

**The People's Democratic Republic of Algeria Ministry
of Higher Education and Scientific Research University
of Amar Thelidji Laghouat Faculty of Letters and
Languages Department of English**



**The Challenges of Educational Technology.
Case Study: Department of English
University of Ammar Thelidji, Laghouat**

**Dissertation Submitted to the Department of English as Partial Fulfillment of
the Requirement for the 'Master' Degree in English Language, Literature and
Civilization**

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**Academic year:
2020-2021**

Dedication

We would like to dedicate this work to everyone who believed in us, supported us, and kept our motivation in check enough to reach this point.

To our parents who never left us to struggle, especially the recent years. To our beloved sisters and brothers who had our backs no matter what. To our best friends, classmates and companions, inside and outside the classroom.

Acknowledgements

We'd like to show our gratitude towards our supervisor, Mrs. Cherfaoui, for her endless support and encouragement, for her complete understanding under all circumstances, and for never pressuring us during the process.

Special thanks go to all the members of the faculty and department of English, from teachers to students; especially those who participated in our research; and to all the thinkers and hard workers, as this work wouldn't have been possible without them and their thoughts.

Our best regards go to the members of the jury, and a huge thanks to all our teachers and mentors.

Abstract:

The growth of technology over the past four decades has been noticeably rapid, with desktop computers becoming an ordinary appliance at most homes around the world, as well as the advent of the internet in 1990. These two specific technologies have improved and progressed to the point where the absence of a computer or an internet service in any type of building, be it a house, a library or even a hospital, is seen as strange. Technology kept making its way into many areas of everyday life, and among them is education. Students nowadays rely heavily on their computers and the internet to retrieve the information they need while doing research and preparing for tests and exams. But given that we live in a third world country, our adoption of these technologies and modern methods of teaching has been very slow, and the use of technology in education is not widespread. The target of the dissertation is to get to the reasons behind this slow, if not nonexistent, adoption of modern technologies and teaching methods in our department, how we can catch up to the rest of the world, and see what difference the incorporation of these technologies can make in terms of both teacher and student performances.

الملخص :

كان تطور التكنولوجيا على مدى العقود الأربعة الماضية سريعاً بشكل ملحوظ، حيث أصبحت أجهزة الكمبيوتر شيئاً عادياً في معظم المنازل حول العالم، بالإضافة إلى اختراع الإنترنت سنة 1990 وقد تحسنت هاتان التقنيتان بالتحديد وتقدماً إلى حد بعيد إلى درجة ان عدم وجود جهاز كمبيوتر أو خدمة الإنترنت في أي نوع من المباني، سواء كان منزلاً أو مكتبة أو حتى مستشفى، يعتبر أمراً غريباً. استمرت التكنولوجيا في شق طريقها إلى العديد من مجالات الحياة اليومية، ومن بينها التعليم. يعتمد الطالب في الوقت الحاضر على أجهزة الكمبيوتر و الإنترنت بشكل كبير بغرض استخراج المعلومات التي يحتاجون إليها أثناء إجراء البحوث والتحضير للاختبارات و الامتحانات. لكن بالنظر إلى أننا نعيش في بلد من العالم الثالث، فإن اعتمادنا لهذه التقنيات وطرق التدريس الحديثة كان بطيئاً للغاية، واستخدام التكنولوجيا في التعليم ليس واسع الانتشار. الهدف وراء هذه الرسالة هو التعرف على الأسباب الكامنة وراء هذا الاعتماد البطيء على التقنيات الحديثة في قسمنا، ثم العثور على حلول. تمكننا من اللحاق ببقية العالم، و اظهار الفرق الذي يمكن أن يحدثه دمج هذه التقنيات من حيث أداء الأساتذة والطلاب.

Table of Contents

Dedication.....	i
Acknowledgements.....	ii
Abstract.....	iii
Table of Contents.....	v
List of Figures.....	ix
General Introduction.....	1
Chapter One: A Historical Background of Educational Technology.....	5
Introduction.....	6
1.1 Historical Background of Educational Technology.....	6
1.1.1 Cave Paintings and Drawings (3.000 B.C.E).....	6
1.1.2 Pythagoras Academy (510 B.C.E).....	7
1.1.3 The Invention of Paper in China (105 B.C.E).....	7
1.1.4 Manuscript Transcripts (382 B.C).....	7
1.1.5 The Gutenberg Printing Press (1450s).....	8
1.1.6 Public Education (1600-1800).....	8
1.1.7 The Audiovisual Age (1910-1940).....	8
a. The Radio (1910).....	8
b. The Film Strip Projectors (1930).....	9
c. Overhead Projectors (1940).....	9
1.1.8 The Computer (1941).....	9

1.1.9 The Information Age: The Television (1960).....	9
1.1.10 The Hand-Held Calculator (1970).....	10
1.1.11 The Computer (1970s-1980s).....	10
1.1.12 Smartboards (1991).....	10
1.1.13 The Digital Age (1995-present).....	11
1.2 Educational Technology in the Past 20 Years.....	11
1.2.1 Wikis (1998).....	11
1.2.2 E-Learning (1999).....	12
1.2.3 Learning Objects (2000).....	12
1.2.4 E-Learning Standards (2001).....	13
1.2.5 Blogs (2003).....	14
1.2.6 The LMS (2004).....	14
1.2.7 Video (2005).....	15
1.2.8 Web 2.0 (2006).....	15
1.2.9 Social Media (2009).....	16
1.3 Types of Educational Technology.....	16
1.3.1 Synchronous and Asynchronous Learning	17
1.3.2 Linear Learning.....	17
1.3.3 Collaborative Learning.....	18
Conclusion.....	18

Chapter Two: The Third World and Educational Technology in High Education: Setbacks, Solutions and Impact.....	20
Introduction.....	21
2.1 Educational Technology and Higher Education.....	21
2.2 Education Technology in Developing Countries (Third World).....	22
2.3 The State of Educational Technology in the Department of English.....	24
2.3.1 Internet, Website and Platform Issues.....	24
2.3.2 Human Factors.....	25
2.4 Possible Solutions.....	26
2.5 The Impact of Educational Technology.....	29
a. Taking Advantage of Asynchronous Learning.....	29
b. Stimulation through Simulation.....	29
c. Encouraging Collaboration.....	30
d. Lifting Pressure off Teachers.....	30
e. Giving Students More Options.....	30
f. Improving the Students' Writing Skills.....	31
g. Improving the Students' Speaking Skills.....	31
h. Teaching/Learning beyond the Walls of the Classrooms.....	32
Conclusion.....	32
Chapter Three: Methodology and Data Analysis.....	34
Introduction.....	35

3.1 Research Design.....	35
3.1.1 Descriptive Study.....	35
a. The Observational Method.....	35
b. The Case Study Method.....	36
c. The Survey Method.....	36
3.1.2 The Population.....	37
3.1.3 The Sample.....	37
3.2 Tools of Gathering Data.....	38
3.2.1 The Questionnaire.....	38
3.3 Results and Analysis.....	39
3.3.1 The Students' Responses.....	39
3.3.2 Analysis of the Students' Responses.....	38
3.3.3 The Teachers' Responses.....	49
3.3.4 Analysis of the Teachers' Responses.....	58
3.3.5 Discussion of Results.....	59
Conclusion.....	60
General Conclusion.....	61
Works Cited.....	64
Appendix of the Questionnaires.....	66

List of Figures:

Graph 1: Students' Reliance on Technology outside the Classroom.....	39
Graph 2: The Students' Thoughts on the Necessity of Technology Integration in our Department.....	40
Graph 3: Students' Thoughts on how Efficiently Technology is Being Implemented in our Department.....	41
Graph 4: Online Classrooms during the Pandemic.....	42
Graph 5: The Helpfulness of Social Media Platforms during the Pandemic.....	43
Graph 6: The Helpfulness of Online Platform "Moodle" to Students.....	44
Graph 7: The Teaching and Learning Methods which Students Prefer to Work with.....	45
Graph 8: Student's Opinions on the idea that Technology Hurts more than it Helps.....	46
Graph 9: Students' Views on Whether or not Technology will improve their Productivity.....	47
Graph 10: The Teachers' Thoughts on the Necessity of Technology Integration in our Department.....	49
Graph 11: Teachers' Reliance on Technology outside of class in their Teaching Process.....	50
Graph 12: Teachers' Thoughts on How Efficiently Educational Technology is Being Used at our Department.....	51
Graph 13: The Teaching Method that Teachers Prefer the Most.....	52
Graph 14: Teachers' Experience with the Online Platform "Moodle".....	53
Graph 15: Teachers' Experience with Social Media during the Pandemic of COVID-19.....	54
Graph 16: Teachers who Have or Have not Held Online Lectures during the COVID-19 Pandemic.....	55

Graph 17: Teachers' Thoughts on the Idea that Technology can be more distracting than Beneficial to Students.....	56
Graph 18: Teachers' Opinions on whether or not Educational Technology Will Enhance Productivity.....	57

General Introduction

An article written by Chris Liang-Vergara and Kerry Gallagher on the website “EdSurge” goes over 5 common ways the implementation of educational technology fails. It highlights how a great number of teachers do not feel confident in their knowledge in technology and their ability to operate and integrate it into their classes. Teachers feel overwhelmed by the constant pressure to implement new methods to make their classes up-to-date, more efficient and productive. The article also states that the failure of technology in education is because schools implement technology for the simple reason of having it, they do not think of why we need it or how it should be used.

Another article written by Jamie Martin on the website “Medium.com” argues that the reason why educational technology mostly fails is because it focuses on the wrong problems. This article references some of the same points in the previous article while also adding that the failure of technology in education is due to the scarcity of hardware and material in poor, third-world countries.

A blog written on the website “webanywhere” showcases the benefits of incorporating technology in education. It allows teachers to get to know their students’ strengths and weaknesses, making it easier to address them by curating and personalizing lessons that suit each student’s learning style, as well as encouraging collaboration among students and teachers and helping those students who may find real life situations stressful or anxiety-inducing through the use of virtual online lectures.

Another blog written on the same website offers some useful mobile apps that students can use to improve their knowledge. Since this study is concerned with students learning English, there are only 2 apps mentioned in the article that interest us the most; Duolingo and Khan Academy, where people can learn languages at their own pace. Other apps mentioned in the article include a time management app named “My Study Life”, and a self-test app named “Quizlet”. This article; however, overlooks the fact that these apps have some features that are hidden behind a pay-wall.

The objective in this thesis will be to tackle the setbacks and challenges which stand in the way of incorporating educational technology in and outside of classrooms at our department, as well as figuring out why things are the way they are, getting to the root of the problem and analyzing it.

This dissertation aims to expose the problems that teachers and students face with regards to educational technology incorporation. After exposing these problems, the aim will be to offer and suggest some possible solutions and workarounds to these issues so that our department can use these technologies to their fullest potential, which will help create a better teaching and learning environment.

Central Questions:

Central to this study are three questions regarding the apparent underperformance of educational technology at our department, why this technology is failing, what can be done to improve the situation, and what benefits both teachers and students will reap.

1. Why is the adoption of educational technologies slow in the University of Ammar Thlidji?
2. What solutions can we offer in order to overcome these setbacks and challenges?
3. How will the adoption of educational technologies affect the performance of teachers and students?

Hypothesis:

1. The adoption of new technologies is slow due to the limited and low budget of the university, making it difficult to obtain them.

Several teachers refuse to abandon older, more traditional methods of teaching and see technology, no matter how beneficial, as distracting to the students, thus hindering their performances. If the administration of our department decided to introduce a program where these teachers can learn how to use educational technology and take full advantage of what it has to offer, that can persuade them to incorporate these technologies into their classes.

Broken, inaccessible platforms that are difficult to navigate due to their faulty design and convoluted user interface can prevent teachers from posting their lectures, and as a consequence students cannot find what they need.

2. In order to avoid being behind the curve, using the more affordable and free pieces of technology, such as Google Classroom, Zoom and email, is a good start. They are developed by certified programmers and companies, which means they are reliable and free of bugs. Since these apps and websites are free to use, that means they are within reach of most students and teachers.

3. Using more of these technologies, teachers can stay in touch with their students; they can post assignments on digital platforms and hold online lectures via video calls. The physical distance between the teachers and their students becomes irrelevant, this will strengthen and ease their communications, keeping them connected and up-to-date with each other at all times.

Methodology:

This study will be centered on why educational technology is not succeeding in our department. The research methodology which will be used is descriptive, where data will be collected through the use of a questionnaire. This questionnaire will consist of 10 questions and will be aimed at Master 2 level students and teachers in the department of English at the University of Ammar Thelidji, the size of the sample is 50 students and 5 to 10 teachers.

