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Submitted and Defended by:
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## The Technical Difficulties of Online Teaching and Learning for EFL

## Users in the Era of Covid 19

The Case of First Year Master's Students of English Language at the University of

Biskra, Algeria.

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**Dissertation Submitted to the Department of Foreign Languages as Partial
Fulfillment of the Requirements for the Degree of Master in Sciences of Language**

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## Dedication

*I dedicate my dissertation work to my family. A special feeling of gratitude to my loving parents,* **Abderrahmane** *and* **Salima** *whose words of encouragement and push for tenacity ring in my ears. I carry all the meanings of love to my brothers and sisters* **Ramzi**, **Zaki**, **Salah**, **Wissal** *and* **Djoulia** *because they have always been by my side when I was immersed in my research.*

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# Abstract

This study aims to explore the effects of technical problems facing students and teachers during online learning and teaching, and focused on several objectives. First, outlining the most important challenges and barriers that EFL students encountered during their experience of the online education system. Second, trying to understand the best methods and practices to motivate students to study and create an atmosphere of interaction and communication with the teacher. Third, focus on providing solutions around the best online platforms and appropriate tools in the learning and teaching process. In fact, there are no empirical studies illustrating the challenges that the University of Biskra faces with regard to the study problem. Therefore, the researcher relied on a sample of forty English language students from the first year of a master's degree to participate in a questionnaire on the one hand, and an interview with six university teachers from the Department of English on the other. Two methods of data collection were organized in a structured manner to ensure that participants provided as much detailed information as possible. Finally, through descriptive analysis of the chosen methods, the study revealed several influences caused by technical problems on the quality of online learning and teaching. Poor internet connectivity and lack of experience and training by teachers and students to use the new system based on online platforms were among the main reasons. Through the results of the study, it was possible to conclude that there are many technical problems centered in the inability of the teacher and student to use the platforms on the one hand, in terms of inefficiency, and the lack of an appropriate motivational study atmosphere for learning and teaching on the other hand. Despite this, the study showed the possibility of coming up with solutions and proposals that lead to the development of the distance education system. By improving the quality of the academic experience of these new systems, the premise that prompted their formal introduction into higher education was the COVID-19 pandemic crisis.

**Keywords:** Covid-19, Online Learning, ICT, distance learning, EFL.

# List of Abbreviation and Acronyms

**WHO:** World Health Organization

**E-Learning:** Electronic Learning

**EFL:** English as a Foreign Language

**ELL:** English-language learner

**COVID-19:** Coronavirus disease

**ICT:** Information and Communications Technology

**TPACK:** Technology, Pedagogy and Content Knowledge

**SAMR:** Substitution, Augmentation, Modification and Redefinition

**LMS:** Learning Management Systems

**CMS:** Course Management Systems

**VLE:** Virtual Learning Environments

**CG:** Google Classroom

**CHED:** Commission on Higher Education

**SRCs:** Student Representative Councils

**IT:** Information Technology

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# Chapter 1: Introduction

**Introduction**

In late 2019, a virus called covid-19 spread all over the world, causing panic among governments and peoples about how to deal with it. It was first detected in Wuhan, China and then immediately spread rapidly across the country. On March 11, 2020, the World Health Organization (WHO) declared this event a global pandemic (Cucinotta & Vanelli, 2020). Algeria is one of the countries affected by the virus, and it has been spreading since then until now, which has greatly affected all areas of life. Thus, due to the rapid spread of it, the Algerian government has struggled to break the chain of Covid-19 spread by urging all people not to do activities outside the home, reducing social interaction and shifting education methods to systems that rely on the Internet and technology.

In education, all universities in Algeria are temporarily closed. This is being done to curb the spread of Covid-19. Even under these conditions, the implementation of the learning activities must continue. Therefore, the Ministry of Higher Education has ordered that teaching and learning activities are conducted at home, so online learning and teaching cannot be avoided. Through what has been mentioned, the focus of this study mainly revolves around the impact of the application of the distance learning system in education for users, whether students or teachers within the academic framework during the peak period of the spread of the virus. In other words, this study focuses on the effects of technical difficulties on online teaching and learning for EFL users in the era of Covid-19.

In this light, the introductory chapter is divided into five sections starting with the background to the study, the statement of the problem, the research objectives, the research questions and hypotheses and the structure of the thesis.

## 1.1. Background of the study

Education refers to the systematic acquisition of new preferences, attitudes, values, skills, behavior, knowledge, and understanding in schools and universities. For a long period, approaches such as research, assignments, videos, storytelling, training, and discussion have been used to help learners acquire knowledge and values (Altun, 2017). Learning can be achieved through self-study, where a person learns everything on their own or with little guidance, or they can attend classes, which can be virtual or face-to-face. However, universities and colleges have adopted virtual education system, especially those

that work and study at the same time. Choosing a learning and teaching style depends on the academic environment, student learning ability and teachers teaching ability (Pham et al., 2019).

The entire direction of education, both online and in the classroom, has been disrupted in the wake of the COVID-19 pandemic. The covonavirus disease (COVID-19) has had a devastating impact on all sectors of the global economy since the World Health Organization (WHO) declared it a pandemic in March 2020. The first cases were reported in Algeria in March 2020. The rising number of confirmed cases and deaths prompted the government to enact stricter regulations across the country to keep the population safe.

The Ministry of Higher Education closed all universities, which had a significant negative impact on education, as social distancing was an important element in preventing the spread of the disease. Therefore, despite the circumstances, they inevitably tried to develop alternatives for the school-leaving certificate. However, there was no other alternative than the introduction of distance learning, where students would be able to access education from their homes via the Internet, to ensure that the teaching-learning process was interrupted as little as possible in all universities. Multiple institutions were involved in this transition to ensure students and teachers receive quality online teaching materials and are able to conduct their assessments without disruption.

Online education meant carrying out the pedagogical processes using electronic devices such as smartphones, laptops and computers that students could access. According to Singh & Thurman (2019, pp. 289-306), virtual education over the internet represents a platform that facilitates the educational process by making it more flexible, creative and student-centric. It can increase equality by making education accessible to anyone with an internet connection, and is therefore more cost-effective for the students in remote and rural areas. Therefore, the provision of education becomes easier, especially in poor countries, as the WHO identifies it as a crucial tool to meet educational needs around the world (Colace et al., 2006).

Following this, universities have implemented several creative approaches to combat the crisis in the region by using applications and software such as Moodle, Zoom and Google Classroom to help students take online classes. Home learning was accepted as the new norm across the country, which helped boost learners' confidence and security, and

helped universities stay in touch with students and teachers throughout the period while everyone was struggling to make ends meet to adapt to the new conditions (Agnoletto & Queiroz, 2020)

Despite all the situations related to the pandemic, online education and learning was the best and appropriate solution taken by universities in order to supplement education. This study aims to delve into the application of this surprising educational system, and to try to focus on the experiences of users, including students and teachers. Thus, knowing the effects of technical problems in this new system, which impede the correct learning and teaching atmosphere. Returning to the general problem, most of what was taken into account through background studies, that the Internet and the financial inability of families to provide the appropriate devices in order to use virtual platforms, are among the main obstacles, especially in the conditions of the covid era.

## 1.2. Statement of the problem

The COVID-19 pandemic has presented a demand for online education in a way that Algerian higher education institutions cannot keep up. In a situation where such demand exists, an abrupt transition might prove impossible, particularly in regions where the required resources are not readily available. Additionally, teachers were not well versed in the art of distance learning and ensuring curriculum is completed on time, and administrators may also need extensive training on how to remotely manage teams and complete all assignments on time. Finally, student resistance could prevent any government implementation of integrating virtual learning methods in place. With this difficulty that the pandemic presents in the region and beyond, and the potential impact that could be experienced from future pandemics. So it is clear that the ability of Algerians to quickly utilize the available technology, to mobilize stakeholders to develop relevant contingency mechanisms to adapt to new norms, and to offer the corresponding infrastructural adjustments, determine the continuation of learning and teaching in all universities becomes.

This study aims at determine the challenging and obstacles confronted by English Language Learners (ELL) in the department of English at Mohamed Khider University of Biskra, Algeria. Based in what has been said, within the specific Algerian university students & teachers when using technology to put it differently, they suffer from the lack

of knowledge of how to deal with e-learning. It would be useful to examine and evaluate the experiences of learners and teachers in a term of the effects of technical difficulties on teaching and learning for EFL users in the era of Covid 19.

## 1.3. Research objectives

In light of what has been said, the pandemic has affected every aspect of human life and education is one of them. Moreover, online learning is considered as the best solution during the Covid 19 era. These points led to the initiation if this study which is on : the effects of technical difficulties on online teaching and learning for EFL users in the era of Covid-19. Hence, the objectives of this study are :

1- Identifying e-learning challenges and barriers during the COVID19 crisis faced by EFL students.
2- Understanding and using best practices and techniques to engage and motivate EFL learners and teachers in e-learning.
3- Familiarizing EFL students and teachers with platforms and applications that can help them improve and enhance education during the pandemic.

## 1. 4. Research questions and hypotheses

The current study focuses on investigating the effects of technical difficulties on online teaching and learning for EFL users in the era of Covid-19. It is an attempt at answering a few questions that pertain to university teachers as well as the first year master's students of English. The specific objectives of the investigation can be expressed in the following research questions:

1. What are the challenges of online education that EFL students & teachers suffer from in Algeria ?
2. What are the technical problems that students and teachers face during the online study process?

This thesis focuses on studying the technical problems that teachers and students face during their experience of the online education system. Hence, it is based on two hypotheses which are:

*H1*. If the results of the studies show that the EFL learners find it difficult to learn online, the problem is based on the lack of knowledge about this new system, as well as the technical difficulties surrounding it.

*H0*. If the results of the studies show that the EFL learners do not find any big difficulties to learn online, There is no problem in the matter.

## 1.5. Structure of the dissertation

This dissertation consists of five chapters.

Chapter one presents the general introduction, the background of the study, the problem statement, the research goals related to the dissertation, the research questions, and the hypotheses that will be answered after analyzing the data collected from the participants and the structure of the work.

Chapter two provides an overview of the literature. It presents the main points and aspects related to the subject under study. It focuses on two important sections:

- An introductory section on the concepts of e-learning and the systems used in directing it to higher education institutions. As well as a look at previous studies in the field of technology and communications and their relationship with platforms used in education and online learning.
- A section that explains studies related to the technical difficulties and problems that students and teachers face during their experience of the online education system. As well as its impact on academics and academic studies during the Covid-19 pandemic.

Chapter three presents the methods chosen to answer the research questions presented in the first chapter. It introduces the general methodology used in this work, describes and justifies the procedures used to collect data and how to analyze them. This chapter ends by mentioning a number of ethical considerations.

Chapter four presents and discusses the results of the data collected from the participants. In this chapter, all research questions are answered based on the analysis.

Chapter five contains a general conclusion for the dissertation. It summarizes the main results of the research and their importance. This chapter concludes with an acknowledgment of the study's limitations, future prospects and a series of recommendations.

# Chapter 2: Literature review

**Introduction**

Currently, the higher education system is in the process of constant change, and universities are keeping up with the requirements, desires and needs of students. Therefore, information, technology and e-learning systems are considered an important element in university activities. These institutions are increasingly investing  in online systems and devices (Popovici, 2015, p. 180). However, in the age of technology, one of the major challenges of universities is the integration of innovative e-Learning systems that enhance and support  both  teaching  and  learning (Fischer, 2014, p. 63-69).

Taking into account the above aspects. It can be concluded that the transition to e-learning has a significant impact on the educational process in terms of students' and teachers' perceptions of the use of online environments in teaching and learning processes. Thus, these existing ideas become the core of this study. Therefore, it is important, appropriate and necessary to analyze whether students and teachers are adjusting to e-learning and  are satisfied or dissatisfied with this exclusive online experience. The purpose of this study is to investigate the views of students and teachers on the e-learning experience during the Covid-19  pandemic  to improve and strengthen e-learning systems.

In other words, this study attempts to explore several points. First, how learning has been affected during this crisis. Second, students' and teachers' perceptions of using e-learning platforms. Finally, understand how these skills affect the process of understanding and  learning. To  summarize, the study aims to highlight the main challenges that EFL students and teachers face in online learning, and in what contexts these platforms are most likely to be used in universities.

## 2.1. Definitions of e-learning

Due to its complexity, several definitions have been proposed for the concept of e-learning. Simply put, e-learning refers to the use of information and computer technologies and systems  to create and design learning experiences (Horton, 2006). Similarly, Elmari Engelbrecht (2005) describes e-learning as the concept of using electronic media typified by the Internet, CD, cell phone or television to enable distance learning and teaching (p.45). In simple terms, e-learning refers to the transfer of knowledge and education using a variety of electronic devices (Koohang, 2005, pp. 191-192). Which helps in the process

of developing the classic system based on presence within the classes into a system based on online interactions. (Cohen, 2006).

In addition to the above, other researchers have presented their definitions in several other aspects. According to Schank (2002) e-learning is "communication and learning activities via computers and networks (or electronic means)". More specifically, Fry (2000) defines e-learning as "the delivery of training and education through online interactivity and a range of other knowledge gathering and dissemination technologies". Moreover, Griggs & Downing (2002, pp. 47-53) share the same definition as Fry. They defined e-learning as the creation and dissemination of knowledge through online services in the form of information, communication, education and training. Moreover, e-learning is self-directed learning based on technology, especially web-based technology (Bleimann, 2004, p.191-195).

Internet and web technologies are important in online learning. Horton (2001) defines e-learning as "the use of the Internet and digital technology to create experiences that shape people." In addition to web technology, e-learning requires multimedia learning materials (Evans & Fan, 2002, p.127-134). Therefore, e-learning was developed with a focus on information and communication technology (ICT) to improve learning performance and efficiency (Hamid & Lytras, 2002, p.311-316, p.40-51). In addition, online learning effectively requires technology to educate students using two-way video, two-way computer interaction, cables, satellite downlinks, and the Internet (Evans & Hasse, 2001). To illustrate Honey (2001, pp. 200-202) has provided many good examples of learning activities involving ICT. These examples include email learning, online research, online discussion, and email coaching. From these definitions and examples, e-learning can be defined as learning activities that invole using computers, networks and multimedia technologies.

In fact, from the definitions of e-learning, several important points can be taken that serve the content of the study. First, e-learning is the main tool for online communication between its users, students and teachers. Secondly, online learning and education depends mainly on the features of e-learning. Thus, choosing the appropriate features helps in facilitating the learning process in general. Finally, information and communication technology is the main and approved source for the development of distance education. In

order to provide the appropriate atmosphere based on interaction between users of the system.

After several terms related to distance education were mentioned in the previous paragraphs, it is now necessary to clarify the most important differences, especially between e-learning and online learning.

## 2.2. E-learning or online learning?

Through the concepts of e-learning mentioned in the previous paragraphs. The most important differences between online learning and e-learning should be clarified in order to facilitate understanding the difference in information when accessing the upcoming titles in the research.

Rapid technological development facilitated distance learning (McBrien, 2009). Most terms (e-learning, open learning, web-based learning, computer-based learning, blended learning, m-learning, etc.) share the ability to use computers connected to a network that may be learned anywhere, anytime, and by any means (Cojocariu, 2014, p.116). Online learning can be defined as a method of improving the educational learning process by making it more student-centered, innovative, and adaptable. Online learning is defined as a learning experience in a synchronous or asynchronous environment using a variety of Internet-enabled devices (mobile phones, laptops, etc.). Students can learn and interact with teachers and other students (independently) wherever they are in these environments (Singh & Thurman, 2019, pp. 289-306).

Synchronous learning environments are structured in such a way that students attend live classes, where there is real-time interaction between educators and students, and there is the possibility of immediate feedback. However, asynchronous learning environments are acceptable, learning content in the form of live lessons is not available in such a learning environment and it can be found in a variety of learning systems and forums. Also, Immediate feedback and reaction is not possible in such an environment (Littlefield, 2018).

In Short, the difference between e-Learning and online learning is that with e-learning, students can interact with teachers using the Internet only. They cannot study or communicate with their teacher even if they are on the same premises. Online Learning, on the other hand, students can use virtual conferencing software of cloud meeting to

interact directly with teachers and study online over the Internet. In addition, both e-learning and distance learning are about the same type of learning facility to prevent students from physically attending the classroom. They can use the internet to study the course without leaving their seats.

## 2.3. E-learning in higher education

Whether it is e-learning or traditional on-campus education, education plays an important and vital role for people living in developing countries. As Säljö (2000) pointed out, learning and knowledge are important factors related to people's perception of economic and social development, through the understanding that the development of education and the opportunities for expansion and its experience in new dimensions, are fundamentally linked to the developmental situation of society. In other words, a society that lacks economic and developmental awareness in general, suffers from a lack and slow implementation of new educational systems. Consequently, this will result in obstacles and challenges during its first trial.

It is important that countries around the world maintain stable levels of human capital. This is because from an education perspective, it will lead to its collapse. This is done by highlighting the most important ways and plans that go in all areas of life (The World Bank, 2000). This is especially true in developing countries, where growth through education is often seen as the key to development. In recent decades, a technological revolution has taken place in much of the modern world. Society has evolved from a society shaped by the living conditions of industrialism to today's knowledge society, in which creativity and ingenuity drive and guide society (Hargreaves, 2003).

Previous societies were characterized almost exclusively by an educational system in which teachers and students physically interacted in the classroom. Major technological developments that have shaped society, especially in the last twenty years and above all through the Internet have changed our view of education (Castells, 2001). Today, for example, we speak of concepts such as the flipped classroom (Knewton, n.d.). This concept is related to the way in which teachers and students in today's education systems use various information and communication technologies (ICT) for teaching and learning activities in classrooms.

Many research studies have shown that ICT and e-learning are important for teachers and students in higher education (Kirkwood, 2009). One reason is that the use of such technologies creates more flexible solutions for students (Sanderson, 2002; Laurillard,2004; Anderson, 2008), who primarily have the opportunity to study online regardless of the geographic location of the learners. Recent research also suggests that another important change brought about by ICT and e-learning is the increased flexibility and allowing universities around the world to enroll larger numbers of students (Andersson, 2008).

