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**Exploring the Correlation between Educational
Technology Integration and Use and Students'
Perceptions of Academic Learning Outcomes:
The Case of Master One English Major Students at
Bejaia University**

Thesis Submitted to the Department of English at Bejaia University
In Partial Fulfillment of the Requirements for the Degree of
Master of Arts in Didactics of Foreign Languages

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June 2024

Abstract

This study explores how integrating technology into education impacts the academic performance of English major students. By surveying first-year master's students in the English department, the research focused on two groups: 22 Linguistics (L) students and 18 Literature and Civilization (LC) students. Totalling 40 participants selected through systematic random sampling. The results show a positive correlation between technology use and academic success in both groups. On a self-assessment scale for academic performance, Linguistics (L) students scored an average of 3.58, while Literature and Civilization (LC) students scored 3.24. In terms of technology use, Linguistics (L) students scored 4.06 and Literature and Civilization (LC) students 4.13. These findings indicate that both groups benefit from educational technology in their studies.

Based on these results, several recommendations are made:

1. **For Educators:** Incorporate technology into teaching strategies to boost engagement and performance, using online resources, multimedia presentations, and interactive learning platforms.
2. **For Students:** Actively use technology in their studies through online resources and digital tools, and enhance their digital literacy by attending training sessions and workshops.
3. **For Policymakers:** Develop national training programs for educators and promote strategies for effective technology integration (TI) in teaching.

Further, future research could investigate which specific technologies most effectively enhance learning for Linguistics (L) and Literature and Civilization (LC) students, or explore the impact of technology on academic outcomes in other disciplines.

Key words: engagement, motivation, outcomes, performance, technology

Acknowledgements

First, praise to Allah for giving me health, patience and strength to be able to realize this work despite all the many difficulties and obstacles.

This work would not have been accomplished without the contribution and endless support and support of many people, for whom I am sincerely grateful.

Special thanks to my teacher and supervisor Mr. **Belkacem Outemzabet** for always being present in all circumstances to correct my mistakes and to provide me with valuable feedback, wise advice and smart guidance throughout this research.

Special thanks to my parents, mother and father, who always trusted and supported me to accomplish this work.

I am also so thankful to all the English students of Master 1 who helped by answering the questionnaires.

In addition, I would like to thank all the members of the jury for evaluating my work.

Dedication

I dedicate this to

My parents,

My wife,

My brothers and sisters

Amar

List of Acronyms

ALO: Academic Learning Outcomes

EFL: English as a Foreign Language

Ed-Tech: Educational Technology

ICT: Information Communication Technology

L: Linguistics

L&C: Literature and Civilization

M: Mean

PM: Pooled Mean

SD: Standard Deviation

TI: Technology Integration

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GENERAL INTRODUCTION

GENERAL INTRODUCTION

1. Introduction

In recent years, the rapid advancement of technology has significantly transformed the landscape of education, revolutionizing the way students learn and teachers teach. The integration of technology in educational settings has been a subject of extensive research, with a growing focus on its impact on academic learning outcomes (Akram et al., 2022). Zheng (2020), indicating that technology integration in education is crucial in improving students' academic learning outcomes. This assertion is supported by numerous studies; such as study done by Means et al. (2014) affirmed that technology integration and use could enhance students' critical thinking skills and problem-solving abilities. They also argued that by incorporating technology into their learning process, students could develop essential skills that are vital for success in the 21st-century workforce. This highlights the importance of understanding how students perceive the impact of technology on their academic learning outcomes. This study delves into the relationship between technology integration and students' learning outcomes, exploring how students perceive their academic learning outcomes and technology integration and use. As well as the ways, the integration and use of technology influence students' academic learning outcomes in Linguistics and Literature studies. By investigating these key factors, we seek to gain deeper insights into how technology integration can shape and improve educational outcomes (Zhan et al., & Wu et al., 2022).

2. Statement of the Problem

Nowadays, educational technology (Ed-Tech) has had a transformative impact on the field of education, particularly in improving the students' outcomes. In recent years, there has been a surge in the use of educational technologies in schools and universities as a means to enhance teaching and learning experiences. With the integration of technology into the classroom, students have found innovative ways to influence their academic learning outcomes. However, the impact of these technologies on students' academic performance and overall educational experience is not well understood. In addition, there are still challenges and obstacles in effectively integrating technology in the classroom. This study aims to investigate the effects of using educational technologies on students' outcomes, including their academic achievement, engagement, and attitudes towards learning. This research also seeks to identify

how the use of technology influences learning practices and achievements within this academic context, aiming to provide insights that can inform educational strategies and enhance the overall learning experience for students in diverse program options.

3. Research Questions

This study aims to answer the following research questions:

Question 1- How do master Linguistics (L), Literature, and Civilization (L&C) students perceive their academic learning outcomes (ALO) and technology integration and use (TI)?

- a. How do Master 1 linguistics (L), Literature, and civilization (L&C) perceive their academic learning outcomes and technology use and integration?
- b. How do linguistic and literature and civilization students compare in their self-assessment of specific academic learning outcome categories, such as attainment, understanding, higher-order learning, cognitive and creative skills, practice methods, dispositions, and membership/inclusions/self-worth?
- c. What are the differences in students' perceptions of technology use and integration between linguistic and literature and civilization studies?

Question 2- How does the integration and use of technology influence students' academic learning outcomes in both linguistic and literature and civilization studies?

- a. What is the overall correlation between technology integration and students' academic learning outcomes?
- b. How does this correlation vary across different academic learning outcome categories?
- c. How do these correlations differ between linguistic and literature and civilization studies?

4. Research Hypotheses

Based on the provided questions and sub-questions, here are the corresponding hypotheses:

- Hypothesis 1a: There will be significant differences in the perceptions of academic learning outcomes and technology use and integration between Master 1 Linguistics (L) and Literature & Civilization (L&C) students.
- Hypothesis 1b: Master 1 Linguistics (L) and Literature & Civilization (L&C) students will show variations in their self-assessment scores across specific academic learning outcome categories, such as attainment, understanding, higher-order learning, cognitive

and creative skills, practice methods, dispositions, and membership/inclusions/self-worth.

- Hypothesis 1c: There will be significant differences in students' perceptions of technology use and integration between Master 1 Linguistics (L) and Literature & Civilization (L&C) studies.
- Hypothesis 2a: There will be a significant positive correlation between technology integration and students' academic learning outcomes across Master 1 Linguistics (L) and Literature & Civilization (L&C) studies.
- Hypothesis 2b: The correlation between technology integration and academic learning outcomes will vary across different academic learning outcome categories.
- Hypothesis 2c: The correlations between technology integration and academic learning outcomes will differ between Master 1 Linguistics (L) and Literature & Civilization (L&C) studies.

5. Significance of the Study

This study investigates the impact of technology integration and use on EFL students' learning practices and achievement. Its main significance is to describe the correlation between technology integration and use, and major students' academic learning outcomes in the department of English at Bejaia University. The findings of this study would also complement other studies and provide appropriate data about the effects of Ed-tech for learning outcomes. The study may provide literature to add more information about how technology integration influences students' outcomes.

6. Population and Study Sample

The population of the study consists of Masters 1 EFL major students for 3 options including (Linguistics, Literature and Civilization, and Didactics) enrolled in the department of English at the University of Bejaia, during the academic year (2023/2024). Thus, the sample for this study consists 40 students from Master 1 EFL students majoring in Linguistics and Literature and Civilization; which selected with systematic random sampling.

7. Research Design and Data Collection

The main purpose of this research study is to investigate the correlation between technology integration and use, and Students 'learning at the University of Bejaia. In order to investigate the subject and to achieve the objective of this study, we have adopted a quantitative

method, and relied on a printed questionnaire designed and distributed to 40 participants from our study population. The sample was randomly selected from Master 1 Linguistics and Literature and Civilization EFL students of English at Bejaia University.

8. The Structure of the Thesis

The present research study starts with a general introduction, which covers the introduction and the problem statement of the research topic, the research questions and hypotheses, the significance of the study, population and sample as well as the research design and data collection. Therefore, it is divided into two main chapters:

Chapter 1 deals with the literature related to impact or educational technologies on students 'learning outcomes. Therefore, it consists of three main sections: the first section is based on the use of technology in education, which covers with the definition of key concepts and meaning and rationale of educational technology (Ed-Tech). It also deals with the forms, devices, and models of the ICTs used in education. Moreover, this section consists of the use of technologies in EFL classroom, in addition to challenges of the ICTs in English language learning. It also deals with learning and studying using educational technologies (Ed-tech). Section two, on the other hand, is based on the academic learning outcomes (ALO) and their assessment. Furthermore, to academic achievement, performance, engagement, and motivation; in addition how these concepts are related. Additionally, it also explains the relationship between digital technologies and student's performance and outcomes. Furthermore, this section also describes different models to assess academic learning outcomes (ALO) and performance. Finally, the third section presents a review of the previous research conducted on impact of educational technologies (Ed-tech). It involves the major findings on the impact and effects of using technologies in language education. Further, it also presents the major findings about the relationship between classroom used of technologies and blended learning. Moreover, it also explains the relationship between educational technologies (Ed-tech) used for students' performance and motivation.

Chapter 2 presents the methods and the results of the present study. It includes also three main sections: section one is based on the methodological part, which covers the description of the method and design, population and sample, and the data collection instrument. While, section two is devoted to the data analysis and interpretation of the results. In addition, the last section is based on the discussions, implications, limitations, and recommendations for further research. Moreover, the conclusion of the present study. Finally, this chapter ends with a general conclusion.

CHAPTER ONE

REVIEW OF THE LITERATURE

CHAPTER ONE: REVIEW OF THE LITERATURE

Introduction

The present chapter deals with the different theoretical background related to the educational technologies use for students' performance and achievements. It is divided into three sections. The first is concerned with the use of technologies in education and language teaching, which includes the definition of key concepts of educational technology. It also deals with the various forms, devices and models of the information and communication technology (ICT) used in education as related concepts. Furthermore, this section concerns with how language is taught using technologies in addition for the challenges of ICT in English language learning. The second is about the students' learning performance and achievements. In addition, the last one presents a review of the previous research on the impact and effects of using technologies in language education.

Section One: The Use of Technologies in Education and Language Teaching

1. Introduction

Technology has changed life as we know it and education is no exception. Technology and English language teaching are interrelated (Singhal, 1997). Educational technology plays a very significant role in the teaching and learning process. The present section deals with the definition and discussion of the key concepts. It consists for the meaning and rationale of educational technology. It also deals with forms, devices and models of the ICT's used in education. In addition, it shows how language is taught with technologies and numerous challenges of ICT in English language learning, and finally yet importantly, it discusses learning and studying using educational technologies.

2. Meaning and Rationale of Educational Technology

Under this, we shall highlight and talk about the terminologies in the heading to better the understanding and correlation of ICT and teaching. In addition, the major terminology is education technology.

To start with, the term “education” comes from the Latin words educare, meaning, “to educate,” and educere, meaning, “to give birth.” Vico (1999.p.327). Many scientists, researchers, and theorists from various fields have studied the definition of education such as the studies done by Chazan (2022). The author agrees that education is a purposeful activity aimed at achieving goals such as transmission of knowledge, skills and character traits. Additionally, the term can also refer to the academic field that studies the methods, processes, and social institutions involved in teaching and learning. However, technology is one of the keywords of our world, yet it is also one of the most confused (Schatzberg, 2006). The word has Greek roots (techne for art or craft; -ology for branch of knowledge) and was coined in English in the 17th century. Nye (2009) defines technology as the development and use of tools and machines to solve real-world problems. It involves the application of scientific knowledge and engineering design to create practical products and processes. Furthermore, According to Kaplan (2003) , Technologies are best viewed as systems that combine techniques and activities with devices and artifacts in a social organizational context in which technologies are developed, deployed, and managed. Moreover, Educational technology commonly

abbreviated as (Ed-tech), it is a wide field, therefore; one can find many definitions. According to Robert (2010) Educational Technology is the field of study that investigates the process of analyzing, developing, implementing, and evaluating the instructional environment, learning materials, learners, and the learning process in order to develop teaching and learning. It is also referred to the use of technology Improving teaching and learning (Leung 2018). It involves the application of various technological tools and resources such as : computers, software, Internet, mobile devices, interactive whiteboards , digital projector , and multimedia to create a more engaging and effective learning experience (Hu et al., 2018). Although; the researchers like Bates (2015) and Mazui (2022) have classified the term educational technology into two categories, which are; technology of education and technology in education. The terms technology of education and technology in education are two phrases that are confusing to many. According to Bates (2015), technology of education (Ed-tech) encourages the use of technology to enhance the process of learning within the current school curriculum. It is a broader term that includes philosophical aspects, essential approaches, theoretical and applied subjects on using technology to support education. Ed-Tech aims to facilitate collaboration and enhance knowledge transfer in an interactive and immersive manner. On the other hand, Mazui (2022) argues that technology in education (Tech-ed) focuses on teaching students how technology works, including innovation through technology, coding, programming, and computer science. It deals with the use of hardware and software, including the internet and other related activities, for educational context .Furthermore Iwyn (2016) explained that technology in education is more focused on the practical application of technology in the classroom, such as using computers, tablets, and other devices to support teaching and learning.

Furthermore, the concept of ICT is widely used in education; it has become a famous used acronym. It also stands for information and communication technology. It mainly refers to the tools, facilities, processes and devices that provide the required environment of physical infrastructure and services for the generation, transmission, processing, storage and dissemination of information in all its forms, including voice text (Asabere, 2012). Meanwhile, according to Kent (2004), ICT in the pedagogical point of view refers to information and communication technology, such as computers, communication facilities and features that support teaching in a variety of ways. Moreover , Ruthven and Brindley (2005),claimed that the term ICT encompasses the spectrum of hardware (desktop and laptop computers, projection technology, calculators, data acquisition and digital recording devices), software applications (generic software, multimedia resources) and media telecommunications - and information systems (intranet, internet). Thus, ICT can be defined as information management

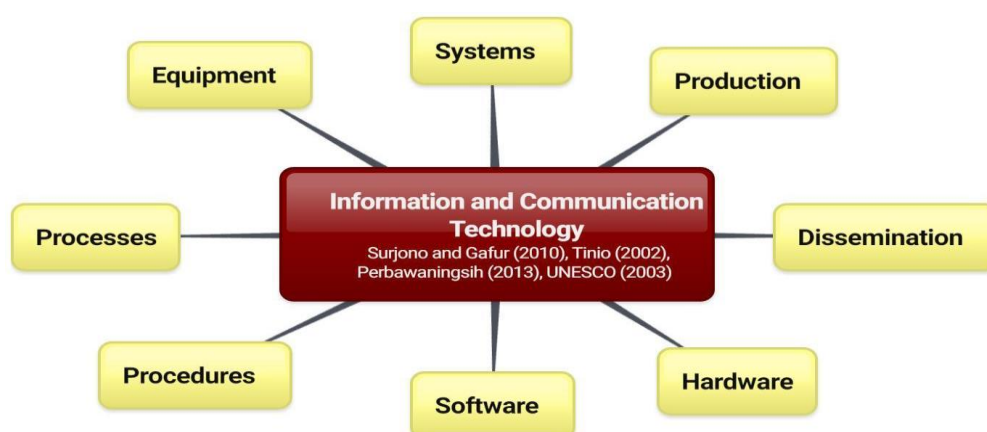
tools: a diverse set of goods, applications and services used to produce, store, and process, distribute and exchange information. This includes the “old ICT” such as the radio, television and telephone as well as the “new ICTs” like computers, satellite and radio Technology and the Internet. (UNDP, 2003).