Structure of The Study:

The study will consist of three chapters. The first chapter will go over the historical background of educational technology and its evolution over the ages. The second chapter will be about the challenges and problems which hinder the effective incorporation of educational technology at our department, then it will go over the solutions that we can offer to improve the teaching and learning conditions through the use of affordable and free technology as well as the benefits this will bring and the expected results. The final chapter will be dedicated to research design and data analysis for the questionnaire that was conducted with the teachers and students of our department.

Limitations:

Some of the limitations faced during research for this dissertation include a limited number of past works and research that discuss educational technology in our University and department in particular. Rather, all works referenced in this dissertation discuss the issues that educational technology faces in general, in any part of the world, and although we can apply them to our department and draw some parallels, they were still too broad and general. Other limitations include the limited sample size of participants in our questionnaire; it could be small number of teachers or a small number of students.

Chapter One:
**A Historical Background of Educational
Technology**

Introduction

The definition of the term “educational technology” has gone through many changes and has taken on different meanings over time. But in recent decades, it has settled into one definition; nowadays, we define educational technology as the integration, use and management of suitable hardware and software technologies into our education systems and curriculums in a positive way to create a rich environment with the aim of facilitating the teaching and learning process and improving the performances of teachers and students. This chapter aims to trace the history of educational technology, starting with its most basic to its most advanced and modern forms so far.

1.1 Historical Background of Educational Technology:

The term “educational technology” does not only refer to the modern devices, such as computers and smartphones, that we use today, it also refers to any and all methods and tools that humans have used since ancient times to facilitate the process of gathering, storing and sharing all kinds of information amongst a group of people. Educational technology has undergone multiple stages and evolutions, from prehistoric eras all the way to modern times.

1.1.1 Cave Paintings and Drawings (30.000 B.C.E):

Educational technology can be traced back to the very beginnings of the human race itself; generations would pass their knowledge to the succeeding generations after them. Cave paintings dating all the way back to 30,000 B.C.E are considered as the first evidence of early use of educational technology; these ancient humans used ground rocks, sand, animal blood or fat to paint images of animals and people on the walls of caves. Although the exact purpose of these paintings is unknown, it is generally believed that they were used to tell stories and pass knowledge among the ancient humans.

This is considered to be the very first traceable instance of humans using their tools and products (animal blood and sand...etc.) to convey and share information amongst each other. (Shamaa Mohamed, 2017)

1.1.2 Pythagoras Academy (510 B.C.E):

The very first instance or appearance of a formal education academy was the Pythagoras Academy, dating back to 510 B.C.E, which was opened by the philosopher Pythagoras (570 BC – 495 BC) himself. The setting of this academy was an open classroom where students would gather and learn while a teacher would stand in front of them and relay his lessons.

During this period and earlier periods, stories, history, news and other information were shared through speech and narration in public gatherings, the Pythagoras Academy made this process formal by organizing these gatherings inside dedicated buildings which are now known as schools. (Shamaa Mohamed, 2017)

1.1.3 The Invention of Paper in China (105 B.C.E):

Historians refer to 105 B.C.E China as the time and place for the invention of paper. During those times, paper was manufactured with plant fibers; these fibers would be soaked, pressed then dried and put on wooden frames and screens. The person who is credited with this invention is Cai Lun. Prior to this, bamboo and wooden strips were used for centuries, which were very costly. This invention of this innovative technology is considered a turning point in how information was stored and exchanged. (Shamaa Mohamed, 2017)

1.1.4 Manuscript Transcripts (382 B.C):

Manuscripts are documents which had to be written and rewritten by hand; these documents came in different forms, ranging from books to scrolls. Manuscripts were produced from animal skin known as “Vellum” or a parchment. Manuscripts were very crucial in education

since they greatly helped students practice handwriting, especially in the early stages or levels of their education. (Shamaa Mohamed, 2017)

1.1.5 The Gutenberg Printing Press (1450's):

Jumping forward to the 1450's, Gutenberg's printing press was invented as a means to make the process of printing books consume less time, money and material. The press was a tall machine that stood between 5 to 7 feet tall. The way it worked was by arranging and rearranging metal letters known as type into the desired order; then, lines of these letters would be arranged in place. This technology made printing books extremely easier and more affordable, especially for libraries. (Shamaa Mohamed, 2017)

1.1.6 Public Education (1600-1800):

Public schools at this time were funded by wealthy to help educate poor people. However, these schools were not free and the students had to pay to get their grades; but after many years, these schools were made available to the public for free. In these schools, the teaching process went as follows: older students were taught first, and then these students would go on to pass that information to the younger students after them. Schools mostly taught English and other skills that young people will need in the workplace. (Shamaa Mohamed, 2017)

1.1.7 The Audiovisual Age (1910-1940):

a. The Radio (1910):

It started with the discovery of the radio signal and the radio waves by Guglielmo Marconi and Hertz. These waves and signals are capable of transmitting sound, such as voices and music, as well as other different types of data, through the air. Since the radio became widely available to the public, many educational radio channels were established to take advantage of the radio's accessibility. Most of these educational channels dealt with science and helped spread information to the public to improve their scientific knowledge. (Shamaa Mohamed, 2017)

b. Film Strip Projectors (1930):

The introduction of film strip projectors is perhaps the first, true integration of technology into the classroom; projectors are the predecessors of data shows. Teachers would play films on the projectors to enhance their presentations and engage their students' imagination and keep them immersed in the materials they're being taught through audiovisual stimulation. (Shamaa Mohamed, 2017)

c. Overhead Projectors (1940):

Ten years after the film strip projectors were introduced into classrooms, overhead projectors made their way in as well. Created by Roger Appeldorn, these machines projected clear images and writing through clear film, these projectors made it easier for students to view information and absorb it quickly. (Shamaa Mohamed, 2017)

1.1.8 The computer (1941):

The first computer in the world was invented by Konrad Zuse, though computers would not make their way into classrooms until decades later. Computers at this time were mainly used for analytical work and solving problems with aircraft wings. (Shamaa Mohamed, 2017)

1.1.9 The Information Age: The Television (1960):

Although the television was invented in 1927, its integration into education did not take place until the early 1960's. Teachers and educators would share their knowledge and information with their students through the use of tapes. The story of the television is similar to that of the radio, where certain TV channels were established for the particular purpose of broadcasting shows and documentaries which were dedicated to science, literature and history, just as some radio channels had done before. These channels helped students significantly as they

were now able to get information even when they are not inside the classroom. (Shamaa Mohamed, 2017)

1.1.10 The Hand-Held Calculator (1970):

Although calculators helped students with mathematical problems, its integration into education was a rather slow process. Many teachers feared that calculators would make their students lazy; they also argued that the device would dramatically and negatively impact their mental math skills as they would immediately resort to calculators instead of relying on their own abilities. (Shamaa Mohamed, 2017)

1.1.11 The Computer (1970s-1980s):

By the mid-1970s, many schools in the United States started adapting computers and incorporating them into their curriculums. The most popular brand of computers in schools at the time became Apple, particularly the Apple 1 computer. The surge in popularity of school computers only continued and had skyrocketed during the 1980s, although not all schools were financially able to provide the hardware for every class and every student.

However, by 1989, school computers went from being a novelty or a gimmick to being a truly reliable piece of technology that can help teachers and students and improve the learning environment. (Shamaa Mohamed, 2017)

1.1.12 Smartboards (1991):

Developed and produced by the company “Smart Technologies” in 1991, smartboards were basically digital or electronic white boards that worked with user input and interaction through touch. The level of interactivity that these boards brought allowed students to draw and take notes on the boards, as well as play educational games on them. This technology was mainly aimed at young students who were in early stages of their education. Smartboards combine data shows with regular white boards; much like a data show, teachers could bring up images and text and have students directly interact with the information up close. (Shamaa Mohamed, 2017)

1.1.13 The Digital Age (1995-present):

The 90s brought the advent of the internet, this new technology brought people closer together overall, but specifically teachers and students. The integration of the internet into education was rather quick. One method that's still in use to this day is distant communication through e-mail; this allowed students to stay up-to-date with their educators.

The internet only became more reliable and crucial in education as it was improved and refined over the years. People nowadays can access the internet via Wi-Fi, whereas in the 90s and early 00s, they were only able to access it with a landline telephone in their homes or in libraries. At this point, the new, modern era of educational technology began, with the internet becoming the main source of information for everyone. (Shamaa Mohamed, 2017)

1.2 Educational Technology in the Past 20 Years:

By the end of the 90s, technology had changed the face of education thanks to the internet becoming more popular and widely available to the public. Educational institutes became aware of this and started updating their libraries to be equipped with computers and an internet service for students and teachers to take advantage of.

This current era in educational technology, the internet and its contents go hand-in-hand with education; students see the internet as their personal library and also the facilitator in terms of learning and communicating with their educators.

1.2.1 Wikis (1998):

Invented by Ward Cunningham in 1994, Wikis were first built as a tool meant for programmers to collaborate and share their work. Then, in the late 90s and early 00s, Wikis evolved as an online platform where people can share and edit information publicly. The editing feature encouraged collaborations among users and also helped the platform stay up-to-date in

terms of providing the most relevant information. After this evolution, schools started to notice how useful Wikis can be, students worked together in collaborative projects, unhindered by the time and distance between them.

Although, regardless of its usefulness, it is still seen by teachers and institutes as a source that isn't completely reliable and trust-worthy due to how information can be easily modified, despite constant moderation by users who always check for outdated information and make sure to fix it immediately. (Martin Weller, 2018)

1.2.2 E-learning (1999):

The term “e-learning” had been around since 1999 with the rise of the web and the wikis, and by that year it had already made it into mainstream education. Universities in the west started adopting this pretty quickly provided that students were open, willing or able to work with the e-learning program model. Initially, e-learning was thought to be cheaper, and while that was true in terms of lowering the production costs for physical books and such things, the need for constant updates was difficult to keep up with.

This learning model is seen as the one that laid the groundwork in terms of technology uses, approaches and integration into education for the coming decades, as the term “e-learning” is mostly used as a blanket statement to describe learning through the use of electronics like computers and the internet. (Martin Weller, 2018)

1.2.3 Learning Objects (2000):

According to IGI Global, learning objects can be defined as “...any entity, digital or non-digital, that can be used, re-used or referenced during technology-supported learning.” Some examples of learning objects are instructional content, such as videos, images or text, or instructional software and tools such as apps or websites that can be found and used via the internet (IGI Global, n.d).

Learning objects was one of the approaches that were adapted in e-learning. Initially, it was mainly used in the field of programming and computer science, little pieces of code that can be taken, reused and implemented in a multitude of different programs. The idea of creating little

pieces of code that can be shared, reused and even assembled with other small pieces of code to create large learning objects made a lot of sense, so this approach was adapted. The little pieces of code can be replaced with any other piece of information of any kind. An example of this would be a webpage that contains different small objects like images (static or animated ones), videos and text that deal with one particular topic, these small objects are taken from other sources and combined together in one place, the webpage is the large learning object (Martin Weller, 2018).

1.2.4 E-Learning Standards (2001):

In the early 2000s, e-learning started to witness a surge in interest, this interest was followed by many efforts that aimed at creating platforms which were easy to set up and access, accompanied by a professional approach when it comes to the process of creating e-learning content, as well as initiatives which helped introduce and share the tools which e-learning operated with.

The Information Management System (IMS) was used to develop the e-learning standards which were used in creating and describing content, tools and courses. Later on, Sharable Content Object Reference Model (SCORM) became the new industry standard which was used in specifying the learning content which can be used in Virtual Learning Environments (VLEs).

Standards are considered to be the parts of the machine which work together in the background, or the building blocks, that help e-learning work as intended. Some standards have failed in creating easy to set and accessible e-learning content and tools, but SCORM remains as one of the more successful ones. (Martin Weller, 2018)

SCORM was not, in fact, an entirely new standard that was designed and created from the ground up. The “Reference Model” part of its name indicates that what SCORM actually did was reference many other existing standards which were set by the industry, these different standards only addressed certain parts of e-learning. SCORM combined these standards into one package and told developers how they can be properly and effectively used together. (SCORM.com, n.d)

1.2.5 Blogs (2003):

When people came to the realization that literally anyone can publish anything publicly on the web, they quickly moved to take full advantage of this privilege that the internet provided them, especially those who worked in education and had the interest or intent of making the internet an important element in learning and teaching.

Blogging was one thing that people did a lot of by the turn of the millennium; it was mainly used for posting personal journals and diaries at that time. However, the one feature that makes blogging a useful tool in education is the ability to subscribe to anybody's blog; this allows subscribers to receive updates from the bloggers they followed. Soon enough, a great portion of bloggers was now comprised of teachers who saw the benefits they could gain from this, they started posting their lessons, updating the information in these lessons and keeping their students up-to-date. This strengthened the relationship between teachers and their students outside the classroom.