However, another element of e-learning that needs to be mentioned here is that its implementations in the classroom has also proven to be relatively expensive in the transition between traditional education and e-learning-based education (The World Bank, 2000). However, there seems to be a common understanding among researchers that the use of e-learning in higher education is far more cost-effective in the long run than education delivered in more traditional ways (Sanderson, 2002, pp. 185-188 & The World Bank, 2000). For example, Sanderson (2002) explained that this cost reduction is the result of reductions in various operating costs. One reason that traditional instruction costs more than e-learning is the higher staff costs (Sanderson, 2002).

Changes in the way higher education is delivered through the use of e-learning are particularly evident in developed countries in Europe and North America (Bates, 2001). The Nordic countries have invested in various IT tools in education and are considered world leaders in this area (Myndigheten, 2006). But what about areas categorized as developing countries? Efforts by many developing countries to incorporate e-learning into higher education are still in their infancy compared to developed countries, according to Sife & Sanga (2007). Even those developing countries that want to introduce e-learning as a tool in higher education, they often encounter various obstacles; for example poor infrastructure and access to information, lack of institutional support, necessary resources or internet access, poor technological skills and so on (Sife & Sanga, 2007). In the same content Denis (2010) considered that the effective implementation of e-learning was based on the fact that universities were obliged to train or hire staff to deal with changes in technical aspects and pedagogical strategies.

To adopt and use e-learning in educational activities for univercity, it is desirable that sufficient resources and conditions already exist within the organization. For example,

Gulati (2008), for example, explained that the lack of different types of resources is a common problem when adopting e-learning. Developing countries spend more money on higher education than developed countries, based on their wealth and income (The World Bank, 2000). Despite this, developing countries spend significantly fewer resources per student than developed countries, and thus the fact remains that the quality of higher education depends heavily on government grants (The World Bank, 2000).

## 2.4. E-learning platforms in higher education

E-learning in higher education offers a scenario for the development of teaching-learning processes through educational platforms such us Moodle, Zoom meeting, Google classroms...etc, and their didactic communication functionalities, mainly online forum (Lopez, & Camilli, 2014; Guedez & Navea, 2014; Bousbahi & Alrazgan , 2015; Bin, 2017 One of the challenges of e-learning in higher education is to enhance the benefits of experiencing a system based on remote communication and interaction, which it offers to groups that do not have the opportunity to participate in other traditional models. This requires an adequate use of the potential of this methodology to allow students to combine self-directed and collaborative training processes, as well as trainings in digital competence, which are becoming increasingly necessary to meaningfully participate in the new knowledge society and economy of the 20th century (INTEF, 2017, p. 5).

Aspects that need constant updating when using the learning platform include: pedagogical functionalities, online lesson design and didactic interaction. The development of the theoretical framework allowed to deepen aspects such as: ICT in higher education distance learning, technological pedagogical models, design of online learning environments and the learning platform components in higher education (course components and communication tools of learning platforms).

### 2.4.1. ICT in higher education

The influence of information and communication technology (ICT) in the knowledge society leads to a permanent revolution in the different sectors (Fruth & Neacsu, 2015), and requires a new educational approach focused on the use of open content and resources (Knyazeva, 2016), mainly based on the possibilities of Web 2.0 cloud technologies (wikis, blogs and social networks) (Barak & Barros, 2017) to promote "persistent connectivity, enabling students and educators to access and contribute to shared workspaces, anytime"

(Adams, 2017). Keane & Blicblau (2016) emphasize that student's use of ICT contributes to the development of the 4Cs (creativity, communication, collaboration and critical thinking) which, in the 21st century, combined with the 3Rs (reading, writing and arithmetic).

E-learning practices focus on identifying the educational potential of technology and taking on a transformative role of students towards self-regulated learning strategies (Zimmerman, 1990, pp. 3-17) that lay the foundation for new generations of learning (Scoppio & Luyt, 2017, pp. 725–746). The study by Topchyan and Zhang (2014, pp. 207-218) has validated some factors influencing the perception of distance learners to develop the competences for working in virtual learning teams, namely: loyalty, integrity, conscientiousness, communication, collaboration, creativity, motivation to learn, Persistence, independence and intercultural communication. The variety of web resources integrated into virtual learning platforms offers opportunities for selecting and customizing information, collaboration and learning resources. Nevertheless, some results suggest that university students are less likely to use these technologies to regulate their own learning process (Yot & Marcelo, 2017, pp. 1-18). In addition, Henderson, Selwyn & Aston (2017, pp. 1567- 1579) suggested that digital technologies are not changing the nature of university teaching and learning.

Online learners pay attention to the structure and leadership of virtual learning environments in order to have a deep and meaningful approach to learning (Garrison & Cleveland, 2010). A systematic review from 1995 to 2014 conducted by Martin, Ahlgrim & Budhrani, (2017) concludes that it could not be clearly distinguished whether synchronous online learning technology was used to distribute the content or whether it was used to teach the students to give the opportunity to interact with each other or the material. Studies by various authors (Prendes & Gutierrez, 2013, ITU-UNESCO, 2014 & Kebble, 2017) assume that ICT should promote interactivity and favor forms of communication in the knowledge society. The time spent by students in communication activities is considered a predictor of academic performance (Rienties & Toetenel, 2016). The selection, adoption and adaptation of ICT tools promotes openness to permanent change, rediscovery of the most valuable goals of science and continuous improvement of teachers and students.

In fact, e-learning in higher education is characterized by the idea of development based on ICT systems. Which contribute to the application of the possibility of communication and information between users within the virtual world. Thus, the adoption of ICT tools promotes a clear change from the classic use of teaching and learning methods, to opening new doors and goals to improve the work integrity and learning atmosphere between teachers and students within the academic system.

## 2.4.2. Techno-pedagogical models

Techno-pedagogical models such as TPACK (Technology, Pedagogy and Content Knowledge) (Mishra & Koehler, 2006, pp. 1017-1054) and SAMR (Substitution, Augmentation, Modification and Redefinition) (Puentedura, 2016) provide a framework for decisions about the use of ICT as a didactic experience.

## 2.4.2.1. TPACK model

According to Shulman (2015, pp. 4-14), the teaching profession is "magical" and necessitates "embracing uncertainty" through a mutual commitment between a teacher and a student. In other word he advocated for the integration of content knowledge and pedagogy by coining the term PCK (Pedagogical Content Knowledge), which served as a forerunner to Mishra and Koehler's TPACK (Technology, Pedagogy, and Content Knowledge) model (2006, 2008). consists of technological knowledge applied to the teaching-learning process The TPACK model (Mishra & Koehler, 2006, pp. 1017-1054) provides various combinations of the model's knowledge types based on the context of application: curricular, pedagogical, and technological, based on the application contexts.

In the same context, the model provides seven dimensions: CK (Content Knowledge), PK (Pedagogical Knowledge), TK (Technological Knowledge), CPK (Pedagogical Content Knowledge), TCK (Technological Content Knowledge), TPK (Technological Pedagogical Knowledge), and TPCK (Technological Pedagogical Content Knowledge). The TPACK model, which has been widely deployed internationally, offers several different strengths and opportunities. This is through questionnaires developed to analyze the level of proficiency in ICT integration (Schmidt, 2009 & Cabero, 2014). Thus, it allows the design of teaching strategies to promote less and diversified development of knowledge.

## 2.4.2.2. SAMR model

The SAMR (Substitution, Augmentation, Modification, and Redefinition) model is divided into four stages, beginning with substitution (first contact with technology) and ending with redefinition (mastery of educational technology). The first two phases correspond to the process of improving the way ICT is integrated, while the following two phases are in the process of transformation. The role of technology in teaching practice distinguishes each phase  (Puentedura, 2016) :

- Substitution : occurs without any functional change, technology acts as a direct tool substitute.
- Augmentation : technology serves as a direct replacement tool, with functional enhancements.
- Modification : the technology enables the redesign of critical tasks.
- Redefinition : technology enables the creation of previously unimaginable tasks.

In this context, it is preferable to incorporate resources tailored to the objectives (from memory to creation), the level of competence (from substitution to redefinition), and the investigative process into the teaching-learning process (from research to share). These models can be thought of as conceptual frameworks that provide a comprehensive view of various relevant elements to consider when implementing technologies in the educational context.

### 2.4.3. The learning platform components in higher education

The learning platform is a method of structuring instructions that promotes optimal content organization and interaction with students, and it is used by the majority of universities (Gomez, 2016 & Almarashdeh, 2016). Teaching should make use of virtual environments (Moreira, Henriques, Goulo, & Barros, 2017, pp. 253– 263) while also adapting the discourse to the uniqueness of the virtual environment's complexity. Learning platforms have been described as virtual scenarios that promote educational innovation and professional development (Prendes & Gutierrez, 2013, pp. 196-222), with a stronger focus on the model of educational personalization  and  cooperation.

## 2.4.3.1. Course components of learning platforms

The learning platforms in distance higher education must be adapted to virtual environments' knowledge and practices (e-Learning), promoting usefulness (Moreno, Cavazotte, & Alves, 2017), autonomous learning (Yates, 2016 , pp. 54-62), and interaction with teachers throughout learning tasks and communication tools (Ma, Han, Yang & Cheng, 2015, pp. 26-34; Gharmallah, 2017). In this vein, Benedetti (2015, p. 171-176) presents a map to understand the student's navigation processes while adhering to the cognitive style in order to understand and make better decisions in the domain of the virtual course (Tabel 1).

| Process | Description |
|---------|-------------|
| Understanding | Overview of the course structure. All parts / areas of the course are visible. |
| Instructional | Organization logical course. Easy access to components of the course. |
| Functional | The course links operate correctly. The course content levels are accurate. |

**Tabel 1**. Student's navigation processes (Benedetti, 2015)

According to  Young (2014, pp. 311-323)  research, online graduate students' perceptions of their best learning experiences include activities that allow them to share knowledge and reflect, among other things. The learning platform-mediated teaching-learning process includes a wide range of educational components to the communicative act, such as masterclasses, knowledge presentations, and questioning (Figure 1).
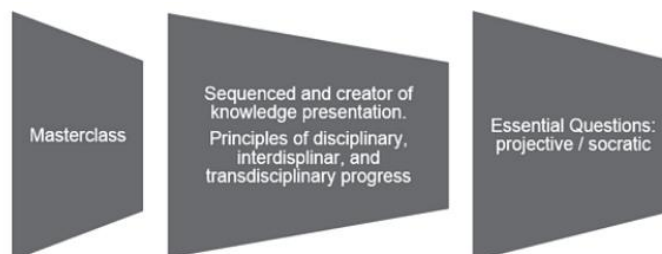


**Figure 1**. Communicative act in the teaching-learning process (Young, 2014)

Medina, & Campos (2014) emphasized the importance of teachers' communicative competence and its impact on the development of educational processes, making strides toward harmonizing the instructive-creative design, which will be worked on in virtual environments. The educational application of learning platforms responds to the challenges of distance higher education by customizing tasks and adapting content presentation to virtual support, combining with traditional materials (Medina & Dominguez, 2015).

## 2.4.3.2. Communication tools of learning platforms

The use of a learning platform promotes interaction between all components of a traditional didactic scenario ; teacher, students, and subject matter (Figure 2).
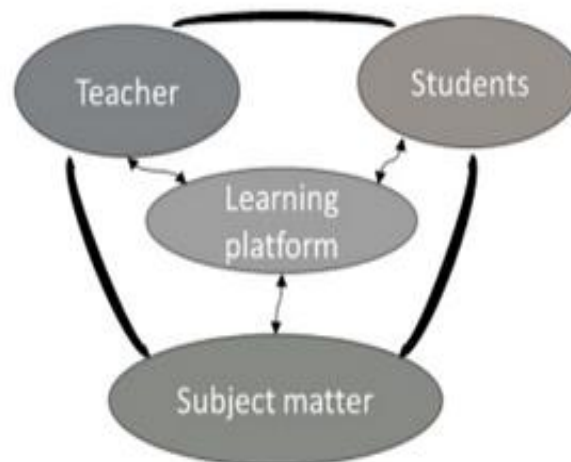


**Figure 2**. Components of a ICT learning scenario (Bates, 2015)

Interaction between the various components is required to promote mediated learning (Bates, 2015), that is the learning platform ushers in a new era that goes beyond traditional space-time to motivate and make available a variety of instructional options to students, colleagues, and various groups.

The most important communication features of the platforms include forums, chat and webconference (Tabel 2).

| Features | Explanation |
|----------|-------------|
| Forums | Asynchronous virtual scenarios for comments and reflections between teachers and students. |
| Chat | A synchronous written speech involving a group of students and teachers. |
| Webconference | Synthesizes the main points of the oral discourse, which is supported by transparencies, pictures, video tutorials, and so on, and is expanded with questions and comments from the teacher and students. |

**Tabel 2** . The most important communication features of the  learning platforms (Bates, 2015)

Instructor-monitored online discussions promote co-constructed knowledge through activities such as sharing, negotiating, elaborating, evaluating, and so on (Ioannou & Demetriou, 2014, pp. 183-195) and facilitate students' higher order thinking (Kwon & Park, 2017, pp. 469-491). Students are more aware of the benefits of collaborative learning when teachers value it (Gomez, Barbera & Fernández, 2016, pp. 146-163).

Interaction in online forums allows students to exchange different perspectives on a subject (Duran, Cornejo, & Flores, 2017, pp. 319-323). According to Arasaratnam & Northcote (2017, pp. 188-198), one of the benefits of online forums is having time for reasoned comments, which may not always be possible in face-to-face sessions. Learning platforms seek to exploit the most valuable aspects of training scenarios in order to become open spaces for the intellectual and emotional enjoyment of all participants, while utilizing communication resources.

## 2.5. E-learning platforms

Various terms are used to describe educational computer applications, such as E-learning systems, Learning Management Systems (LMS), Course Management Systems (CMS), and even Virtual Learning Environments (VLE). Students can use these systems to access course content in various formats (text, image, and sound), as well as to interact with teachers and/or colleagues via message boards, forums, chats, video conferencing, and other types of communication tools (Sanchez, 2010, pp. 1632-1640).

These platforms offer a set of configurable features that enable the creation of online courses, subject pages, work groups, and learning communities (Paulsen, 2003, pp. 134-

148). In addition to the pedagogical dimension, these systems include a set of features for registering, monitoring, and evaluating student and teacher activities, as well as the ability to manage content via the Internet. Piotrowski (2010) defines an e-learning platform as a system that provides integrated support for six different activities: creation, organization, delivery, communication, collaboration, and assessment.

From a technical standpoint, there are various types of LMS, some of which are commercial solutions (such as Blackboard/WebCT) and others are open-source solutions (such as Moodle). Regardless of the type, several studies have revealed that there are significant benefits to using e-learning platforms (Moura, 2009, pp. 89-100). But its adoption poses some challenges for organizations as well as appropriate choice of technology platform. On the other hand, with regard to open source solutions, some studies have identified Moodle (a modular, object-oriented dynamic learning environment) as the most widely used and easiest to use platform in higher education (Paulsen, 2003, pp. 32-44 & Alexander, 2006).

## 2.5.1. Moodle platform

Moodle is one of the most widely used open-source e-learning platforms, allowing the creation of a course website and restricting access to enrolled students (Cole & Foster, 2008). This platform enables the exchange of information among geographically dispersed users via synchronous (chats) and asynchronous communication mechanisms (discussion forums). In terms of functionality, it has easily configurable features that allow creating assessments for students (quizzes, online tests, and polls). Furthermore, there is the task management control feature using the schedule (Legoinha, Pais & Fernandes, 2006) a complementary toolkit to support the teaching and learning process.

According to (Blin & Munro, 2008), the Moodle platform is distinguished by a set of functionalities divided into two categories namely resources and modules. Resources are instructional materials that are typically created digitally and then uploaded to the platform. These resources include web pages, PowerPoint presentations, word documents, flash animations, video and audio files, among others. Modules are Moodle components that allow students and teachers to interact with each other while manipulating and transforming content (Blin & Munro, 2006, pp. 475-490). The Moodle platform provides several modules in this context, including Database, Lessons, Assignments, Workshops,

Chats, Forums, News, Glossary, Wikis, Choice, Quiz, Survey, Feedback, SCORM (Sharable Content Object Reference Model), and External tools (Moodle, 2012).

## 2.5.2. Factors affecting the use and adoption of moodle platform

Teaching and learning are constantly evolving, and the current trend in educational institutions is the use of technology as a mediator (Ansong, 2016, pp. 248-262). E-learning is a revolutionary change in distance education that refers to the use of information technologies to facilitate access to resources that improve teaching and learning. Several studies have looked into e-learning and the use of the Moodle platform from various perspectives, including technological perspectives (Abdullah, 2017, pp. 1097-1109), social perspectives (Ansong, 2016), human factors (Mtebe, 2015), and reinforcement factors such as e-learning enjoyment and content, incentives, and encouragement from others (Jones, 2015).

Ansong (2016) stated in his study that there are four factors in the adoption and use of the Moodle Platform, which are technological factors, human factors, social factors, and reinforcement factors. Similarly, human and social influence was mentioned as having either a positive or negative influence on the use and adoption of Moodle in higher education institutions (Ansong, 2017). In the same context, Ahmad (2012, pp. 444) identified the motivating factors for using and adopting Moodle as improved communication with students, improved student learning, and organized instructional resource materials as major aspects that needed future research attention. Despite the numerous advantages that learning management systems such as Moodle have to offer, the aforementioned factors may contribute to the stalling of Moodle's use and adoption, particularly in developed countries.