3. Forms, Devices and Models of the ICTs Used in Education

Today’s world demands more efficient learning models that allow students to play a more active role in their education (Crompton, 2016). Technology is having an impact on how instruction is delivered and how information is found and shared. Until very recently, the educational models encouraged memorization as an essential learning skill. These days, technologies have changed the educational model and access to information. Knowledge is available online, mostly free, and easily accessible. Reading, sharing, listening and, doing are currently necessary skills for education (Morris & Cros, 2016). Mobile devices have become a complete set of applications, support, and help for educational organizations by conducting an analysis of the behavior and use of mobile devices on current students, efficient educational applications can be developed (Bano, 2018). Moreover, ICTs play a very significant role in the teaching and learning process (Leung 2018). It involves the application of various technological tools and resources such as; computers, software, Internet, mobile devices, interactive whiteboards, digital projector, and Multimedia to create a more engaging and effective learning experience (Hu et al., 2018).

Figure 1.

Information and Communication Technology



created with www.bubbl.us

Gafur (2010) Definition the Concept of Information and Communication Technology (Page 02)

As illustrated in Figure 1 above, there are various forms, devices, and models of Information and Communication Technologies (ICTs) utilized in education, reflecting the diverse ways technology can enhance learning experiences. This part seeks to delve into the diverse forms, devices, and models of ICTs used in educational settings.

3.1. Devices and Applications

ICTs have developed education by providing innovative devices and applications for teaching and learning (Clark, 2016). There is a numerous devices and applications of ICTs used in education, among them;

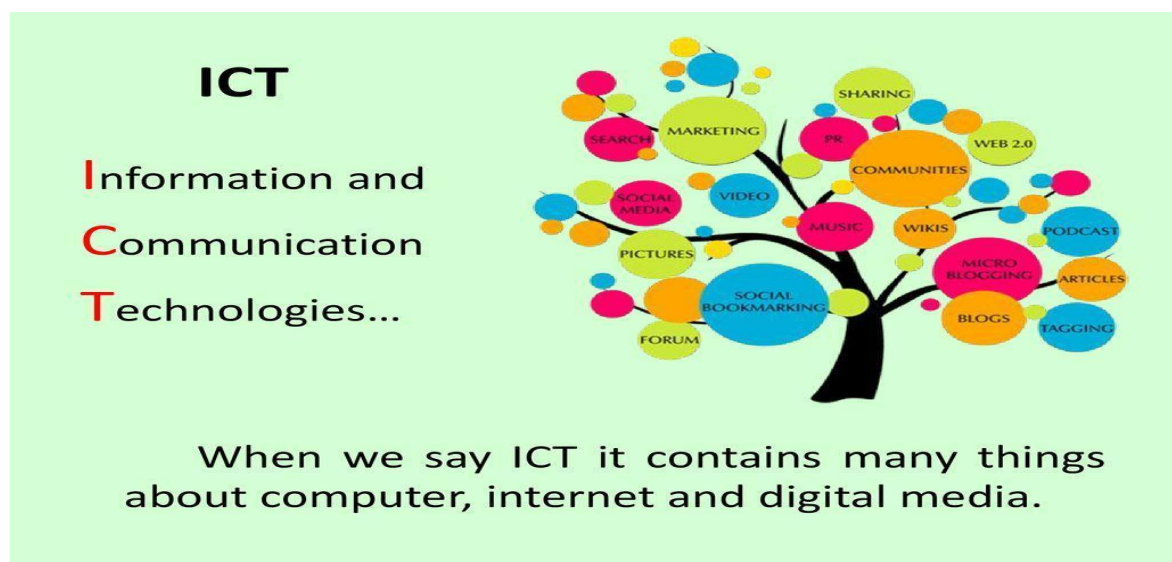
3.1.1. Computers and laptops.

Computers and laptops have been widely used as a tool in the teaching-learning process. The computer is an electronic system that has the ability to manipulate data quickly and accurately as well as designed and organized to automatically receive and store input data, processes it, and produces output under the supervision of a step by step instruction program (Operating System) which is stored inside (Donald, (2015). While a laptop is a portable computer with a built-in LCD screen, keyboard, and trackpad. A laptop's screen is on a hinge, which allows it to open up when in use and to close like a book to keep it safe when stowed away. (Fisher, 2001). Therefore the Computers, and especially laptops, have become standard equipment in higher education as the number of universities instituting laptop initiatives continues to grow (Weaver & Nilson, 2005).The computers and laptops have also the potential to enhance teaching and learning (Roschelle, 2000) and provide students with a learning experience that other strategies cannot provide. Stephens (2005) affirms that laptops can facilitate faculty-student interactions and in-class participation, thus increasing engagement and active learning. According to him, this is often done through preparing and posting discussion questions and using new devices such as response keypads to facilitate student interaction. Driver (2002) also found that laptops, coupled with web-based activities, enhanced satisfaction with group projects and overall class satisfaction. Foster (2001) stated that students in laptop classrooms reported higher participation rates, more interest in learning, and a greater motivation to perform well. Furthermore, Becker et al. (2010) found that teachers often use computers and laptops for tasks such as lesson planning, accessing educational resources, delivering multimedia presentations, and providing individualized instruction. Moreover, Becker (2010) has also more explained that computers and laptops served as essential tools for delivering multimedia presentations in the classroom. Teachers utilized presentation software,

such as PowerPoint or Google Slides, to create visually engaging and interactive lessons. Integrating multimedia elements such as images, videos, and audio clips not only captured students' attention but also facilitated deeper understanding of the content being taught. In addition, the utilization of computers and laptops enables teachers to implement blended learning approaches, combining traditional classroom instruction with online resources and activities (Graham, 2013). Thus, the integration of computers and laptops into teaching practices offers numerous benefits for both educators and students. From enhancing classroom instruction to facilitating administrative tasks.

Figure 2.

ICT's definition



Tinio (2002) ICT in Education (Page 03)

3.1.2. Mobile technologies.

Mobile phones and tablets are called mobile technologies since they have similar uses. The use of mobile technologies to support, enhance, and improve access to learning is a relatively new idea (Masrom, 2010). Therefore, for the last several decades, mobile educators have used technologies, school administrators, students, and others in higher education to help them teaching and learning (Kozma, 2001). In this respect, mobile technology refers to any device that is designed to provide access to information in any location or while on the move. According to Rouse (2022), a mobile phone is a wireless handheld device that allows users to make and receive calls. While the earliest generation of mobile phones could only make and receive calls, today's mobile phones do a lot more, accommodating web browsers, games,

cameras, video players and navigational systems. Also, while mobile phones used to be mainly known as “cell phones” or cellular phones, today’s mobile phones are more commonly called “smartphones” because of all of the extra voice and data services that they offer. While a tablet is a wireless, portable personal computer with a touchscreen interface. Thomas (2021) argues that student use of mobile technology can contribute to positive experiences both in and out of the classroom. According to Hulme and Shield (2008), mobile technologies enable learners to engage in learning activities anytime and anywhere, facilitating flexible and personalized learning experiences. Additionally, Sharples et al. (2019) highlight that mobile devices support various learning approaches, including informal learning, collaborative learning, and experiential learning, by providing access to diverse resources such as educational apps, online courses, and multimedia content. Moreover, research by Chen and deNoyelles (2013) suggests that mobile technologies can enhance student engagement and motivation through interactive features, such as gamification and social networking functionalities. Crompton (2013) explains the role of mobile devices in promoting active learning strategies, such as problem-solving, critical thinking, and collaborative activities, by providing access to real-time information and interactive tools. Similarly, Ranieri et al. (2012) highlight the importance of mobile technologies in facilitating seamless integration between formal and informal learning contexts, enabling students to bridge learning experiences across different settings. Moreover, Hwang (2014) stated the potential of mobile technologies to support personalized learning experiences through adaptive learning systems and context-aware applications, catering to individual learners' needs and preferences. However, Bugmann (2019) delves into the implications of mobile learning not only for students but also for teachers' pedagogy and instructional practices. One significant finding of his study is the recognition of the need for professional development initiatives to support teachers in effectively integrating mobile technologies into educational settings. On the other hand, the author argues that the teachers face the challenge of adapting their instructional approaches to leverage the use of mobile devices for learning. This requires not only familiarity with the technical aspects of mobile technologies but also pedagogical knowledge on how to best utilize these tools to enhance teaching and learning outcomes. In this case, Karsenti (2019) noticed that the professional development programs play an important role in equipping educators with the necessary skills, strategies, and pedagogical frameworks to integrate effectively mobile learning into their classrooms. These initiatives may include workshops, seminars, online courses, and peer collaboration opportunities focused on topics

such as mobile app selection, designing mobile-friendly learning activities, assessing mobile learning outcomes, and addressing challenges associated with mobile technology integration. Thus, mobile technologies in education offer numerous benefits for both teachers and students. For teachers, these technologies provide greater flexibility in delivering content and engaging with students. They can easily access educational resources, such as e-books, videos, and interactive simulations, to supplement their lessons and make learning more engaging. Mobile devices also enable teachers to communicate with students more effectively through email, messaging apps, and online platforms, facilitating timely feedback and support. However, for students, mobile technologies offer increased accessibility to educational resources and learning opportunities. With mobile devices, students can access learning materials anytime, anywhere, making it easier to study and review concepts outside of the classroom. This accessibility promotes self-directed learning and empowers students to take control of their education. (Vosloo & Dykes, 2012).

3.2. Models of the ICTs Used in Education

A model is a plan, representation, or description that describes an object, system, or concept that is often simplified or idealized. (Eggen & Kauchak, 2012). The learning model is a specific approach to teaching and contains instructional elements such as films, books, programs, curriculum (Joyce, 1992). Although there are various models of ICT's used in education. Among them;

3.2.1. Blended learning models.

The concept of blended learning has gained great popularity over the last few years, with its advantages being lauded by learning professionals. Therefore, blended learning combines the benefits of traditional classroom teaching with emerging technology to make learning more real-time, contextual, and engaging (Clark 2003). According to Thorne (2013) defines blended learning as a mix of e-learning and multimedia technologies, such as video streaming, virtual classes, and online text animation combined with traditional forms of classroom training. Garner (2015), affirms that blended learning is a learning environment designed by bringing together face to face learning with online learning that aims to improve students' learning. Furthermore, Jamey (2012) also explained that blended learning is a combination of online-based learning with face-to-face learning in (conventional) classrooms. In addition, Kaur (2013) also stated that blended learning is an effective combination with various delivery models, teaching models and learning styles that can be done in an interactive learning environment on online learning. Therefore, this model can be applied to any subject.

Hence, blended learning is important, because it breaks down the traditional centeredness of teaching, further it improves students' access and flexibility, enhances active learning levels, and achieves better student experience and results (Cortez, 2013). However, Saliba (2013) stated that all of this would be realized if lecturers who use blended learning could improve teaching skills and utilization of e-learning media. Meanwhile Oliver and Trigwell (2005) said that a blended learning environment may offer experiences that are not available in non-blended learning and that the nature of these different experiences promotes learning.

a. Types of blended learning models.

Here are the five most common types of blended learning

a.a. Face-to-face model.

Face-to-face model is a crucial component of blended learning models. It refers to the direct interaction between instructors and students in a physical classroom setting. This approach allows for real-time feedback, dynamic discussions, and personalized instruction, enhancing engagement and understanding (Graham, et al. 2013). Dziuban (2007) argues that face-to-face interaction also fosters social presence and a sense of community, which are essential for effective learning experiences. Furthermore, the study done by Picciano (2007), he explains the importance of face-to-face sessions in facilitating good understanding of complex concepts through active participation and immediate clarification of doubts. In addition, Garrison and Kanuka (2004) have also found that face-to-face interactions provide opportunities for collaborative learning, where students can exchange ideas, work on group projects, and develop interpersonal skills.

a.b. Rotation model.

Rotation model was considered as a dynamic approach that combines both online and face-to-face instruction Means (2009). It involves students rotating through different learning stations, which could include online activities, small group discussions, or teacher-led instruction. (Means et al., 2009). According to Graham (2006) rotation model provides flexibility and personalized learning experiences for students, allowing them to engage with content in various ways and at their own pace. The author also argued that, by integrating online resources and digital tools, rotation model not only caters to diverse learning styles but also fosters collaborative learning environments. Additionally, as highlighted by Picciano (2009), the rotation model encourages self-directed learning and empowers students to take ownership of their education.

a.c. Flex model.

Horn and Staker (2015) stated that, the flex model provides learners with important autonomy and control over their learning path .in addition the authors argued that it is allows students to have significant control over the time, place, path, and pace of their learning. It integrates face-to-face instruction with online learning, providing students with flexibility and autonomy in how they engage with course materials and demonstrate mastery. In this model, students can customize their learning experience by accessing digital resources, collaborating with peers, and receiving personalized support from instructors (Horn, & Staker, 2015).

a.d. Enriched virtual model.

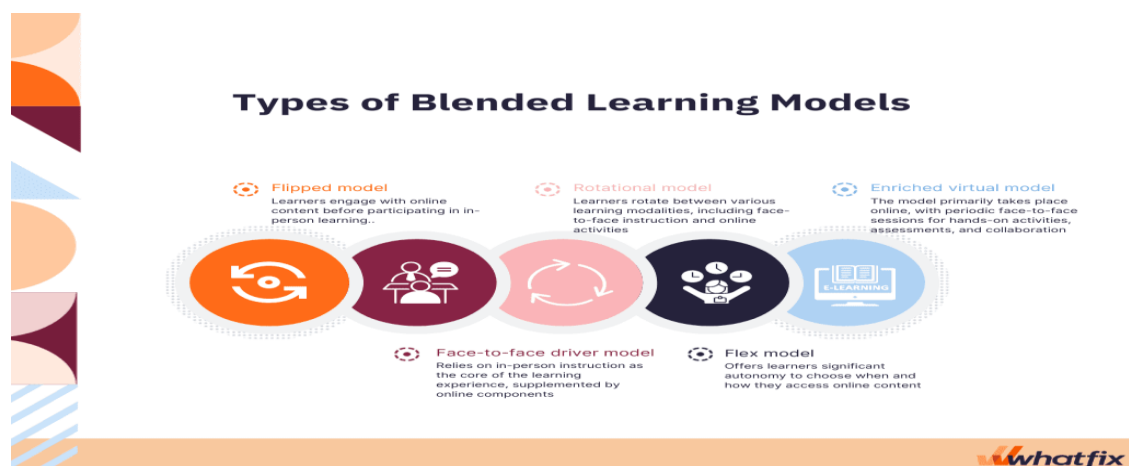
According to Horn and Staker (2015), enriched virtual is primary an online learning experience with face-to-face sessions. Hence, in this model, students have access to online resources, lectures, and activities, allowing them to work at their own pace (Horn & Staker, 2015).

a.e. Flipped model.

The flipped model is a pedagogical approach where traditional teaching methods are inverted or "flipped."(Bergmann & Sams, 2012). In this model, students engage with instructional materials, such as lectures or readings, independently before class, often through online platforms.it also allows for more personalized and interactive learning during face-to-face sessions and provides students with the flexibility to learn at their own pace . (Treglia, 2000).

Figure 3.