Furthermore, the accessibility of blogs meant that students from all around the world, regardless of whether or not they are a member of the blogger/teacher's class, can view and learn from the lessons being published in these blogs. (Martin Weller, 2018)

1.2.6 The LMS (2004):

The learning management system, LMS for short, is a piece of software used mainly in educational institutes. It allows educators to create and manage lessons; it also facilitates the delivery of these materials to the students.

The types of content that educational institutes can deliver through the LMS range from documents, courses, images and videos and interactive tests. The administration can also choose or create different types of users in LMS, these users have certain privileges according to the role they play in the institute; users such as students, teachers, parents, visitors and editors. Teachers are able to grant their students access to certain lessons and courses according to their progress, which the LMS allows them to keep track of through tables and graphs.

Before the internet became widely available, especially to students and teachers at home, LMS used to be managed and used inside the educational institutes on their own, local servers. Fortunately, nowadays, LMS can be accessed by administrations, teachers and students from anywhere provided that they have internet-access which is constantly available thanks to Wi-Fi and cellular data. (Martin Weller, 2018)

1.2.7 Video (2005):

In 2005, a new video hosting and streaming platform was introduced to the world, it was named YouTube. Much like blogging, when people came to the realization that they can record and broadcast their own video content, people within the education sphere saw the potential this medium had.

Previously, during what are known as the audiovisual age and the information age between the 1920's and the 1960's, teaching and learning through broadcast and film were restricted to the television and physical film reels that school administrations provided which were limited in length and quantity. Students did have constant access to projectors and educational programs on television were scheduled and were not accessible at all times. Streaming videos on the internet completely changed things, it gave teachers the ability to record lessons in videos and instantly share them, and students were now able to access these videos at any time and watch them as many times as they had to.

However, to this day, students are expected to avoid videos because they are not seen as academic by colleges and universities. Teachers still do not consider videos produced by students as a form of assessment, student works that come in the form of text are still the format that students are expected to follow and work with. (Martin Weller, 2018)

1.2.8 Web 2.0 (2006):

When web 2.0 was created, it was described as something new that will change people's relationship with the internet and the way they interact with it. Web 2.0 combined all the platforms and services in which the content was user-generated, such as YouTube and blogs. In

2006, people started to recognize the social aspect of web 2.0 and considered its potential usage in education. (Martin Weller, 2018)

In education, web 2.0 tools can be describe as free programs that can be used to create and share content and material which is student-generated, such as school projects. These programs were accessible and easy to use; most importantly, they encouraged the spirit of collaboration, students were incentivized to interact with other students to share their knowledge and work with together to create projects. The acts of collaborating and sharing information is not restricted to the immediate group of students within a class or school, but can take place on global level since this all takes place on the internet. Web 2.0 tools also increase the level of engagement and interaction that students have with the materials they are learning. (collegestar.org, n.d)

1.2.9 Social Media (2009):

The presence of social media in education is something that is being seen and experienced today. These social media platforms include the aforementioned blogs, as well as Facebook and its companion instant-messaging application Facebook Messenger...etc.

Social media allowed students to truly be connected to their teachers and other students, the ability to instantly message each other allowed for easier communication and a stronger spirit of collaboration. Some platforms, such as Moodle, Google Classroom...etc., are not usually seen as social media but they still qualify as such due to the simple fact that they facilitate communication among teachers, administration employees and students. (Martin Weller, 2018)

1.3 Types of Educational Technologies:

Educational technology means the effective implementation of technological tools in education. This effective implementation goes hand-in-hand with the argument that each student has his or her own learning style, which means that teachers should be aware of choosing the right type of technology that plays to each student's strengths. Thankfully, there are different types of educational technologies to choose from which suits the students' every need.

1.3.1 Synchronous and Asynchronous:

Since students nowadays have constant access to the internet and all of its platforms, they now have the ability to absorb the information they're being taught in their own pace and in the format which suits them best, whether it's in the form of text, images, audio or video.

Asynchronous learning basically means that students are no longer restrained by the school's schedule; they can keep learning even when they are outside of the classroom. They can even move ahead of other students in the curriculum. As a student who relies on asynchronous learning, you are no longer dependent on the presence of other students, you are not required to wait for their progress to catch up to yours and you move at your own pace. Examples and tools for asynchronous learning are online courses which are made possible thanks to the aforementioned LMS, e-mail, blogs, social media...etc.

Synchronous learning on the other hand means that all students receive and exchange information and knowledge at the same time. Examples of synchronous learning are online or in-person lectures and classes, where all are students are present and learning in the same pace. (BrianCert Academy, 2015)

1.3.2 Linear Learning:

Computer-Based Training (CBT) is the process of self-paced learning through the delivery of activities on computers or other devices such as smartphones or tablets. Previously, CBT used to be delivered through CD's and presented in a linear fashion akin to online books. The reason for the linear presentation of content in CBT is due to the fact that it is mostly used to teach materials that have linear progression, such as computer science and programming and mathematics.

Educators can easily assess their students' performances thanks to the software that is used in CBT. The nature of activities is more interactive, exercises come in the form of multiple choice questions, images, audio and video, and simulations, making them stimulating and

engaging for learners unlike the traditional materials. These learners can receive immediate feedback on their performances as well all thanks to the software. (BrianCert Academy, 2015)

1.3.3 Collaborative Learning:

Computer-Based Collaborative Learning (CSCL) is the process of learning through collaboration; students are banded together in groups of 3-5 members and are required to solve challenging exercises and tasks.

Social presence and interaction encourage the spirit of collaboration among the members of the group, students negotiate and discuss solutions and suggestions and share information. (BrianCert Academy, 2015)

Conclusion:

The definition of educational technology is not restricted to modern software and hardware materials that are used in our modern age. As seen throughout this chapter, educational technology can be traced back to the oldest eras of human history. It has changed with each era, evolving to meet the needs and demands of every generation.

Educational technology encompasses every piece of hardware, software, method and even establishments and institutions that have helped improve the educational process throughout the centuries. From the earliest known eras in recorded history when people used cave drawings to describe and record their lifestyles as well as any event that took place, moving millennia ahead to the establishment of academies such as the Pythagoras academy. Later on, the invention of paper made the process of recording, storing and sharing information much easier, which became more popular in the form of manuscripts and the invention of the printing press centuries afterwards.

In recent centuries, as schools became more mainstream and widely open to the public, more technologies made their way into them. Starting from the early 1900s, technologies such as the radio, television and projectors made education more efficient. As the century moved on, technology progressed and evolved with it, starting from the 1980s all the way to current year, computers and the internet became a vital, irreplaceable part in the learning and teaching process.

Despite the major advancements and improvements that educational technology has witnessed in recent decades, the benefits of such advancements have only been felt and seen in first-world countries where technology is easily accessible, obtainable and sustainable; the same, however, cannot be said when talking about underdeveloped, third-world countries. Due to multiple factors, ranging from social to economic and political, modern technologies and methods have not made their way into the educational systems of third-world countries.

Chapter Two:

**The Third World and Educational
Technology in Higher Education: Setbacks,
Solutions and Impact**

Introduction:

In first world countries, educational institutions have been able, for the most part, to take advantage of educational technology. This allowed them to be at the top of the ladder and be ahead of the curve. On the other hand, developing countries still struggle to find a suitable and more reliable educational system that makes the most out of educational technology as an integral tool in the teaching and learning process. There are many factors to take into consideration when trying to figure out the reasons behind the slow, and at times non-existent, integration of technology into education in these countries. After getting to the root of these factors, there are things to be done in order to change the current circumstances for the better. The adoption of the appropriate technologies as well changing the attitudes towards educational technology will ensure a positive outcome in terms of teacher and student performance and productivity.

2.1 Educational Technology and Higher Education:

Ever since new technologies made their way into education in the 1980's and 1990's and replaced older technologies, higher education institutes, colleges and universities have been doing their best to adopt them and keep up with the growing and evolving needs of the new generations of learners, millennials and generation Z learners.

These new learners have spent the majority of their lives using and relying on technology outside of education; activities such as booking flights, ordering food, communicating and catching up with their friends and families are all done with smartphones, computers and the internet. Because of this, the new generations of learners expect technology to be present in their universities, so educational institutes feel the pressure and the need to provide.

Outside of education, technology has already helped to facilitate many tasks. In many companies, employees no longer have to be physically present inside the company's building in order to work, or attend meetings. The same can be said about technology in education, many schools nowadays do not even have a physical campus and instead offer online schooling; these

online schools remove the necessity for students to be present in the same place at the same time during lectures while still delivering the same amount of information to their students as well as valid certificates.

One of other changes that technology brings to higher education is altering the role that educators play in the classrooms. Rather than being the absolute and only provider of knowledge and information, the teacher becomes a motivator to students. In traditional methods, lectures can be very boring or daunting to students since they do not play an active role in them. They are mere receivers, lectures can be one-sided where the teacher is speaking and the students are simply listening and trying to take notes. Technology changes this dynamic, teachers can take advantage of technologies like the LMS and social media to provide students with more resources for information. After this is done, lectures can become more like seminars, students walk into them while already possessing information, they become interactive and engaging.

Now, the teacher's duty is to help further explain the information that students have gathered, answer any questions they might have, and clarifying any misconceptions or misunderstandings regarding the material. The teacher's role in this context is not just someone who has deep knowledge about the subject, but also an instructor, coordinator and a motivator to students. (Roger G. Baldwin, n.d)

2.2 Educational Technology in Developing Countries (Third World):

Unlike their first-world counterparts, educational institutions, universities and colleges, in developing, third-world countries are still struggling with the fast-paced adoption of educational technologies. The weak economies in some of these countries render the adoption impossible. While in other countries, the popularity of the traditional methods outweighs that of the modern, technology-oriented methods.

Daniel Rodriguez-Segura (2020) analyzed the state of educational technology in developing countries. Even though these countries all share the same circumstance, that being the lack or the failure of technology in their educational systems, there still are different contexts for each of these countries. Contexts such as the level of connectivity to the internet and access to electricity per person between every country and within each country, as well as how the governments of these countries approach and handle technology integration into education, this

could be due to corruption or to the mismanagement of resources like funds and hardware materials.

Internet and electricity access in low and middle-income countries, such as the Democratic Republic of the Congo, Nigeria and Ethiopia, stands at 57%, 50% and 19% respectively (Daniel Rodriguez-Segura, 2020).

When it comes to internet access, only 1 in 4 people have access to the internet in Sub-Saharan Africa, while 475 million people in India are also deprived of this access as of 2018. The papers also highlights that in countries like Zambia and Niger, there are over 500 students per computer in every school, and Argentina the ratio for student per computer is 1:20 (Daniel Rodriguez-Segura, 2020).

The disparity of electricity and internet access seems to be present across all of the developing countries mentioned in the paper. However, this study is only concerned with the country of Algeria, particularly the department of English at the University of Ammar Thelidji in Laghouat.

A policy by the Algerian government for ICT implementation does, in fact, exist. But such a policy lacks a successful and committed implementation in reality due to the insufficient amount of appropriate materials, such as the very low number of universities and schools in rural regions and communities. These communities do not only suffer from a low number of schools and universities, but from connectivity issues as well. Algeria also faces the challenge of working with a weak infrastructure; it is for this reason that the policy has not yet been brought into fruition (Amr Hamdy, 2007).

Alongside the policies, states that there have been some basic training programs and initiatives to get teachers accustomed to the usage of technology inside their classrooms. However, the training that that teachers have received was very basic and limited both in terms of how much the teachers were being taught and in terms of how long they were trained for (only 30-60 hours) (Amr Hamdy, 2007).

When it comes to educational technology implementation, developing countries face many setbacks ranging from political to economic, as seen in the mishandling and mismanagement of materials and resources, technical and hardware issues like the absence and insufficiency of materials. Algeria, as a developing country, also faces challenges which hinder the performances of its educational institutions and universities.

2.3 The State of Educational Technology in the Department of English:

In the department of English at the University of Ammar Thelidji, like in many other Algerian universities, there are multiple challenges which stand in the way of successful technology integration. The reasons behind educational technology not doing as well as it should, or as it is expected to, range from hardware and software limitations, the mismanagement of the existing materials as well as the attitudes of the people who partake in the teaching and learning process, both teachers and students as well as administrators at the department.

2.3.1 Internet, Website and Platform Issues:

The official platform that was provided and approved by the Algerian Ministry of Higher Education is known as “Moodle”. According to ethinkeducation.com, Moodle stands for “Modular Object-Oriented Dynamic Learning Environment”. This platform, created by Martin Dougiamas in 2002, is a learning management system (LMS) designed to help educators, learners and administrators alike. This platform was established as a means to support all the learning needs of its users.