## 2.5.2.1. Technological factors

In advanced academic institutions, information technology is now used as a medium for teaching and learning. This shift in education provides a new perspective, with an emphasis on the use of learning management platforms to facilitate learning and teaching (Boateng, 2016, pp. 248-262). Activities that allow learners to be active users, in participating in the online learning process, are enabled by e-learning system technologies. If academic institutions provide online e-learning platforms and services, they must be used and adopted by their users (Sumak, 2011).

Regardless, the success of e-learning is determined by the degree to which teachers use technology, to which they would naturally prefer an easy-to-use technology system over one that is difficult to understand (Adenuga, 2015). It is therefore critical to investigate how technological factors influence the use and adoption of E-learning in higher education institutions, particularly in developing countries. There are numerous constructs available to the user, and these constructs can have a direct or indirect impact on the users' attitudes and intent to use the systems (Duval, 2017, pp. 1-10).

## 2.5.2.2. Human factors

Technology innovation brings new ways of doing things, which are frequently resisted because people are unwilling to leave their comfort zones because they are accustomed to their old ways of doing things (Essel & Wilson, 2017, pp. 14-26). Human capital resources are regarded as a critical component of an organization's structure in order to realize an institution's vision (Essel & Wilson, 2017). If new technology, such as Moodle for classrooms, is adopted, teachers and students may perceive it as unfriendly and thus disregard it. Authors mentioned human factors such as attitudes toward the use of technology, computer self-efficacy, perceived ease of use, perceived usefulness, and lecturers' competences to use technology in their review of previous studies (Abdullah, 2017 & Kilic, 2014, pp. 169-179). According to Adenuga (2015, pp. 176- 178), the more difficult is to manipulate technology, the less likely users are to embrace it.

Hanif (2018) attempted to investigate the relationship of the human factor in extending the technology acceptance paradigm with subjective criteria and behavioral intentions. This is for the use and adoption of technology in e-learning systems by digital learners. Researchers have adopted and defined this factor in the context of understanding human characteristics such as perceived ease of use, perceived usefulness, attitudes and intention of behaviour, and computer efficacy. As well as how this affects the actual use and adoption of technology in higher education institutions. Thus, this construct is important in this study because it has a direct impact on how Moodle users interact with the adoption and use of technology.

## 2.5.2.3. Social factors

Abdullah (2017) stated that social factors included environmental factors, cultural factors, and encouragement from others, whereby a lecturer's decision to use Moodle for

teaching is influenced by others. These include the views of colleagues and coworkers, as well as the Chief Technology Officer and Academic Officer. Social Influence included three previously studied conceptually investigated constructs namely encouragement from others, cultural acceptance factors, and organizational/environmental factors. Social influence was viewed as a major determinant factor in technology adoption and use (Ansong, 2016).

### 2.5.2.4. Reinforcement factors

Reinforcement factors have a significant impact within the platform. First, improve communication with students during the teaching process. Second, improve and organize the resources used and tools within the Moodle platform. Finally, strengthening the relationship of interaction and communication between students and teachers through the application of the correct administrative education system, which aims to strengthen the relationship between all parties (Ansong, Lipschuetz & Santiague, 2017).

These motivating factors encouraged students and instructors to use Moodle. especially in situations where technology is perceived as a burden or additional workload for instructors  (Adenuga, 2015). Because of the difficulties that instructors and students face in using and adopting learning management systems, the reinforcement factor has been emphasized. As a result, it is critical to include this construct in the context of developing countries.

### 2.5.3. Google classroom platform

Google Classroom is an educational program  developed by Google as a free online service for schools. Although it was released in 2014, it was first released to the general public in 2017 (Magid, 2014). As a component of Google Suite for Education, anyone with a Google account can create, teach, and participate in a course (Ressler, 2017) . The primary purpose of GC is to make it easier for faculty and students to share files on the web. It connects the user to your other Google services like Gmail, Google Drive, Google Docs, etc.This will remove the paper copies of the documents. The instructor creates a class and provides the code for the class to the students.

This allows them to join the course and  access course materials. As soon as a student joins, a separate folder opens, created in your Google Drive. This folder contains all the

materials that the instructor has shared with the students. Then, the students can ship their tasks to be checked and qualified by the trainer.

## 2.5.3.1. The characteristic of Google classrooms

Apart from the general description of this learning app, various researchers have also noted the following distinctive features of Google Classroom. Janzen (2014) found that this application is easy to use and interact with. In addition, he reported that using the application saves time since it has an easy-to-use interface and integrates other Google applications such as Docs, Slides, and Sheets. Similarly, according to Chehayeb (2015), the software was developed to make classrooms paperless and save time. He also mentioned that Google Classroom allows teachers to send reviews to Google Sheets to easily edit and review student feedback and results. Also, in the online context, this learning application is open to both the students and the teachers, but is not accessible or available to students who are not enrolled in the Google class mentioned above (Ajjan Hartshorne, 2008, pp.71-80).

Furthermore, Mafa & Govender (2017, p. 73) emphasize the accessibility of the app, stating that it is free to download and install on a mobile device, allowing for quick learning on the go. In other words, this program can be accessed from any mobile device at any time, making it useful for both teachers and students. Therefore, it is a program that allows teachers to set up an online classroom where students can talk freely with their teachers and classmates.

In support, Chehayeb (2015), head of the Commission on Higher Education Education Information and Publishing Division (CHED), stated that the implementation procedure of Google Apps is not complicated and given the high quality of the freely available technology, it is logical to go to Google. Finally, Google Apps for Education were also suggested by the IT director of the University of Philippines for the following reasons: (1) it is free; (2) offers a much larger storage capacity; (3) provides additional security; and (4) has a user-friendly interface.

## 2.5.3.2. Previous works related to Google classrooms

Several GC-related research papers have been collected from the world (Kumar & Bervell, 2019, pp.1793-1817, Ventayen, 2018, pp.47-51). In this regard, Yoo (2018, pp.

140-153) investigated the effectiveness of using GC to boost students voices in the final year of students pursuing the primary teacher education. Consideration should also be given to how the program would affect future teaching at the university level. The research found that GC improved students performance on several parameters. This data was used to evaluate the online platforms. Four criteria were distinguished: ease of access, speed, collaboration and student participation.Moreover, research by Kwon & Kang (2019) on the effects of Coogle Classrooms in Korean high schools showed that the program offered many learning benefits. They found that it allowed students and teachers to interact more easily on an individual level. That is, it organizes class materials and assignments, and boost engagement through real-time collaboration on projects.

Another study by Izenstark & Leahy (2015, pp. 1-3) highlights the opportunities GC offers for students and faculty to discuss its practicality. The program was found to deliver fairly seamless materials, as evidenced by librarians' ability to easily share information, exercises, and supplemental materials with their students. The students were particularly pleased that they were able to integrate their campus e-mail accounts. In the same context, Iftakhar (2016, pp. 12-18) conducted a study with thirty-five students and seven professors working at a university. The researcher tried to assess the overall effect of GC as used in the different classes. In addition, a survey was also conducted collect student expectations. The investigation was carried out according to the "typical case sampling" method. Interviews and observations were the way the data was collected. The results showed that GC has great potential for use in teaching. The data collected from the students' point of view were also valuable for research.

The study by AlMaroof (2018, pp. 112-123) was conducted to identify the factors that influenced their students' reception of Google Classroom at GC. It was carried out with three hundred and seventy-seventh respondents via an online questionnaire. The results showed that students' feelings about ease of use and usefulness had a positive impact on their behavior. This, in turn, affects students actual use of the program. University and college decision makers can benefit by gaining a better understanding of their student effectiveness with GC. Azhar & Iqbal (2018, pp. 52-66) focused their study on the trainer's perceptions of Google Classrooms. Throught, using a qualitative research design, they collected a sample of twelve university teachers who had used Google Classrooms for at least one semester. They found that most teachers only saw it as a tool for organizing

documents and other basic classroom tasks. The reason they gave was the lack of a user-friendly interface.

Im & Kim (2020, pp. 41-63) studied the effects of online instruction in middle school using GC. The focus was on the students' English listening skills. Seventy-four students assigned to the experimental group used Google for educational apps. The control group consisted of seventy-one students, all using paper worksheets only. At the end of the semester, the hearing ability of both groups was compared. The results showed that the class using GC experienced an improvement. This indicates that the program is effective in developing the English of high school students.

In short, Moodle and Google Classrooms offer several advantages in the distance education sector. Both of them facilitate and regulate the interaction between students and professors in a better way and ensure smoothness in work, as was clarified through the studies mentioned above. On the other hand, there are some negative points faced by users through their experience of these systems, which will be clearly presented through the upcoming titles, especially under study during   the  Covid 19 pandemic.

## 2.6. Advantages and disadvantages of e-learning in higher education

The adoption of e-learning in education has several benefits and also has some downsides. Different studies provided different opinions about the efficacy and practicality of e-learning. The upcoming titles discuss some of the advantages and  disadvantages of e-learning.

## 2.6.1. Advantages of e-learning

The implementation of e-learning in education has been beneficial in several contexts. Previous studies have demonstrated several benefits related to the implementation of e-learning technologies in higher education (Raspopovic, 2017, pp. 141-160). E-learning was viewed as the ability to focus on the needs of individual learners. For example, focusing on the needs of individual students versus the needs of educational institutions can effectively impart knowledge in the digital age. When the e-learning environment is managed, its impact on pedagogical learning is demonstrated by providing equal access to information regardless of users' location, ethnicity, race and age. The e-learning environment also helps

students to trust themselves, so teachers are no longer the sole source of knowledge but serve as guides and advisors (Joshua & Obille, 2016, pp. 51-69).

Several studies have shown a positive effect of e-learning on learner or student knowledge (Gautam & Tiwari, 2016, pp. 14-17). For example; with e-learning, you can observe a much more flexible learning path to proceed to a class that requires very little movement. Students will gain deeper insights into the information through activities in the classroom through interactive video (Gautam & Tiwari, 2016). This allows students to respond quickly to activities.

It is important that the instructors use advanced technology throughout the teaching process and; Therefore, learning encompasses a range of information and communication technology (ICT) skills (Aithal, 2016, pp. 225-235). It is also observed that e-learning systems improve communication between students and faculty. Part-time and full-time students can actively participate in selecting online degree programs from any location, providing an accessible resource for experiences and learning for people who are traveling or relocating (Radu, 2015, pp. 150-155).

Al-Handhali et al. (2020) pointed out several benefits of LMS, making it user-friendly and effective in time management, facilitating the management of courses, teachers and facilities, and generating reports (pp. 222-228) . It also provides a timely reminder for users including: delivery date, answering questions, exam dates...etc. Aydin & Tirkes (2010) analyzed the usefulness of LMS and Moodle in their study. The results of the study showed that Moodle is undoubtedly one of the most effective tools of LMS. Identified benefits include its flexibility according to the modules used and support for teaching through any style or mode of environment. Considering the modular design and its user interface, Moodle's ease of use is superior along with its competitors (pp. 593-600). However, considering the learning environment, Moodle was recognized as easy to use due to the variety of options available. Also, the increase in user authentication options, the easy installation process along with maintenance in Moodle helps  increase usage frequency (Aydin & Tirkes, 2010, pp. 593-600).

## 2.6.2. Disadvantages of e-learning

Despite the significant benefits of e-learning, students encounter several challenges that ultimately lead to limited or negative outcomes. Arkorful & Abaidoo (2015) outlined in

their study that e-learning is in certain cases held off by seclusion and contemplation, leading to a lack of student interaction. E-learning can be less effective compared to today's form of teaching due to the lack of a face-to-face encounter with instructions or teachers (pp. 29-42). Since the e-learning method generally conducts assessments online, this reduces the possibility of restricting improper activities such as fraud and plagiarism...etc. (Arkorful & Abaidoo, 2015). The lack of significant face-to-face interactions is the most striking disadvantage of e-learning, not only among peers but also between trainers and learners (Islam, Beer & Slack, 2015, pp. 102-112).

There is a lack of community in the online learning environment as student engagement matters much less compared to student-teacher interaction. Gilbert (2015) emphasized that most students want to work autonomously to avoid interacting with their classmates. Cultural barriers are another major disadvantage when launching an online course. In their study, Aparicio & Oliveira (2016) evaluated the influence of cultural traits, which include individualism and collectivism, in determining the perceived success of e-learning. The results of the study showed a significant impact of individualism and collectivism on organizational and individual impact (pp. 58-70).

Technology is a platform that can easily be taken for granted when incorporated into daily life, but it is not widely adopted due to the lack of monetary benefits to access it. The global knowledge available on the internet is led by the increase in the proportion of students using computers and other electronic devices (Talebian & Rezvanfar, 2014, pp. 300-305). Another downside is maintaining motivation in an online course that online learners experience. Students who lack self-motivation and independence had lower success rates compared to their peers (Sarkar, 2012, pp. 30-41).

Learners who lack self-regulation tend not to allocate enough time to complete tasks; hence changing poor quality work or late orders. Overall, successful students have higher beliefs that they will be successful, with better technology literacy and access, higher levels of personal responsibility, and higher self-organizational skills (Sarrab et al., 2013, pp. 826-839). Students must be able to assess the motivating factors to continue the dynamism throughout the duration of the course. Students are not motivated and can easily lose sight of their original goal, quickly become lost within the course and consequently withdraw from the course (Raspopovic, 2017, pp. 141-160). Therefore, it is important to

determine an individual's success in taking an online course through understanding learning styles and self-behaviour.

In short, although it is mandatory to penetrate into the understanding and development of online learning due to the growing need for it within the educational Poles, especially in the last two years due to the corona pandemic. In this case in particular, this system is a new experience for teachers and learners. Therefore, finding differences in terms of pros and cons as well as some challenges is possible and will be addressed under the curve of study based on the conditions of covid-19.

## 2.7. Online learning during the corona virus pandemic

Due to the unprecedented situation caused by the coronavirus pandemic, the impact of the pandemic on education, universities, faculty and students has become a topic of great interest to researchers. Allo (2020) examined students' perceptions of online learning during the coronavirus and showed that students had a positive attitude towards e-learning and considered it helpful and useful in the time of crisis caused by the pandemic (2020, pp.1-10). Furthermore, a study by Suresh (2018) involving 424 universities around the world found that institutions related to research, conferences, international mobility and educational provision were affected by the pandemic. Most universities indicated that they had to implement online learning and had to face many challenges.

Although some universities had used e-learning as an additional method prior to the corona virus pandemic, most of them were not ready for a fully online experience. It is, therefore, necessary to optimize the e-learning process in order to continue to provide education appropriately. This optimization should also consider student-teacher interaction, and the language used in communication between students and teachers should be clear but also contain terms specific to their field of study (Goian, 2004).

Many advantages of e-learning can solve the prevailing problems in the education sector. However, when we look at the actual situation, we find that e-learning has not been as successful as promised or has the potential to be, which means that there are problems with e-learning implementation. In the following section, we will look at the challenges and obstacles in online teaching and learning.

### 2.7.1. Challenges for online teaching and learning

A sudden introduction of online teaching and learning due to Covid-19 and lockdown by many universities has been shown to create numerous challenges for the higher education industry. Although there are notable achievements, particularly for higher education institutions that already had well-established online teaching and learning systems, it was recognized that the transition from classroom-based to online learning was not smooth for most universities and colleges. The literature shows that academics and students, among others, struggle to adapt; connectivity, network and internet issues, unfavorable physical space and environment; mental health issues, lack of basic needs, and lack of teaching and learning resources are the major challenges associated with the sudden shift to online learning. These challenges are discussed below.

### 2.7.1.1. Academics' difficulties to adjust

Academics play a crucial role in their respective higher education institutions as facilitators of online learning. Due to a sudden COVID-19 outbreak and consequent sudden shift to online learning, ordinary academics did not have enough time to adapt to the new teaching platforms (Burgess & Sievertsen, 2020). Further, evidence shows that some academics lack adequate knowledge of information technology and their understanding of online teaching is relatively low (Chen, 2020, p. 200). As a result, these academics face challenges in facilitating online learning. These challenges may include how to organize online classes, how to conduct online classes according to the plan, which online classes platform to choose, and how to monitor the impact and quality of online classes, resulting in a decrease in user satisfaction (Goh & Sandars, 2020). The sudden shift to online teaching also has raised serious concerns among academics about their ability to engage with students on an online platform while maintaining the same level of interaction as with face-to-face formats (Jegede, 2020; Ratten, 2020).

For this reason, Bryson & Andres (2020) have argued that replicating the classroom experience on an online platform is impossible and could undermine learning outcome (pp. 1-16). Since academics have not been offered training due to the sudden shift to online learning, they are likely unfamiliar with online tools that limit instruction (Chang & Fang, 2020).

Additionally, delivering a lesson online can be hampered by issues such as system congestion (Chen, 2020). Conducting online assessments has also been reported as a challenging task for academics and faculty staff, particularly with regard to how to avoid plagiarism during the exam (Sahu, 2020, p.12). Also, teachers often face problems such as lack of self-discipline and learning attitude, which is even more challenging for academics who have no experience in online teaching themselves (Bao, 2020, pp.113-115). These are some of the challenges that led to the Commission on Higher Education (CHED) decision to suspend online teaching after three days after students and teachers complained about the online learning method, suggesting that the Philippines is not ready are to implement this online learning system (Toquero, 2020). It is, therefore, argued that an effective online teaching and learning system requires proper planning and investment (Demuyakor, 2020). Unfortunately, during emergencies such as the Covid-19 outbreak, adequate advance planning and investment in online learning is almost impossible.

## 2.7.1.2. Students' adjustment difficulties

As their teachers, students struggled to transition from traditional classroom-based learning to online learning. In the study on barriers to online learning in the time of Covid-19, Ronnie (2020) found that students found it difficult to adapt to online learning styles due to homework assignments and poor communication between them and lectures. Students were generally unprepared for online learning. While social issues and faculty issues have been found to affect student intentions to study online, access to online learning platforms has been shown to be a major challenge for many students (Aboagye, 2020, pp.1-8).