Types of Blended Learning



Paula (2022) Types of blended learning (Page 14)

3.2.2. E-learning.

Both teachers and students, particularly in response to the COVID-19 pandemic, to facilitate remote learning and overcome barriers to traditional education (Ramesh, 2020), have increasingly utilized E learning. E learning has also been considered as one of the best strategies to be adopted for teaching and learning. It involves the use of a computer or electronic device (e.g. a mobile phone) in some way to provide training, educational or learning material. (Derek Stockley 2003). Selim (2007) asserted that e learning includes integration of media into teaching and uses a central platform for organizing communication processes. Therefore, Bao (2020) highlight that teacher have adapted to e-learning platforms by creating digital content, conducting virtual classes, and leveraging multimedia resources to engage students effectively. Additionally, students have embraced e learning by participating in online discussions, accessing educational materials remotely, and utilizing interactive tools for collaborative learning (Bao, 2020).

Figure 4.

E learning



Galea (2002) E-learning (Page 04)

4. The Use of Technologies in EFL Classroom

Technology is having a growing impact on foreign language teaching worldwide (Jones, 2018). Thorne et al., (2015) argued that the landscape of language teaching and language learning has transformed so rapidly that the formal classroom does not serve as the primary language-learning site anymore. Enhancing language learning with e-learning apps and

technology is nothing new since our formal education system has used different educational technology tools and multimedia based learning content for already decades (Ahmadi , 2018). Reza (2018) argued that educational technology tools appeal greatly to language instructors due to their contribution to enhancing learner autonomy as well as students' active engagement and maximizing positive language learning outcomes. According to him, the use of technology has become an important part of the learning process in and out of classrooms and is viewed as the core requirement in modern schools and universities. Furthermore, Alqahtani (2019) affirms that language teachers can use a wide range of digital resources, such as e-books, audio files, videos, and online articles, to supplement their teaching materials. These resources offer increased flexibility and can be easily updated, making them a valuable tool in language teaching.

4.1. The Role/importance of ICT in Learning English as Foreign Language

ICTs plays a very significant role in the acquisition of English as a Foreign Language (EFL) by offering diverse resources and interactive platforms for learners. Through multimedia applications, online courses, and language learning software, learners can engage with authentic materials, practice language skills, and receive immediate feedback, enhancing their proficiency in English (Stockwell, 2008). Moreover, Blake (2008) argued that ICT facilitates personalized learning experiences tailored to individual needs and learning styles, promoting autonomy and motivation among learners. Meanwhile, Tinio (2002) stated that ICT has a crucial impact on education especially in Learning English as Foreign Language in terms of the acquisition and assimilation of knowledge for both teachers and students. The author suggests a number of strategies that teachers and students adopt in learning English, among them;

4.1.1. Active learning.

ICTs tools are implemented to help calculate and analyze the information obtained for exams and report student performance. Computerized and easily available for consultation. Unlike memorization or memorization, ICT encourages student participation as the student decides what to learn at his or her own pace and works through problems in real-world situations.

4.1.2. Collaborative and cooperative learning.

ICTs promotes interaction and collaboration between students and teachers regardless of distance between them. It also gives students the opportunity to collaborate with people from different cultures and work in groups, allowing them to improve their communication skills and

global awareness. Researchers have found that the use of ICT typically leads to greater collaboration between students inside and outside of school and a more interactive relationship between students and teachers (Grégoire et al., 1996). “Collaboration is a philosophy of interaction and personal lifestyle where individuals are responsible for their actions, including learning and respecting the skills and contributions of their colleagues.” (Panitz, 1996).

4.1.3. Creative learning.

ICTs promotes the manipulation of existing information and the creation of one's own information. Knowledge to produce a tangible product or a specific product teaching purpose.

4.1.4. Integrative learning.

ICTs promotes an integrative approach to teaching and learning by removing the synthetic separation between theory and practice, unlike the traditional classroom where emphasis is placed on only one particular aspect.

4.1.5. Evaluative learning.

The use of ICTs for learning is student-centered and provides helpful feedback with different interactive features. ICT enables students to discover and learn new teaching and learning methods based on constructivist learning theories rather than memorization and learning.

5. Challenges of ICTs in English Language Learning

Under this, we are to look at and discuss some of the challenges faced in the use of ICTs in English language learning.

One challenge was lack of enough time: Teachers do not have enough time to practice the usage and understand the complexity of computer systems and this has led to hardships faced during manipulation of these devices during teaching. As a result, technology becomes abandoned. In addition, many teachers do not have sufficient knowledge about the use of ICT in teaching. It is a common observation by experts that many teachers who experience fear during ICT training express their views and knowledge about the use of technology. Some teachers said the short-term training did not meet teachers' needs. For this reason, they should not use ICT in Classroom practices (Ang'ondi, 2013). The main problem or issue faced by the teacher as well as Students to adopt the suitable internet facilities. If someone has the internet facility then the other problem will be how to monitor the activities of the teachers and Learners. Therefore, it is necessary to make sure that they do not visit irrelevant educational and socially undesirable sites. (As cited in Feuerriegel, 2016). Moreover, Silviyanti and Yusuf (2015) stated

that, teachers do not effectively use technology in their English language teaching (ELT) cycle because not all can use ICT given their ability to provide their teaching practice with significant resources. In short, they affirmed that, teachers may well have experience-using ICT for their teaching, but they may be limited from using it by inadequate numbers of computers. In addition, they argued that, teachers would not have been motivated to use ICT in the classroom unless the school had good tools and appropriate educational equipment, including computer Software and hardware.

Furthermore, Salehi (2012) found three biggest challenges in ICTs integration in EFL classrooms such as lack of technical support at school, lack of access to the internet and the shortage of class time, while the attitudes of the teachers did not really influence their use of ICTs in the classroom. Meanwhile, Tanveer (2011) classified the challenges into three categories: administrative (e.g. Inadequate e-learning resources, misuse of ICT tools by students), technical (e.g. lack of technical training for both teachers and for students) and educational (e.g. confusion about time management). Riasiati, Allahyar and Tan (2012) also mentioned that several challenges in integrating ICT into EFL classrooms include teachers' lack of internet access; lack of effective training, teachers' attitude towards using ICT, students' attitudes, etc. include Lack of time. Thus, considering the challenges found by the previous researchers, it is clear that ICT integration may also lead to some barriers in the implementation of it in the teaching and learning process. Thus, teachers need to bear in mind that the existence of ICT is not the only shortcut to the success of teaching and learning.

6. Learning and Studying Using Educational Technologies

Teaching a foreign language is not an easy task. In the past, EFL teachers depended only on the use of traditional methods (Belias et al. 2013). With the technological development, educational technology is used in the field of EFL teaching and learning. Therefore, new teaching and learning methods have been introduced. Nowadays, the use of educational technology plays an important role in education because it provides several technological tools that can make the learning and the teaching process more effective (Grace & Kenny, 2003). The use of educational technology has a significant place in EFL teaching and learning. In fact, there are different approaches on the use of educational technologies for leaning and studying English. This part seeks to highlight the most important approaches.

6.1. Constructivist View on the Use of Technologies in Education

Constructivism is an approach that takes a role in developing instruction methods based on the construction of knowledge by an individual, based on his/her prior knowledge, skills and competences. Therefore, Kilic et al. (2003), who claim that technology takes the role of transferring information or, in other words, the role of the teacher in traditional methods, believe that learners use technology-supported constructivist environments to analyze the world, to access information, to interpret and organize their own knowledge and to share it with others. Using technological tools in learning environments will provide certain benefits in the implementation of the constructivist approach. Moreover, Gunes (2014) indicates that the first step in constructivist educational environments is activating prior learning. Watching a video, listening to a voice record or an image at the beginning of the lesson will provide the environment in which students' prior learnings will be activated. The teacher will be able to control whether the prior knowledge is true and will correct if it is wrong. According to him; if the student does not have prior knowledge, the teacher will provide the opportunity for the formation of this prior knowledge by additional activities. Hence, Balkan (2003) claims that constructivism approach is a model, which arose with the idea of making education more efficient and lasting; and one that uses the existing instructional strategies but gives a new direction to them. In constructivism, learning occurs with the active efforts of the individual and constructed in one's mind. Furthermore, Constructivists believe that students construct their own meaning through active engagement and by constructing their own representation of what they know. Students learn from thinking and doing, and thinking results from an activity (Jonassen, 1999). In the constructivist classroom, students interact with the environment and create their own interpretation of the world instead of being mere recipients of information transmitted by the instructor (Jonassen, 2000). The author claimed that instructor motivates students by proposing a topic or presenting a case with emphasis on the big concept. The purpose is to trigger students' curiosity to investigate and learn more on the topic. Pitts and Sherin (2002) proposed a "learning-for-use" model to encourage the learner to develop useful knowledge and provide guidance to instructors on how to design learning activities that foster useful understanding. This approach, closely related to the constructivist views, offers students an opportunity for acquiring knowledge that will be applied to practical situations and for reflecting on the content learned (Bazilion & Braun, 1998).

6.2. Cognitivist View on the Use of Technologies in Education

The cognitivist approach is a psychological perspective that focuses on understanding mental processes such as perception, memory, and decision-making (Keane, 2015). Mayer (2019) discusses how cognitive load theory can inform the design and implementation of multimedia technologies in education, emphasizing strategies to optimize learning efficiency and effectiveness. He suggests that multimedia materials, such as videos, animations, and simulations, have the potential to either facilitate or hinder learning, depending on how they are designed; by aligning multimedia elements with principles derived from cognitive load theory, educators can optimize learning efficiency and effectiveness. However, Clarke (2019) argue that technology has not only facilitated access to vast amounts of information but has also fundamentally transformed the cognitive processes involved in learning. He discusses how digital tools and platforms have reshaped the way individuals encode, store, retrieve, and manipulate knowledge, leading to new modes of cognition and learning that are increasingly mediated by technology. The author also explained the role of technology in augmenting and extending cognitive abilities, as well as in shaping educational practices to align with principles of cognitive psychology.

6.3. Connectivist View on the Use of Technologies in Education

The connectivist approach, popularized by Siemens and Downes (2005) in their paper "Connectivism: a Learning Theory for the Digital Age. According to Downes (2005) the technology, particularly digital tools and online platforms, provides unprecedented access to information and facilitates connections with individuals and communities worldwide. This access allows learners to explore a wide range of perspectives, collaborate with others, and construct their understanding of the world. Furthermore. Veletsianos & Shepherdson (2016) examined the experiences of learners participating in connectivist, which are characterized by their emphasis on networked learning, open access to resources, and learner autonomy. Their research found that participants in connectivist reported high levels of engagement and satisfaction, attributing this to the opportunities for collaboration, peer interaction, and exploration of diverse perspectives facilitated by the course structure. Additionally, they found evidence of knowledge creation and sharing within online communities formed around these courses, suggesting that connectivist approaches can effectively support collaborative learning practices. Thus, constructivist, cognitivist, and connectivist views offer distinct perspectives on the use of technology in education, each highlight different aspects of learning theory and instructional design.

Conclusion

From the reviewed research, this study concludes that technologies play an important role in learning and studying language; because it provides several technological tools that make the learning and the teaching process more effective. Furthermore, it highlighted the most important approaches on the use of educational technologies for learning and studying English.

Section Two:

Academic Learning Outcomes and Assessment (ALO)

1. Introduction

This section covers review of literature relevant to this study, which is about academic learning outcomes and their assessment. It also focused on the related concepts of academic achievement, performance, engagement and motivation. Furthermore, it also deals with the relationship between digital technologies and student performance and outcomes. In addition, it deals with how academic outcomes and performance can be measured and/or assessed, refer to existing models (Brown, 2005).

2. Academic Learning Outcomes (ALO) and their Assessment

Academic learning outcomes and their assessment are fundamental components of educational systems (Smith, 2009). It is also an important topic covered and discussed by various authors and researchers. For instance, Suskie (2018) defined academic learning outcomes as specific statements that articulate the knowledge , skills , and competencies that students are expected to acquire through their educational experiences .Moreover Biggs (2011) further elaborates on this definition , explaining the importance of constructive alignment between intended learning outcomes , teaching activities , and assessments . According to him, academic learning outcomes should be clearly articulated and measurable, allowing educators to assess student progress and achievement effectively. He argued that students should also reflect the desired outcomes of the educational program, aligning with broader institutional goal and standards. However, Smith and Brown (2009) noted that the process of assessing learning outcomes offers invaluable insights into student’s comprehension of content, acquisition of skills, and development of competencies.

2.1. Academic Learning Outcomes (ALO)

Learning outcomes can be considered as a key concept in a changing education policy landscape. (Lassnigg, 2012). It has been presented as a central element in a paradigm shift in education characterized by a change in emphasis from teaching to students learning (Adam, 2004). Many researchers have widely defined the concept in different ways. For instance, Cortes (2009) defined a learning outcome as a statement of what the student is expected to

know, understand and be able to do at the end of a learning period. Therefore, Biggs and Tang (2011) defined academic learning outcomes (ALO) as the knowledge, skills, and abilities that students are expected to acquire or demonstrate because of their educational experiences. This definition emphasizes the importance of both the acquisition of knowledge and the development of skills and abilities. Furthermore, Biggs and Tang (2011) provide a comprehensive framework for understanding and improving teaching and learning at the university level. Central to their approach is the concept of academic learning outcomes, which they define as the culmination of students' educational experiences in terms of knowledge, skills, and attitudes. For the Knowledge, the authors stated both factual knowledge and conceptual understanding. Factual knowledge involves the recall of information, while conceptual understanding refers to the ability to grasp underlying principles, theories, and relationships within a discipline. However, for the Skills, Biggs and Tang (2011) described a wide range of competencies that students develop through their educational journey. These can include critical thinking, problem solving, communication, research, and practical skills relevant to the specific discipline or field of study. In addition, according to Biggs and Tang (2011), attitudes are the disposition or mindset that students develop towards learning, their subject matter, and themselves as learners. Such as curiosity, perseverance, openness to new ideas, and a sense of responsibility for their own knowledge. Similarly, in a study by Anderson et al. (2001), academic learning outcomes were defined as observable and measurable performances of what students can do, understand, or produce because of instruction. This definition highlights the importance of observable behaviors and measurable outcomes in assessing student learning.

Additionally, Learning outcomes have become widely used in higher education; Outcomes of higher education are not limited to learning outcomes (Bauerlein, 2008). Students can benefit from their outcomes experience in many different ways, such as better social status, higher employment rates, civic engagement, opportunities to attend further studies, or simply leading a more fulfilled life (Ewell, 2005). While such outcomes are related to learning, they should not be confused with the actual mastery of knowledge, abilities, and skills that result from student's engagement in learning experiences (Ewell, 2005). Such long-term social and economic benefits of the experience can serve as secondary proxies for learning outcomes, but they are not direct outcomes of learning (Ewell, 2010). The author discusses the importance of defining clear and measurable learning outcomes to enhance the quality of higher education. He explains the need for alignment between learning outcomes, instructional activities, and assessment methods to ensure that students are adequately prepared for future endeavors. He also argues that this alignment ensures coherence and consistency in the educational process,

enabling educators to effectively guide students towards achieving desired learning objectives. The author also affirms that by aligning instructional activities with intended learning outcomes, educators can optimize teaching strategies to facilitate student mastery of essential knowledge and skills.

Furthermore, Ewell (2010) highlights the importance of measurability in learning outcomes. He asserted that a clear and measurable outcome provide educators with tangible criteria for assessing student progress and attainment. This facilitates the development of meaningful assessment methods that accurately gauge student learning and inform instructional decision-making. Additionally, the author also stated measurable outcomes enable educators to track students' academic growth over time and identify areas for improvement in both teaching and learning practices. Wehlburg (2013) explores the process of developing learning outcomes that are meaningful, measurable, and relevant to the goals of higher education institutions. She highlights the role of assessment in gauging student achievement of these outcomes and driving continuous improvement in teaching and learning practices. Kedrowicz (2014) delves into the alignment between assessment practices and learning outcomes. The authors discuss strategies for designing assessment measures that effectively measure student attainment of intended learning outcomes and offer insights for policymakers and practitioners seeking to enhance the quality and accountability of higher education.