Despite the fact that its use is widespread around the world, students and teachers at our department have reported many issues while using the platform, mainly from the students’ end. Students who used Moodle have reported facing technical issues such as not being able to log into their accounts on the platform due to the high traffic that it experiences in Algeria. Low latency also plays a huge role in this situation due to the weak broadband internet service in the country. Because of this, loading time is long and the users are unable to view and download the content which their teachers upload for them.

Even for those who still manage to log into the platform, they still have to deal with the badly designed and convoluted user interface of Moodle. A poorly designed platform hinders the user experience of the students as they face many difficulties navigating the different sections of the app or while attempting to find the particular contents and materials they are looking for.

This, alongside the bugs and crashes that the platform faces on both desktop and mobile on a daily basis, leaves the users, particularly students, feeling very frustrated and having no other choice but to abandon the platform and look for better, easier to use, alternatives.

According to Speedtest Global Index, speedtest.net, the fixed broadband internet service in Algeria was ranked at the 173rd spot out of 190 countries. This, obviously, has a huge, negative impact on the learning experience of Algerian students, given the fact that the internet is the number one source of information for them outside the classroom.

These circumstances leave our university and its students and teachers alike struggling, being negatively affected by faulty, broken and unusable platforms and an extremely slow and unreliable broadband internet service. This eventually leads teachers and students to resort back to traditional methods, which have been impossible to work with due to the health risks from the COVID-19 pandemic.

Had the internet services and online apps and platforms been of use, teachers and students wouldn't have fallen behind on their curriculums during the 8 to 9-month period when schools had to be closed because of lockdown.

2.3.2 Human Factors:

Aside from the technological and technical factors, there are also human factors which contribute to the setbacks. There are three elements at play concerning the human factor; the administration, teachers and students.

When it comes to the administration, they still provide and rely on outdated tools and at times misuse other tools and platforms. For example, the Learning Management System (LMS) is meant to be used as a platform that both teachers and students can use to continue the teaching and learning process outside of their classrooms. However, it is used by the administration only as a bank for files and documents and not as an interactive platform to improve teaching and learning. The administration's role when it comes to using LMS should be only as an overseer or a moderator, taking care of the technical aspects of things such as maintenance, solving technical issues and keeping the platform up to date so that it remains operational.

In the case of teachers, there seems to be a bias towards traditional methods. Teachers either do not trust the efficiency of technology in education, or they do not trust their own

knowledge and skills when it comes to operating and working with technology inside and outside of their classrooms. Some teachers do not believe that technology would help improve the teaching and learning environment.

These teachers view technologies such as laptops, tablets, smartphones and the internet as a negative distraction to their students; since teachers cannot control what their students do on their devices, they cannot be sure if students are really following the lesson. For them, the negative aspects of educational technology out-weight the positive ones, so it is not worth using. Some other teachers lack the basic training needed to handle technologies and work with the different modern approaches, they fear that misusing these technologies would lead to a disorganized session full of technical issues and difficulties, which means the students will walk out of the classroom having learned almost nothing at all.

Although students are the ones who use and interact with technology the most among all the three elements, there are some reasons which make them refrain from using technology in their education. The aforementioned platforms, which are not useful, force the students to seek information in other alternative sources which can be unreliable and unverified, which exposes the students to false, misleading information and plagiarism during their studies.

On top of this, another reason why some students refrain from using technology in education is the fact that they feel overwhelmed with the amount of information that exists on the internet, there's an oversaturation of information and misinformation that leaves students indecisive over which source to trust and work with.

2.4 Possible Solutions:

Even though the department currently faces some challenges regarding the effective implementation of educational technology, there are possible workarounds that the administration, teachers and students can follow. These solutions are concerned with the financial, human and technical aspects, taking into consideration the views and opinions of the students and teachers in this regard.

Starting with the official platforms that students and teachers rely on (Moodle), since this particular platform did not live up to the expectations nor did it ease the teaching and learning process, especially during the pandemic when online platforms were desperately needed.

A suitable replacement would be to create a new platform that is unique to the university and to every department; such a platform needs to have a better, easy to use interface similar to the user interfaces of other modern and popular websites. The platform needs to be updated frequently in order to ensure that it runs smoothly to meet the expectations of its users. This would incentivize students and teachers to use the platform more. With the platform being unique to the department, this will guarantee that users will not suffer from any technical difficulties such as log-in issues due to high traffic.

Since creating an entire platform from the ground up would consume money, time and resources, another greater alternative would be to work with the existing platforms which are created by experienced and trust-worthy programmers and developers who keep improving these apps and platforms through continuous, consistent and frequent software updates and bug fixes. Such alternatives include Google Classroom, Discord and Zoom; these pieces of software are witnessing a widespread use in many educational institutions around the globe due to the pandemic.

On their support page (support.google.com) Google describe “Google Classroom” as an online platform that can be used by teachers, students, administrators and even parents on both mobile devices and desktop computers. Teachers can use Classroom to start video meetings with their students, create, post and manage classes, assignments and grades online without the need for paper, modify the assignments and add material to them ranging from YouTube videos to other files and documents, teachers can give direct feedback to their students and also post announcements to inform them and keep them up to date.

On the other end, students who use Classroom can track classwork and submit their assignments and homework as soon as they finish them, receive feedback on their performances and check their grades quickly, they can even share their own materials and interact with their teachers and classmates with comments and questions.

Administrators can also take part in Classroom, they act as moderators who ensure that classes run smoothly, they can protect the data of the users, set up classes and control memberships, add and remove members to and from classes.

Discord and Zoom share the same purposes and functions as one another, administrators, teachers and students can set up dedicated servers or rooms to hold online meetings from

anywhere at any time. These two platforms are very simple in terms of how to set them up and use them.

These apps are all very effective and useful, which explains the surge in popularity, especially in the education sectors. However, considering that some students live in areas where the broadband internet service is weaker, a strong and stable internet connection is needed in order to hold these online meetings despite how well-designed and easy to use these platforms are. This issue is left for the government to handle by improving the quality of the internet services around the country.

Despite the fact that these apps and platforms are accessible and free to use, some important groundwork needs to be laid out first before using them. Administrators, teachers and students alike need to be familiarized with these apps and trained to handle them, some rules and optimal working conditions must be put in place such as a code of conduct for students like respecting the teachers, their colleagues and the working environment as well as being professional, setting time tables that take the schedules of each member, be it the teachers or the students, into consideration.

Given the fact that not all teachers, administrators and students are completely familiar with newer pieces of technology, some basic and proper training is needed in order to prevent any technical issues and confusions. Training programs can help familiarize the members of the department with the software and teach them how to use it on their own; these training programs can come in the form of simple tutorials in person or via videos.

After basic training is done, another setback needs to be addressed as well. This setback is the shyness or anxiety that some students experience when having to participate in online lectures. Some students can become very shy and nervous when sitting in front of their webcams and speaking through their microphones. Helping students get over these anxieties can make them more comfortable during online lectures which will in turn improve their performances.

Every member of the department should be open minded and willing to make way for any future initiatives and newer solutions that have the potential to improve and enhance the teaching and learning environment in the department.

2.5 The Impact of Educational Technology:

To say that educational technology is important and beneficial now more than ever before would be a severe understatement. Not only does technology help make teaching and learning simpler and easier and more accessible, but it also prepares students for the future, many jobs in the market nowadays require at least a decent level of technical skill and knowledge of technology.

a. Taking Advantage of Asynchronous Learning:

Educational technology caters to the different needs of each student; teachers can take advantage of this and create custom lessons which are purposefully designed to fit the different learning styles of their students. With asynchronous learning, every student can study and learn at their own pace while using the format that helps them absorb the information in the easiest and quickest way, be it visual, auditory, text (reading and writing) or kinesthetic. This way, teachers can get to know their students better, have an easier time knowing which students are taking in the information and which ones are not; this will expose the shortcomings of every student, allowing the teachers to address them as early as possible.

b. Stimulation through Simulation:

Outside of education, young students rely on technology to keep themselves entertained and escape boredom. Moving that mentality into education can be extremely beneficial as many students find classes and lectures a bit boring. If technology was used as a means to stimulate students and keep their attention, then they will be more engaged with the learning materials they receive. Using platforms such as Kahoot is a step in the right direction. Kahoot is a game-based learning platform, it “gamifies” the learning experience and material, presenting questions and tests in the form of quizzes and puzzles. Constant stimulation to the brains and minds of students is sure to keep them interested and mentally present during classes and lectures, be it in person or online.

Stimulating the students can be easily achieved through the use of puzzles and quizzes which help students improve their problem solving skills. Outside of education, many young people play simulation video games, these games teach their players about many things such as language, physics, math, finance and business...etc. Taking advantage of simulation games can reap many benefits for students. Since this study is concerned with language learning, then using language learning games and puzzles is what is most appropriate.

c. Encouraging Collaboration:

Educational technology encourages the spirit of collaboration among students, making tasks like homework and presentations easier and encouraging the act of socializing between students. Online collaboration is also beneficial for students who may find real life settings stressful and challenging. Collaboration also incentivizes students to be less selfish and share the information and knowledge they have with their colleagues.

d. Lifting Pressure off of Teachers:

A lot of teachers tend to be overworked and their schedules can be overloaded, technology can take care of this problem through the use of management tools. Teachers can manage many tasks easily with some useful software allowing them to have more free time which they can dedicate to take care of students and track their progress.

Working with some pieces of software that can automate certain tasks on behalf of the teachers, tasks such as instantly creating spreadsheet documents, sending scheduled updates to students via timed e-mails...etc.

e. Giving Students More Options:

One of the biggest benefits of using the internet in education is the fact that students will no longer feel restricted or limited to the physical library; they can find different sources from across the internet. Of course, this process needs to be moderated, so instead of allowing students the freedom of extracting information from any given, random source on the internet, the sources

need to be frequently verified. To avoid making the students feel overwhelmed and confused with the endless amounts of information that exists online and which source is reliable or trustworthy, the administration will take on the task of bringing all the reliable sources and referring the students to them.

f. Improving the Students' Writing Skills:

Through the use of software such as Microsoft Word and many keyboard apps on their smartphones, students can instantly check their spelling and punctuation mistakes and grammatical errors. The software is able to recognize these mistakes and errors and highlight them for the users; after highlighting these mistakes, the software suggests some corrections. Thanks to this, students can greatly improve their writing skills and knowledge in grammar. Correct form and grammar will become natural to students, and even if it took them quite some time to remember the writing and grammatical rules, the software will always notify them of their mistakes and errors and help them correct it. This is extremely useful since teachers can only help so many, they are not able to keep up with every little spelling mistake or grammatical error that every student makes all the time. Teachers can trust that the software will take care of that responsibility on their behalf.

g. Improving the Students' Speaking Skills:

With the help of the internet, students can also communicate directly and instantly with native speakers of the English language. Social media has brought people closer and made the world seem smaller, so reaching out to people from countries like The United States, The United Kingdom or Australia is easier than ever before. Even if students are only able to have brief interactions with native speakers, they can still be sufficient enough to give them a good idea on many aspects of language learning such as the correct pronunciations of words and the different accents of each country. Through continuous interaction with native speakers, students can improve their knowledge as they practice their listening and speaking skills. Even if students were unable to find a native speaker to interact with, video-hosting platforms such as YouTube

can compensate them. There exist endless amounts of videos of native English speakers speaking their language and even offering free lessons and tutoring their viewers.

h. Teaching/Learning beyond the Walls of the Classrooms:

Thanks to technology, the process of teaching and learning is no longer confined to the physical space of the classroom. Teachers can seamlessly and smoothly continue delivering their lessons and lectures with their students from home after school is over for the day. This can be done directly with voice or video calls on aforementioned platforms like Discord and Zoom, or indirectly through the use of LMS and Google Classroom. This way, teachers and students no longer have to be concerned about the limited schedules that the schools set for them, and whether or not there are free, empty classrooms to use, which is something that tends to happen quite often in the department.

Conclusion:

As educational technology evolved, and still evolves, through the ages, it brings new opportunities and new possibilities to how the process of teaching and learning can be executed, the process of recording, storing and sharing knowledge and information. As surveys and studies tackle the issue of educational technology integration, the disparities between educational technology in first-world countries and third-world countries become more apparent, which only supports the claim that educational technology is needed now more than ever before.

Educational technology in the department of English at the University of Ammar Thelidji, Laghouat, like many others around the country and other third-world countries, faces many challenges and setbacks ranging from technical to financial to human. Over the past year, the COVID-19 pandemic has really exposed how futile traditional methods and approaches can be in such times and it showed how important it is to adopt a technology-based teaching and learning approach, this approach improves the teaching and learning environment of the classes and has many benefits for teachers and students alike.

