.). (2010). *Interactive whiteboards: Theory, research and practice*. Hershey, PA: IGI Global.

Thomas, M., &Reinders, H. (Eds.). (2010). *Task-based language learning and teaching with technology*. London & New York: Continuum.

## References

---

Van den Branden, K. (Ed.). (2006). *Task-based language education: From theory to practice*. Cambridge: Cambridge University Press.

Van den Branden, K., Bygate, M., & Norris, J. M. (Eds.). (2009). *Task-based language teaching: A reader*. Amsterdam and Philadelphia, PA: John Benjamins.

Virkus, S. (2008). *Use of Web 2.0 technologies in LIS education: Experiences at Tallin University, Estonia*. In L. Tedd (Ed.), *Program: Electronic library and information systems* (pp.262- 274).

Wilkinson, D. & Birmingham, P. (2003). *Using Research Instruments: A Guide for Researchers*. London: Routledge Falmer.

Williams, M., & Burden, R. L. (1997). *Psychology for language teachers: A social constructive approach*. Cambridge, UK: Cambridge University Press.

Zhang, C. (2013). *A Study of Internet Use in EFL Teaching and Learning in Northwest China*. *Asian Social Science*, 9(2), 48-52.

# Appendices

# Appendices

---

## Appendix I

### Students' questionnaire

Dear students, we have a collection of questions you are kindly requested to answer to learn about student perceptions and expectations of the use of digital technology in education and how it affects English language learning. Some questions only require putting an X on the correct box.

1. What do you prefer?

Traditional Education  Modern Education

2. Do you use technology for learning?

Yes  No

3. What impression do you have towards digital technology?

Positive attitude  Negative attitude  Both

4. What kind of digital technological tools do you use in the classroom? \*you can choose more than one\*

Computer  Tablet  Smartphone  Data Projector   
Voice Recorder

5. To what extent do you use dictionaries or the internet on your phone/tablet as a support in your class?

Usually  sometimes  rarely  never

6. Why do you use such technologies? \*You can choose more than one\*

- Check a word's meaning
- check a word's pronunciation
- Check the definition of a given concept

# Appendices

---

- To gather information as a preparation to participate in the class
- To transfer a course
- To use language learning applications
- To share information

7. While doing research what do you use the most?

Books  internet  both

8. Do you wish to spend more time using technology in your classroom?

Yes  No

9. If you need an explanation or a clarification, do you rely on your teacher or consult the internet via your phone?

I rely on my teacher only  I consult the internet via my phone

10. How can the use of digital technology enhance learners' autonomy?

.....

.....

.....

.....

.....

11. According to you, what are the benefits and the negative points of digital technology?

- It motivates students to seek knowledge
- Technology raises students' engagement and collaboration in the classroom
- It creates an entertaining learning environment
- Digital technology can be distracting for students to keep focused after a while of use

# Appendices

---

It may limit students' critical thinking because of relying on it so often

The internet can be misleading or inaccurate sometimes due to unreliable resources

12. Do you think that the English department is equipped with enough technological materials?

Yes  No

13. Do you have any suggestions to improve the teaching and learning situation at your university?

.....

.....

.....

.....

.....

.....

☺ Thank you for your collaboration ☺

## Appendix II

### **Teachers' Interview**

The purpose of the following interview is to get your opinions on how technology has affected EFL teaching and learning. Therefore, we kindly ask to respond to the following questions.

1. How long have you been teaching English?

.....  
.....

2. Do you think that using technology is necessary nowadays for EFL teaching and learning?

.....  
.....  
.....

3. Do you use technology in the classroom?

.....  
.....  
.....

4. Do you find it more useful than the traditional way of teaching? Why?

## Appendices

---

.....  
.....  
.....

5. What kind of problems do you often encounter while using technology?

.....  
.....  
.....

6. Do you think that technology is misleading students in their studies? How?

.....  
.....  
.....

7. According to you, does the use of technology motivate learners into being more engaged in the classroom?

.....  
.....  
.....

8. While planning a lesson or researching, which tool do you use the most? Internet or Books?

## Appendices

---

.....  
.....  
.....

9. To what extent do you agree that new educational technologies facilitate the learning and teaching process? How?

.....  
.....  
.....

## **Résumé :**

L'utilisation de la technologie éducative dans l'enseignement et l'apprentissage de l'anglais langue étrangère (ALE) est devenue de plus en plus courante ces dernières années. Les enseignants et les étudiants ont constaté que l'utilisation de la technologie éducative peut être un outil précieux pour soutenir l'enseignement et l'apprentissage sans ignorer les techniques conventionnelles. Une étude de cas menée à l'Université d'Ain Temouchent a montré que les enseignants et les étudiants préfèrent utiliser la technologie éducative pour améliorer l'enseignement et l'apprentissage de l'ALE. Les résultats de l'étude ont conclu que l'utilisation de la technologie éducative est cruciale dans le processus d'enseignement et d'apprentissage de l'ALE.

## **ملخص :**

اكتسب استخدام التكنولوجيا التعليمية شعبية كبيرة في تعليم و تعلم اللغة الانجليزية كلغة اجنبية في السنوات الاخيرة. كما حث المعلمون و الطلاب على ان استخدام التكنولوجيا التعليمية يمكن ان يكون وسيلة فعالة لدعم التدريس والتعلم دون التخلي عن النظام التعليمي الكلاسيكي. اظهرت الدراسة الحالية بعين تيموشنت ان معظم الطلاب والمعلمين يفضلون استعمال التكنولوجيا التعليمية للمساهمة في تحسين تلقين اللغة الانجليزية كلغة اجنبية. توصلت هذه الدراسة الى ان للتكنولوجيا اثر بالغ الاهمية في عملية تدريس وتعلم اللغة الانجليزية كلغة اجنبية.