2.1.1. Selecting learning outcomes for assessment.

The assessment of higher education student learning outcomes is very important. It is provides essential assurance to a wide variety of stakeholders that people have attained various knowledge and skills, and that they are ready for employment or further study (Coates, 2014). There are several ways to approach the design of a program of assessment for student learning outcomes. There are also many approaches, models, and methods for attempting to explain academic performance and assess learning outcomes, (Cechova et al., 2019).Therefore; a selecting learning outcomes for assessment should provide as flows;

a. Cognitive outcomes.

Cognitive learning refers to the recall or recognition of knowledge and to the development of intellectual abilities and skills (Posner, 1992). Broadly defined, cognitive learning outcomes range from domain-specific knowledge to the most general of reasoning and problem-solving skills (Shavelson and Huang, 2003, p.13). According to John et al. (2011), Cognitive outcomes represent the extent to which individuals can efficiently acquire, organize, and apply new

information and skills, with a focus on minimizing cognitive load and promoting effective learning strategies. They also emphasize the importance of cognitive load theory in understanding cognitive learning outcomes. They argue that effective learning occurs when instructional materials are designed to minimize extraneous cognitive load and optimize germane cognitive load, thereby enhancing learning outcomes. As defined by Sternberg (2003), Cognitive outcomes involve the development of practical intelligence, which encompasses the ability to adaptively solve real-world problems, drawing upon a combination of analytical, creative, and practical thinking skills. The author affirms that successful intelligence presents a comprehensive framework for understanding cognitive learning outcomes that extend beyond conventional academic measures. According to Sternberg, successful intelligence entails the integration of multiple dimensions of cognitive functioning, including traditional academic skills, practical intelligence, creative thinking, and wisdom. According to Seligman (2005), Cognitive outcomes include the cultivation of grit and self-regulatory processes, such as goal setting, perseverance, and metacognition, which are essential for achieving long-term academic and personal success. In Addition as described by Willingham (2009), Cognitive outcomes encompass the transfer of knowledge and skills from one context to another, reflecting individuals' ability to generalize and apply what they have learned in meaningful and adaptive ways. Willingham's research in cognitive psychology offers valuable insights into enhancing cognitive learning outcomes through effective instructional practices. The author states several key strategies for optimizing learning. Firstly, he explains the significance of establishing a robust foundation of factual knowledge as a precursor to deeper understanding and higher-order thinking skills. The author argued that by ensuring students have a solid grasp of essential facts and concepts, educators can scaffold their learning effectively. Additionally, Willingham (2009) advocates for promoting deep understanding by encouraging students to make meaningful connections between new information and their existing knowledge framework. According to him, this approach fosters comprehension and retention by contextualizing learning within relevant frameworks. Furthermore, the author stresses the importance of providing many opportunities for practice and feedback to reinforce learning and facilitate skill development. He affirms that through deliberate practice and constructive feedback, students can refine their cognitive abilities and transfer their knowledge to real-world contexts more effectively.

b. Non-cognitive outcomes.

According to Heckman and Rubinstein (2001), non-cognitive outcomes encompass a broad range of skills, attitudes, and behaviors that are essential for success in various domains of life. These outcomes include social-emotional skills, character traits, and interpersonal competencies that contribute to individuals' overall well-being and success. Heckman and Rubinstein emphasize the importance of non-cognitive skills alongside cognitive abilities in shaping individuals' outcomes in education, employment, and social interactions. According to Heckman and Rubinstein (2001), non-cognitive outcomes are not only crucial for academic success but also play a significant role in various aspects of life, including career advancement, health outcomes, and social relationships. As stated by those authors, these outcomes explain a wide range of skills such as self-control, motivation, perseverance, empathy, and interpersonal communication. Heckman and Rubinstein argue that non-cognitive skills are not only predictors of future success but also factors that can be developed and nurtured through appropriate interventions and experiences. Furthermore, Durlak et al. (2011) claimed the importance of non-cognitive outcomes, particularly social-emotional learning (SEL), in promoting positive youth development. They define SEL as the process of acquiring skills related to self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. Durlak et al. (2011) highlight the role of SEL programs in improving academic achievement, reducing behavioral problems, and enhancing social skills among children and adolescents. However, the study of non-cognitive outcomes of higher education is more complicated than that of cognitive outcomes. The links between values and beliefs on the one hand and observable activities and behaviors on the other are not clearly established (Pascarella and Terenzini, 2005).

Moreover, learning outcomes can be divided into different categories in several ways. For example, James and Brown (2005) examined accounts of projects and were able to distinguish seven categories. Firstly, According to Brown, (2005) Attainments typically refer to the achievements or accomplishments one reaches in a specific area, such as education or work. Attainments are often related to the school curriculum, focusing on subjects like literacy, numeracy, and science. These attainments can also be measures of basic competence in the workplace. The author also argued that they usually entail mastering specific rules or mental procedures associated with particular tasks, and their meanings are usually well defined and familiar. In addition, Brown (2005) explains the attainment of literacy skills involves the ability to read, write, listen, and communicate effectively using language. This includes

comprehension, vocabulary development, grammar, and writing conventions. According to Brown (2005) numeracy attainments, on the other hand, focus on mathematical concepts, problem-solving strategies, and numerical fluency across different domains such as arithmetic, algebra, geometry, and statistics. Science attainments encompass the understanding of scientific principles, inquiry skills, and the ability to apply scientific knowledge to real-world phenomena. The author also suggests the attainments in the workplace as measures of basic competence or proficiency in job-related tasks and responsibilities. These may include technical skills, job-specific knowledge, and professional competencies required to perform essential job functions effectively. Moreover, to subject-specific attainments, workplace readiness skills such as communication, employers as indicators of overall competence and employability also value collaboration, critical thinking, and adaptability.

Brown (2005) also explains the second category, which is understanding, according to him it is comprehension of ideas, concepts, and processes at a deeper level beyond mere memorization or rote learning. It involves the ability to grasp the underlying principles and connections between different pieces of information. Rather than just acquiring factual knowledge or mastering procedural steps, understanding involves engaging with abstract reasoning and making intelligent judgments about the meanings and implications of what is being learned. The author reinforced his idea with example. He stated that when someone has a strong understanding of a subject, they could not only recall facts but also interpret and analyze them in context. This deeper level of comprehension allows individuals to apply their knowledge flexibly in various situations and to solve problems creatively. Understanding involves more than just surface-level recognition; it requires the ability to delve into the complexities of a topic, discern patterns, and synthesize information to form coherent insights. Furthermore, Brown (2005) affirmed that understanding goes beyond simply knowing how to perform specific tasks or follow procedures. It involves the development of cognitive processes such as critical thinking, inference, and logical reasoning. The author said that individuals with a deep understanding of a subject could make connections between different concepts, recognize patterns, and draw conclusions based on evidence and logical analysis. Brown (2005) also highlight that; in educational settings, fostering understanding is often prioritized over rote memorization because it promotes higher-order thinking skills and prepares learners to tackle complex real-world challenges.

Another category that is explained by Brown's model is cognitive and creative imagination ; which involves the mental processes of constructing meaning, whether through personal insights, cognitive discoveries, artistic expressions, or practical innovations. The author stated other educational categories that primarily involve the transmission of existing knowledge to learners, cognitive and creative activities emphasize the active engagement of learners in the generation of new knowledge. According to him, this can take various forms, including the development of novel ideas, the creation of original artworks, or the invention of innovative solutions to real-world problems.

As highlighting by Brown (2005) in cognitive and creative attempt, individuals draw upon their imagination, critical thinking skills, and domain-specific knowledge to explore new possibilities and express themselves in unique ways. Whether through writing, visual arts, music, or scientific experimentation, learners are encouraged to think outside the box and push the boundaries of conventional wisdom. According to him, this process of exploration and experimentation fosters a sense of curiosity, autonomy, and self-expression, allowing learners to develop their own identities as knowledge creators and innovators. Moreover, the author affirms that cognitive and creative activities often involve a degree of risk-taking and uncertainty, as individuals venture into uncharted territory and challenge established norms and conventions. Furthermore, as stated by Brown s model, cognitive and creative activities not only stimulate intellectual growth but also promote emotional and aesthetic development. Brown (2005) also explained that, engaging in creative expression allows individuals to explore their emotions, perspectives, and values, fostering a deeper understanding of themselves and the world around them.

Another category explained by Brown (2005) was using how to practice, manipulate, behave, and engage, in process or system. It refers to the practical application of knowledge and skills in various processes or systems. It also involves the ability to effectively practice, manipulate, behave, and engage with the tools, techniques, and procedures relevant to a particular domain or context. Unlike understanding and cognitive creativity, which emphasize conceptual understanding and knowledge innovation, using focuses on the mastery and practical application of existing skills and technologies. The author also stated developing proficiency in using requires individuals to acquire and refine specific practical and technological skills through hands-on experience and practice. According to him, this could include mastering software applications, operating machinery, performing physical tasks, or

navigating complex systems. The emphasis is on becoming proficient in executing tasks accurately, efficiently, and safely within the appropriate contexts. Moreover, Brown (2005) also affirms that using involves not only the acquisition of technical skills but also the development of procedural knowledge and problem-solving abilities. Individuals need to understand the systematic processes involved in carrying out tasks, as well as how to troubleshoot and adapt when faced with unexpected challenges. According to him, this may involve following established protocols, guidelines, or best practices to ensure the quality and reliability of outcomes. Furthermore, he suggest that using also encompasses the ability to interact effectively with others and collaborate within different processes or systems. The author also affirmed that, this includes communication skills, teamwork, and the capacity to navigate social dynamics and organizational structures.

In addition Brown's model describes another category, which is; higher-order learning. It refers to the advanced cognitive processes involved in thinking, reasoning, and metacognition that go beyond basic comprehension and memorization. It encompasses complex intellectual skills such as critical thinking, problem solving, analysis, synthesis, evaluation, and reflection. Brown (2005) asserted a lower-order learning outcomes, which focus on acquiring factual knowledge or procedural skills, higher-order learning emphasizes the development of deeper levels of understanding and the ability to apply knowledge in novel and meaningful ways. According to him, these concepts of learning transcend other learning outcomes by placing emphasis on more sophisticated cognitive processes that involve abstract thinking, abstraction, and the integration of diverse sources of information. Brown (2005) stated that, higher-order learning involves the ability to engage in complex cognitive tasks, make connections between different ideas, and synthesize information to form coherent insights. It also requires individuals to monitor and regulate their thinking processes through metacognition, which involves awareness of one's own thoughts, strategies, and cognitive abilities. However, the author said that; higher-order learning outcomes could sometimes lack a clarity of meaning that is commonly shared among educators and learners. This ambiguity stems from the complexity and multifaceted nature of higher-order cognitive processes, which can be challenging to define and measure. Additionally, agreement about how higher-order learning outcomes should be assessed is often difficult to achieve, as traditional assessment methods may not capture the full range of skills and competencies involved.

Brown (2005) asserted another category, which is, dispositions. It refer to the attitudes, perceptions, and motivations that individuals bring to the learning process. As highlight by Brown, these affective conditions play a crucial role in shaping learners' experiences and outcomes, influencing their willingness and ability to engage effectively with the content, activities, and communities of learning. According to him, dispositions encompass a range of psychological factors that influence how learners approach tasks, interact with others, and persevere in the face of challenges. The author argued that; attitudes towards learning, such as curiosity, openness, and enthusiasm, could significantly affect learners' engagement and motivation. He also explained that, a positive attitude towards learning fosters a sense of curiosity and a desire to explore new ideas, while a negative attitude may lead to disinterest or resistance. Similarly, perceptions of one's own abilities and potential, known as self-efficacy, can influence learners' confidence and willingness to tackle challenging tasks. Furthermore, Brown (2005) said that, learners' dispositions are shaped by the cultural, social, and environmental contexts in which they are situated. According to him, factors such as family background, peer influences, and societal expectations can affect individuals' beliefs, values, and attitudes towards learning. For example, learners from cultures that value collaboration and collective achievement may exhibit different dispositions towards learning than those from cultures that emphasize individual achievement and competition.

Lastly, Brown s model, maintained the last category of learning outcomes, which is membership, inclusion, and self-worth are integral aspects of the social dimension of learning, emphasizing learners' sense of belonging, acceptance, and value within the group or community where learning occurs. Brown (2005) explained that, the membership refers to individuals' affiliation with a particular group or community of learners, while inclusion relates to their feeling of being welcomed and accepted as part of that group. Self-worth pertains to learners' perception of their own value and contribution within the group context. According to him, when learners feel a sense of membership, they are more likely to identify with the goals, values, and norms of the learning community, leading to a greater commitment to participation and engagement. Membership fosters a sense of belonging and camaraderie, providing learners with a supportive network of peers and mentors who share common interests and aspirations. As Explained by Brown (2005), this sense of community can enhance motivation, resilience, and overall satisfaction with the learning experience. The author claimed that, the inclusion involves creating an environment where all learners feel respected, valued, and supported regardless of their background, abilities, or differences. Inclusive learning communities celebrate diversity

and recognize the unique contributions that each individual brings to the group. According to Brown, by fostering a culture of respect, empathy, and mutual support, educators can create a safe and welcoming space where learners feel empowered to express themselves, take risks, and learn from each other. While Self-worth as highlighted by Brown's model, is closely linked to learners' sense of competence, autonomy, and agency within the learning community. As claimed by Brown (2005), when learners perceive themselves as capable, valued, and respected members of the group, they are more likely to actively participate in learning activities, contribute their ideas and perspectives, and take ownership of their learning journey. Conversely, feelings of inadequacy, exclusion, or marginalization can undermine learners' confidence, motivation, and sense of belonging.

3. Academic Achievement and Performance

3.1. The Concept of Academic Achievement

Academic achievement was once thought to be the most important outcome of formal educational experiences and while there is little doubt as to the vital role such achievement play in student life and later (Kell and Benbow, 2013). Many researchers and scientists have widely defined the concept in different way. For instance, William (2012) said that, academic achievement generally refers to the level of success a student attains in their educational pursuits typically measured by grades, test scores, and other forms of assessment. According to Marsh (2007), academic achievement refers to the extent to which a student has accomplished their educational goals and objectives within a specific academic setting. However, Dweck (2006) claimed that academic achievement is not only about the grades a student receives but also about their mindset and approach to learning. He also argued that it involves the development of a growth mindset, where students believe in their ability to learn and improve through effort and perseverance. On the other hand, Hattie (2009) affirms that academic achievement is not solely determined by individual effort but it also influenced by the effectiveness of teaching methods, curriculum design, and classroom environment. According to him, it simply reflects the interaction between student characteristics, teaching practices, and educational context.