In spite of the fact that educational technology can have a great, positive impact on teaching and learning, there are still varying opinions and stances regarding this matter. Although

a considerable amount of people see the integration of technology into education as the next and the most intuitive step that education should be taking, there is still a number of people who believe that the negatives of such technologies out-weight the positives.

Chapter Three:

Methodology and Data Analysis

Introduction:

In the third and final chapter of this dissertation, we will go over a general, then a detailed, view of all the necessary elements and components that comprise the research methods that have helped us gather the information needed to support our study. Afterwards, we will discuss the tools that we've used to collect data then showcase the results of the research in detail and analyze our findings.

3.1 Research Design:

3.1.1 Descriptive Study:

A descriptive study or thesis paper can be defined as a research method whose purpose is to accurately describe the features or characteristics of the population or phenomenon that is being studied and investigated. There is a variety of tools that can be used in a descriptive dissertation, which of these tools is the most appropriate is absolutely dependent on the aims or objectives of the study. (Scribbr.com, n.d)

Some of the methods and tools include the following:

a. The Observational Method:

When using the observational method, you rely solely on observation to collect data and information on a phenomenon in a natural setting, so you simply record the things you observe, such as behaviors, events and trends. This method is mainly used by psychologists, sociologists and market researchers, where the aim is to get a grasp and an understanding of people's actions and behaviors as they happen in the real world.

The two types of observational methods are quantitative and qualitative observations. The quantitative observation deals with statistics and numbers; the results of this method are gathered through the use of numerical analysis, it deals mostly with numbers such as age, weight and volume. This type of observation is used in the natural sciences; for example, observing the

changes in temperature in different natural settings. On the other hand, the qualitative observation does not deal with numbers and statistics, but instead deals with observing the characteristics of its subjects. For example, a market researcher would observe, either closely or from afar, the latest purchasing trends. The researcher is not concerned with the quantity of what people are purchasing, but simply what they are purchasing. (Scribbr.com, n.d)

b. The Case Study Method:

In a case study, the only point of interest for the researcher is a specific subject; it could be an individual person, a group of people, a phenomenon or an event. The subject being studied using this method tends to be unusual, complex and interesting, it is considered an anomaly due to how it challenges certain assumptions or stereotypes, so studying it offers us new perspectives on a given research problem.

The case study method can be very helpful when attempting to gain an in-depth understating of a subject in its real-life context or setting. (Scribbr.com, n.d)

c. The Survey Method:

In a survey method, researchers compose a series of questions and present them to the participants in the form of an interview, in person or online, or a questionnaire, written on paper or online. After participants are done answering questions, the researchers gather their responses to describe and analyze them.

It is absolutely crucial to note that the questions in a survey must be ordered in a coherent manner, they must be well written so that they are easy to understand for the participants, and the survey must include various types of questions such as open-ended questions, close-ended questions and rating-scale or multiple choice questions.

Surveys can be used for many purposes such as: getting to know the public's opinion on a certain political or social issue, gathering opinions and reviews for a company's product to evaluate the customers' satisfaction or dissatisfaction... etc.

For this dissertation, the descriptive method was the most appropriate one to implement in order to conduct research due to the nature of the subject. The observational method was used

to assess the situation regarding the implementation of educational technology in our department and get a full grasp of the issues and challenges facing it.

Along with the observational method, the survey method was used as well, which came in the form of an online questionnaire. Through the use of the survey method, we were able to gain new perspectives on the issue, looking at things from our point of view as well as the points of view of other students and the teachers as well. (Scribbr.com, n.d)

3.1.2 The Population:

A research population is a large group of people or objects chosen by the researcher based on certain characteristics which the members of the population have in common. The population represents a vital element in research and is one of the main sources for collecting valuable information and data for the researcher (questionpro.com, n.d).

The population which we chose in our research is comprised of teachers at the department of English in the University of Ammar Thelidji; these teachers are all currently teaching during the academic year of 2020/2021. The other portion of the population is comprised of Master 2 level English students, all currently studying at the department of English in the University of Ammar Thelidji during the academic year of 2020/2021.

3.1.3 The Sample:

A research sample is a specific amount of people or objects taken from a large population. An important step to consider when choosing a sample is that the sample should be representative of the whole population; this is done so that any generalizations on the part of the researchers are safe and not misleading to the readers or misrepresentative of the population (questionpro.com, n.d).

The sample that we chose from our population is 5 English teachers and 50 Master 2 level English students. We felt that 50 students and 5 teachers should be a good number to represent the population and get a variety of opinions and feedback.

3.2 Tools of Gathering Data:

3.2.1 The Questionnaire:

A questionnaire is a very useful research tool that is comprised of a series of questions or prompts, the questionnaire is designed to collect information or feedback from participants or respondents. A good questionnaire should preferably be composed of a variety of question types, such as open-ended questions, close-ended questions, multiple choice questions and other prompts where respondents are asked to provide their opinions in either a short paragraph or a long one (questionpro.com, n.d).

When we composed our questionnaire, we kept in mind the cohesion, flow and clarity of the questions. We kept the language simple and the length of the questions was no longer than two lines each. We had a good idea of what opinions the respondents were going to lean towards the most, but we had to keep an open mind and offer them enough space to give their opinions through the use of open-ended questions. We asked other, straight-forward questions which were answered by either “yes” or “no”, or taking a position in favor of or against an idea.

The questionnaire began with an introduction to familiarize the respondents with the subject we were researching and the problem we were tackling. In the first couple of questions, we wanted to know how much students and teachers relied on technology in and outside their classrooms and whether or not they took advantage of it during the pandemic. In the following couple of questions, we wanted to get an idea about the respondents’ experiences with educational technology and their thoughts and opinions on its current state in our department.

After these introductory questions, we asked our respondents about what teaching and learning approach they preferred, either the traditional methods or the modern, technology-reliant methods, or a mixture of both approaches. And at the end of the questionnaire, we wanted to know if respondents thought technology would increase the productivity of teachers and students, then we asked them to offer some suggestions and solutions that they believe would improve the state of educational technology at our department in the future.

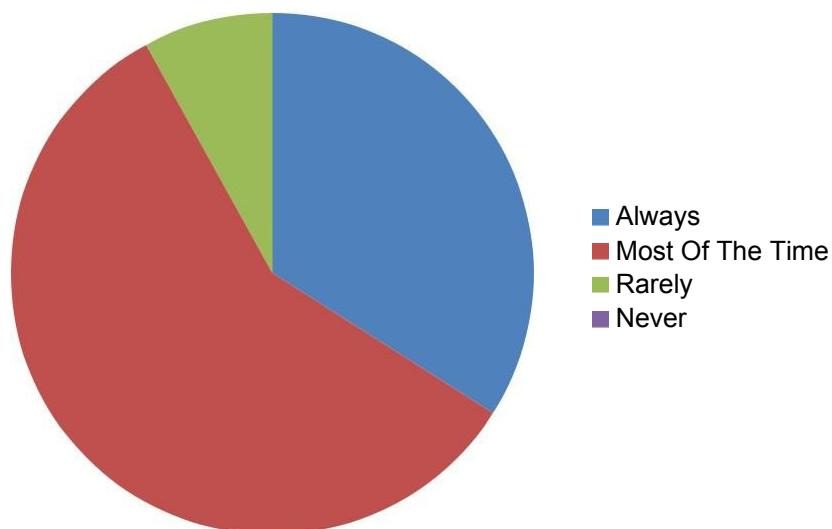
3.3 Results and Analysis:

The responses to our questionnaire by students and teachers have been very informative and helpful. Through the use of the questionnaire, we had the opportunity of having different, varying points of view, suggestions and opinions. This helped us see just how much teachers and students needed educational technology to change the teaching and learning environments of their classes.

First, we will discuss and analyze the responses that the students provided us with. Afterwards, we will discuss and analyze the responses of the teachers. Then, we will compare the two sides and see if there are any common or differing points of view.

3.3.1 The Students' Responses:

1. How much do you rely on technology (sites, platforms... etc.) outside the classroom (assignments, revision)?



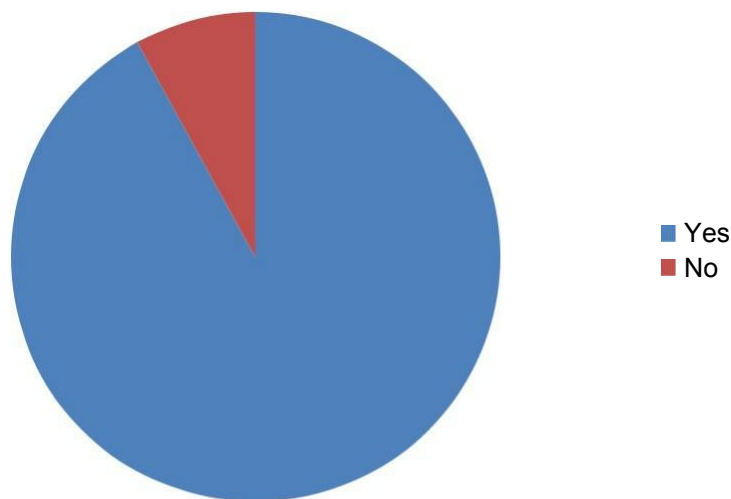
Graph 1: Students' Reliance on Technology outside the Classroom.

At the start of our questionnaire, we wanted to know how much the students of our department relied on technology in their studies when they are outside of the classroom. The pie

chart above showcases that there is a heavy reliance on technology, as 58% of students said that they rely on technology most of the time; 34% of respondents said that they rely on it all the time, while a slim 8% claimed they rarely rely on technology. None of the students stated that they never relied on technology during their studies outside of class.

The response to this first question made it obvious that students do see the benefits of technology in education, as they rely on it and see it as an equal, if not a superior, to physical libraries and other traditional methods of learning.

2. With the rapid development of educational technology, do you believe that its use is now a must in our department?



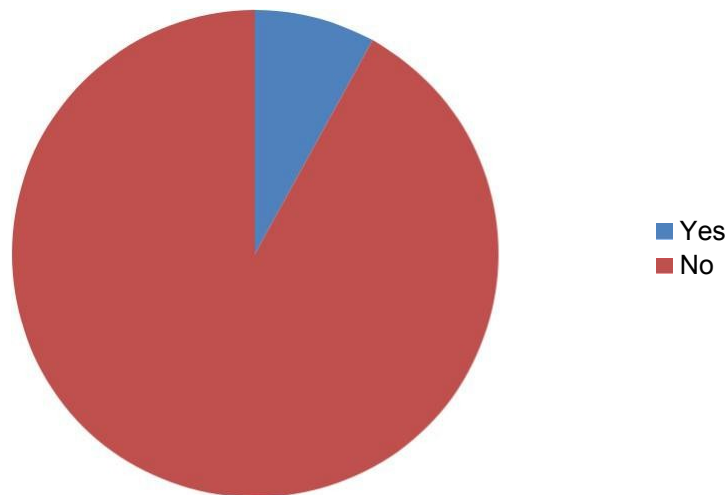
Graph 2: The Students' Thoughts on the Necessity of Technology Integration in our Department.

In the second question, we asked students if they thought that integrating technology in our department is a must, with other departments and universities making the most out of what they have.

There's an apparent need for the immediate implementation of more educational technology into our department's classes, with 92% of respondents expressing overwhelming support for this idea. This shows just how much students want technology to be more present

inside their classes since they already rely on it outside of class, students welcomed this idea so that their learning experience would become more engaging, stimulating and productive.

3. Based on your experience, do you think that educational technology is being used efficiently in our department?

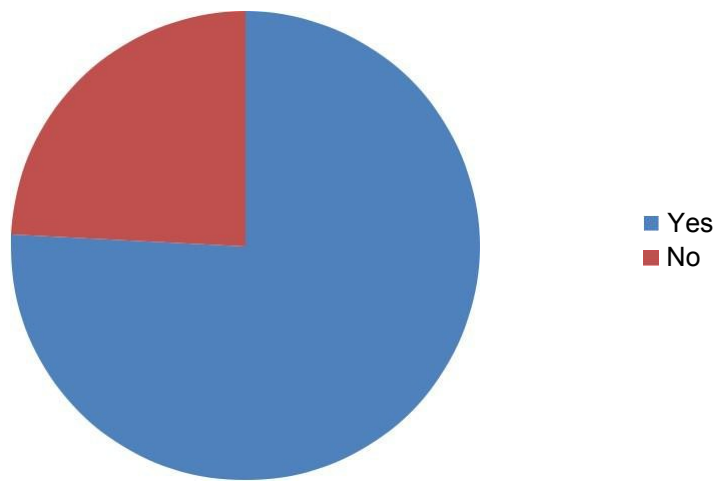


Graph 3: Students' Thoughts on how Efficiently Technology is Being Implemented in our Department.