Technical issues in particular can arise during online learning, but most students do not have access to technical support and advanced technologies that facilitate online learning (O'keefe, 2020). Access to digital learning devices such as laptops and tablets and access to data for internet connection have been identified as barriers to online learning for some students (Adnan, 2020, pp. 45-51; Moawad 2020, pp. 100-107). Students from poor families living in underdeveloped communities often do not have access to online learning systems. The study, conducted in West Bengal, India, shows that 30.6% of students self-learn by reading textbooks and did not participate in e-learning, mainly due to lack of access to online learning platforms (Kapasia, 2020).

As reported by Dawadi (2020), access to online learning for some students is a major concern for the higher education sector in these challenging times. That is because it reinforces the inequalities that already exist among its citizens in terms of their social, economic and educational life. While some students are not satisfied with the current online teaching platforms (Chen, 2020). The reason for this is that they face some challenges, such as accessing online learning platforms (Ronnie, 2020).

## 2.7.1.3. Connectivity, network and internet issues

Online teaching and learning requires a fast and reliable internet connection. Therefore, the shift from traditional face-to-face learning to online learning has meant that students and academics need to stay connected to the internet. However, this may not be possible, which would interfere with teaching and learning. Connectivity challenges have been highlighted as the main factor undermining e-learning and e-teaching during the lockdown following the outbreak of the Covid-19 pandemic (Aboagye, 2020, pp.1-8; Berezhna, 2020, pp.130-135). In the study on barriers to online learning, Ronnie (2020) found that having a fast and reliable internet connection is a bigger problem than owning devices or having technical skills.

The critical challenge of having a reliable internet connection for online learning has also been described in the literature (Mohammed & Mark, 2020, pp. 1-4) as the main reason for non-participation in online learning by the majority of students. according to Demuyakor (2020), this disadvantage for online learning has been attributed to the lack of internet data by Ghanaian international students in China. The unavailability of appropriate hardware and software to access online learning has also been identified as a barrier by some students (Crawford, 2020, pp. 1-20).

To ensure that all students have equal access to online learning, Student Representative Councils (SRCs) at various universities called for the provision of digital learning devices (smartphones, tablets and laptops) and internet data for all students (Kwabena & Boateng, 2020, pp. 41-52). However, some students could not access online tools at home due to poor network despite having digital learning devices and internet data (Aboagye, 2020). The problem of bad networks is particularly common in developing countries where ICT and telecommunications systems are not properly developed (Aboagye et al., 2020). Accordingly, Chang & Fang (2020) found that 60% to 70% of teachers agree that the speed and stability of the network are poor, leading to challenges in accessing online learning

tools. These references suggest that reliable network infrastructure, availability of internet data, and availability of digital learning devices such as smartphones, tablets, and laptops are important for students to ensure smooth online teaching and learning.

### 2.7.1.4. Unconducive physical space and environment

The lack of physical learning space and environment also presented a challenge for some students learning online during the lockdown. In most poor households, students do not have their own room where they can study in privacy (Ronnie, 2020). Learning from home is, therefore, becoming difficult for this disadvantaged group of students. Research conducted by Demuyakor (2020) shows that loud background noise causes some students to rush to the restroom to answer calls from their professors or turn off video transmissions. Similarly, Kapasia (2020) found that out of 232 students, 103 (44.4%) did not have their own reading room for their studies.

Without a supportive learning environment, students are unable to focus on their schoolwork and learning productivity is reduced (Chang & Fang, 2020). That is, students whose parents are not supportive and whose home environment is not conducive to learning. The shift to online education during Covid-19 has overlooked this reality of an unconducive learning environment that negatively impacts learning outcomes.

### 2.7.1.5. Lack of teaching and learning resources

The unavailability of resources that facilitate online teaching and learning has been a major concern for academics and students. According to Kerres (2020), some universities did not have properly functioning online communication tools. For example, a university has limited student access licenses to online library materials. Such issues would definitely affect the delivery of online learning materials . Additionally, lack of access to high-speed broadband or digital devices has also been reported to undermine online learning (pp. 1-5).

While academics may struggle to work from home due to insufficient infrastructure or resources to enable online classes with immediate effect, the burden on parents has increased as they need to secure computers and IT equipment for their children to be able to learn at home (Garbe, 2020, pp. 45-65). In deep rural areas where there is no electricity, students may struggle to stay connected due to a lack of electricity to charge the online learning devices such as laptops (Verawardina, 2020). Overall, not all higher education

institutions have the human and physical resources to move online (Crawford, 2020, pp. 1-20).

### 2.7.1.6. Covid-19 and academic outcomes

There is a limited research on the impact of Covid-19 on student academic performance. This is likely due to the lack of data measuring academic outcomes during the Covid-19 period. However, it is expected that further research will be carried out in this area as soon as scientific results become available. Gonzalez (2020) examined the academic performance of students before and after the Covid-19 confinement. Their study results show that students also achieved significant improvements in their scores on tests administered in online format in previous years.

Furthermore, this improvement is only significant when comparing data post-containment of Covid-19 (i.e. there are no significant differences in online testing conducted before containment) (Gonzalez et al., 2020). Therefore, these results indicate that the new assessment process cannot be the reason for the improvement in student performance, as learners also achieved better results when the format of assessment did not change. Although Gonzalez et al., (2020) findings found no impact of the Covid-19 restriction on student academic performance, the Covid-19 outbreak is expected not only to result in poor student performance but also to increase dropout rates (Dorn, 2020).

### 2.7.2. Covid-19 positive side

While Covid-19 has created many problems for the higher education sector, it has been recognized that this pandemic has created opportunities on the positive side. Such opportunities include new approaches and tools for online learning and capacity development. For example, the lockdown resulting from Covid-19 has pushed universities that previously used traditional teaching methods into the digital world (Ratten, 2020). This means universities need to develop innovative ways to deliver teaching without compromising on quality (Ratten, 2020). Also, new challenges related to online teaching and learning will create a space for innovative thinking and solutions within the sector (Bryson & Andres, 2020, pp. 1-16). It is also argued that because of online teaching and learning, both students and teachers will develop their online communication and interpersonal skills through regular contact with online platforms (Beech & Anseel, 2020, pp. 447-449).

The outbreak of Covid-19 also provided opportunities for new research in a new area, greater use of digital data collection methods, and wider exposure to the virtual dissemination of research results. This provided researchers and academics with new experiences in the digital world, which are necessary for their capacity development (Gardner, 2020). Therefore, not everything is bad about Covid-19, but the challenges and problems far outweigh the possibilities.

## Conclusion

Through what was mentioned in the literature review. Previous studies were discussed regarding the concepts of e-learning and the in-depth experiences and methods of using it in teaching and learning online. Also, its most important impact on higher education was clarified, especially during the COVID-19 pandemic which showed some of the positives and several difficulties and problems faced by university administration in general and teachers with students in particular. And that is during the process of using the platforms and tools. The following chapter will be devoted to research methodology.

# Chapter 3: Research  Methodology

## Introduction

Most of the previously mentioned studies highlighted a number of aspects related to the experiences of students and teachers in the context where online education and implicitly of e-learning platforms have been used as complementary tools to the traditional learning process. However, there are few studies that mention exclusive use of online tools and platforms and examine their impact on academic users' experiences. Moreover, as happened during the pandemic, when universities were forced to use it mainly in the educational process.

This Chapter presents the research methodology used in this study. It describes the methodology used in research to answer the research questions mentioned in the general introduction, starting with a general methodology that highlights one of the research instruments (quantitative, qualitative or mixed method research approach) that serves and regulates the data collection methods which is in this context the mixed method research because it is the most appropriate one to conduct this study in addition to a description of the population and sample under investigation.

## 3.1. General methodology

For the current study, the researcher opted for a mixed-methods research based on a questionnaire and interview addressed to students and teachers In order to obtain the appropriate data from the quantitative and qualitative aspect, and to obtain the respondents' opinions and attitudes about the problems faced by online education since the beginning of the epidemic. In mixed-methods research design, the researcher gathers different types of information during his/her investigation to answer why and how the phenomena being studied and to provide clear quantitative numbers for reasons and causes (Creswell, 2013, p.4).

In other words, the use of diverse and overlapping data methods is important and aims to answer the questions posed in this research. Also, high-quality mixed method research involves mixing at all stages of the study, from formulating, sampling, data collection, analysis, and interpretation of research questions (Yin, 2006, pp. 41-47). Because mixed law researchers adopt a non-purist, compatible or mixed position (Johnson & Onwuegbuzie, 2004, pp. 14-26), It allows users to combine various research design components to find the best solution to their specific research problem.

In short, the use of mixed-methods research enables the researcher to engage in systematic reflection in determining fundamental structures and properties of experience. The researcher used a questionnaire and an interview to identify the lived experiences of students and teachers in the higher education sector with challenges they encountered in online teaching and learning. Their perceptions, emotions and experiences should then be used to find big themes and derive meaning from them. All of this should draw conclusions from the point of view of people who have experienced the phenomena, which in this case are the impact of technical difficulties on online teaching and learning for EFL users in the Covid 19 era; the point was to illustrate these challenges from the experiences of these academic perspectives.

## 3.2. Data collection methods

Data collection refers to the process used by a researcher to collect and measure data on the specific variables concerned in a systematic and modern way, to enable him to detect the knowledge gap and to evaluate the results. A researcher has a number of approaches to data collection at the planning stage. Choosing a data collection method is determined by the type of data the researcher intends to use. That is, the data are experimental or observational, qualitative or quantitative (Bar-llan, 2000, 257-277). Hence, The current study involved collecting information from the sample about the challenges they identified when using online learning and teaching.

The type of data collected for this research is primary data. Andrei (2008) described it as first-hand information collected by the investigator himself. This is unlike secondary data that the researcher collects from other sources such as articles, government publications, websites, books, internal records, etc. In other words, secondary data comes from third-party sources. For the current study, the primary data were collected through a questionnaire with students and interview with teachers.

## 3.2.1. Questionnaire

As mentioned earlier, the researcher conducted a questionnaire in order to examine students' perceptions regarding the ability of universities to provide knowledge in the context of exclusively online learning and to examine their attitude towards exclusively online learning. So, the questionnaire determined and considered as the most suitable instrument for serving the research objectives.

According to Wai-Ching (2001), a questionnaire is a research instrument consisting of a series of questions and other prompts designed to gather information from respondents. Although they are often designed for statistical analysis of responses, this is not always the case. The questionnaire was invented by Sir Francis Galton (1822 - 1911). It has many advantages over some other types of surveys in that they are inexpensive, does not require as much effort on the part of the respondent as oral or telephone surveys, and often has standardized responses that make data collection easier.

This questionnaire included both close-ended and open-ended questions in order to collect the qualitative and qualitative data. Open-ended questions are free-form survey questions that allow respondents to answer in open-ended text format, allowing them to respond based on their full knowledge, feeling, and understanding. That means the answers to this question are not limited to a set of options. So, open-ended questions are an integral part of qualitative market research (Porst, 2011). In the other hand,  the closed-ended question come in a variety of forms, but are defined as having explicit options for a respondent to choose from. However, one should decide on the most appropriate question type on a case-by-case basis, depending on the goal of the survey (Foddy, 1993, pp. 127).

### 3.2.1.1. Population

The population in any research refers to the totality of the units for which the research information is to be used to draw the final conclusions. It defines the units to which the investigator intends to make generalizations from the findings of the set of individual units from which the researcher selects a sample. This is the second step of any research, after the researcher has set the research goals. According to Dhawan (2020, pp. 5-22), the researcher needs to understand the target population in order to determine the to-go-to sampling method and also specify the sample size. Also, the population can be finite or infinite, meaning that it is easy to determine the total number of units in a group or impossible to determine the total number of units in the target group (Taherdoost, 2017).

The current study involves studying and examining a finite population from the Univercity of Mohamed Khider Biskra, Algeria. The population includes all of  the first year EFL (English as a Foreign Language) master students because they fit the study and had a full experience with the period of the pandemic. Furthermore, using a finite population size is advantageous in that it gives the researcher the freedom and opportunity to compose a sample size. When the target population is known, it is easy for the

researcher to choose one of the methods to calculate the desired sample size to obtain a working sample (Faugeir & Sargeant, 2008, pp.790-797). Thus, the researcher is able to generalize the results to the entire population, assuming that the sample has chosen is a representation of the entire population. The results are, therefore, more reliable. This study involves working with forty mixed students (female and male) of diverse educational levels, ages, backgrounds, academic abilities and socio-economic status.

## 3.2.1.2. Sampling

The researcher could not work with the entire population of individuals, it was, then, necessary to select a portion of the group to work with and this is called the sampling technique. Therefore, a sample is defined as a subset of the total target group that represents the required population characteristics (Asiamah, 2017). It could be selected using either probability sampling or non-probability sampling.

The current research used a non-probability sampling approach to select the working sample. In non-probability sampling, the researcher decides who to include in the study based on relevance to answering the research questions. Rather than using randomization to select the sample, the researcher's judgment determines how many individuals to include using well-considered inclusion and exclusion criteria. The sampling approach used for the current research was a convenient type of non-probability sampling. That is to say, the researcher draws a sample from a group of people who are easy to contact or reach (Field & Pruchno, 2006, pp. 565- 583).

## 3.2.1.3. Questionnaire description

As previously mentioned, this questionnaire is based on the open-ended questions and the closed- ended questions. In order to collect the quantitative and qualitative data needed from the participant. So, it is necessary to describe all existing sections in order to facilitate the questionnaire's desirability and make it clearer.

This questionnaire was divided into three main sections that serve the research purposes, where it attempts to understand the technical problems faced by students during their online education experience, as it was designed based on the user use of the new system. It consists of seventeen questions in total, the first section is centered on six items, the second six items as well and the last section is composed of five items.

The first section is entitled "general information". It focuses on the student's general background in terms of age, gender, education level and questions about any prior experiences of online learning before enrolling at the university.

The second section is entitled "online learning during Covid-19". This section aims to emphasize on the questions surrounding the experience of online learning during the Covid-19 pandemic, by knowing the platforms used and the success or failure of the university administration in facilitating and defining the methods of operation of this system, and on the other hand, understanding the extent of the teachers' support to students during the online education period.

The third section is entitled "technical difficulties of online learning". It focuses on questions to understand what technical difficulties and problems students have encountered during their online education experience, as well as trying to understand the cause of these problems and how to better develop and improve this educational system in the future.

### 3.2.1.4. Piloting the students' questionnaire

The questionnaire was tested in two main stages. The first stage was based on twelve questions aimed at touching all sides of the research variables, and relied mainly on deepening the students' answers. After distributing the questionnaire to a group of participants, all opinions were taken about how they found the questions in terms of ease or difficulty of understanding, as well as in terms of knowing whether there is a repetition of answers throughout the questionnaire or not.

The second stage relies on taking the results and the supervisor's advice in modifying and coordinating the questions in order to come up with the appropriate copy to collect the data from the students in the correct manner.

### 3.2.2. Interview

The data collection method used in this study is the interview. Kvale (1996) defined the interview as the qualitative research tool that attempts to describe and explain the meaning of central issues in the respondents' lifeworld and to understand the meaning of what the respondents or the interviewees say. Moreover, McNamara (1999) mentioned that Interviews are particularly useful for learning the story behind a participant's experience.

The interviewer can pursue in-depth information about the topic. Interviews can be useful to track specific responses to questionnaires, e.g. B. to investigate their answers further.

Interview design and question wording affect the depth and freedom with which a person can respond. Some interviews encourage long and detailed answers, while others are designed to elicit short and specific answers. The degree of structure imposed on an interview does vary along a continuum, but it is useful to think of three main types: structured, semi-structured, and unstructured.

The researcher chose to use semi-structured interviews to collect data from the participants. One advantage of this method is that the researcher formulates questions prior to the meeting so that the conversation can be smooth and have direction to avoid loss of focus. Besides, participants could respond to the open-ended questions in their best possible way to give in-depth data. To equally get answers from the participants, the researcher asked the same questions for all of the participants. Lindlof (2006) argues that by asking the same questions of all participants in roughly the same order, the researcher minimizes interviewer effects and achieves greater efficiency of information gathering (p. 172). So, In this method, the researcher formulates the most important conversation ideas (Hollowitz & Wilson, 1993, pp. 41-52).

### 3.2.2.1. Sampling

This interview took place within the University of Biskra, where six teachers were selected from the department of English Language in order to learn from their experience in education and also understand the problems and technical difficulties they encountered during their online teaching process. The researcher in this study relied on a convience samplig which means in this case interviewing teachers who are responsive to research objectives and who have accepted to answer interview questions fully and honestly through prior experiences with the subject matter of the study.

The interview with teachers will allow qualitative information and a better description of the topic of study related to the technical problems they have encountered during their experience with online teaching and learning platforms. Moreover, studying other problems they generally face in teaching and dealing with students during the COVID-19 pandemic. Moreover, Six teachers were selected for several important reasons. First, the difficulty of reaching all of them and requesting interviews during a tight educational year.

Secondly, dealing with six teachers serves the research objectives well and makes it easier for the researcher to analyze the data extracted from their answers, add and compare to the previous data analysis related to the questionnaire with students. Finally, not all teachers accepted to participate in the interview and this has a clear impact on the reason for obtaining answers from six of them only.

### 3.2.2.2. Interview description

The interview for this study consists of eight questions. So first, it starts with general questions about the online teaching experience and education in general. In addition, it seeks to understand the technical problems teachers face while using the new platforms and teaching methods that have emerged with the online teaching and learning system during Covid-19. In addition, this number of questions has been selected because it touches all aspects of the study and serves it in terms of answering the questions previously asked at the beginning of the research.

The researcher in this study uses the factual questions, which are a type of questions that require fact-based answers, and also uses the content questions, meaning that the interviewer asks the respondent to provide specific information about participants or attitudes. Also, the interview contains probe questions that mainly ask for more details that serve the study's objectives.

### 3.3. Data analysis

Data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 28.0 (IBM Corporation). It is statistical software that allows researchers to analyze data without using advanced statistical analysis skills. Therefore, it is most appropriate to serve the study in terms of descriptive statistics by presenting and summarizing the collected data in numbers and percentages. The effects of technical difficulties on online teaching and learning for EFL users in the era of Covid 19.