3.2. The Concept of Academic Performance

Academic performance becomes one of the key factors in determining students' success in their future careers. It is defined as a student's ability to complete academic assignments, such as final course grades and grading point average (Olivier, 2019). According to Hattie (2009), academic performance refers to the extent to which a student meets educational goals and

standards set by educational institutions. It encompasses various aspects such as grades, test scores, class rank, participation in extracurricular activities, and overall engagement in learning. It is often used as a measure of a student's competence and progress in their studies. Furthermore, academic performance is not solely determined by traditional metrics like grades and test scores. As highlighted by Eccles and Roeser (2011), it also includes non-cognitive factors such as attitudes, values, and beliefs about learning, which can significantly affect a student's success in school. Babyegeya (2022) has revealed a number of factors that affect students' academic performance. One of the factors is how students actually learn or intend to learn and what teachers actually teach. In this view, other factors like shortage of books and materials, teaching and teacher education affect students' academic performance. He adds that the type of teachers, their experience, professional qualifications, and commitment to work may contribute to the student's achievements. In addition to his findings, he insists on instruction time in which students spend in actual learning activities. The author contends that the more they understand the better they perform. Moreover, according to Hattie (2009), academic performance is influenced by a multitude of factors, including but not limited to individual characteristics (such as intelligence, motivation, and self-regulation), family background, socioeconomic status, school environment, teaching quality, and peer influences. Each of these factors plays a role in shaping a student's academic journey and outcomes.

3.3. Relationship between Academic Achievement and Performance

Academic achievement and academic performance are closely related concepts, but they can be distinguished in various ways within the literature. While they both measure aspects of a student's academic progress, they do so from different perspectives and with varying emphases. Academic achievement refers to the overall learning outcomes attained by students over a specific period. It encompasses a broad spectrum of skills and knowledge acquired through formal education, including subject mastery, critical thinking abilities, problem-solving skills, and academic motivation (Hattie, 2009). According to Zimmerman (2008), academic achievement is influenced by various factors such as cognitive ability, study habits, learning environment, and socio-economic background. It is often assessed through standardized tests, grades, course completion rates, and academic awards. On the other hand, academic performance focuses more narrowly on the measurable outcomes of a student's academic endeavors within a specific context or timeframe (Rankin, 20015). It typically involves evaluating how well students perform in tasks, assessments, or evaluations relative to established criteria or standards (Choi, 2005). Authors such as Reyes et al. (2012) emphasize

that academic performance can be influenced by factors such as classroom instruction, assessment methods, teacher effectiveness, and curriculum quality. They affirm that it is commonly assessed through quizzes, exams, projects, and class participation. While academic achievement and performance are interconnected, they differ in terms of scope and measurement. Academic achievement reflects the holistic development of a student's academic abilities and knowledge accumulation over time; whereas academic performance focuses on immediate outcomes and demonstrations of learning within a particular context (Tang, 2019). As highlighted by Wei et al. (2018), academic achievement serves as a long-term indicator of educational success and future opportunities, while academic performance provides insights into current progress and areas for improvement. Academic achievement, as discussed by Bandura (1997), is not solely dependent on cognitive abilities but also influenced by self-regulatory processes such as goal setting, self-efficacy beliefs, and academic motivation. This broader perspective emphasizes the importance of non-cognitive factors in shaping academic success, highlighting the need for interventions that support students' socio-emotional development alongside academic skills (Salmela, 2019). Furthermore, Buckley (2015) said that academic achievement is often seen as a multifaceted construct encompassing not only cognitive outcomes but also socio-emotional and behavioral dimensions. Authors like Durlak et al. (2011) argue that fostering social and emotional competencies such as self-awareness, self-management, social awareness, relationship skills, and responsible decision-making can enhance students' academic performance by improving their ability to focus, manage stress, and engage effectively with learning tasks. In contrast, Mangal (2001) claimed that, academic performance assessment tends to focus more narrowly on cognitive outcomes and content mastery, often overlooking the broader array of skills and competencies that contribute to academic success. According to him, this emphasis on summative assessment and standardized testing has been criticized for its potential to narrow the curriculum, incentivize rote memorization over deep understanding, and perpetuate inequities based on socio-economic status and cultural background (Darling-Hammond, 2013). Moreover, Marsh (1997) stated the relationship between academic achievement and performance is dynamic and reciprocal, with each influencing and being influenced by the other. For example, a student's previous academic performance can influence their subsequent achievement by shaping their self-concept, motivation, and future aspirations (Marsh & Yeung, 1997). Conversely, improvements in academic achievement, such as mastering challenging concepts or developing critical thinking skills, can lead to better performance outcomes over time. (Cavey, 2000).

Additionally, Martinez (2007) assessed that academic achievement and performance are measured and analyzed through various methods and indicators in educational research, each providing insights into different aspects of student learning and progress. Academic achievement is typically assessed using a combination of quantitative and qualitative measures to capture the breadth and depth of students' learning outcomes (Sternberg, 2002). Sternberg (2002) discuss the importance of considering practical intelligence alongside traditional measures of academic achievement .He argued that academic assessment should encompasses broader range of silks beyond those typically measured by standardized tests. Additionally, Academic achievement is evaluated through various methods encompassing both formative and summative assessment as highlighted by Popham (2008) the author affirmed that quizzes, class participation, and homework, provide ongoing feedback to both students and teachers, facilitating learning progression. He also claimed that summative assessment like standardized tests, final exams and term papers, gauge students understanding and mastery of subject matter at specific points in time. According to him these assessments are designed to measure cognitive skills , including comprehension , analysis , synthesis , and evaluation , while also considering non cognitive factors such as attitude , motivation and engagement . Moreover, Brookhart (2011) stated that academic achievement assessments serve not only to measure individual progress but also to inform instructional practices, curriculum development and educational policy decision. Academic performance, on the other hand, is often evaluated through more immediate and specific assessments of students' knowledge and skills within a particular context or timeframe. This may involve quizzes, exams, projects, presentations, or other formative and summative assessments administered by teachers in the classroom (Brookhart, 2004). These assessments aim to measure students' mastery of course content, critical thinking abilities, problem-solving skills, and application of knowledge to real-world scenarios. Researchers may analyze performance data using statistical methods such as regression analysis, correlation, and factor analysis to identify patterns, trends, and relationships between academic outcomes and various factors such as teaching practices, instructional strategies, and student characteristics (Gorard, 2001).

4. Academic Engagement and Motivation

4.1. The Concept of Academic Engagement

Academic engagement refers to the level of involvement, commitment, and enthusiasm that students demonstrate towards their learning experiences within an academic setting (Paris, 2004). It explains various dimensions such as participation in class activities, completion of assignments, interaction with peers and instructors, and overall dedication to academic pursuits. According to Paris (2004), engaged students are actively involved in their own learning process, seeking out opportunities for growth and demonstrating a genuine interest in the subject matter. According to Blumenfeld, and Paris (2004), academic engagement is a multifaceted construct that comprises three main components: behavioral engagement, emotional engagement, and cognitive engagement. They explained that, behavioral engagement refers to the observable actions and behaviors of students in the classroom, such as attending class regularly, participating in discussions, and completing assigned tasks. As claimed by those authors, emotional engagement pertains to students' affective responses to the learning environment, including their interest, enjoyment, and sense of belonging within the academic community. They also argued that cognitive engagement involves the mental processes and strategies that students employ to actively process information, analyze concepts, and apply knowledge to new situations. Therefore, most of research show that academic engagement is positively associated with various academic outcomes, including higher grades, greater academic achievement, and increased retention rates (Skinner et al., 2009).

4.2. The Concept of Academic Motivation

Academic motivation refers to the drive, desire, and persistence individuals' exhibit towards engaging in academic tasks, achieving academic goals, and pursuing academic success (Frank, 2003). It encompasses various aspects such as intrinsic motivation, extrinsic motivation, and amotivation. Intrinsic motivation involves engaging in academic activities for the inherent enjoyment and satisfaction they bring, while extrinsic motivation involves engaging in academic activities to obtain external rewards or avoid punishment (Mouza, 2012). The author stated that a motivation refers to a lack of motivation or interest in academic tasks. Deci and Ryan (2000) proposed Self-Determination Theory (SDT), which is widely used to understand academic motivation. According to SDT, individuals are motivated to pursue activities that satisfy three basic psychological needs, autonomy, competence, and relatedness. According to Deci (2000), highlight autonomy refers to the sense of control, choice individuals have over their academic pursuits, competence refers to the feeling of effectiveness, and mastery in

academic tasks and relatedness refers to the sense of connection and belongingness with others in the academic context. Moreover, contemporary researchers like Dweck (2006) have explored the role of mindset in academic motivation. Dweck's work on mindset theory distinguishes between fixed and growth mindsets. Individuals with a fixed mindset believe that abilities are innate and unchangeable, leading to a focus on proving one's intelligence or avoiding failure. In contrast, the author also affirmed that individuals with a growth mindset believe that abilities can be developed through effort and learning, leading to a focus on learning and improvement. Furthermore, Eccles and Wigfield (2002) have highlighted the importance of expectancy-value theory in understanding academic motivation. Expectancy-value theory posits that individuals' motivation is influenced by their beliefs about their ability to succeed in academic tasks (expectancies) and the value they place on the outcomes of those tasks. In today's digital age, researchers are also exploring the impact of technology on academic motivation. For example, Wang and Fredricks (2014) investigated how the use of educational technology influences students' motivation and engagement in learning. They found that technology-enhanced learning environments could positively influence students' intrinsic motivation by providing interactive and personalized learning experiences.

4.3. The Relationship between Academic Engagement and Motivation

Academic engagement and academic motivation are closely related but distinct concepts in the realm of education and psychology (Paris, 2004). Academic motivation refers to the internal processes that drive individuals to engage in academic activities and pursue academic goals; academic engagement refers to the observable behaviors and actions individuals' exhibit in the academic context (Selwyn, 2016). Blumenfeld and Paris (2004) define academic engagement as the extent to which students are invested in learning, actively participating in academic tasks, and persisting in the face of challenges. They claimed that, it encompasses behavioral, emotional, and cognitive dimensions, including aspects such as participation in class, time spent on task, interest in learning, and depth of understanding. On the other hand, academic motivation, as proposed by researchers like Deci and Ryan (2000), refers to the underlying reasons and desires that lead individuals to engage in academic activities. It includes intrinsic motivation, extrinsic motivation, and amotivation, which influence the intensity, direction, and persistence of individuals' academic behaviors. While academic engagement focuses on the observable behaviors and manifestations of involvement in academic tasks, academic motivation delves into the internal processes and psychological mechanisms driving those behaviors (Mishra, 2006).

Despite their distinctions, academic engagement and motivation are interconnected and mutually reinforcing (Mishra, 2006). Mishra (2006) affirmed that high levels of academic motivation are likely to lead to increased academic engagement, as motivated individuals are more likely to invest time and effort in learning activities. Conversely, active engagement in academic tasks can also enhance individuals' motivation by providing opportunities for mastery, autonomy, and relatedness (Ryan & Deci, 2000). Ryan (2000) claimed that academic engagement and academic motivation are measured and analyzed through various methods and approaches employed by researchers and educators to understand students' involvement, persistence, and success in academia. For academic engagement, researchers often utilize self-report measures, teacher ratings, and direct observations to assess students' behavioral, emotional, and cognitive engagement in learning activities. Blumenfeld, and Paris (2004) developed the "Student Engagement Instrument" (SEI), a widely used self-report measure that assesses three dimensions of engagement: behavioral engagement, emotional engagement, and cognitive engagement. According to them, this instrument provides insights into students' participation in class, interest in learning, and depth of understanding. Additionally, some researchers such as Huang et.al (2003) may employ classroom observations and coding schemes to directly observe and analyze students' engagement behaviors, such as time on task, participation, and interaction with peers and teachers. In contrast, as stated by Tarenzini (2005) academic motivation is typically assessed through self-report surveys, interviews, and experimental manipulations aimed at uncovering individuals' motivational beliefs, goals, and orientations. Ryan and Deci (2000) developed the "Academic Motivation Scale" (AMS), which measures various motivational constructs, including intrinsic motivation, extrinsic motivation, and amotivation, across different academic domains. This scale allows researchers to examine the intensity and quality of individuals' motivation for engaging in academic tasks. Furthermore, researchers often employ statistical analyses such as correlational analyses, regression analyses, and structural equation modeling to examine the relationships between academic engagement, academic motivation, and academic outcomes. For example, Wang and Eccles (2012) conducted a longitudinal study using structural equation modeling to investigate the reciprocal relationships between students' academic engagement, academic motivation, and academic achievement over time. As stated by them such analyses allow researchers to identify the factors that contribute to students' engagement and motivation and their impact on academic success.

5. The Relationship between Digital Technologies and Student Performance and Outcomes

The relationship between digital technologies and student performance and outcomes is a topic of significant interest and ongoing research in the field of education (Maeroff, 2006). Digital technologies encompass a wide range of tools and resources, including computers, tablets, interactive whiteboards, educational software, and online platforms (Koehler, 2006). The impact of these technologies on student learning outcomes has been studied extensively, with researchers seeking to understand how their integration into educational settings influences academic achievement, engagement, and skill development (Ertmer et.al, 2013).

One key aspect of the relationship between digital technologies and student performance is the potential for these tools to enhance student engagement and motivation (Ross, 2004). According to Zhao and Frank (2003), digital technologies can offer interactive and immersive learning experiences that capture students' interest and facilitate active participation in the learning process. According to those authors by incorporating multimedia elements, simulations, and gamification techniques, digital technologies can make learning more enjoyable and relevant to students' lives, leading to increased motivation and improved academic performance. Furthermore, digital technologies can provide personalized learning opportunities tailored to students' individual needs and preferences. As noted by Means et al. (2009), adaptive learning platforms and intelligent tutoring systems can analyze students' progress and learning styles to deliver targeted instruction and support. As explained by those authors this personalized approach can help address the diverse learning needs within a classroom, enabling students to progress at their own pace and receive timely feedback to support their learning goals. Additionally, digital technologies offer opportunities for collaborative learning and communication, which are essential skills for success in the 21st century. Through online forums, video conferencing tools, and collaborative editing platforms, students can engage in virtual discussions, group projects, and peer feedback activities (Bocconi et al., 2020). These collaborative experiences not only foster deeper understanding of course material but also promote the development of communication, teamwork, and problem-solving skills that are critical for academic and professional success (Ribble, 2004).

However, it is important to recognize that the relationship between digital technologies and student performance is complex and multifaceted, with both positive and negative outcomes depending on various factors (Zhao, 2003). While digital technologies have the

potential to enhance learning experiences, they also pose challenges related to digital equity, distraction, and information overload (Selwyn, 2016). Therefore, Frank (2003) said that, educators and policymakers must carefully consider how to effectively integrate digital technologies into educational practices while mitigating potential drawbacks and ensuring equitable access for all students. In addition to the complexities surrounding the integration of digital technologies in education, research also highlights the importance of considering how these tools are utilized, within the learning environment. Simply providing access to digital devices and resources does not guarantee improved student outcomes; rather, it is the thoughtful integration of technology into instructional practices that yields meaningful results (Mishra & Koehler, 2006). Effective implementation involves aligning digital tools with learning objectives, designing engaging activities that leverage their capabilities, and providing necessary support and scaffolding for students to navigate digital environments effectively (Mouza, 2012). Moreover, the role of educators in mediating students' interactions with digital technologies cannot be overstated. Teachers play a critical role in modeling responsible digital citizenship, guiding students in navigating information ethically and critically evaluating online sources (Ribble & Ross, 2004).