When it comes to using technology in education, whether or not it is being used efficiently is determined by the productivity of teachers and students when using it. The students who responded to our questionnaire see that educational technology is not being used efficiently in our department.

In addition, some students stated other things such as that fact that they had no idea about the existence of educational technology in our department. While another respondent added that educational technology is not being at all in our department.

4. In our department, has any teacher arranged an online classroom? Especially during the pandemic.

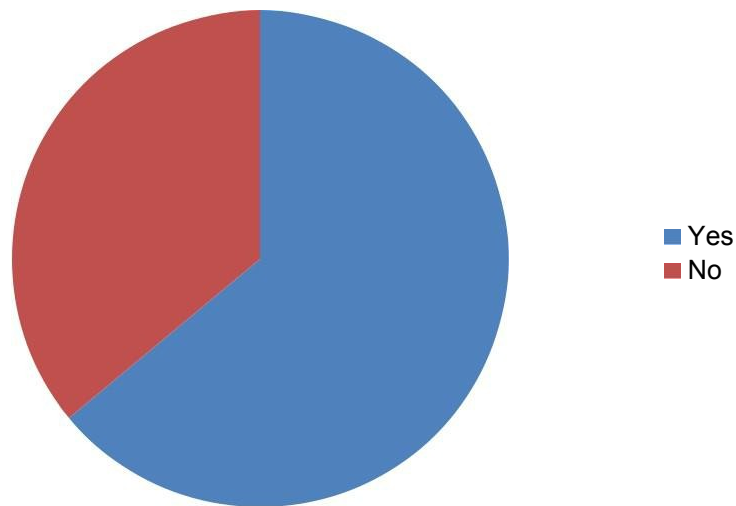


Graph 4: Online Classrooms during the Pandemic.

The year 2020 saw the pandemic of COVID-19 affecting many aspects of life for people around the world, including education. Many educational institutes around the world reacted to the pandemic by arranging online classrooms through the use of computer programs such as Zoom, Google Classroom...etc. This allowed them to continue with their curriculums almost without interruption and avoided wasting a whole year.

When it comes to our department, however, these online classes have not been used. According to 90% of the students who participated in our questionnaire stated that no online classes were held or arranged by teachers. Although the remaining 10% claimed that some of their teachers have, in fact, held online lectures. This shows that the aforementioned distance learning technologies have not been taken advantage of during such a time.

5. During the pandemic, have social platforms (Facebook, Gmail...etc.) helped you stay up-to-date and in touch with the administration, teachers and classmates?

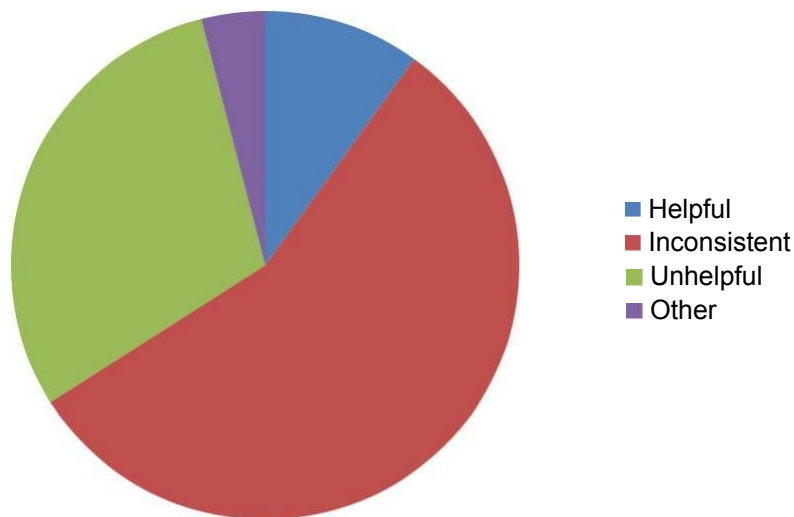


Graph 5: The Helpfulness of Social Media Platforms during the Pandemic.

Social media has become a big part of everyday life for billions of people. During the pandemic these platforms helped everyone stay in touch with others while in lockdown.

When it comes to education, 78% of the student-respondents stated that social media has greatly helped them stay in touch with their colleagues, educators and the administration of our department. Platforms such as Facebook, Gmail and others ensured that students would receive updates regarding the curriculum, the exams as well as when they can resume their education inside the university.

6. Over the course of your education at our department, have you found the online platform "Moodle" helpful during your studies?

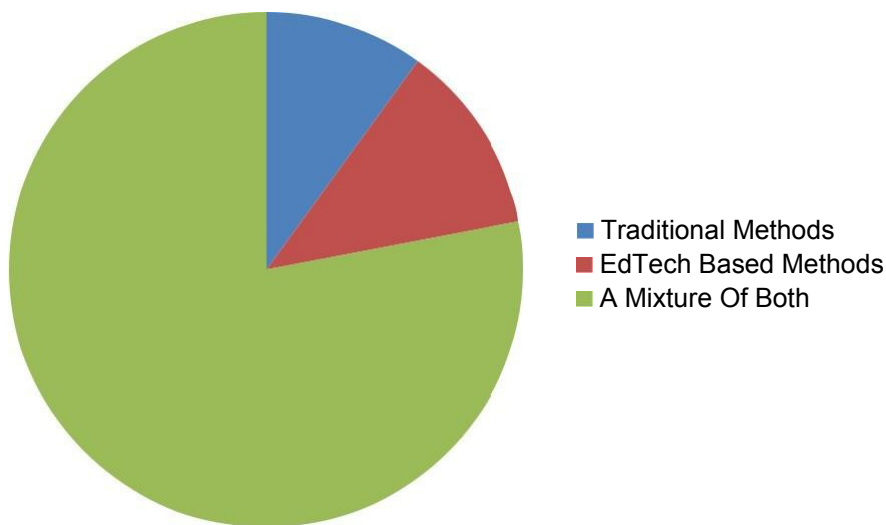


Graph 6: The Helpfulness of Online Platform “Moodle” to Students.

Ever since the application “Moodle” started being used in our department, the opinions regarding how reliable it is have been different. This application has been very polarizing, and the answers that students provided when asked them about it prove that.

The opinions on “Moodle” are negative for the most part, with 56% of student responses stating that it is very inconsistent, another 30% of students stated that “Moodle” has been unhelpful to them during their studies. A slim 10% told us that they found the platform helpful. 4% of the respondents gave more detailed opinions, such as the fact that it is very buggy and outdated in terms of features, in addition to the user interface being very difficult to navigate through, making it very hard for students to find the materials they were looking for in the app.

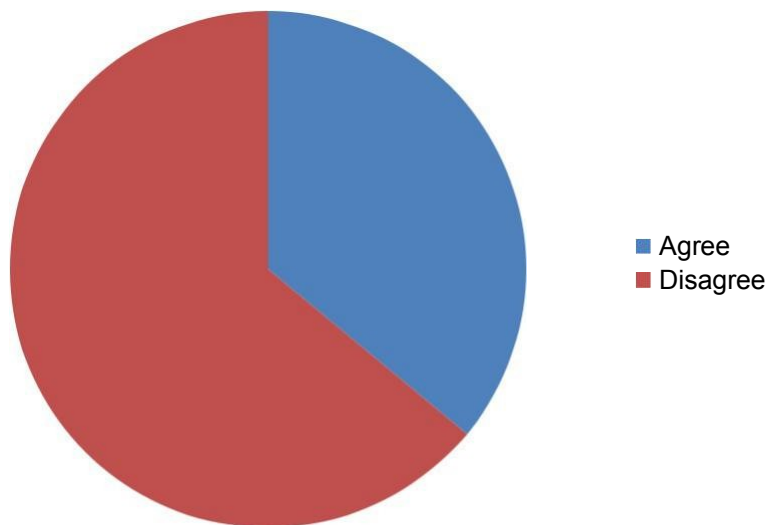
7. As a student, are you more comfortable with the traditional ways of learning or do you prefer a new approach based on the incorporation of educational technology?



Graph 7: The Teaching and Learning Methods which Students Prefer to Work with.

When it comes to the different teaching and learning methods available, 78% of students appear to be more comfortable with a new approach that balances both the old, traditional methods and the modern, technology-based methods. While 10% of them seem to lean toward the traditional methods only, and 12% seem to be ready to move to technology-based methods and completely abandon the traditional ways of teaching and learning.

8. Some teachers see that technology can be more distracting to the students than beneficial, do you agree with this point of view?

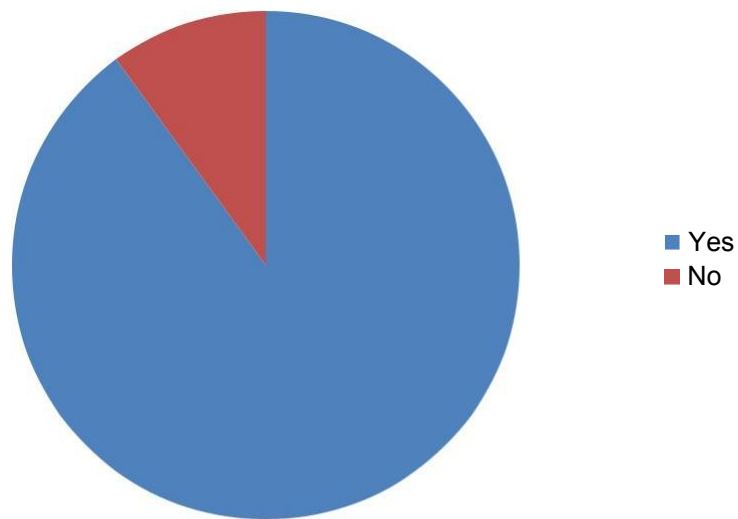


Graph 8: Student's Opinions on the idea that Technology hurts more than it helps.

We asked the students on the idea that some teachers have regarding educational technology being more detrimental and distracting than helpful and beneficial to the students.

64% of the students disagree with this notion, seeing that technology's advantages outweigh the disadvantages. The other 36% agreed with this idea, seeing that students would be distracted during class while using technologies such as their smartphones and laptops, hence negatively affecting their performances.

9. Do you think educational technology will help enhance the productivity of teachers and students?



Graph 9: Students' Views on Whether or not Technology will improve their Productivity.

When we asked students on whether or not they think technology will help increased their productivity and improve their performances, an overwhelming 90% of them said yes. Students see that technology will help them in education just as it helps them in other aspects of their lives. While the remaining 10% of respondents believe that technology will be more of a hindrance to their education, echoing the same idea that it is distracting to them.

3.3.2 Analysis of the Students' Responses:

At the end of the questionnaire, we asked the students to provide any additional suggestions or solutions that they believe would improve the state of educational technology in our department.

We received multiple suggestions and solutions concerning this issue. These suggestions range from the technical aspect of the technology itself to the human aspect, meaning the operation and management of technology.

All of the students who offered their ideas expressed a strong urge for technology integration in our department, they were all eager to see a new version of our department that is more up-to-date with the rest of the world. The majority of respondents suggested applications such as Zoom and Discord for online lectures to be held. Another respondent suggested that we improve the efficiency of existing systems such as the LMS, it should be accessible to both students and teachers, where teachers can record videos of lectures and post them online. This will ease the learning process for those students who live far away from the university and cannot attend every lecture or seminar in person.

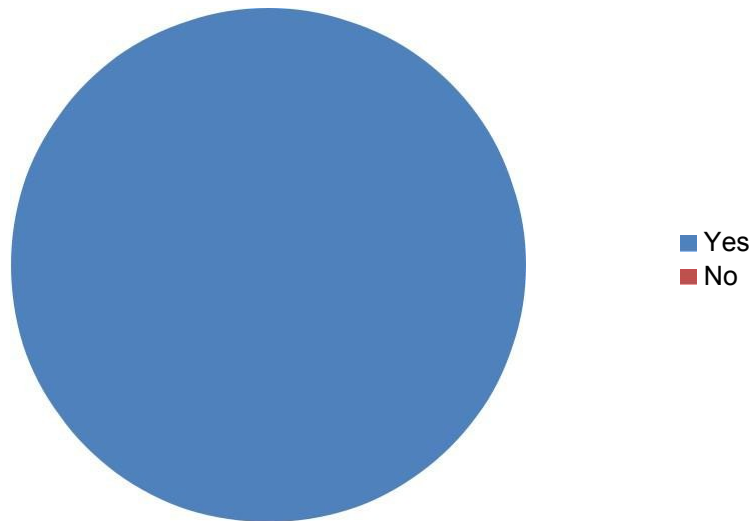
The majority of students expressed their dissatisfaction regarding the online platform “Moodle”. As seen in Graph 6, a huge number of students described the platform as either inconsistent or completely unhelpful to them during their studies. Some respondents suggested that another decent and reliable platform should be adapted, such as Google Classroom.