Responses to the open-ended items were qualitatively analyzed by coding them into categories describing the impact of technical difficulties on online teaching and learning. In addition, analysis of descriptive statistics in percentages and relativistic circles was undertaken to identify the correlation between students' perceptions about the use of online learning and the impact of the Covid-19 pandemic on the way education has always been

used face to face interaction has become another system based on the internet and digital platforms.

The researcher had no prior experience with the program, so he took a course on "Udemy" in order to understand the method of use. The researcher learned the most important concepts and methods to serve the study using this program.

## 3.4. Ethical considerations

In any qualitative or quantitative study, it is good to consider any ethical issues that may arise, especially when dealing with human participants. The researcher was closely connected with the participants during the questionnaire and interview. It was therefore necessary to reassure them that the study had not had any impact on their personal lives.

Confidentiality is one of the most important ethical issues that emerge in this research. None of the information obtained by the researcher will be accessed by a third party for any purpose whatsoever. Rather, he must make sure that the information is stored safely so that it does not fall into the wrong hands. This is until it is destroyed after approval of the thesis because this is its main purpose. Furthermore, the researcher must ensure that participants remain as anonymous as possible throughout the study period. However, this is usually not possible with face-to-face interviews, since the researcher already sees the participant. However, respondents were assigned pseudonyms to ensure that only the researcher knows who participated and what their contributions were. Finally, respondents were given comprehensive information about the research at the beginning of the study. Before participating, they were guided through the research topic and research questions to ensure they understood what they were participating in.

## Conclusion

This part of the study illustrated the methodology used to extract data from participants, focusing on population and research instruments suitable for the process. In addition, the researcher explained the method of descriptive analysis in order to reach the answers and objectives of the study. He also defined the software used in data information analysis from which the results will be presented, discussed and validated hypotheses.

The next chapter will explain and discuss the analysis results of the questionnaire and the interview in detail.

# Chapter 4: Results and discussion

## Introduction

This chapter of the research reports the findings of the current study. It represents the practical part through studying and discussing the results extracted from the questionnaire provided to students and the interview conducted with teachers. The process of data collection depends on the methodology used, which is based on qualitative and quantitative analysis. Thus, providing results lead to the answer to the research question.The discussion of this particular section illustrates the impact of technical problems on online teaching and learning in the era of Covid-19.

## 4.1. The analysis and the discussion of students' questionnaire

**Section one: General information**

**Item 1** . Gender

Male  ☐                                                    Female  ☐

The results of this question are shown in the table below:

|       |        | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|--------|-----------|---------|---------------|--------------------|
| Valid | Male   | 11        | 27,5    | 27,5          | 27,5               |
|       | Female | 29        | 72,5    | 72,5          | 100,0              |
|       | Total  | 40        | 100,0   | 100,0         |                    |

**Table 3:** The statistics of males and females included in the questionnaire

The results of this question are represented by the following figure:
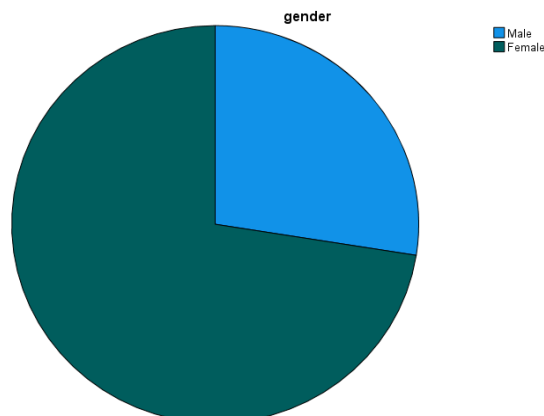


**Figure 3**: Students' gender

The results of item one showed that the vast majority of those studying English as a university major are females (72.5%) compared to (27.5%) of males. This is due to several possible reasons. First, males and females are of different natures, and it shows in the way languages are processed. It has been proven that when learning languages, girls' brains show greater activity in the areas used for language coding. Boys' brains, on the other hand, show more activity in areas associated with visual and auditory functions. So the male brain is more analytical and prefers structured work, while females are more intuitive and prefer the liberal arts (King & Gurian, 2006, pp. 56-58). As a result, it can be said that most women choose to learn English because it fosters the creativity and desire related to their purpose and love of teaching in general.

In addition to that, the fact, these languages are perceived as a female domain (just as engineering is perceived as a male domain). The stereotyping of female and male subjects will certainly leave its mark on us at some point. For example, language teachers in primary and secondary schools tend to be women, which means that children associate languages with their female teachers from an early age and therefore more girls look up to them as role models.

**Item 2** : Age

The table below presents the results of item two:

**Age**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 20,00 | 2 | 5,0 | 5,0 | 5,0 |
| | 21,00 | 10 | 25,0 | 25,0 | 30,0 |
| | 22,00 | 21 | 52,5 | 52,5 | 82,5 |
| | 23,00 | 5 | 12,5 | 12,5 | 95,0 |
| | 33,00 | 1 | 2,5 | 2,5 | 97,5 |
| | 38,00 | 1 | 2,5 | 2,5 | 100,0 |
| | Total | 40 | 100,0 | 100,0 | |

**Table 4**: Participants' ages

Schematically, this table is represented in the following figure:
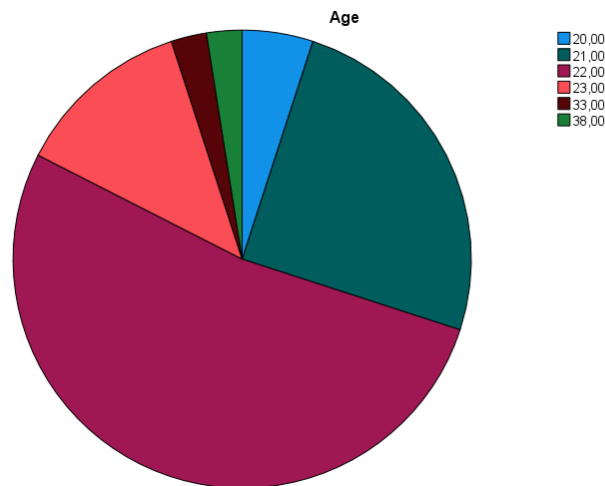
**Figure 4:** Participants' ages

The results in the table showed that the majority of the percentage (52.2%) are twenty-two years old, which is expected because the study was directed to first-year master students, which is considered the correct pedagogical age with the academic year. This is followed by (25%) by the age of twenty-one, which is also considered the pedagogical age due to the difference of months in the year . As a result, there can be a difference in the age of students without a reason related to the repetition of a previous school year. On the other hand, the percentage (12.5%) for the age of twenty-three and the percentage (5%) for the age of twenty due to the missing of a previous school year due to failure to obtain the required average, and early entry (those aged 20) due to reasons related to the work of their parents (teaching in particular), which gives them the right to send their children to school at an early age. Finally, the low percentage (5%) was for two students aged thirty-three and thirty-eight, who graduated in previous years and returned to complete their university studies (in order to obtain a master's diploma) or to adjust their career.

**Item 3**: What is your BAC stream?

Literary ☐ Scientific ☐ Technical ☐

The statistics of this question are shown in the table below:

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Literary | 13 | 32,5 | 32,5 | 32,5 |
| | Scientific | 27 | 67,5 | 67,5 | 100,0 |
| | Total | 40 | 100,0 | 100,0 | |

**Table 5:** The BAC streams of the sample under investigation

This table is displayed through the following figure:
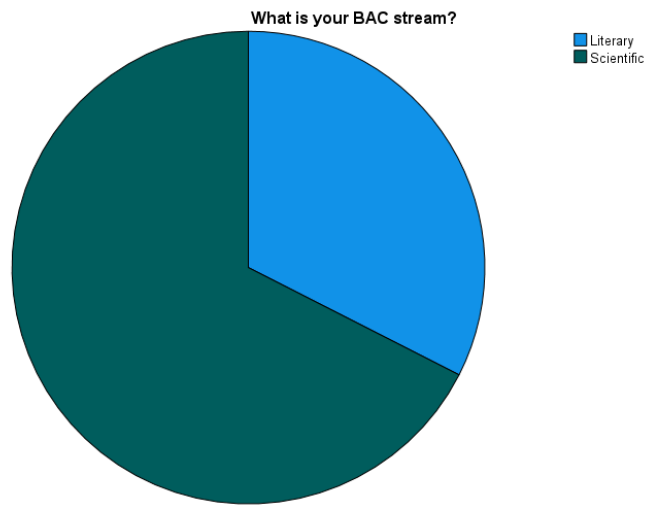


**Figure 5:** Participants' BAC streams

Through the results of the table, which showed that the percentage 67.5% of the answers followed a scientific BAC, which of course is different from the literary stream they chose at the university (English language study) and this is due to several reasons. First, the student's study of scientific courses in high school gave him an idea of what he/she could face during the university if he/she completed the study of scientific disciplines related to mathematics, physics or science in particular, which are difficult majors that most students suffer in achieving the necessary success in them. So, the student goes after the BAC to study the disciplines in which he can succeed and ensure graduation from the University.

On the other hand, 32.5% of the students were from the literary specialization, this is due to their desire to complete their studies in high school, although the study of languages is part of several different disciplines from which the student can choose, such as learning French, law, Arabic literature, humanities or social sciences ...Etc. Therefore, they can opt several different disciplines of the same general orientation (literary), so the percentage is low compared to scientific students within the English language discipline.

**Item 4**: How did you find learning at university?

Easy    ☐                  Difficult    ☐               Very difficult    ☐

    In between     ☐

The table below presents the results of item four:

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Easy | 18 | 45,0 | 45,0 | 45,0 |
|  | Difficult | 5 | 12,5 | 12,5 | 57,5 |
|  | In between | 17 | 42,5 | 42,5 | 100,0 |
|  | Total | 40 | 100,0 | 100,0 |  |

**Table 6:** Students ' impression of their level of study at University .

The representation of this table is in the following figure:
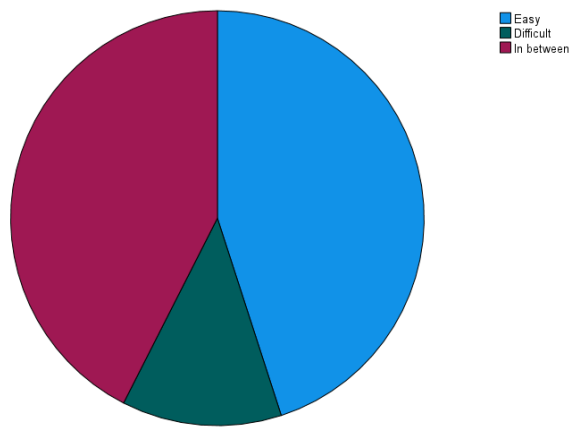


**Figure 5:** Students ' impression of their level of study at University

The majority of students (45%) said that studying at university was easy. 42.5% said it was on average. The reason for this is that the English language major at university is organized and taught the language very efficiently, in addition to the keenness of the professors to teach the language correctly. This facilitates the process of linguistic achievement of students. In addition, the ease of English is linked to external reasons, as it is a universal language and is found everywhere ; in movies, songs, books, social media and the internet in general... Etc. So, studying at the university will not be a major obstacle for students and is therefore easier. The percentage of students who consider their university level to be average is strongly related to the lack of language practice in this context. On the other hand, (12.5%) said that they found it difficult to study, and this may be due to the fact that they found problems in the first way to learn English, and this lies in the failure to learn the basics necessary to build a sound language. So, getting to university and choosing a language major without getting enough of the basics leads to a stumbling block in picking up the most complex and detailed university courses.

There were no answers from the participants that the study was very difficult at the university, and this can give an idea of the efficiency of the university in teaching this major in general.

**Item 5**: Did you have any experience with online learning before the covid 19 pandemic?

Yes ☐                                        No ☐

If yes, please say more

The next two tables represents the results of item five

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Yes | 4 | 10,0 | 10,0 | 10,0 |
| | No | 36 | 90,0 | 90,0 | 100,0 |
| | Total | 40 | 100,0 | 100,0 | |

**Table 7:** Students ' experience with online learning before the pandemic

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | | 36 | 90.0 | 90.0 | 90.0 |
| | It was just general English classes in the baccalaureate year via Google classroom and Zoom meeting. | 2 | 5,0 | 5,0 | 100.0 |
| | it was just some classes that our teacher gave us in high school using google classroom. | 2 | 5.0 | 5.0 | 100,0 |
| | Total | 40 | 100,0 | 100,0 | |

**Table 8:** Students who experienced online education before the pandemic

The representation of table saven is in the following figure:
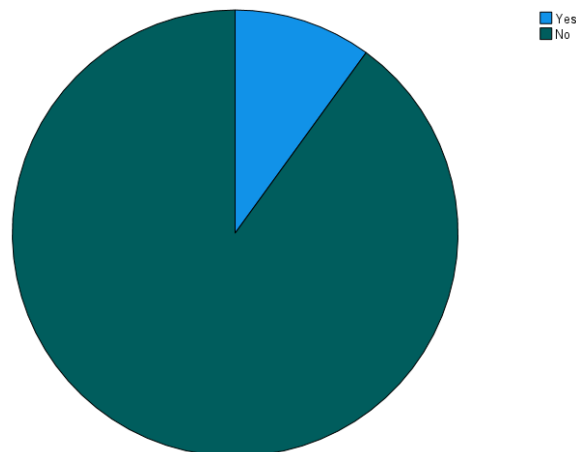
**Figure 6:** Students ' experience with online learning before the pandemic

From the results obtained in the seventh table, it can be concluded that the majority of students (90%) had no experience with online learning, due to several possible reasons. First of all, the reliance of the Algerian education system, in general, on the traditional way of dealing with face-to-face interaction between the teacher and students within educational institutions. On the other hand, it is not necessary to use distance education systems in general because there is no reason for institutions to engage in understanding this system. Therefore, all the reasons mentioned did not give students the opportunity to experience using these modern systems.

By looking at 10% of the students, it can be concluded that they had a slight prior experience with online education, which is illustrated by the eighth table. Their experience was based on attending some of the support classes provided by teachers on a voluntary basis during their high school graduation year, in order to help them study better. So the access of some of the educators and teachers to the use of platforms such as Google Classroom and Zoom Meetings is something that offers a simple experience for these students.

**Item 6**: Are you motivated about learning English  through online learning during  the Covid-19 pandemic?

                Yes    ☐                                No    ☐

Please say why

The results of the first part of the question are presented in the following table:

|       |       | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------|-----------|---------|---------------|--------------------|
| Valid | Yes   | 16        | 40,0    | 40,0          | 40,0               |
|       | No    | 24        | 60,0    | 60,0          | 100,0              |
|       | Total | 40        | 100,0   | 100,0         |                    |

**Table 9:** Students' motivation to study English using online learning

This table is represented in the following figure:
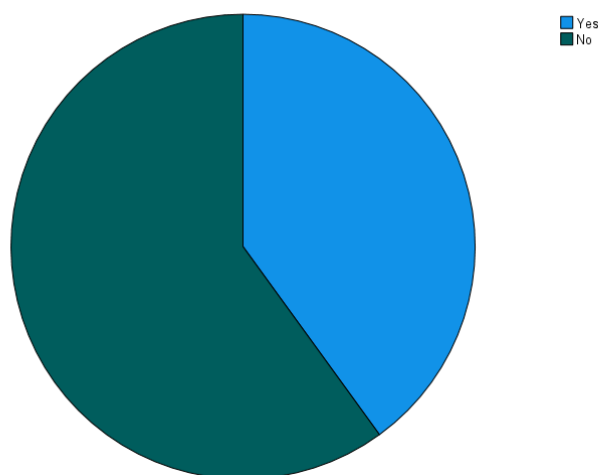


**Figure 7:** Students' motivation to study English during the pandemic

The results showed that 60% of students had no motivation to study English using online learning. This can be due to several reasons. First of all, online learning requires students to take responsibility for their own learning, they cannot simply participate in class with other students. The requirement compels them to participate in online classes with their own awareness to gain new knowledge and information while interacting with teachers and other students (Knowles & Kerkman, 2007, pp.70-80). Schunk (2014) argued that students' learning success is related to their motivation.

Furthermore, Matthews (2010) found that students were differentially influenced by their extrinsic motivation, such as the learning environment, and their intrinsic motivation, such as personalities. Moreover, as mentioned earlier in the theoretical part, and according to the research of Ronnie (2020), one of the reasons why students are not motivated to study is the difference in the style used and adopted for learning, and this lies in the difference in the use of electronic platforms from the use of the blackboard and the direct presence between students and teachers under one roof.

Sixteen students, representing (40%) of the participants, responded that they were motivated to study English in the Covid-19 era using online learning, which can be due to

several reasons related to the advantages of e-learning, which was praised by the researchers' studies in detail in the literature review part. One of the studies related to the positives of online learning, which has been put forward by (Gautam &Tiwari, 2016, pp. 14-17), where it showed that e-learning has a positive impact on the student in terms of the new knowledge and experience that they acquire during the exploration and use of this system. On the other hand, it opens the doors of quick communication between the teacher and the student in any circumstance. All these reasons make students motivated to study online, especially during the pandemic.

The qualitative answers added by the students better explained the reasons why they are motivated or not to learn English during the Covid-19 period using online learning. One of the most important reasons mentioned regarding the lack of motivation to study English is first, the technical problems they face during the use of digital platforms and the inefficiency of their users, whether teachers or administration in general (Usher et al., 2021). Second, the problem of the slow or poor internet connection in Algeria, which is a barrier to the use of online education as a priority for study. Third, the difficulty of absorbing and understanding information during online courses compared to the face to face interaction in the classroom (DeWitt, 2020). Finally, the lack of a good schedule and timing for all students to attend online courses (Baber, 2021). All these problems will be studied by analyzing the answers to the next questions in the questionnaire.