6. Models to Assess Academic Outcomes and Performance

Assessing academic outcomes and performance is a multifaceted process that requires consideration of various dimensions (Hattie, 2009). One prominent model for understanding assessment in higher education is outlined by Brown (2005). Brown's model emphasizes the importance of considering different aspects of academic achievement, ranging from knowledge acquisition to higher-order thinking skills and personal dispositions. Assessments based on this model typically involve a combination of formative and summative approaches, allowing educators to track students' progress over time and provide targeted feedback for improvement (Brown, 2005). One dimension highlighted by Brown's model is the assessment of attainments, which focuses on students' ability to achieve specific learning objectives or outcomes within a given course or program. These objectives serve as benchmarks for evaluating students' mastery of content knowledge and skills, providing a clear framework for assessing their academic progress (Brown, 2005). Another key dimension in Brown's model is understanding, which involves evaluating the depth of students' comprehension and insight into the subject matter. Assessments in this category go beyond surface-level knowledge and assess students' ability to analyze, synthesize, and evaluate information, demonstrating a deeper understanding of the material (Brown, 2005). Additionally, Brown's model emphasizes the importance of assessing

cognitive and creative skills, which involve evaluating students' ability to apply critical thinking, problem solving, and creativity in academic contexts. These assessments measure students' capacity to think critically, generate innovative solutions, and approach complex problems from multiple perspectives (Brown, 2005). Furthermore, assessments based on Brown's model also consider the practical application of knowledge and skills, often referred to as the "using" dimension. This involves evaluating students' ability to apply theoretical concepts in real-world settings, demonstrating their readiness for professional practice or further academic study (Brown, 2005). Moreover, Brown's model highlights the assessment of higher-order learning, which involves evaluating students' ability to engage in advanced cognitive processes such as analysis, synthesis, and evaluation. These assessments aim to measure students' ability to think critically, make connections between disparate ideas, and construct well-reasoned arguments (Brown, 2005). Additionally, Brown's model emphasizes the assessment of students' dispositions, which involves evaluating their personal traits, attitudes, and habits of mind that contribute to academic success. Assessments in this category may include measures of resilience, perseverance, self-regulation, and collaboration, providing insights into students' readiness for future learning and professional endeavors (Brown, 2005). Finally, the membership dimension of assessment focuses on evaluating the degree to which students are integrated into academic communities or disciplinary cultures. This dimension considers students' engagement with peers, faculty, and the broader academic community, as well as their participation in extracurricular activities and professional development opportunities (Brown, 2005).

Conclusion

The literature reviewed in this section explained the academic learning outcomes and their assessment. Furthermore, it highlighted different concepts of academic learning outcomes with models to assess academic outcomes and performance.

Section Three: Review of Previous Research

1. Introduction

In this Section, the present researches provide a various studies carried on the impact and effects of using technologies in language education. It also deals with the relationship between classroom use of technologies and blended learning. In addition the relationship between educational technologies use for students' performance and motivation.

2. The Major Findings on the Impact and Effects of Using Technologies in Language Education

In recent years, there has been a significant focus on the impact of technology on language education. Scholars like Warschauer (2000) and Levy (2009) have extensively explored the integration of technology into language learning environments. They argue that technology can enhance language acquisition by providing learners with authentic and meaningful opportunities to practice language skills. Warschauer (2000) suggests that technology enables language learners to engage with authentic language materials, such as videos, podcasts, and online articles, which reflect real-world language usage. These authentic resources expose learners to natural language contexts, including idiomatic expressions, and cultural references, which are essential for developing communicative competence. He argued that technology facilitates interactive and communicative language practice through various digital platforms and tools. For instance, learners can participate in online language exchange communities, where they can interact with native speakers through text, audio, or video communication. According to him, this authentic interaction provides learners with opportunities to apply their language skills in real-life communication scenarios, receive immediate feedback, and refine their linguistic abilities. Furthermore, Jones and Brown's (2020) supported this idea in research, stating how educational technologies contribute to personalize learning, for individual student needs and learning styles. Their study emphasizes how these technologies adeptly develop to individual student needs and diverse learning styles, by using educational content and resources to the unique preferences and paces of each learner. The authors claimed that technology becomes a dynamic tool for enhancing educational outcomes. The findings from Jones and Brown highlight the transformative effects of

personalized learning facilitated by educational technologies, through adaptive curriculums, modules, and interactive platforms, students can navigate their educational courses in a manner that enhances their strengths, preferences, and their comprehension of course.

Additionally, there was other work done by Hattie (2012), according to him, technology integration in education can have a very significant positive effect on student achievement. In his influential study, John Hattie's "Visible Learning" (2012) synthesizes meta-analyses of major's educational interventions. He found that technology integration, when effectively implemented, could significantly enhance student achievement. Therefore, Hattie emphasizes that it is not just the presence of technology but how it has used that matters. Moreover, the work of Gee (2003) suggests that video games and interactive technologies can enhance student motivation and engagement in learning. Gee, in his book "What Video Games Have to Teach Us about Learning and Literacy» in (2003), said that video games offer a unique and powerful learning environment. He argues that the design principles of video games, such as challenges, feedback, and interactivity, can be applied to traditional education to enhance student motivation and engagement in learning. According to Gee, the interactive nature of video games provides a dynamic learning experience, encouraging active participation and problem solving. By applying these principles in educational technologies, educators can open into the intrinsic motivation that often accompanies game-based learning, fostering a more engaging and effective learning process. The concept of personalized learning and adaptive technologies is more explored by Dede (2013), indicating that using educational experiences to individual needs can improve outcomes. He argues that putting educational experiences to individual needs through adaptive technologies can lead to improved learning outcomes. The idea is that technology can dynamically regulate content, and assessment based on each student's abilities and preferences. He also affirms that, this modification allows learners to progress at their own course, addressing gaps in understanding and reinforcing strengths, ultimately enhancing the effectiveness of the educational process. The researcher Dede (2013) supported his idea for the integration of adaptive technologies to create a more personalized and responsive learning environment. In Addition, Voogt et al. (2013) discuss how technology enables global collaboration among students, fostering a more interconnected and diverse educational experience. In their collaborative work, Voogt et al. (2013) explore the impact of technology on education. Specifically highlighting its role in facilitating global collaboration among students. The authors argue that technology provides a platform for students from diverse geographical locations to Collaborate on projects, share ideas, and engage in cross-cultural

exchanges. This interconnectedness not only broadens students' perspectives but also promotes a more inclusive culturally diverse educational experience. They affirmed that this could be done by breaking down geographical barriers; technology allows students to collaborate in ways that were previously challenging, fostering a globalized learning environment that prepares them for the interconnected world they will navigate beyond the classroom.

Likewise, technology integration can support the development of critical thinking; this was the idea of Jonassen (2000). He states that technology integration can support the development of critical thinking skills through problem-solving and authentic learning experiences. . In his work, "Toward a Design Theory of Problem Solving" Jonassen (2000) contends that the integration of technology in education can play an important role in fostering critical thinking skills. According to Jonassen, technology provides a platform for students to engage in problem-solving activities that stimulate real-world challenges, offering authentic learning experiences. According to him by utilizing technology in this manner and ways, students are prompted to analyze, evaluate, and apply information in a practical context, thereby planning their critical thinking abilities. Therefore , Jonassen (2000) emphasizes that technology should be thoughtfully integrated to create learning environments that emphasize problem-solving, enabling students to develop the analytical skills necessary for navigating complex issues in many domains.

3. The Major Findings about Relationship between Classroom Used of Technologies and Blended Learning

Over the past few decades, advancements in technology have flourished (El-Ghalayini & El-Khalili, 2012). With this eruption in technology available, nearly every aspect of daily life has been impacted. However, the impacts these changes in technology have had in education seem to be more recent. Access to technology is becoming more and more attainable for schools across the world, and with that availability has come a shift to incorporate that technology in education (Alijani, Kwun, & Yu, 2014). One of the biggest transitions brought about by access to technology in the classroom has been a shift away from traditional learning and toward blended learning. Therefore, numerous studies have already been undertaken in the relationship between classroom use of technologies and blended learning. For instance, Graham (2006) stated that, the relationship between classroom use of technologies and blended learning is multifaceted and dynamic, reflecting the integration of digital tools into traditional instructional

practices to enhance teaching and learning experiences. Garrison and Kanuka (2004) stated the significant role of technology in fostering interaction among students, instructors, and content within blended learning environments. They emphasize that technologies such as video conferencing tools and online forums serve as essential facilitators of communication and collaboration, two key components crucial for the success of blended learning initiatives. Moreover, Bonk and Graham (2006) highlight how technology enables flexibility in the delivery and pacing of instruction. Online learning platforms and multimedia tools allow learners to engage with course materials at their own pace, accessing content asynchronously and revisiting concepts as needed. Additionally, technologies such as adaptive learning systems and intelligent tutoring systems can personalize the learning experience by dynamically adjusting content and activities based on learners' progress and performance. This adaptability promotes individualized learning pathways, allowing learners to focus on areas of weakness, review foundational concepts, or explore advanced topics according to their needs and interests. Similarly, research by Picciano (2009) suggests that the strategic integration of technology can help bridge the gap between traditional and online learning modalities in blended environments. By leveraging multimedia resources, simulations, and interactive exercises, instructors can create dynamic and engaging learning experiences that cater to diverse learning styles and preferences. Furthermore, Hew and Cheung (2014) highlight the importance of aligning technological tools with pedagogical goals to ensure their effective integration into blended learning environments. In contrast, another study found that students in the online context perceived metacognitive and effort regulation strategies were stronger than for traditional students (Pallarès et al., 2019). Similarly, the study by Broadbent and Poon (2015) demonstrated that learning strategies of time management, metacognition, critical thinking, and effort regulation were relevant to academic success in the online context, while that in the traditional context their effects were smaller. However, a few studies have analyzed these effects between online and blended contexts. The research by Broadbent (2017) found that students' academic performance is highly determined by the use of cognitive practices, metacognitive strategies, and resource management strategies for both online and blended contexts. To the authors' best knowledge, only a few comparative studies have been conducted on face-to-face and blended learning contexts.

4. Relationship between Educational Technologies Used for Students' Performance and Motivation

Motivation is a psychological process, which leads anyone to act in a way that helps him/her to fulfill unsatisfied needs (Latham, 2011). It is one of the most important factor behind any achievement. Same case is with academic performance. Students can be motivated intrinsically and extrinsically, depending upon the nature of students and that motivation is directly affecting the academic performance of them. It can be positive or negative, progressive or destructive (Linnenbrink, 2002). Kostelecky (2005) stated that, Motivation is one of the most important factors in universities or educational sector especially when we are talking about the performance of the students in their studies or projects.

Thus, many studies have been conducted to predict relationship between educational technologies use for student's motivation and its impact on student's academic performance. For instance, study by Clark and Mayer (2016) explored how multimedia learning environments, which often incorporate educational technologies, can influence student motivation and subsequently influence performance. They argue that when instructional materials are designed to align with cognitive principles, such as providing meaningful and relevant content, they can enhance both motivation and performance. Additionally, Wu, and Wang (2018) investigated the effects of using educational technologies, specifically mobile learning applications, on student motivation and academic achievement. They found that students who engaged with mobile learning applications exhibited higher levels of motivation and subsequently performed better academically compared to those who did not utilize such technologies. This suggests a positive correlation between the uses of educational technologies and both motivation and performance. Similarly, Hirumi and Bai (2010) conducted a meta-analysis examining the impact of various educational technologies, including online learning environments and interactive multimedia, on student motivation and achievement. Their findings indicate that well-designed educational technologies can effectively enhance student motivation, leading to improved academic performance across different subjects and grade levels.

Furthermore, in a study by Johnson et al. (2016), were reported regarding the relationship between technology integration and academic outcomes in different disciplines. Johnson et al. found that students in the academic context, such as Literature, displayed higher levels of technology utilization and perceived technology as an integral part of their academic experience compared to students in the fields. Additionally, a study by Smith and Brown (2019) explored the impact of technology access and support on student engagement and performance. Smith

and Brown found that students who had greater access to technology resources and support tended to have higher levels of confidence and proficiency in using technology, ultimately leading to improved academic outcomes. . Moreover, in a study by Lee and Smith (2018), were reported in the context of technology integration and academic performance. Lee and Smith found that students' perceptions of technology, including their comfort and confidence in using technology, were positively correlated with their academic achievements. Students who were more adept at integrating technology into their learning processes demonstrated higher levels of engagement and academic success. Furthermore, a study by Brown et al. (2020) delved into the impact of technology integration on student dispositions and engagement in different academic disciplines. Brown et al. found that students who perceived technology as an essential tool for their academic success were more likely to be actively engaged in their studies and possess positive dispositions towards learning.

Deci and Ryan (2000) proposed Self-Determination Theory (SDT) as a framework for understanding the relationship between motivation and educational technologies. According to Self-Determination, students are intrinsically motivated when they feel a sense of autonomy, competence, and relatedness in their learning environment. On the other hand, Liu, and Yuan (2001) found that when carrying out online activities, students learn effectively only when they are highly motivated. Tseng and Tsai (2010) showed that intrinsic motivation and self-efficacy to be highly related when engaging with online tasks, in that students who tended to engage were intrinsically motivated to do so and demonstrated high levels of self-efficacy. They argue that, the self-efficacy is central for enhancing intrinsic motivations to engage in an online learning environment others studies have also compared the effects of students 'emotions and motivation in a different learning context, their findings have demonstrated that levels of negative emotions differ between face-to-face and online learning contexts, online students reported higher levels of anger and anxiety than face-to-face students (Butz et al., 2015), while the boredom levels of face-to-face students were higher than those of online students (Butz et al., 2016). However, other studies have found no differences in the emotions experienced by students in online and face-to-face contexts (Daniels & Stupnisky, 2012).

Conclusion

Thus, the review of the literature explains that educational technologies could be used as a significant strategy in enhancing students' performance and motivation. Furthermore, the works conducted previously by various scholars, scientists, and researchers, affirmed that educational technologies used in learning are an efficient educational tool to develop and to promote students' learning practices and achievements. Therefore, these ideas collectively suggest that when thoughtfully implemented, educational technologies can contribute to enhanced students' engagement, personalized learning, global collaboration, and the cultivation of critical thinking skills eventually improving the educational sectors. Thus, our main objective is to explore the students' perceptions on the impact of using educational technologies in improving their academic learning outcomes at Bejaia University.

Conclusion

The first chapter is about the theoretical background. It is divided into three sections. The first section is about the use of technologies in education and language teaching. The second section is about performance, achievement, and motivation, and the last one is a selection of some related studies to the field of our research.

CHAPTER TWO
METHODS, RESULTS, AND DISCUSSIONS

CHAPTER TWO: METHODOLOGY, RESULTS, AND DISCUSSIONS

Introduction

The previous chapter presented the theoretical framework that underpins this study, and it reviewed the literature that is related to educational technologies and student's learning outcomes. The current chapter provides a description of the study under investigation as well as the research design and instrument. Thus, this chapter is divided into two sections. The first section includes the description of research methodology and design, description of population and sample of the study, description of the data collection tools and procedures for analyzing and treating data. Further, it deals with validity and reliability of the study in addition with ethical consideration. The second section on the other hand covers the analysis and interpretation of the research findings with discussion of the results.