Another idea that a student suggested is that the university's computers and internet services should be accessible all the time to students. This way, students would be able to get more work done since the only internet or computer access they have is at home. Others suggested that there should be a data show in at least every classroom so that teachers can make their lessons more engaging and interesting for the students.

Overall, the vast majority of students are in favor of integrating more technologies into our department and making the existing technologies more accessible for themselves and for teachers, and they believe that the administration should respond to their needs as soon as possible.

3.3.3 Teachers' Responses:

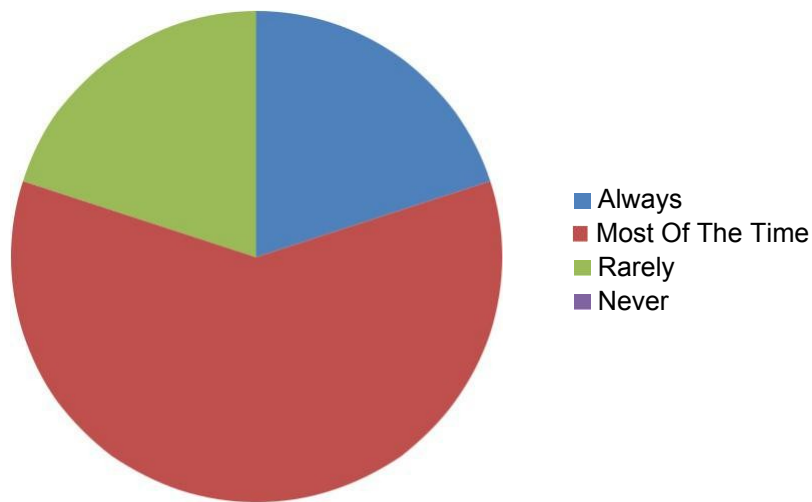
1. With the rapid development of educational technology, do you believe that its use is now a must in our department?



Graph 10: The Teachers' Thoughts on the Necessity of Technology Integration in our Department.

It is very obvious that all teacher-respondents agree that the integration of educational technology is now a necessity as they know very well how beneficial educational technology can be. Based on this response, we can say that both teachers and students have the same vision and are willing to work with technology to improve the teaching and learning environment at our department.

2. As a teacher, how much do you rely on technology (sites, platforms..etc) in and outside the classroom in your teaching process (assignments, lessons... etc) ?

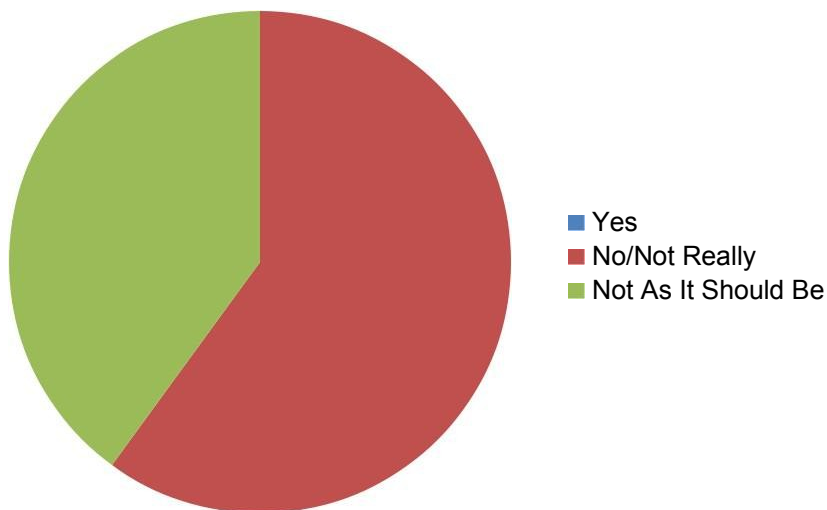


Graph 11: Teachers' Reliance on Technology outside of class in their Teaching Process.

60% of the teachers who participated in the questionnaire stated that they rely on technology most of the time when they are outside of the classroom, 20% stated that they rely on it all the time. This shows that teachers use technology in their teaching process outside of class almost as much as students do.

20% stated that they rarely ever use technology outside of their classrooms, this is either due to their reliance on traditional methods or due to the fact that they do not find technology to be all that helpful in general or to the fact that they face problems with specific pieces of technology, be it a hardware or a software problem.

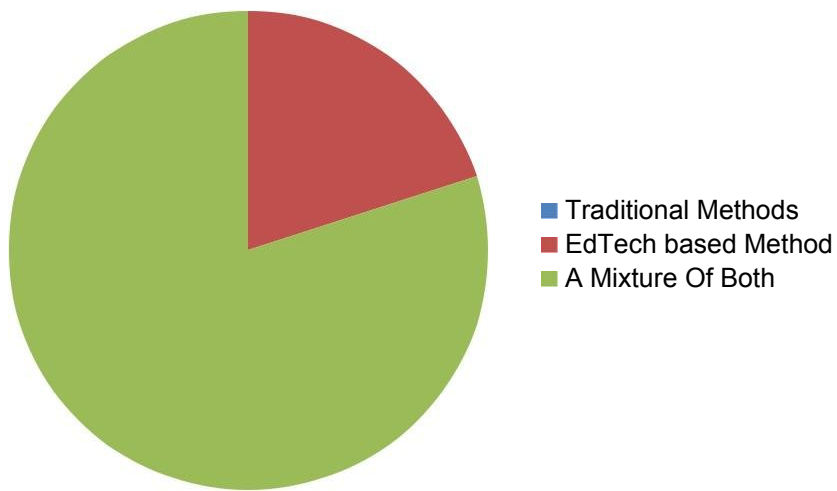
3. Based on your experience, do you think that educational technology is being used efficiently in our department?



Graph 12: Teachers' Thoughts on How Efficiently Educational Technology is Being Used at our Department.

60% of teachers see that educational technology is not being used as efficiently as it should be at all; 40% of them see that it is being used but not how it should be, which means that educational technology is there to some degree but it is being misused and mismanaged, or that it can be provided but isn't. None of the teachers said that technology is being used efficiently.

4. As a teacher, are you more comfortable with the traditional ways of teaching or do you prefer a new approach based on the incorporation of educational technology?

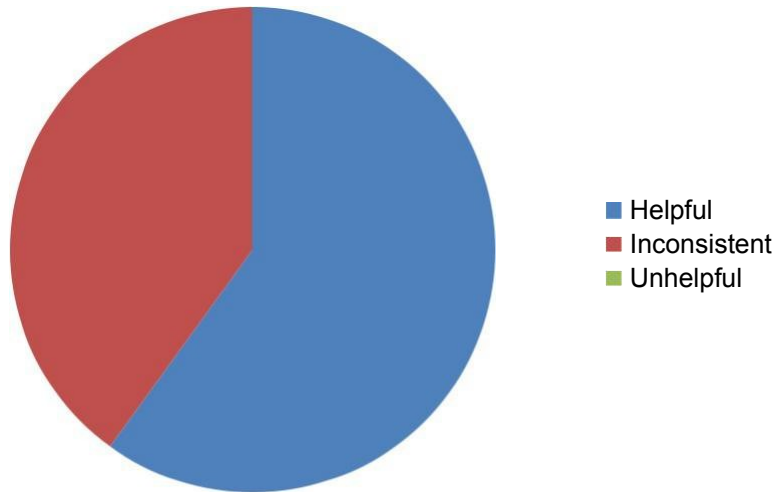


Graph 13: The Teaching Method that Teachers Prefer the Most.

As seen previously with the students' questionnaire, teachers responded almost exactly the same way. 20% of teachers prefer a technology-based educational method, while 80% of them are comfortable with a mixture of both traditional and technology-based methods.

None of the teachers expressed any desire to solely keep using traditional methods without incorporating any technology into their classes.

5. Over the course of your career as a teacher, have you found the online platform "Moodle" helpful during your teaching process? Describe any issues you may have faced while using this platform.

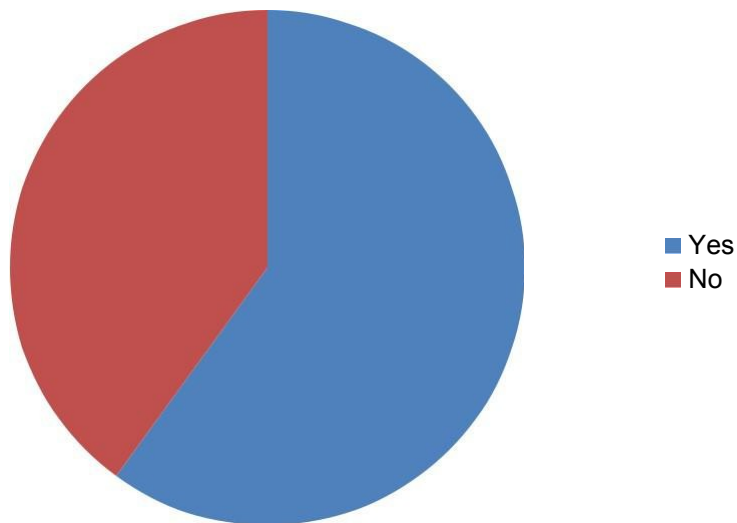


Graph 14: Teachers' Experience with the Online Platform "Moodle".

Unlike the students, 60% of teachers found the online platform "Moodle" mostly helpful to them, while 40% of them found it inconsistent. None of the teachers stated that the platform was unhelpful.

What we can deduct from the contrast between students' responses and the teachers' responses is that "Moodle" makes it easy to upload lessons, but when it comes to viewing and downloading material it is complicated and convoluted.

6. During the pandemic, have social platforms (Facebook, Gmail...etc.) helped you stay on track with regards to the curriculum?



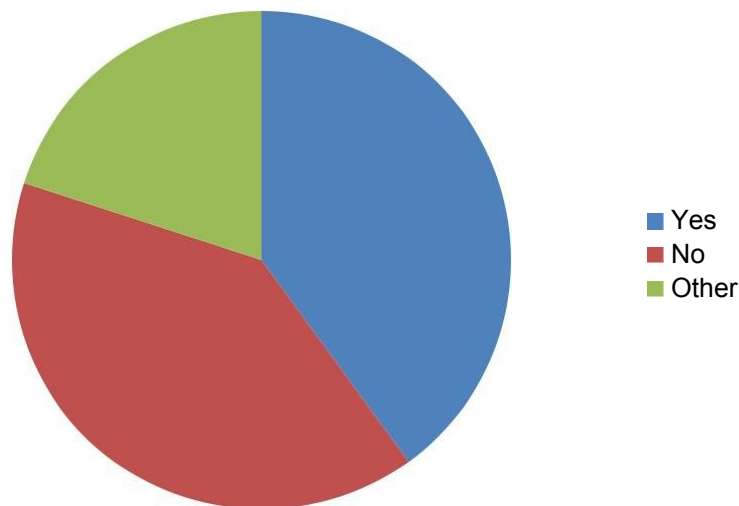
Graph 15: Teachers' Experience with Social Media during the Pandemic of COVID-19.

The teachers' experience when using social media in education during the pandemic is, again, very similar to that of the students.

60% of respondents who used social media (Facebook, Gmail... etc.) in education during the pandemic stated that this technology has helped them stay in touch with their colleagues and their students, it also helped them stay on track with the curriculum as well.

40% of respondents stated that social media has not helped them during the pandemic; this could be due to the fact that they do not use social media whether it's for educational purposes or simply socializing in general.

7. During the pandemic, have you held any online lectures with your students? If so, have you faced any difficulties in the process, describe your experience.



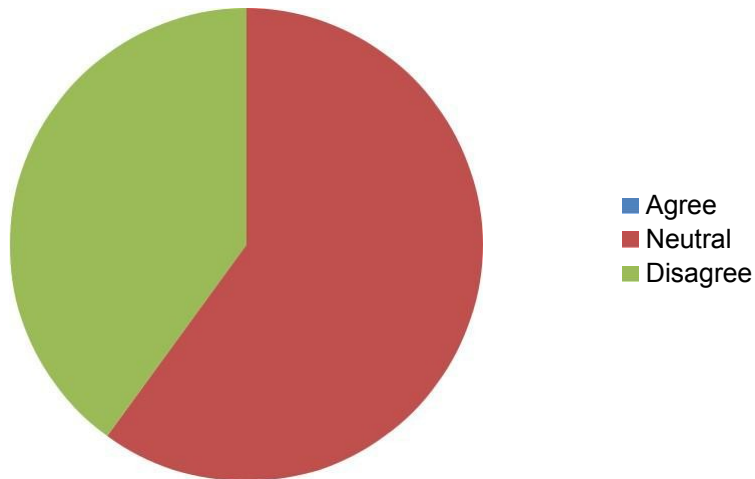
Graph 16: Teachers who Have or Have not Held Online Lectures during the COVID-19 Pandemic.