For students who feel that online learning motivates them to learn English during the Covid-19 period. The reasons they see as motivating are their desire to try something new in learning and teaching, and to face challenges in order to gain knowledge. Also, they mentioned that online leaning keeps the students attached to the lectures and prevents waste of time.

**Section two: Online learning during Covid-19**

**Item 1**: What is the primary platform used for online teaching and learning at your university?

Google Classroom  ☐     Moodle Platform  ☐   Zoom Meetings  ☐       Other  ☐

The coming table represents the data collected from students when answering this question :

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Google Classroom | 3 | 7,5 | 7,5 | 7,5 |
| | Moodle Platform | 27 | 67,5 | 67,5 | 75,0 |
| | Zoom Meetings | 10 | 25,0 | 25,0 | 100,0 |
| | Total | 40 | 100,0 | 100,0 | |

**Table 10:** Platforms used for online education

The results of this table are represented in the following figure:
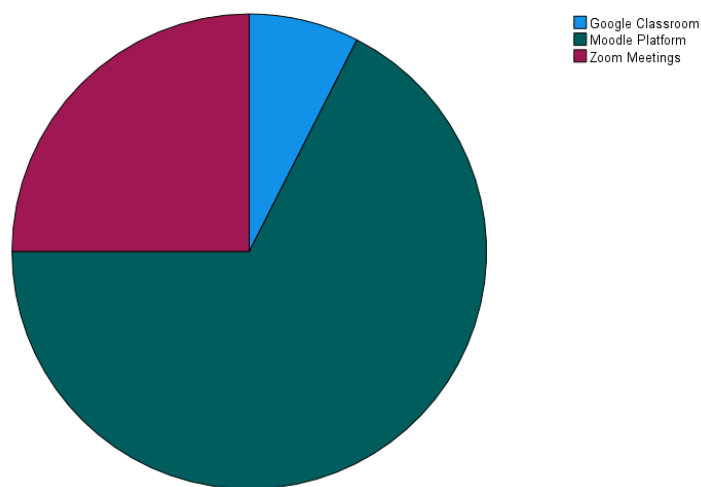


**Figure 8:** Platforms used for online education

According to the results have shown in the table more than half of respondents (67.5%) use the Moodle platform within the University of Biskra. As stated in the theoretical part, LMS based on Moodle is widely used by educational institutions because of its benefits including producing new and sophisticated innovations in technology to make learning easier, organizing systems to exchange various international knowledge for practical experience and developing higher education (Ansong, 2017). In addition, Ahmad (2012), reported that the effects of using Moodle create a positive impression among students and teachers, and that students perceive themselves sufficiently and see benefits in using Moodle, for example improved communication, learning and organization of instructional materials as main aspects requiring future research attention.

25% answered that they use the Zoom platform. This can be related to several features distinct from other platforms. First, the ease of use of the website through its simple

interface, that can be understood by any visitor who uses it for the first time. Second, the advantage of direct communication between students and teachers with the possibility of teaching by using the online courses explanation tools (Lau, 2014) . Finally, the main advantage is the ability to host very large online conferences. This is great for educational institutions with a lot of students, and not many services can match the sheer number of participants allowed in a Zoom room.

Three students (2.5%) admitted to using Google Classroom. It is considered as an excellent platform with great features. However, there are some escalations that prevent universities from using it officially. First, there is no possibility of direct communication between students with their teachers and can only be accessed by opening accounts on Google. Thus, the education process is difficult because of all these obstacles. Second, the online video service does not perform well, as it lacks many of the tools that the teacher needs to communicate information to students. Finally, it is difficult in Google Classroom to get an atmosphere of interaction between students among themselves and with the teacher who explains the lesson to them online .

All that has been mentioned about the features of online education platforms does not mean that there are no technical difficulties encountered by teachers and students in particular. Understanding and analysis of all these obstacles will be discussed through the students ' answers to the upcoming questions.

**Item 2**: Do you think that using the platform you have chosen is sufficient to compensate for attending classes at the university?

<div align="center">

Yes   ☐                          No   ☐

</div>

Justify your answer please

The following table shows the valid answers as well as the missing ones obtained from the sample:

|   |   | Item 2 | Justify your answer please |
|---|---|---|---|
| N | Valid | 38 | 40 |
|   | Missing | 2 | 0 |

**Table 11:** The statistics of the valid and the missing answers from item 2

Thirty-eight of the forty participants answered the question; the two who did not answer may have forgotten or found it difficult to understand.

The results of this question are shown in the table that comes next:

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | No | 38 | 95,0 | 100,0 | 100,0 |
| Missing | System | 2 | 5,0 | | |
| Total | | 40 | 100,0 | | |

**Table 12:** Results of the platform's sufficiency to compensate attendance at the University

The results of this question are displayed through the following figure:
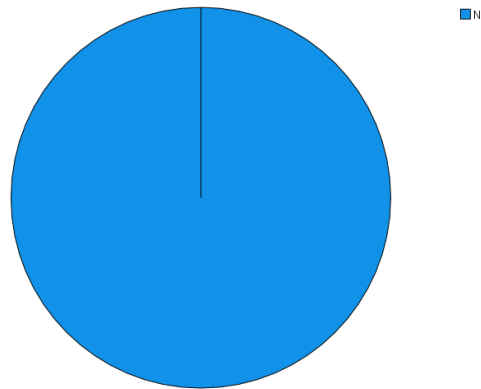


**Figure 9:** Results of the platform's sufficiency

According to the results of the table, 100% of the students who responded to the possibility that their chosen platform could compensate for attendance at the University. They said that it could never compensate for attendance face to face with the teacher for several reasons explained by their answers to the open-ended question .

First, the use of the Moodle platform is directed only for documents and sometimes videos are posted without the teachers' explanation. Therefore, it is a bit difficult for students to understands the contex. As mentioned earlier through the study of Arkorful & Abaidoo (2015), on the impact of not using all the features of the platform in online education, as it negatively affects the quality of interaction between students with their teacher. Thus, the online learning platform is not enough to capture all the details based on particularly suffering from the lack of teaching and learning materials.

Second, in some cases, students need to take notes and comments. However, they need to communicate with their instructors to facilitate the online learning process. In

addition, communication between students is critical to getting ideas, developing vocabulary and background. This is what online education platforms lack and therefore cannot be relied upon to make up for university attendance.

Finally, teachers suffer from inefficient use of the system and associated platforms, which causes difficulty during the teaching process using online tools. This corresponds to what was mentioned earlier in the theoretical part, where (Chen, 2020, p. 200)  study shows that some instructors lack adequate knowledge of information technology and their understanding of online teaching is relatively low.

Although the online platforms are a new concept and it is still young in most universities, some tried to adopt the models but teachers and students did not have enough experience in using the different platforms designed to facilitate online learning .

**Item 3**: Do you think that the material provided by the teacher through online learning is sufficient for your academic achievement?

Enough    ☐             Not enough at all   ☐             Relatively enough   ☐

The following table reveals the detailed percentages of item 3 :

|  | N | % |
|---|---|---|
| Not enough at all | 21 | 52,5% |
| Relatively enough | 19 | 47,5% |

**Table 13:** Efficiency of teacher's provided materials in academic achievement

The following figure is the representation of the above table:
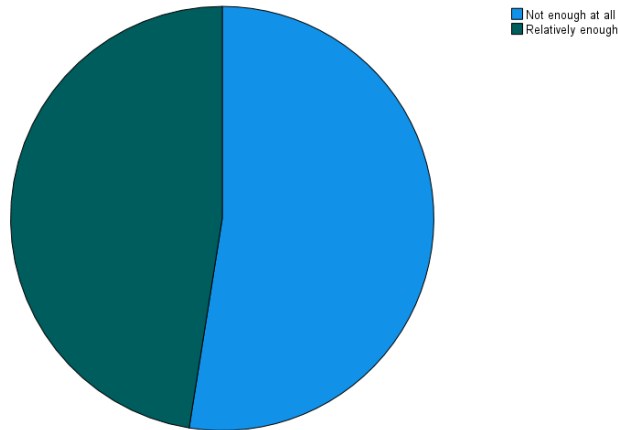
**Figure 10:** Efficiency of teacher's provided materials in academic achievement

21 participants (52.5%) responded that the provided materials by the teacher during online learning are not enough for academic achievement. This is due to what was previously mentioned in the literature review and confirmed by (Bao, 2020, pp.113-115), who stated that teachers often face problems such as lack of self-discipline and learning attitude, which is even more challenging because they do not have much experience in online teaching themselves. Thus, the provision of materials in the absence of understanding the system in the first place hinders the process of teaching and getting students to academic achievement .

On the other hand, 19 participants (47.5%) responded that the provided materials by the teacher during online learning are relatively enough for academic achievement. This is due to the same reasons related to the difficulties that teachers face in adapting to the online education system. However, some of them want to understand it and try to use it properly. Therefore, their attempt to provide conditions that help students in all cases to understand properly and useful in academic achievement. Yazan (2015), in his study stated that teachers preferred to conduct virtual classes using platforms that provide this service in order to interact and communicate with their students. Through these attempts, the Student finds that the material provided by the teacher through online learning is relatively enough to be sufficient for the academic achievement.

**Item 4**: How helpful has been your univercity in providing full support in terms of solving students' problems during the experience of the online learning system?

Not at all helpful ☐     Slightly helpful ☐     Moderately helpful ☐     Very helpful ☐

Extremely helpful ☐

The next table represents the data obtained from the participants in trying to answer this question:

| | N | % |
|---|---|---|
| Not at all helpful | 8 | 20,0% |
| Slightly helpful | 29 | 72,5% |
| Moderately helpful | 3 | 7,5% |

**Table 14:** University support to solve the problems facing students

From the results of the table, there is a clear discrepancy in how the university supports students during their online learning experience, less than half, representing 72.5%, said that the university was only slightly helping to solve the problems they face. The possibility that this may be the reason for this is explained by (Kerres, 2020) .He mentioned that the first problem of the university is the inability to access all available licenses, whether in terms of material or moral related to online learning platforms. This is in order to obtain the necessary materials to provide the right and optimal atmosphere for students to receive information correctly and fully. Thus, avoid problems related to online education.

8 students, representing 20%, responded that they did not find any support from the university in the face of problems encountered during the use of the online education system. This is, probably, due to the inability of the university to organize and manage a body concerned with understanding the requirements of the student and studying new systems of education that are significantly different from traditional methods of teaching. This is confirmed by a study of (Chang & Fang, 2020), in which they showed that the sudden change from traditional education to education using online platforms, was not accompanied with sufficient training for officials in the university administration. In order to present the new system properly and understand how to solve all the problems related to it. Thus, the absence of a full understanding of the new system from the university itself is necessarily accompanied by the inability of the student to solve the problems encountered in online learning.

3 students, representing 7.5%, responded that the university was only moderately helping to solve the problems they face. Despite the difficulties of introducing the new system unexpectedly, the university made attempts to adopt it comprehensively. Thus, helping to solve difficulties depends mainly on academics adapting to the education system

and solving its problems themselves, and then solving the problems of the students . This is confirmed in the study of (Suresh, 2018), where he stated that, universities were affected by the pandemic. So, most of them indicated that they had to implement online learning and had to face many challenges. Especially, those related to the impact of students ' adaptation to the use of the new system and the ability of teachers to offer online courses.

**Item 5**: How helpful are your teachers while studying online?

Not helpful ☐          Slightly helpful ☐          Moderately helpful ☐          Very helpful ☐

Extremely helpful   ☐                    Helpful ☐

The results of this question are displayed in the following table:

| | N | % |
|---|---|---|
| Slightly helpful | 16 | 40,0% |
| Moderately helpful | 18 | 45,0% |
| Very helpful | 6 | 15,0% |

**Table 15:** Teachers support while studying online

The majority of students' responses were between moderately helping (45%) and slightly helping (40%).  This is mostly due to several reasons . First, the students considered the teacher to be less than optimal in terms of the learning materials provided because the teacher was limited in the online teaching methods conveyed to the students. As confirmed by the research results of (Ningsih, 2020), who found that online learning tends to limit the interaction between lecturers and students and the explanations of the material are less than optimal and not maximal. Teachers can only provide students with materials and assignments for e-learning due to the limited use of it. Thus, they are restricted in terms of their ability to help the students with the problems they may face.

Second, with the introduction of compulsory online education in Algeria, some of the services became freely available for university use. While there were no local platforms, the international platforms like Moodle and Zoom were accessible. Nonetheless, participants said that it is still difficult for teachers to use the technological devices, which affects the whole process of integrating online learning. According to Kerres (2020), the

use of technology in universities was associated with the sudden emergence of covid-19, which led to the mandatory use of a technology-based system. Thus, agreeing to work with it in teaching without taking the necessary training in order to learn how to use it leads to difficulties in receiving information.

6 participants, representing 15%, had another opinion. The teacher was very helpful to them. This may be due to the fact that some teachers have difficulties using the online education system. But they try to solve problems and understand the system better. Thus, they are able to help students during the online lessons. (Pellegrino & Hilton, 2020) stated that, the teacher is the focus of education. If the necessary tools and training are not provided for duty during the pandemic, the entire academic side will be affected. In addition, the teacher's spontaneous attempts improve and help in the atmosphere of studying online with students even if the general conditions are not suitable.

**Item 6**:  What devices do you use for online learning most?

Laptop  ☐               Desktop  ☐               Tablet  ☐               Smartphone  ☐

The next table represents the data obtained from the participants in trying to answer this question:

|  | N | % |
|---|---|---|
| Laptop | 16 | 40,0% |
| Desktop | 3 | 7,5% |
| Smartphone | 21 | 52,5% |

**Table 16:** The most used device in online learning by students

The following figure is the representation of the above table:
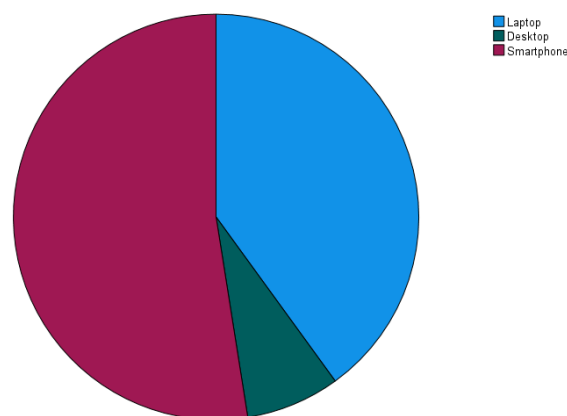


**Figure 11:** The most used device in online learning by students

The majority of students, representing (52.5%), use smartphones during online learning compared to other devices such as laptops (40%) and desktop computers (7.5%). This raises some questions and conclusions. First, the fact students' smartphones are the first engine for them during their online learning. This can cause them some difficulties :

- Smartphones are not the best and most appropriate option during the learning process and online education. This is because most platforms and websites require the operation of their full characteristics of high-specification devices.

- Students ' choice of smart devices instead of using a laptop, for example, because it is mainly caused by the student's inability to financially acquire the most suitable devices for the task. Hence, more difficulty in learning online. All these reasons hinder the online learning process (Garbe, 2020, pp. 45-65).

Secondly, the sixteen students (40%) who use the laptops have a better experience during the online learning process. However, this does not prevent the difficulty of understanding and assimilation of the new system. Especially since its use is mostly directed towards this goal only. This was confirmed by the researcher's study (Ronnie, 2020), which showed that the environment that surrounds the student while using everything related to the online learning process has a significant impact on the student's entity. This is because the environment related to the virus pandemic necessarily affected his understanding and use of the new system. Thus, the coincidence of problems is a metter of fact.

Finally, as previously explained, the majority of participants did not have the financial means to obtain the appropriate equipment for the online learning process. This explains the low percentage (7.5%) of students who have desktop computers (Verawardina, 2020).

**Section three : Technical difficulties of online learning**

**Item 1**: Which of the following do you feel was most difficult after shifting to online learning? (You can check up to two boxes)

☐ Lack of face to face interaction with my instructor(s)

☐ Lack of face to face interaction with my Classmates

☐ Not learn as well with the online learning environment

☐ The technical problems and difficulties while using the online platforms

Mention other difficulties you have faced after shifting to online learning

The next table represents the data obtained from the participants in trying to answer this question:

| | N | % |
|---|---|---|
| Lack of face to face interaction with my instructor(s) | 27 | 67,5% |
| Not learn as well with the online learning environment | 7 | 17,5% |
| The technical problems and difficulties while using the online platforms | 6 | 15,0% |

**Table 17:** Difficulties encountered by students after the shifting to online learning

This table represents the qualitative opinions of students regarding the question asked :

| | N | % |
|---|---|---|
| | 23 | 57,5% |
| Poor internet connection | 5 | 12,5% |
| the internet connection is not always perfect. | 3 | 7,5% |
| the internet weekness in Algeria | 2 | 5,0% |
| The most difficulty that faced me was the weak flow of the internet. | 7 | 17,5% |

**Table 18:** Students ' opinions about the difficulties they faced during online learning

According to the results shown in (Table 17), there is a clear discrepancy in the percentages related to the difficulties faced by students after they switched to online learning. 67.5% of the sample answered that the biggest difficulty during their online learning is the lack of face-to-face interaction between them and their teachers. Basically, interaction with the teacher is so important to students that face-to-face learning cannot disappear entirely, Therefore, if there is no interaction within the educational platforms, the students cannot understand and assimilate the information provided by the instructor. This was confirmed in the literature review chapter by a study of (Arkorful & Abaidoo, 2015), where they showed that learning online without fully understanding the way it is used, naturally leads to a lack of interaction between students and teachers. This creates a difficulty in accepting this new system and a greater desire to return to the classical system based on face-to-face interaction within the classroom.