Section One: Research Methodology

1. Introduction

This Section describes and explains the methodology deployed in this study, and the details, which informed the choice of methods, deployed in this study. This research was conducted in order to provide a descriptive analysis of issues. Therefore, it mainly consists of description of research method and design, description of the population and sample of the study. Furthermore, it describes the description of the data collection instrument, procedures and analysis. It also covers the structure of questionnaire and self-assessment scale. Further, it presents the validity and reliability in addition with ethical consideration

2. Description of the Research Design and Method

The present study is mainly descriptive, descriptive research is the most widely used in research, it is mainly used to obtain information concerning the status of phenomenon to describe the existence of the variables or conditions in a situation (Blaxter, 2006). Therefore, the present study adopted a descriptive survey design through which a quantitative method is employed. Quantitative research is the collection and analysis of numerical data to describe, explain, predict, or control phenomena of interest (Gay, Mills & Airasian, 2012). Moreover, quantitative research; involves data collection procedures that result primarily in numerical data which is then analyzed primarily by statistical methods (Dornyei, 2007). To put it another way, quantitative research quantifies opinions and attitudes through a systematic investigation of the relationship among variables (involving age, gender, socioeconomic and educational status, family income and so on) by using a structured, close-ended and Likert-scale questionnaire to generate numerical data (Johnson et al., 2007). Thus, quantitative research approach is utilized considering this latter as a more scientific approach that enables us to objectively and precisely gather and analyze our data in a relatively short time and avoid bias that makes our research findings generalizable and highly reliable. The quantitative approach is more structured and focused, which provides us with more control over the steps of examining whether the students used technologies for studying exist in making our study as precise as it should be. Further, aiming at arriving to a conclusion about whether the students used technologies while studying in and out of classroom or not and how the process of learning is executed, and the impact it has on students' outcomes. In addition to that, a descriptive study is required in order to reach our research aims and answer our research questions. Since our research topic has unprecedentedly been investigated in our university, therefore, using an experimental method

would not be appropriate because of time limitations. In addition, providing us with insight to identify the state of such issue and describe the circumstances in our university. Besides, our study aim is to point out the case, attain greater knowledge, and understand the situation of the impact of using educational technologies for Major students at Bejaia University, which greatly justifies taking the descriptive analysis of data. In order to investigate this research's aims, quantitative data are gathered from Master one students for two options (Linguistics, Literature and Civilization) of the Foreign Languages Department using a questionnaire as a study tool. Therefore, the generated numerical data were analyzed using statistical procedures and presented findings through graphs, figures and tables.

3. Description of the Population and Sample of the Study

The Population in this context denotes a group of individuals in which a researcher is interested and to which the findings and the implications of the research are to be generalized (Polit & Beck, 2010). Target population constitutes the total number of people that meets the designated set of criteria and can be of any size (Gay et al., 2012). In addition, according to Johnson (2022) the term population refers to the pool of individuals from which research participants are selected. Within the context of this study, the representative population of our study consists of all Master one students enrolled in the department of English at Bejaia University (144 Students) including Linguistics (35 students), Didactics (65 students) literature and civilization (44 students) during academic year 2023/2024. 40 students were selected randomly from the whole population of 144 Master one EFL students to answer a close-ended questionnaire, which equals 39.5%, which is largely and statistically sufficient to collect enough data that lead us into a valid conclusion with regard to the population size and our study aim. The sample of the study consists only of the Master one Major students for two options; which includes linguistics (22 participants) which equal 55%, literature and civilization. (18 participants) which equals 45%; were randomly selected from every group of this population.

We have selected this sample because, the students of master one for Linguistics , Literature and Civilization have more opportunities to do projects , research and presentation sessions that gives them possibilities of using different technology devices available in and out of the classroom.

4. Collection and Analysis of Data

4.1. Data Collection Instrument and Procedures

Kabir (2016) defines data collection as the systematic process of collecting and measuring information related to variables of interest to address research questions, test hypotheses, and evaluate outcomes. In this study, it is a structured close-ended print questionnaire, divided into three sections. We have decided to take the questionnaire as an exclusive tool to collect our data because it is considered as one of the most common instruments that everyone can answer regardless of the level, moreover, it does not take much time either, for us and for the participants. In addition, we preferred to submit it because students generally ignore e-documents and do not answer them, unlike when we distribute the copies in person during regular sessions at the university. Another reason is that students may take printed copies more seriously and answer them objectively more than online documents. It is possible to use an online questionnaire, but for the sake of collecting massive data in a short time, so we thought it would be preferable and better to rely on a print one. Hence, we were depend on a printed questionnaire for EFL Master one students (Linguistics, Literature and Civilization) , before the questionnaire was conducted therefore, students were informed of the anonymity of data collection and analysis and that their answers will be treated for pure academic purposes aiming at making them feel comfortable to reach the largest and most honest answers. Further, the internal consistency of the academic learning outcomes (ALO) and technology integration (TI) variables was assessed using Cronbach's alpha coefficient Under Microsoft Excel. For the combined results of both groups, **Cronbach's alpha values were 0.751 for ALO and 0.893 for TI.** These values suggest a moderate to high level of internal consistency within each variable across all participants, indicating that the items within each scale are measuring a similar underlying construct consistently.

Here below is a table (table 1) that describes the period taken for collecting data, in addition to the number of participants, respondents and response rate.

Table 1.

Description of the Procedures of Data collection

Period	Population	Participants	Instruments	Respondents	Response rate
March-April 2024	144 English Students of Master one	40	Questionnaire	40	100 %

4.2. Data Analysis Tools and Procedures

After gathering the targeted data, we will analyze it statistically, so that we will have certain interpretations and answers to our questions. In an overarching aim to identify significant patterns and trends in the data and display our findings meaningfully, descriptive statistics such as Means, Standard Deviation, frequencies and percentages will be used within the adoption of Excel programs that will be employed to analyze our collected data. This goes hand in hand with our quantitative data and research aim to investigate whether students 's learning outcomes improved when integrating technologies in and out of the classroom or not. Excel is the easiest and most convenient analysis tool concerning our sample, which does not represent a relatively large size that requires automatic processes such as SPSS, rather, 40 answers, can be easily analyzed using Excel, which is considered fast, and time gainer. This process remains a reliable tool for analytics; it organizes data into readable format, which makes it easier to extract actionable insights about our research aim.

4.3. Description of the Research Instrument

A questionnaire provides a numeric description of trends, opinions, experiences and practices of individuals (Creswell, 2009). Therefore, the study employed a structured questionnaire to collect quantitative data, which administrated in class to the participants of the study. This type of questionnaire helps to generate quantifiable empirical data, especially if it is designed and tested carefully (Leary, 2014). All the 40 EFL students completed the questionnaire for this study. It consists of a theoretical framework of Brown's models (2005) and Technology uses and perceptions survey (TUPS) for students. Its describe with Likert scale that helps to measure degrees of opinion and understanding on latent constructs such as conceptions, perceptions, attitudes, and beliefs (Leod, 2008). The Questionnaire, which is divided into Three Sections, is presented in the table below

Table 2.

The structure and content of the questionnaire

Section	Section's title	Description	Content/Scale points
Section one	Student's Socio-demographic and Academic data	This section is devoted to collecting data about participants' general information	Level, gender, age ...
Section Two	Self-assessment of Students' Academic learning Outcomes	This section includes a list of items from (1, to 21) involving seven categories of self-assessment students' Academic learning Outcomes, following Brown's models (2005)	5 point Likert scale: from Very Poorly to Very well
Section Three	Technology Uses and Perceptions Survey (TUPS) for students	This section consists of student's perceptions and Technology used , including 14 items	5 point Liker scale: from Totally Disagree to Totally Agree

5. Validity and Reliability

5.1 Validity

Validity is an important aspect in all research, and Cohen et al. (2007) argues that invalid research is useless. Gibbs (2018) notes that validity concerns the extent to which the study represents what is actually happening, while reliability concerns consistency, meaning that if one were to replicate the same research twice, the findings would be consistent. However, Dörnyei (2007) explains that although validity and reliability refer to empirical research in general, they have been associated with quantitative methods for a long time. In this research, content validity is used. The relevancy of the objective of the test and the content of the test items are show the content validity of the test. Hence, our study and test had content validity because this test based on the course objectives in the syllabus of Master one students for two options (Linguistics, Literature and Civilization). Besides the researcher checked the validity of the test used content validity for two options. The content of questionnaire for students' linguistics are the same for students' literature and civilization. However, the researcher recognized that both options were given a rich description about aims of the study. Thus we believe that our test have validity.

5.2 Reliability

The way to know a good test is by reliability. Ary (2002) states that reliability is concerned with the effect of such random errors of measurement on the consistency of the scores. Reliability is the consistency of the measurement, or degree to which an instrument measures the same way each time it is used under the same condition with the same subjects (Ary, 2002). Hence, to measure that reliability of test items, the researcher firstly gained try-out; It is to know whether the instrument suitable or not. Further, in this research, the researcher used excel programs to know the reliability of test instruments. Thus, we believe that our study has reliability tests.

6. Ethical Consideration

Ethical considerations are critical in any research study, as they ensure that the rights and welfare of participants are protected and respected throughout the research process (Clark 2007). This study was primarily involved with collecting students' perceptions, so it was crucially important to consider the ethical principle in social research (Bryman, 2008). First, the students were well informed about the purposes of the study and what was required from them. The participation was voluntary, and the responses would be later used for academic purposes. In addition, all participants were assured that the information provided in this study would remain confidential and would only be used for this research purposes. Thus, the study adhered to the required ethical considerations to avoid harm, disrespect, and practice privacy and fair treatment of participants (Rahman, 2017). Moreover, anonymity and confidentiality were practiced throughout the data collection process. Thus, the researcher took the ethics set in the study into consideration and ensured that participants' privacy, character, and confidentiality were not in any way harmed or violated.

Conclusion

This section has outlined the research methodology employed in this work. First, it has described the description of research design and method, description of population and sample of the study. Further, it has presented the data collection instruments and procedures, questionnaire and self-assessment scale. It also describe the validity and reliability with ethical consideration of the study.

Section Two: Presentation and Analysis of the Results

1. Introduction

This section is considered as the most important part of the research work. Regarding our ultimate research aims and questions concerning the impact of using educational technologies for major students in learning practices and achievements. Our study demonstrates a correlation between the target objectives, hypothesis, and our findings; with descriptive analysis that indicates presentation of the data collected from the quantitative method of investigation, which is questionnaire. They are interpreted in relation to studies in addition to the conceptual framework provided in the first chapter. In this section, the findings are analyzed, discussed, and stated in the form of facts that pave the way to possible interpretations. It also consists of the examination of the data collected, whether the results match the hypotheses or not. In addition, to the same suggestions and recommendations for further research.

2. Analysis of the Socio-Demographic Data

This part shows general information about the participants; which include their option, gender, age.

2.1. Student's Specialties and Levels

The table below shows that the majority of the participants are linguistics students, which equals 55 %, while literature students are 45%.

Table 3.

Students' Levels and Specialties

Option	Frequency	Percentage
Linguistics	22	55%
Literature and Civilization	18	45%
Total	40	100%

2.2. Students' Gender

The table below shows that the majority of the participants are females, constituting the 90%. Therefore, males are a small minority with a number of 04 students, which represent

10% of the whole sample. It is clear that the number of females is higher than the number of male. This may be because females are more interested in studying foreign languages and English particularly.

Table 4.

Students' Gender

Gender	Frequency	Percentage
Male	04	10%
Female	36	90%
Total	40	100%

2.3. Students' Age

The table below shows that the data obtained reveal that the student's ages vary between 20 and 24 Years old. The majority of students (80%) are between 20 and 23 years old, and (20%) of the students are between 23 and 24 years old. This means that Master 1 students of English are from different age categories.

Table 5.

Students' age

Age	Frequency	Percentage
From 20-23	32	80%
From 23-24	8	20%
Total	40	100%

3. Analysis of Students' Self-Assessment of Academic Learning Outcomes (ALO)

The analysis of students' self-assessment of Academic Learning Outcomes (ALO) revealed interesting insights into their perceived mastery and achievement within their respective fields of study.

Table 6 presents the mean scores (M) and standard deviations (SD) for each item, along with a pooled mean (PM) for comparison between Master 1 Linguistics (L) and Master 1 Literature and Civilization (LC) students. The Likert 5-point scale was employed for evaluation,

representing performance levels from low to high. The interpretation of the mean scores is based on the following ranges: scores between 1 to 1.80 correspond to "Very Badly," 1.81 to 2.60 correspond to "Badly," 2.61 to 3.40 correspond to "Moderately," 3.41 to 4.20 correspond to "Well," and 4.21 to 5 correspond to "Very Well."

Table 6.

The Analysis of Students' Self-assessment of Academic Learning Outcomes (ALO)

Category		Items	Mean		SD		PM	
			L	LC	L	LC	L	LC
Attainment	1	I can demonstrate mastery of theories and concepts taught in this course	3,32	2,72	1,17	0,96	3,56	3,18
	2	I consistently achieve the learning goals and objectives set for assignments and assessments	3,91	3,33	0,97	0,77		
	3	I can apply learned literary theories and methodologies to analyze language phenomena independently	3,45	3,50	0,80	0,92		
Understanding	4	I can explain the underlying principles and relationships within linguistic / literature structures and language systems	3,55	3,06	1,06	1,06	3,36	3,19
	5	I can analyze and evaluate linguistic/ literature data critically, rather than simply memorizing facts	3,14	3,39	0,83	1,04		
	6	I can transfer knowledge of linguistics/ literature to new contexts and apply it effectively in different research or analytical tasks	3,41	3,11	0,91	0,90		
Higher order learning	7	I engage in advanced thinking, reasoning, and metacognition to deepen my understanding	4,45	3,28	6,70	1,02	3,71	3,09
	8	I demonstrate the ability to synthesize information from language theory and data to generate new insights and hypotheses	3,05	3,06	1,09	0,80		
	9	I exhibit metacognitive skills by monitoring and regulating my own learning and research processes to enhance understanding and analysis of linguistic phenomena	3,64	2,94	1,14	1,47		
Cognitive and creative skills	10	I am able to think critically, consider multiple perspectives,	3,73	3,50	1,03	0,99	3,51	3,44
	11	I can generate creative ideas, solutions, or interpretations that go beyond conventional approaches	3,59	3,50	0,67	0,92		
	12	I can adapt my research methods and problem-solving strategies to address new challenges or opportunities	3,23	3,33	1,19	0,91		
How to practice	13	I set specific research goals and develop strategies to achieve them in my domain	3,55	3,28	0,96	0,96	3,66	3,38
	14	I monitor my progress regularly and adjust my research methods or approach as needed	3,77	3,44	1,11	1,10		
	15	I actively seek out resources, support, and feedback to enhance my research and academic performance	3,68	3,44	1,21	0,78		
Dispositions	16	I approach linguistic/ literature inquiry with curiosity, enthusiasm, and a willingness to explore new ideas and methods	3,05	3,28	1,17	1,32	3,41	3,20
	17	I persevere in the face of challenges, setbacks, or obstacles to achieve my research goals	3,18	3,33	0,96	1,08		
	18	I demonstrate integrity, honesty, and respect for others in my academic and professional interactions	4,00	3,00	0,87	1,19		
Membership, Inclusions, self-worth	19	I actively contribute to creating an inclusive and supportive learning environment	3,77	3,06	1,11	1,26	3,81	3,16
	20	I demonstrate empathy, respect, and understanding towards individuals from diverse backgrounds and perspectives	3,82	2,94	1,10	1,11		
	21	I value and nurture my own sense of professional self-worth and recognize the importance of self-care in maintaining overall well-being in my domain	3,86	3,50	1,04	0,92		

3.1. Self-Assessment of Students' Attainment

As far as the category of attainment is concerned, the findings suggest that Master 1 Linguistics students tend to perceive higher levels of achievement and mastery in certain aspects of their academic learning outcomes compared to Master 1 Literature and Civilization students. For the linguistics group, the pooled mean for attainment is 3.56, indicating a perception of attainment closer to "Well." Conversely, for the literature and civilization group, the pooled mean is 3.18, suggesting a slightly lower perception of attainment, closer to "Moderately." For instance, item 1, which assesses the ability to demonstrate mastery of theories and concepts taught in the course, Master 1 Linguistics students reported a mean score of 3.32 (SD=1.17), while Master 1 Literature and Civilization students scored slightly lower with a mean of 2.72 (SD=0.93), which reveals that Linguistics students perceive their mastery level more positively. In spite of this difference in perception, the scores of both groups fall within the "Moderately" range, suggesting a moderate level of perceived mastery. The higher standard deviation among Master 1 Linguistics students suggests greater variability in their perceived mastery levels. However, when examining item 2, which focuses on achieving learning goals and objectives, Master 1 Linguistics students scored higher with a mean of 3.91 (SD=0.97) compared to Master 1 Literature and Civilization students with a mean of 3.33 (SD=0.74). Similarly, for item 3, assessing the application of learned linguistic theories and methodologies, Master 1 Linguistics students reported a mean score of 3.45 (SD=0.80), while Master 1 Literature and Civilization students scored slightly higher with a mean of 3.50 (SD=0.89). Therefore, with items 2 and 3, both groups' scores fall within the "Well" range, indicating generally positive perceptions of goal achievement and application. The low standard deviations in these two items (2 and 3) suggest that there are more consistent perceptions in both groups.