In the 7th question, teachers were asked whether or not they held any online lectures during the pandemic. 40% of them, which is made up of only 2 teachers, said that they actually have held online lectures with their students.

20% of respondents, which is one teacher, stated that they have held online lectures but had to clarify that these lectures were only held with Doctorate students, as License and Master Students have not been trained and haven't been ready for that experience.

The remaining 40% of teachers stated that they have not held any online lectures with their students during the COVID-19 pandemic; this is likely because these teachers are in the same position as the students and are not trained or familiar with the technical side of holding online lectures.

8. Some teachers see that integrating technology inside the classroom (the internet, smartphones, laptops... etc.) can be more distracting to the students than beneficial, do you agree with this point of view? What are your thoughts?



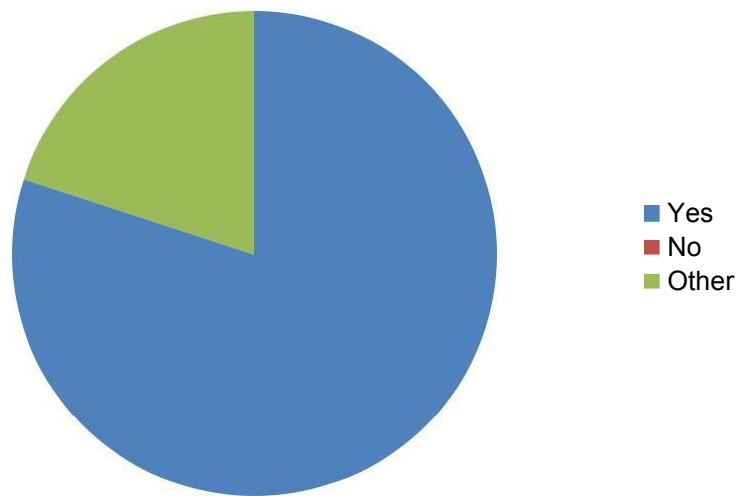
Graph 17: Teachers' Thoughts on the Idea that Technology can be more distracting than Beneficial to Students.

Unlike students, the majority of teachers (60%) decided to remain neutral regarding some teachers' point of view about educational technology's negative effect.

Among the teachers who were neutral, one stated that if technology was to be fully implemented, it should be allowed with the permission of the teacher and should remain under their control and supervision; this is to avoid any misuse or mismanagement by the students.

The remaining 40% expressed their disagreement with this point of view, arguing that technology should be used inside the classroom provided that it is used properly.

9. Do you think educational technology will help enhance the productivity of teachers and students? If you think it will not do so, tell us why.



Graph 18: Teachers' Opinions on whether or not Educational Technology Will Enhance Productivity.

When asked about whether or not they believe educational technology will have a positive effect and enhance the productivity of teachers and students, all of teachers stated that they believe technology will do.

Among these teachers, one argued that for educational technology to have a positive effect and improve the performances of teachers and students, many teachers and students must undergo training in order to familiarize themselves with the technology and truly reap the benefits of working with it.

3.3.4 Analysis of Teachers' Responses:

Although the sample size of teachers was smaller than of the students, the teachers still provided very useful feedback and information about the problem of educational technology. The teachers' responses and answers provided insightful perspectives. However, due the fact that the sample size was small, the number of answers and suggestions was limited.

At the very start of the questionnaire, teachers were asked about their opinions regarding the state of educational technology at our department. There was a consensus on the fact that educational technology at our department is in very poor condition, every teacher gave a different reason as to why this is.

According to one teacher, the issue is not in educational technology itself, but rather in the whole educational system itself. Stating that it is not well-sustained with the proper materials that would help educational institutions easily incorporate different, useful technologies into the teaching-learning environments.

Other teachers criticized the misuse of existing systems and technologies such as the LMS, stating that it is only used to store documents from the administration and lacks interaction, meaning it is not properly used as a platform that facilitates the teaching and learning process. Another teacher criticized the university's priorities, stating that educational technology is neglected in the list of priorities and its benefits are ignored and overlooked.

One teacher pointed out the fact that some teachers do not feel confident in their ability to properly use and manage modern technology inside their classes which is why they refuse to abandon the old traditional ways.

When it comes to the teachers' answers which are shown in the graphs, there seems to be little to no difference between the teachers' responses and the students'. This shows a willingness from both sides to move on to a fully technology oriented way of teaching and learning.

At the end of the questionnaire, teachers were asked to provide some suggestions and solutions that they believe would improve the conditions at our department. Some teachers stated

that the solutions start with the educational systems itself and the mindsets of some teachers and students who are no yet motivated, willing or able to teach and learn using technology.

Other teachers argued that in order for technology to be integrated successfully, the integration itself should be purposeful and the aims should be clear, technology should also be taken seriously as an important element in the educational process.

One teacher recommended that the appropriate conditions should be created and provided for teachers and students so that they would take educational technology seriously and also find the motivation to educate and learn using it.

3.3.5 Discussion of Results:

Even though it can be said that, generally, the majority of people in the Department of English are in favor of a technology-based educational environment, it was important to get a detailed view of this opinion. This detailed view could only be achieved through the use of a questionnaire that addresses every aspect of educational technology, its potential pros and cons, its shortcomings and the opinions of teachers and students.

The answers to the questionnaire were extremely similar and the overwhelming majority of them leaned in favor of educational technology, teachers and students seem to have strong faith in its potential. This, however, does not mean that the participants of the questionnaire do not see how and why educational technology is either underperforming or absent in the Department of English.

Some students stated that they were ready to embrace an environment where technology plays a big role in their learning process; but they claimed that due to the fact that some teachers still rely on traditional methods, such environment cannot be created. On the other hand, a good number of teachers stated that the failure of educational technology stems from the mismanagement of some existing tools and also from the governments unwillingness to enact a drastic, widespread change in support of educational technology.

Because teachers have more experience, and because they used to be students in a time when today's modern educational technology was absent, they have a better, more informed opinion on how educational technology should be implemented and how it can change and improve the teaching and learning process.

Overall, teachers and students seem to be on the same page regarding the importance and potential of educational technology, the suggestions they offered seem to come as a result of a first-hand experience inside the Department of English.

Conclusion:

The problems discussed in this study required the use of the most appropriate approach and research tools, the descriptive methodology allowed for a close and detailed view and understanding of the issue of educational technology at our department. The use of the questionnaire also offered the points of view of each student and teacher who participated in it, allowing them to describe their experiences with educational technology and giving them a platform to voice their opinions and give their suggestions for what needs to be done in order to overcome the challenges that face educational technology at our department.

General Conclusion

General Conclusion:

To sum up, this study has tried to present the concept of educational technology, when we speculate it emerged, how it evolved over centuries and ages and where it stands today. To some people, the term “technology” only refers to today’s modern tools, machines which operate not only using hardware but software as well. However, this term includes any and all tools and methods that humans have invented over the ages to facilitate one process or another, such as creating efficient means of production. In the field of education, the term “educational technology” also encompasses every tool and method that humans have created and used over centuries to facilitate the process of teaching and learning, the process of collecting, storing and sharing information.

In today’s world, educational technology grows at a faster rate than ever before. A number of countries are keeping up with these developments and have recognized the important role of educational technology and have embraced it. On the other hand, some countries, particularly in the third world, are bound to lag behind. The struggle to catch up hinders education in these countries, this struggle stems from different areas such as pedagogic, economic and issues with infrastructure and mismanagement of resources.

Algeria, being part of the third world, suffers from the same issues, especially in the higher education sector. The University of Ammar Thelidji in Laghouat, for instance, was heavily affected by the COVID-19 pandemic last year. The educational process came to a halt once the pandemic hit, the university lacked the solutions to react as quickly as possible. Teachers were unable to conduct or hold online lectures with their students; they were only able to share some digital copies of their lectures. In addition to the lack of solutions, the existing tools, such as the dedicated platforms on which the lessons were posted, have their own fair share of technical issues which rendered them almost useless. This, coupled with the weak broadband internet service that Algeria provides, made it difficult to adapt to the new, unprecedented circumstances. Some teachers’ and students’ inability or unwillingness to use newer technologies, either due to a lack of technical knowledge or due to a reliance on older methods, played a major role, regardless of whether or not there was a pandemic.

This doesn't mean things are hopeless, with the use of the affordable and free pieces of software that exist on the internet; the teaching/learning process can be improved. In addition, repurposing some tools which are mismanaged, such as LMS, can bring positive results.

Despite some cynicism regarding educational technology integration into the Department of English; through the use of a questionnaire, it was revealed that the overwhelming majority of students and teachers are in favor of educational technology implementation, they want their teaching and learning environment to be improved and enhanced using technology, they also provided their own suggestions and the input from the teachers was insightful since they have more knowledge on the inner workings of the department.

At this day and age, no one can deny how vital and important a role educational technology plays. However, its impact can only be seen or felt when an effective strategy has been implemented. Such implementation must be purposeful and must be followed by a long-term commitment.

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Appendix of the Questionnaires:

Students' Questionnaire:

Hello, we would like to ask you a few questions regarding the use of educational technology in the department of English. The aim behind this is to collect data that will not only help us in our research but will help improve the use of educational technology in our department to create a better learning environment for both teachers and students.

1. How much do you rely on technology (sites, platforms...etc.) outside the classroom (assignments, revision)?

- ☐ Always
- ☐ Most of the Time
- ☐ Rarely
- ☐ Never

2. With the rapid development of educational technology, do you believe that its use is now a must in our department?

- ☐ Yes
- ☐ No

3. Based on your experience, do you think that educational technology is being used efficiently in our department?

☐ Yes

☐ No

4. In our department, has any teacher arranged an online classroom? Especially during the pandemic.

☐ Yes

☐ No

5. During the pandemic, have social platforms (Facebook, Gmail...etc.) helped you stay up-to-date and in touch with the administration, teachers and classmates?

☐ Yes

☐ No

6. Over the course of your education at our department, have you found the online platform "Moodle" helpful during your studies?

☐ Helpful

☐ Inconsistent

☐ Unhelpful

7. As a student, are you more comfortable with the traditional ways of learning or do you prefer a new approach based on the incorporation of educational technology?

- ☐ Traditional Ways
- ☐ Educational Technology Based Approach
- ☐ In Between (a mixture of both)

8. Some teachers see that technology can be more distracting to the students than beneficial, do you agree with this point of view?

- ☐ Agree
- ☐ Disagree

9. Do you think educational technology will help enhance the productivity of teachers and students?

- ☐ Yes
- ☐ No

10. What additions do you suggest regarding the integration of technology that would improve the learning and teaching atmosphere in our department?

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Done! Thank you very much for answering our questionnaire. We appreciate your help, time and input.

Teachers' Questionnaire:

Hello, we would like to ask you a few questions regarding the use of educational technology in the department of English. The aim behind this is to collect data that will not only help us in our research, but will help improve the use of educational technology in our department to create a better learning environment for both teachers and students.

1. With the rapid development of educational technology, do you believe that its use is now a must in our department?

☐ Yes

☐ No

2. As a teacher, how much do you rely on technology (sites, platforms...etc.) in and outside the classroom in your teaching process (assignments, lessons... etc.)?

☐ Always

☐ Most of the Time

☐ Rarely

☐ Never

3. Based on your experience, do you think that educational technology is being used efficiently in our department?

☐ Yes

☐ No

4. As a teacher, are you more comfortable with the traditional ways of teaching or do you prefer a new approach based on the incorporation of educational technology?

☐ Traditional Ways

☐ Educational Technology Based Approach

☐ In Between (a mixture of both)

5. Over the course of your career as a teacher, have you found the online platform "Moodle" helpful during your teaching process? Describe any issues you may have faced while using this platform.

☐ Helpful

☐ Inconsistent

☐ Unhelpful

☐ Other:

6. During the pandemic, have social platforms (Facebook, Gmail...etc.) helped you stay on track with regards to the curriculum?

☐ Yes

☐ No

7. During the pandemic, have you held any online lectures with your students? If so, have you faced any difficulties in the process, describe your experience.

☐ Yes

☐ No

☐ Other:

8. Some teachers see that integrating technology inside the classroom (the internet, smartphones, laptops...etc.) can be more distracting to the students than beneficial, do you agree with this point of view? What are your thoughts?

☐ Agree

☐ Neutral

☐ Disagree

☐ Other:

9. Do you think educational technology will help enhance the productivity of teachers and students? If you think it will not do so, tell us why.

☐

Yes

☐

No

☐

Other:

10. What are your thoughts on the current state of educational technology at our department?

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11. What additions can you suggest regarding the integration of technology that would improve the learning and teaching atmosphere in our department?

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Done! Thank you very much for answering our questionnaire! We appreciate your help, time and input.