7 participants, representing 17.5%, indicated that their biggest problem is their lack of adaptation to the online study environment. In fact, the online learning process during the covid-19 pandemic itself completely and generally changed the atmosphere of life. Therefore, studying at home has become a difficult and inappropriate thing for students under all these circumstances. A study conducted by Demuyakor (2020) confirmed the above. He reported that the environment in which the student is present during his online learning by obligation contains one of the causes of noise and chaos, which resulted from his presence outside the classroom on the one hand and the lack of an observer on his concentration within the lessons explanation. Thus, the learning process will inevitably encounter difficulties.

6 students, representing 15%, explained that the difficulty they faced was related to the platforms used for online learning itself. The difficulty of using the platforms is a reason for not taking into account the provision of training courses in order to understand the correct use of these platforms, whether for students or even professors. Thus, this will cause a deficit in explaining lessons and communication. Talebian & Rezvanfar (2014 )gave some important results that support the reasons given. They pointed out that universities in general have chosen free platforms for the sake of material savings or because they are unable to do so in the first place. Therefore, the use of the platforms provided by the university is significantly limited and insufficient for the correct collection of information provided to students. On the other hand, the resort of professors to external platforms in order to get a better service in interacting with students is also accompanied by a difficulty related to the student, as the idea of dealing with several platforms at the same time makes it, especially, difficult for him to study.

Based on the result of (Table 18), it is possible to extract a very important title and a problem that students encounter during online learning. Students in particular suffer from the problems of internet outages and its weakness in Algeria. The internet is the main nerve in activating all the sites and platforms necessary for the online learning process. Thus, the lack of internet connection most of the time hinder the process of distance education. There are several studies mentioned in the theoretical part that support and show what has been mentioned. Aboagye (2020), reported that the quality of internet connection is the most important reason for the good progress of online education, and any problem or malfunction in it leads to hindering the access of information and communication within this new system.

Moreover, poor or no internet quality is having a huge negative impact on the implementation of online learning during the coronavirus pandemic. Those hardest hit were those living in remote rural areas, where signals are weak and taking classwork was therefore difficult. In addition, Kibuku (2020, pp.150-161)  found out that among the difficulties related to online learning is the inability to fully provide the internet for reasons related to the financial deficit and the cost of the monthly subscription of the service provider, especially during the pandemic.

**Item 2** : Online learning tools should be developed better?

Agree  ☐        Disagree ☐        Neither agree nor disagree ☐        Strongly Agree ☐

Strongly Disagree   ☐

If you agree or strongly agree, In what way do you think it should be developed?

☐  Work on improving the used platform in order to get the most out of its features

☐  Work on building a better environment between the teacher and the student during the online courses

☐  Focus on installing experienced people in order to clarify and facilitate the work and use of online learning tools

☐   Work on developing the communication features between the student and the instructor(s)

☐  Giving students an opportunity to share suggestions that facilitate the study of the online courses

The following table shows the valid answers as well as the missing ones obtained from the sample:

| | | Online learning tools should be developed better? | If you agree or strongly agree, In what way do you think it should be developed? |
|---|---|---|---|
| N | Valid | 40 | 37 |
| | Missing | 0 | 3 |

**Table 19:** The statistics that show the valid and the missing answers from item 2

The next two table represents the data obtained from the participants in trying to answer this item:

| | N | % |
|---|---|---|
| Agree | 19 | 47,5% |
| Neither agree nor disagree | 8 | 20,0% |
| Strongly Agree | 13 | 32,5% |

**Table 20:** Students' opinions on the necessity of developing an online learning system

| | N | % |
|---|---|---|
| Work on improving the used platform in order to get the most out of its features | 12 | 30,0% |
| Work on building a better environment between the teacher and the student during the online courses | 11 | 27,5% |
| Focus on installing experienced people in order to clarify and facilitate the work and use of online learning tools | 9 | 22,5% |
| Work on developing the communication features between the student and the instructor(s) | 3 | 7,5% |
| Giving students an opportunity to share suggestions that facilitate the study of the online courses | 2 | 5,0% |
| Missing        System | 3 | 7,5% |

**Table 21:** Possible ways to develop an online learning system

The following figure is the representation of the (Table 20):
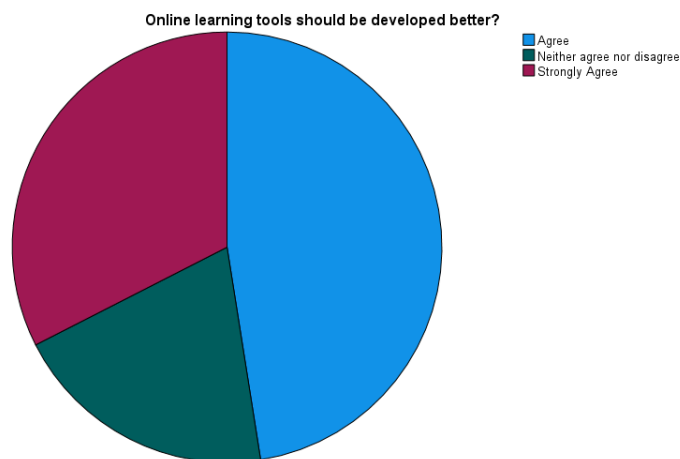


**Figure 12:** Students' opinions on the necessity of developing an online learning system

According to the results of table 20, on the one hand, 47.5% of students agreed on the need to develop online learning tools, and on the other hand, 32.5% strongly agreed on the same necessity. In addition, the results of table 21 confirmed the most appropriate way to develop these tools. 12 students, representing (30%), believe that the most important thing to focus on and develop is the platforms used in distance learning itself. In fact, the main problem is not in the platform, but in the lack of training on how to use it, both from the side of students and teachers (Sarkar, 2012, pp. 30-41). As well as not taking full advantage of all its features and tools due to several reasons, including either the limited university budget, which allows only the use of free tools in those platforms, or the lack of knowledge of academics on the basis of choosing the appropriate platform in order to provide all means of facilitating and developing distance education in general (Jegede, 2020; Ratten, 2020).

According to the results of table 21, which supports the need to develop distance learning tools, 27.5%, in addition to 7.5% of students in general, believe that what should be focused on in order to develop distance learning tools is to facilitate the possibility of interaction between students and the teacher in order to create a better environment for communication during online courses. The most used platform at Biskra University is Moodle. This platform provides several advantages, including sharing files and lessons in an organized manner on the website associated with the student's specialty. However, it does not provide the direct experience of face-to-face interaction between students and the instructor, and therefore the need to add a live video feature is very important in order to develop a better environment for teaching and learning online.

9 participants, representing 22.5%, answered that what online learning tools need to be developed by focusing on installing experienced academics in order to facilitate and clarify the correct way of using them in the first place. This is done by providing appropriate training courses for students and teachers in particular. Thus, facilitating the flow of communication, providing information and lessons during direct classes on the one hand, and avoiding unnecessary obstacles related to the way electronics work on the other.

20% of the students who have chosen to be neutral remained in the need to develop online learning tools or not (Table 20) . This may be due to the lack of a future view of the use of this system in universities. Therefore, the possibility of the return of the traditional system of education based on compulsory attendance in the classroom is what they consider necessary after the end of the pandemic.

3 students, representing 7.5% of the results of Table 21, did not answer the question due to the possibility that they did not understand it or that they forgot it.

**Item 3**: Through your experience, do you think that this system can be relied on permanently at the university?

Yes ☐                                     No ☐

Please, justify your answer

The results of this question are displayed in the following table:

| | N | % |
|---|---|---|
| Yes | 4 | 10,0% |
| No | 36 | 90,0% |

**Table 22:** The possibility of relying on the online learning system permanently

The following figure is the representation of the above table:
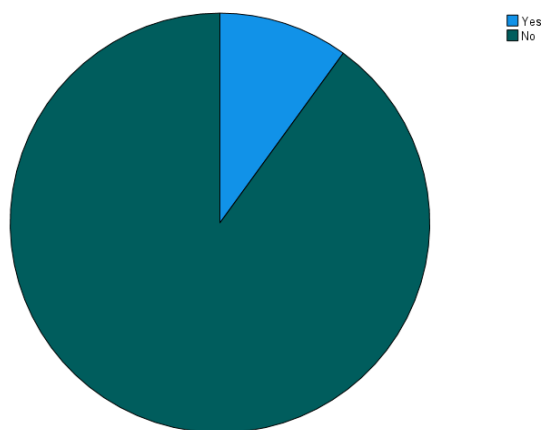


**Figure 13:** The possibility of relying on the online learning system permanently

Based on the results of the analysis of the statistics, the majority of students (90%) believe that it is not possible to rely on this system permanently and they have given qualitative reasons for this. First, the problems of not being able to interact directly face-to-face between students and the teachers using the new system fully introduces the importance and necessity of returning to the traditional system because it is still the most suitable for this task. This theory was supported by the study of Dawadi (2020), in which he showed that the use of the online learning method is still at the height of its

development and needs a period when it is not possible to fully rely on the new system, and therefore it is necessary to return and exploit the classical system.

Second, the problems of the platform once again are one of the main reasons why students do not accept the idea of permanent use of the new system. Adnan (2020, pp. 45-51) in his study on the subject, he found that electronic educational platforms are not suitable for all students because they lack several advantages. Among them, its incompatibility with all devices used by most students (smartphones in particular), which directly hinders the learning atmosphere. Therefore, it is not always reliable for all students.

Finally, the problem of experience related to the new system, both for students and instructors is an obstacle that prevents the good course of teaching and learning. Therefore, following what is known by experience, then, the traditional system is mandatory in this case and cannot be dispensed with at the moment.

On the other hand, 10% of respondents believe that the online learning system can be relied on permanently. They justified the reason for this by answering open-ended questions, which were summarized in several points. First, this system fills the gaps of the previous system where, for example, if a teacher misses an educational class, he can simply make up for it by using this system directly and thus he can share information and explain the lesson without problems. Secondly, this system opens the door towards motivating students to try something new and helpful in crises. Thus, the use of the new system can be permanent, if only it is well adapted to it.

**Item 4**: Compared to the traditional learning experience, how effective do you feel online learning experience has been?

Much more effective ☐       Not at all effective     ☐    Somewhat more effective ☐
Somewhat less effective ☐            No difference ☐

If it is less effective or not effective at all, suggest some possible improvements that you wish to develop the online education system at your university.

The results of this question are displayed in the following table:

| | N | % |
|---|---|---|
| Not at all effective | 7 | 17,5% |
| Somewhat more effective | 3 | 7,5% |
| Somewhat less effective | 30 | 75,0% |

**Table 22:** Students' opinions on the effectiveness of the online learning experience

Through the results of the table, the majority, representing (75%) together with 17.5% of the participants, believe that the online learning experience is limited in the area of somewhat less effective to no effectiveness at all. This is done by analyzing the students' answers related to their suggestions on how to develop the experience of this new system. Where the following reasons and results were concluded. First, the greatest problem that this study has reached from analyzing the students' answers is that the problem of the Internet is the primary reason for impeding online learning. In fact, several studies have been presented and confirmed by many researchers. Among these studies, the researcher Aboagye (2020) found that the student's main suffering in using online learning tools lies in the weakness of the Internet, especially in developing countries, which suffer from difficulties in introducing modern programs and tools into their educational systems.

Second, the students' desire to develop the platform used in terms of its features, making the distance learning experience more effective. The formal inclusion of different platforms within the universities greatly facilitates the provision of better interaction between students and the teacher within the online classes. Therefore, the necessity of adding platforms such as Zoom and Google Classroom, for example, facilitates communication and gives greater opportunities for the possibility of accepting this new system permanently.

Finally, the student's view of the aspect of the teacher's eligibility to use and motivate students during the online courses, has a great impact in providing a better experience of this system. In fact, as was inferred from the answers to the previous questions from this study, the great impact lies in the lack of good running of this system because the teacher himself did not take the necessary training from those who were ignorant to understand the ways of using distance education tools. Thus, the idea of providing training courses is a must to be done in order to provide the best atmosphere for interaction and communication between students and the professor. In the study of Goian (2004), it was found that the language used within the online courses is primarily the responsibility of the teacher, in

terms of stimulating interaction with students and providing the appropriate study atmosphere. So, clarifying the objectives and methods of using the tools enables a better experience of this new system.

Three students from the questionnaire, who represent 17.5%, believe that the online learning experience is somewhat more effective than the traditional system. This could be due to several reasons. First, the use of this new system contributes to the student's personal dependence on himself. Thus, he/she comes out from the idea that the teacher is the focus of information in all the lessons presented. Second, when an e-learning environment is managed, its impact on pedagogical learning is demonstrated by providing equal access to information regardless of where users are located or what ideas they believe in (Joshua & Obille, 2016, pp. 51-69).

Finally, several studies have shown a positive effect of online learning on learner or student knowledge (Gautam & Tiwari, 2016, pp. 14-17). For example; with online learning, students can observe a much more flexible learning path to get to a class that requires very little movement. So, they gain deeper insights into the information through classroom activities through interactive video and this allows them to quickly respond to activities (Gautam and Tiwari, 2016).

## 4.2. The analysis and the discussion of teachers' interview

### Q1.

This question aims to know how teachers feel about the transition to online teaching during the COVID-19 pandemic.

The interview was conducted with a sample of university teachers from the English Language Department as they had the experience with online teaching during the Covid 19 period. Therefore, this question was put first in order to understand what each teacher feels during the sudden transition from the traditional system to the electronic system.

Two thirds of the sample (66%) confirmed that what they encountered during the sudden change to the distance teaching system is the difficulty in adapting in terms of understanding how to use the platform tools provided by the university. As well as the challenges they face in adapting the student with this new system. Especially, in terms of

stimulating learning through it and compensating for the lack of interaction between students and instructors.

In fact, there are many studies that show the negative impact of online learning for students. It also clarify the most important challenges that the instructor faces during the process of online teaching. Searls (2012), believed that the greatest challenge of online teaching is its isolating and impersonal nature. Students who study online typically have fewer opportunities to interact with teachers and peers, which in turn can impact their motivational, cognitive, and affective outcomes. In additon, Barron (2021) found that many teachers face difficulties in transferring some academic materials from the traditional teaching environment to the online modern environment. Therefore, because it needs interaction between students and the teacher, in order to take a direct feedbacks.

The last third of the sample (33%), answered that the transition to online teaching is necessary in universities. However, they indicated that if this system had been previously included, it would have been better. The reason for this is simply according to the answer of one of the teachers, that there will be prior knowledge and experience in how to use the platforms and tools, as well as the possibility of adapting the students to the permanent use of this system. Therefore, there will be no problem in motivating students or teachers during a sudden and direct transition to teaching or learning online, especially during crises.

**Q2.**

This item aims to find out the extent to which teachers have adapted to the use of online platforms in their courses.

With the recent use of the online education system in universities, it was necessary for teachers to experiment with tools and platforms related to it. Through the answers of the sample, important causal points were deduced. First, all teachers (100%) during the interview, stated that they were not comfortable using electronic platforms because they were unable to clarify all the complexities of using their tools during the courses. This was confirmed in the theoretical part of this research by O'keefe (2020) study. It was found that advanced technology in education initially shocked both teachers and students who had no experience in using it. Therefore, the necessity of having special training courses for teachers in order to facilitate the work and understand the ways of using the system, will

necessarily lead to making the general study atmosphere between the student and the teacher more stimulating.

Second, half of the sample (50%) in the interview added a very important point regarding the most widely used platform at the university. They made it clear that the Moodle platform adopted at the university is not enough to attract it as a basis for distance education. This is due to several reasons, including the lack of features in it, such as live videos with students, providing lessons and systematic assignments in a way that facilitates the interaction with the teacher, giving the possibility of communication between students in it through the online course and many necessary equipment in order to achieve interaction between all the parties. All these reasons make the teacher go through difficulties that need study and development. (Chen, 2020), in his study supported the aforementioned reasons for the necessity of developing platforms by providing all the features and equipment needed by the teacher, in order to avoid obstacles and difficulties in accessing this new educational system.

**Q3.**

This element aims at shedding light on the most important technical problems faced by the teacher during the online teaching practices.

Through the answers of the sample, several different points were concluded related to the most important issues that the teacher encounters during his practice of online education. Three-quarters of the sample (75%) agreed that the first technical problem they face during their online teaching is the weak or poor Internet throughput. In fact, this problem affects all areas of life that depend on it, not only education, especially in Algeria. Budur (2020), in his research, which examines the impact of the weakness of the Internet on online education. It was found that the problem of the Internet hinders the proper functioning of the explanation through the online courses. Moreover, the teacher's quest to give an experience similar to the traditional system in terms of delivering the information and the lesson in a way that keeps the student more motivated, is an obstacle to transferring that experience from the ground up because the problem of the weak Internet does not serve communication or benefit from the full advantages of online teaching.

The last quarter of the sample (25%), added that the platforms used during online courses are either complicated or lack many features. Among these features that the

Moodle platform lacks, as one teacher mentioned, for example, is the inability to interact with students directly. And the platform is free from the possibility of taking teacher evaluations about the need to add a distinctive live video. As well as facilitating the use of the platform from the ground up for students in order to build better interaction and motivation for students during the learning process. Chung's study (2020, pp. 46-58), confirmed that educational platforms, despite their diversity, are the first basis for online education. Therefore, it is necessary to understand all its concepts and features in order to obtain the greatest benefit from it.

**Q4.**

This element aims to find the biggest challenge the teacher faced during his shifting from face-to-face education in the classroom to online education.

Two thirds of the sample (66%) indicated an important point regarding the most difficult challenge they encountered during their transition to online education, which is the difficulty of getting students to interact with online courses. In fact, one of the teachers during the interview stated that most students find online learning boring and often complain about the lack of motivation needed during the lessons. Gilbert (2015) study confirmed that the teaching environment is disrupted if there is no incentive, whether for students or teachers, to use the new system in a way that includes all the tools that encourage interaction and communication between them.

The last third of the sample (33%), added the idea of focusing on the development of ICT systems, in a way that is easy to use by the teacher in order to save time and make full use of it during online courses. Also, the ability to access all the necessary tools for explanation is the simplest possible form for the student and the teacher at the same time. Moorhouse (2020) emphasized, in his study, on the impact of the use of ICT in education, that it can be of great benefit if it is used well. This lies in dealing with it and developing it from the ground up, by taking the opinions of its users, especially teachers and learners, and thus placing it well within the educational systems. In fact, the main source of online teaching is the instructor. So the necessity of taking the teacher's opinion on any challenge he faces within the online courses helps in improving the feasibility of education and from it creating interaction between the students and the teacher.

**Q5.**

This item aims to know whether it is possible to rely on online teaching in a way that allows it to be replaced in a place where the study atmosphere is face-to-face between the teacher and the student in the classroom or not.

Half of the answers (50%) of the teachers who were interviewed, indicated that it is not possible to rely on online teaching as a replacement for the traditional method of education, and they inferred this for several reasons. First, face-to-face teaching within the classroom provides greater motivation for study and an immediate response from the teacher to the participation of any student in the subject matter of the lesson. Thus, it facilitates the process of learning and solving all problems. Second, online teaching does not provide immediate interaction between the student and the teacher, unlike the atmosphere of classical education based on interaction, communication, and sometimes entertainment. Hestenes (2012) supported, through his study, the principle of the fundamental difference between online and face-to-face teaching, which showed that it lies in the interaction between the participants in the lesson, whether teachers or students. Whereas, the interaction within the classroom is better and direct between the student and the teacher. Offset by the possibility of weak or non-existent interaction during online teaching.

The other half of the sample (50%) explained that in order to move towards the development of education, it is better to combine the classical and modern methods of teaching because they are complementary to each other. In addition, one of the teachers stated during the interview the necessity of applying the online teaching system correctly in order to include it within the academic community and make it complementary to the classical system based on face-to-face attendance in the classroom.

## Q6.

This item aims to know the teacher's opinion about the eligibility of online teaching in providing the appropriate and sufficient study atmosphere with students in order to obtain lessons and information well.

All teachers sample (100%) answered that it is not possible to rely on online teaching to provide lessons in a good and complete manner. They presented two main reasons. First, in terms of the system and platforms used for education, which, as mentioned previously, suffer from a lack of features and tools that create the best and appropriate study

atmosphere for receiving information and lessons. Secondly, from the point of view of the student himself, the application of the online teaching system or e-learning in general to the student who does not have a real presence in the classroom. It can be accompanied by personal difficulties that the teacher cannot see or treat properly. Thus, it can affect the application of the appropriate study atmosphere by using online teaching.

Several studies confirmed the teachers' view of this component. A study of Hershkovitz, Elhija, & Zedan (2019) found that the application of e-learning in the issue of creating the appropriate atmosphere for interaction and good lessons, is accompanied by great difficulty. The reason lies in the fact that the online education system, regardless of its quality and features, cannot replace a face-to-face meeting between all parties, including teachers and students.

**Q7.**

This item aims to know the teachers' opinions about the ways in which the online teaching system can be developed.

There are several points and common opinions among teachers regarding the necessity of developing the online teaching system. Half of the teachers (50%) emphasized several necessities, the most important of which. First, providing training courses in order to understand how to use electronic platforms and systems, as well as, encouraging cooperation between teachers by providing the necessary equipment and tools for the exchange of experiences, and using them as a group aimed at providing the best interaction with students within the online courses. Second, focus on providing curricula that fit the atmosphere of online teaching and support the idea of creating communication between the two sides of education, students and teachers.

The other half of the sample focused more precisely on the points that lead to the development of the online teaching system. First, focus on preparing the appropriate lessons according to the correct curriculum for distance education. Second, trying to create the appropriate and supportive environment to receive lessons without tiring or boredom. Third, the addition of live chat features between the teacher and the students in order to answer the questions asked. As well as adding the feature to share the student's screen in order to provide the possibility of presenting the works and solutions to the exercises

recommended by the teacher. Thus, the possibility of commenting on it and correcting errors in it directly.

**Q8.**

This last element aims to know any suggestions that the teacher adds in order to enrich the research further.

Three quarters of the sample (75%) added some suggestions, while the last quarter (25%) did not add anything. It is possible that everything that was presented in the previous elements is sufficient for the research endeavor.

Among the suggestions that teachers focused on in this last element, is to develop a complete plan to be initiated by the Ministry of Higher Education in order to lay the correct foundations for the application of the online education system. This is through what was mentioned previously, focusing on providing comprehensive courses that simplify and clarify the ways to use the platforms. Also, it is necessary to inject a significant budget in this field, because relying on it guarantees a bright and advanced future for Algeria in terms of education. And thus guarantees its position with other countries implementing this electronic system.

# Chapter 5: Conclusion

## Introduction

The final chapter of this study summarizes the previous chapters. The importance of the current study can be seen in the insights gained from the analysis of the data collected by the research tools. This chapter contains the summary and the evaluation of the main results. It begins by discussing the findings and ends by listing the limitations related to the research objectives and methodology, and discussing future prospects. Last but not least, this part of the research is about presenting possible recommendations.

The present research uses a qualitative and quantitative analysis during the data collection process. This is in order to find out the impact of technical problems on online learning and teaching for EFL users during the covid-19 era. The main objectives of the study is to identify e-learning challenges and barriers during the COVID19 crisis. Also, it is an attempt to understand and use the best practices and techniques to engage and motivate EFL learners and teachers for the new system.

## 5.1. Summary of the main results

In the current research, the researcher was interested in examining the challenges related to online education during the COVID-19 pandemic. To achieve this, he conducted an interview with English university teachers and submitted a questionnaire to first year master's students in the same specialty. The reason for this was to study their experience of using distance education system in online teaching and learning at  the university of Biskra. The academic year was underway when universities closed in April 2020 and as such, despite the obvious challenges, students had to remain in session. Some of the challenges faced by them was poor internet in Algeria, lack of experience in using online platforms and inability to provide the necessary equipment and softwares for studying as required. The researcher also found that some learners and teachers did not have enough know-how in using learning systems and were also inflexible in terms of time and place.

The study reflected the current state of affairs that is inevitable not only in Algeria but around the world. The impact on the education sector is just one of the other impacts that the pandemic has had on Algerian soil since its inception. Therefore, after completing the questionnaire with the students, further data were collected through the interview with teachers in order to achieve all research goals related to the aspect of learning and teaching. It can be concluded that the causes of technical problems encountered, whether teachers or

students, start from the foundation in the failure of the Ministry of Higher Education to provide solutions through courses taught by professionals with experience in systems and online platforms. This is in order to ensure solutions to technical problems and to know that the teacher is fully capable of using this system in teaching. Thus, improving and motivating students' experience in terms of interaction and communication with the teacher as well as other students through online courses.

Overall, these challenges stem from a lack of adequate funding for the education sector by the Algerian government. Because of these previous problems of inexperience among the teachers and students, fear began to build up in them because they did not know how to complete the course schedule in the allotted time with all the difficulties. In addition, This research can be seen as an important contribution to the existing literature by addressing the difficulties that experts and officials say key stakeholders in the education sector are facing during these uncertain times of the COVID-19 era. It provides important practical insights into the application and adoption of online learning and teaching. In fact, some of the previous literature has identified infrastructural problems as the only or most important problems leading to the slow adoption of technology in the education sector. However, current research has identified additional issues related to government financial support, digital self-efficacy, course design issues, motivational issues, and technical issues with the learning systems.

The results of the study can be used to advise researchers, developers, curriculum developers, designers and policy makers so that they are better equipped with the critical elements of deploying online learning systems to ensure their success in the future. To begin with, the problem facing university administrations and their technical support teams is insufficient resource allocation to ensure that instuctors and students receive the relevant technical training and that learning materials are accessible to everyone and anywhere. Also, any problem arise during the virtual transmission of instructions, they should be able to solve it in a very short time. They should also train teachers and students to deal with smaller problems that don't require a lot of technique.

Moreover, It can also be concluded that administrators in universities are reluctant because all problems have been and are experienced because they are reactive rather than proactive. So,  they need to monitor future issues and progress with the times. Given that we are in the middle of the information age, the uptake of ICT in higher education

institutions in Algeria has been relatively slow. Developers and designers in the region also face a problem due to the lack of local platforms that are easy to use and can accommodate all learners, including English learners and teachers who may not have a thorough understanding of how Western platforms are used. Overall, the results of the current study provide new ideas for decision-makers in the education sector to promote the use of ICT in knowledge transfer, so that implementation in the post-pandemic period can take place as smoothly as possible.

The study also concluded that in order to ensure the success of the online learning and teaching system, the technical problems faced by both students and teachers must be resolved through the use of ICT. And the first step is the need to bring government and university administrations together to address the above challenges by creating radical solutions to ensure that education and a fundamental human right, is enjoyed equally by all students and teachers. As a result, If they tackle each challenge individually, the adoption of ICT in the technology sector will rise to a new and unprecedented level.

## 5.2. Implications

The results of this research clearly help in deducing the effects and technical problems facing online learning and teaching. Thus, researchers in the same field of study can take important ideas and points to enrich their academic studies.

Through the collected data, studies of the subject and trying to fill the gaps in scientific research. Future studies can take these following points and try to address them and enrich the academic aspect. First, despite the Corona pandemic that suddenly came to humanity and caused great damage in all sectors, humans, by nature, keep up with all the challenges they encounter in a positive way. In fact, it can be seen that the educational sector, with the arrival of the pandemic, took a new look at the implementation of the distance education system alongside a system that has been used since time immemorial. Of course, the new start will take some slow pauses, which can be resolved by adopting this research for the development of the sector.

Second, working on the infrastructure in Algeria, especially with regard to the development of the telecommunications sector, enhances the ease of use of the systems shown on the Internet. Thus, it results in a strain in the use of educational platforms on the

one hand and acceleration of a scientific process that is fully integrated into universities on the other hand.

Third, the results of the questionnaire and the interviews gave a very clear and reliable idea for the development of this field. The use of any new system needs highly experienced professionals, in order to explain it and facilitate the ways to use it. Thus, the possibility of simplifying it, in our case, in terms of the smoothness of the process of teaching and learning online. It is possible to rely on providing training courses and providing the necessary equipment for the teacher in order to be able to use the complex platforms with their full features, thus ensuring the interaction of students and motivating them towards relying on this new system as a permanent system in and without crises.

Finally, trying to implement the aforementioned suggestions necessarily improves the experience of teachers and students clearly. However, the decision must be based first on the vision of the university administration and the independent Ministry of Higher Education to develop and improve this system in order to benefit from it in an excellent manner.

## 5.3. Limitations of the study

As any research, the recent thesis has different limitations that need to be acknowledged. First, although the impact of the pandemic has decreased relatively during the period of work of this research (2022), the scheduling system at the University of Biskra is still running according to the ministerial instruction. Consequently, the process of collecting data, whether from students or professors, encountered a few challenges. And that is during working on distributing the questionnaire with the chosen subject or conducting interviews with teachers who are themselves bound by a complex timetable. But despite all the circumstances, the researcher used the social networking sites groups related to the case, in order to publish his questionnaire and reach the desired number of students in order to implement the research methodology. Moreover, he emailed the teachers to set an appropriate day for the interviews.

Second, the time presented and estimated in the second semester of the university year, during which the researcher faced several challenges due to the short period of time, as well, as mentioned previously, the impact of the time program on the progress of the

process of collecting the necessary data from the required and appropriate sample to achieve the objectives of the research.

## 5.4. Recommendations

This research shows that the successful integration of ICT is not an easy task as universities, government and teachers face many challenges. Ensuring that all learners have equal access to learning materials and that teachers manage learners in a standardized way requires no less effort. For this reason, the following are the recommendations made by the researcher in order to try to overcome the obstacles and challenges in teaching and learning online:

- The university administrations should consider different success stories in other countries like Japan and develop their own platforms to be used in all public institutions.
- It is better for the government to consider allocating sufficient budget for infrastructure development to all universities and strengthening their ICT facilities and other learning management systems
- Since illiteracy and lack of experience of teachers have been identified as the main factors, the Ministry of higher Education is recommended to improve their skills through the development of regular training programs. This training should be aimed at: 1. Specialized courses so that educators can acquire enough knowledge about the use of different digital devices and platforms, and 2. Pedagogical courses so that they can conduct online classes and assess learners in a modern way. The processes can be adopted by developed countries that already practice them.
- The government and other private companies should improve the internet connection to avoid internet connection problems.
- Some students and teachers lack electronic devices to access teaching materials. Therefore, the government must provide students with digital devices such as tablets and laptops.
- Universities need to organize workshops and seminars to familiarize learners and teachers with the healthy use of digital platforms without distractions.
- Online platforms need to be easy for both students and teachers.

- Both students and teachers who have experienced online teaching and learning should rely on external references in which e-learning has been successfully implemented. This is in order to quote the best experience in this field.

- It is better for the teacher to rely on platforms that provide better tools for interacting       with students. In order to motivate them to the atmosphere of interaction and communication.

- The teacher should have a good strategy in implementing online learning because online learning is very easy to make students feel bored and teachers who have a good strategy will minimize the possibility of students being bored

- Students should move and communicate, whatever the circumstances, in order to assist the teacher in the task of creating an atmosphere of interaction and communication between all parties. In other words, it is advisable for the student to participate in everything he can within the group in order to stir the general atmosphere of online learning.

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# Appendicies

**Appendix A.**

## Students' Questionnaire

Dear students,

The following questionnaire aims to investigate The Effects of Technical Difficulties on Online Teaching and Learning for EFL users in the Era of Covid 19.

You are kindly invited to answer this questionnaire to help us in collecting information for serving our research aims. Your answers are voluntary and will be confidential. Responses will not be identified by individual.

Please, tick ( ✓ ) in the appropriate answer and write a full answer/statement(s) whenever it needed. Thank you for your time, efforts, and cooperation.

**Section one: General information**

Item 1: Spercify your gender please

        Male   ☐                             Femail   ☐

Item 2: Age : ........................

Item 3: What is your BAC stream?

    Literary ☐                Scientific ☐            Technical ☐

Item 4: How did you find learning at univercity?

Easy   ☐              Difficult   ☐          Very difficult   ☐

In between   ☐

Item 5: Did you have any experience with online learning before the covid 19 pandemic?

        Yes   ☐                       No   ☐

If yes, please say more :

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Item 6: Are you motivated about learning English through online learning during the Covid-19 pandemic?

Yes &#9633; No &#9633;

Please say why :

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**Section two: Online learning during Covid-19**

Item 1: What is the primary platform used for online teaching and learning at your university?

Google Classroom &#9633; Moodle Platform &#9633; Zoom Meetings &#9633; Other &#9633;

Item 2: Do you think that using the platform you have chosen is sufficient to compensate for at tending classes at the university?

Yes &#9633; No &#9633;

Justify your answer please :

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Item 3: Do you think that the material provided by the teacher through online learning is sufficient for your academic achievement?

Enough ☐ Not enough at all ☐ Relatively enough ☐

Item 4: How helpful has been your univercity in providing full support in terms of solving students' problems during the experience of the online learning system?

Not at all helpful ☐ Slightly helpful ☐ Moderately helpful ☐ Very helpful ☐

Extremely helpful ☐

Item 5: How helpful are your teachers while studying online?

Not helpful ☐ Slightly helpful ☐ Moderately helpful ☐ Very helpful ☐

Extremely helpful ☐ Helpful ☐

Item 6: What devices do you use for online learning most?

Laptop ☐ Desktop ☐ Tablet ☐ Smartphone ☐

**Section three : Technical difficulties of online learning**

Item 1: Which of the following do you feel was most difficult after shifting to online learning? (You can check up to two boxes)

☐ Lack of face to face interaction with my instructor(s)

☐ Lack of face to face interaction with my Classmates

☐ Not learn as well with the online learning environment

☐ The technical problems and difficulties while using the online platforms

Mention other difficulties you have faced after shifting to online learning :

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Item 2: Online learning tools should be developed better?

Agree ☐　　　Disagree ☐　　　Neither agree nor disagree ☐　　　Strongly Agree ☐

Strongly Disagree ☐

If you agree or strongly agree, In what way do you think it should be developed?

☐ Work on improving the used platform in order to get the most out of its features

☐ Work on building a better environment between the teacher and the student during the online courses

☐ Focus on installing experienced people in order to clarify and facilitate the work and use of online learning tools

☐ Work on developing the communication features between the student and the instructor(s)

☐ Giving students an opportunity to share suggestions that facilitate the study of the online courses

Item 3: Through your experience, do you think that this system can be relied on permanently at the university?

　　　　　Yes ☐　　　　　　　　　　No ☐

Please, justify your answer:

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Item 4: Compared to the traditional learning experience, how effective do you feel online learning experience has been?

Much more effective ☐          Not at all effective     ☐    Somewhat more effective ☐
Somewhat less effective ☐              No difference ☐

If it is less effective or not effective at all, suggest some possible improvements that you wish to develop the online education system at your university.

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**Thank you for your contribution**

**Appendix B.**

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**Teacher's Interview**

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**Dear Teacher**

This interview is a part of the study that aims to investigate The Effects of Technical Difficulties on Online Teaching and Learning for EFL users in the Era of Covid 19.

Your participation in the study is voluntary and your answers will be securely stored. The data will be used only for research purposes and you will not be identified as an individual within the final research.

**Interview Questions**

Q1. How do you feel about the shift towards online teaching during COVID-19 ?

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Q2. Have you been comfortable integrating the use of online platforms into your courses? why?

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Q3. What are the main technical issues you have faced with online teaching practices?

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Q4. What was the biggest challenge you have faced in switching from face-to-face classroom teaching to online teaching?

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Q5. Do you think that online teaching is enough to replace the atmosphere of face-to-face classes which are based on communication and direct interaction between the teacher and the students? Why ?

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Q6. Do you think that online teaching provides the appropriate and sufficient study atmosphere with students in order to provide lessons in an excellent manner?

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Q7. In your opinion, what are the developments that can be made within the online teaching system in order to improve it?

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Q8. Is there anything you would like to add to serve the search better?

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**Thank you for your contribution**