3.2. Self-Assessment of Students' Understanding

For the category of understanding, the results show that Master 1 linguistics students have higher level on excel in critical analysis, knowledge, and practical application within their field of study compared to their counterparts in Master 1 Literature and Civilization Students. For the Linguistics group the pooled mean for understanding is 3,36, indicating exceptionally "well" Contrary for the literature and civilization group, the pooled mean is 3,19, indicated by their slightly lower mean score closer to moderately. For example, item 1, linguistics students have a stronger understanding of the underlying principles and relationships within their subject structures and language systems with reported mean score of 3,55

(SD=1,06). However Master 1 Literature and Civilization students scored slightly lower with a mean of 3, 06 (SD=1, 06) which show that Linguistics students excel in critical analysis within the well rang, while the Literature group. Correspond with moderately rang. Conversely, when identifying the item 2, which focuses on demonstrating the ability to analyze and evaluate data critically instead of simply memorizing facts, Master 1 Literature and Civilization students indicating higher levels of comprehension and critical thinking skills with a mean score of 3,39(SD=1,04) Compared to Master 1 Linguistics students with a mean of 3,14(SD=0,83). Meanwhile, for item 3, the Linguistics students are capable of transferring their knowledge to new contexts and effectively applying it in various research and analytical tasks, indicating a deeper level of understanding and practical application of their subject matter with high level mean score of 3,41 (SD=0,91). On the other hand, the Master 1 Literature and Civilization students may have a slightly lower level of proficiency in these areas, as indicated by their slightly lower mean score with 3, 11(SD=0, 90) .Thus, With item 2, both groups' scores fall within the “moderately” range, indicating generally positive perceptions of critical analysis, and thinking within their field, further, the low standard deviation for this item, suggest that they are slightly lower consistent in both groups.

3.3. Self-Assessment of Students' Higher Order Learning

For higher order learning category, the results indicate that Master 1Linguistics students scored significantly higher, with a pooled mean of 3.71, compared to Master 1 Literature students scored moderately with a pooled mean of 3.09, suggesting they may have a weaker grasp on advanced thinking, reasoning, and metacognitive abilities compared to their peers in Linguistics. For instance, in item 1; Master 1 Linguistics students engage advanced thinking, reasoning, and metacognition skills that contribute to a deepened understanding of the subject matter with mean score of 4, 45(SD:6, 70) indicating closer of “very well “ran .while the Master 1 Literature and Civilization students engage proficiency at a moderate level with mean score of 3, 28(SD: 1, 02); suggesting room for growth in developing advanced thinking, synthesis abilities, and metacognitive skills. Which mean that the superior performance of Linguistics students in engaging in advanced thinking, reasoning, and metacognitive processes. In contrast, when examining the item 2, which focuses synthesizing information from language theory and data to generate new insights and hypotheses, both groups share the Same rang which indicating the “moderately” level . For example Linguistics group scored with a mean of 3, 05, (SD: 1, 09), while the Literature and Civilization group with a mean score of 3, 06 (SD: 0, 80). However, when examining the item 3,Master 1 Linguistics students exhibit strong

metacognitive skills by actively monitoring their learning and research processes to enhance their understanding, showing a high level of self-awareness and reflective thinking with Mean score of 3,64 .while the contrast group scored slightly lower with a mean score of 2,94 , with indicating closer of “moderately “ range . Thus, with item 2, both groups shared the same level, scores fall within the moderately “rang slightly lower perceptions of their ability to think critically and innovate within the field.

3.4. Self-Assessment of Students’ Cognitive and Creative Skills

The results for students perceptions on cognitive and creative skills indicate that Master 1 Linguistics students performed well with a pooled mean 3.51 within fall of “moderately “ range, showcasing their ability to excel in critical thinking, considering multiple perspectives, and generating creative ideas and solutions that surpass conventional approaches. On the other hand, Master 1 Literature students also performed well with a pooled mean of 3.44, showing that they possess solid critical thinking skills and the ability to consider various perspectives within their field of study. While Literature students may not have scored as high as Linguistics students in generating creative ideas and solutions, their mean score still reflects a good level of proficiency in this area. For instance, based on the results of item 1, Master 1 Linguistics students show higher critical thinking abilities and are more likely to consider multiple perspectives compared to Master 1 Literature and Civilization students. The mean score for Linguistics group on these skills is 3.73, with a standard deviation of 1.03, indicating a relatively consistent level of proficiency. On the other hand, Literature and Civilization group have a lower mean score of 3.50 on these skills, with a slightly lower standard deviation of 0.99. This suggests that while Literature and Civilization students also possess critical thinking abilities, they may not be as consistently strong as those of Linguistics students may. While, when examining the item 2, Linguistics students are more likely to generate creative ideas, solutions, or interpretations that go beyond conventional approaches compared to Literature and Civilization students. The mean score for Linguistics students on this aspect is 3.59, with a standard deviation of 0.67, indicating that they have a generally high level of creativity and are consistent in their ability to think outside the box. On the other hand, Literature and Civilization students have a slightly lower mean score of 3.50 on this aspect, with a higher standard deviation of 0.92. This suggests that while Literature and Civilization students also demonstrate creativity, there may be more variability in their ability to come up with innovative ideas or solutions compared to Linguistics students. Conversely, in item 3 , the results indicates that Master 1 Literature and Civilization students are slightly better at adapting their research

methods and problem-solving strategies to address new challenges or opportunities compared to Master 1 Linguistics students. The mean score for Literature and Civilization students on this aspect is 3.33, with a standard deviation of 0.91, indicating a moderate level of skill with some variability in their ability to adapt. On the other hand, Linguistics students have a slightly lower mean score of 3.23, with a higher standard deviation of 1.19, suggesting that there is more variability in their ability to adapt to new challenges or opportunities. Therefore, with items 1 and 2, both groups' scores fall within the "well" range, indicating generally positive perceptions of strong capacity for innovation and are able to think outside the box in their research and analysis. The low standard deviations in these two items (1 and 2) suggest that there are more consistent perceptions in both groups.

3.5. Self-Assessment of Students' How to Practice

In the four category, which focuses on how to practice, the results reveal that Master 1 Linguistics students achieved a high mean score of 3.66, indicating that they excel in setting specific research goals within their domain and developing effective strategies to achieve them and they are actively seek out resources, support, and feedback to enhance their research and academic performance. Master 1 Literature and civilization students also display proficiency in these areas, although potentially at a slightly lower level with pooled mean of 3, 38 compared to their Linguistics counterparts. For instance , in item 1, which on setting specific research goals and developing strategies within their domain , Linguistics students on this aspect scored with a mean of 3,.55, with a standard deviation of 0.96, indicating a relatively high level of skill and consistency in goal-setting and strategic planning. While Literature students slightly lower level with mean of 3, 28 with Standard deviation of 0, 96. However, when examining item 2, Master 1 Linguistics students are more effective at monitoring their progress regularly and adjusting their research or approach as needed compared to Master 1 Literature and Civilization students. The mean score for Linguistics students on this aspect is 3.77, with a standard deviation of 1.11, indicating a high level of proficiency and consistency in monitoring progress and making necessary adjustments. Literature and Civilization students, on the other hand, also performed well with a mean score of 3.44 and a similar standard deviation of 1.10, indicating a good level of skill in monitoring progress and adapting their research or approach when needed. However, Linguistics students scored higher on this aspect, suggesting that they may be more diligent and effective in tracking their progress and making appropriate changes as required. While, for item 3, the results show that Linguistics group are more proactive in seeking out resources, support, and feedback to enhance their research and academic performance

compared to Literature and Civilization group. The mean score for Linguistics students on this aspect is 3.68, with a standard deviation of 1.21, indicating a high level of proficiency and variability in seeking resources, support, and feedback. Literature and Civilization students, while also scoring well with a mean score of 3.44 and a lower standard deviation of 0.78, showed slightly lower effectiveness in actively seeking out resources, support, and feedback to enhance their research and academic performance. Thus, with items 2 and 3, both groups' scores fall within the "Well" range, indicating generally positive perceptions of their progress. The low standard deviations in these two items (2 and 3) suggest that there are more consistent perceptions in both groups.

3.6. Self-Assessment of Students' Dispositions

As far as the dispositions category is concerned, the results highlight the strengths of Master 1 Linguistics students in their approach to Literary inquiry, demonstrating curiosity, enthusiasm, perseverance, integrity, and respect for others in their academic performance with pooled mean of 3,41. Master 1 Literature students also exhibit these qualities, with slightly lower with pooled mean of 3, 21, which indicates a closer of “moderately” range. For instance, in tem 1, the Linguistics students reflect their approach to Literary inquiry with curiosity, enthusiasm, and a willingness to explore new ideas and methods within their studies with a mean score of 3, 05 (SD= 1, 17). This suggests that Linguistics students possess a keen interest in their subject, maintaining an open-minded and inquisitive attitude towards exploring various facets of language and communication. Conversely, Literature students received a moderately rated mean score of 3.28 (SD= 1,32) , suggesting that while they also demonstrate a level of curiosity and enthusiasm in their literary inquiries, there may be areas for improvement in terms of exploring new ideas and methods within their field. Additionally , as results of item 2 highlights, Master 1 Linguistics students exhibit perseverance in the face of challenges, setbacks, or obstacles that may arise in their academic performance , demonstrating a resilient and determined approach to achieving their research goals with a mean score of 3,18 (SD=0,96) . While, Master 1 Literature students show perseverance in working towards their research goals, setbacks or challenges may present somewhat greater obstacles for them compared to the Linguistics students with moderately rated mean of 3,33 (SD= 1,08) . However, when examining the item 3, Linguistics students display integrity, honesty, and respect for others in their academic and interpersonal interactions, indicating a strong adherence to ethical principles and professionalism in their conduct with a well rated mean score of 4,00 (SD= 0,87) . Conversely for Literature students a slightly lower level mean score of 3, 00 (SD=1, 19). This

suggesting that Linguistics students have a higher level of integrity, honesty, and respect in their academic interactions. Therefore, with items 1 and 2, both groups' scores fall within the "Moderately" range, indicating generally slightly lower perceptions of exploring new ideas and methods. The low standard deviations in these two items (1 and 2) suggest that there are less consistent perceptions in both groups.

3.7. Self-Assessment of Students' Memberships, Inclusions, Self-Worth

In the last category, the results illustrate the strong performance of Master 1 Linguistics students in creating an inclusive and supportive learning environment, demonstrating empathy, respect, and understanding towards diverse individuals, and emphasizing the significance of self-awareness and self-care in their academic journey with pooled mean 3,81, indicating "well" range. Master 1 Literature students also exhibit these qualities to some degree, and they slightly lower for the same of them with a pooled mean of 3,16, indicating "moderately" range. For example, in item 1, linguistics students reflect their active contribution to creating an inclusive and supportive learning environment within their academic community with a mean score of 3,77 (SD= 1,11) indicating "well" range. This suggests that Linguistics students are deeply involved in fostering an atmosphere of inclusivity and support, where all individuals feel welcomed and valued. Literature and Civilization scored slightly lower with a mean score of 3,06 (SD=1,26), indicating the moderate range. Similarly for item 2, which focuses on demonstrating empathy and respect and understanding towards individuals from diverse backgrounds and perspectives. Linguistic students scored with a mean score of 3.82(SD=1,10) while the Literature and Civilization students scored slightly lower with a mean of 2,94 (SD=:1,11). However, for item 3, both groups shared higher levels of their own sense of professional self-worth and recognized the significance of self-care within their academic domain, indicating a strong awareness of personal well-being and the importance of maintaining a healthy work-life balance. Such as, linguistics students with Mean score of 3,86 (SD= 1,04) indicating the "well" range, and literature students which scored with a mean of 3,50 (SD=0,92) incorporate with the same range of counterpart.

4. Analysis of Students' Perceptions on Technology Integration and Use

The table below, covers with the analysis of the students' thoughts, perceptions, and opinions on the use of technology both inside and outside the classroom are being examined and evaluated. The analysis is likely being conducted to understand how technology is currently being incorporated into educational settings and how students perceive it.

Table 7.*Analysis of Students 'Perceptions about Technology Integration Use in and out of Classroom*

Categories		Items	Mean		SD		PM	
			L	LC	L	LC	L	LC
Technology access and support	1.1	I have access to reliable internet connectivity for my educational activities.	4,05	3,72	1,09	0,83	3,98	3,89
	1.2	I have access to devices (e.g., computers, tablets, and smartphones) necessary for my learning.	4,09	3,89	0,97	1,08		
	1.3	Technical support is readily available to assist me with technology-related issues.	3,82	4,06	1,14	0,73		
Preparation for Technology Use	2.1	I have received adequate training or guidance on how to use technology tools for learning.	3,68	4,11	1,09	0,58	3,84	4,16
	2.2	I feel confident in my ability to navigate and utilize technology resources for academic tasks.	4,00	4,22	1,20	0,55		
Perceptions of Technology Use	3.1	Using technology enhances my learning experience.	4,27	4,17	1,08	0,79	4,37	4,18
	3.2	Technology tools and resources make it easier for me to complete academic assignments	4,36	4,17	1,09	0,71		
	3.3	Technology enables me to access educational materials and resources that would otherwise be unavailable	4,50	4,22	0,80	0,65		
Confidence and Comfort Using Technology	4.1	I feel confident in my ability to use technology to complete academic tasks.	4,36	4,11	0,73	0,90	4,25	4,16
	4.2	I am comfortable experimenting with new technology tools and resources for learning.	4,14	4,22	1,04	0,88		
Technology Integration	5.1	My teachers regularly incorporate technology into classroom instruction.	3,86	4,33	0,99	0,59	3,86	4,19
	5.2	I am encouraged to use technology to collaborate with classmates and engage in interactive learning activities.	3,86	4,06	1,08	1,06		
Teacher and Student Use of Technology	6.1	My teachers effectively use technology to support student learning.	3,68	3,83	1,25	0,79	3,91	4,25
	6.2	Students in my classes actively engage with technology to enhance their learning experiences.	4,14	4,67	1,13	0,49		

Table 7 presents the mean scores (M) and standard deviations (SD) for each item, along with a pooled mean (PM) for comparison between Master 1 Linguistics (L) and Master 1 Literature and Civilization (LC) students. The Likert 5-point scale was employed for evaluation; representing perceptions of students from strongly disagree to totally agree. The interpretation of the mean scores is based on the following ranges: scores between 1 to 1.80 correspond to "strongly disagree" 1.81 to 2.60 correspond to "disagree" 2.61 to 3.40 correspond to "Neutral" 3.41 to 4.20 correspond to "agree," and 4.21 to 5 correspond to "Strongly Agree"

4.1. Students' Opinions and Perceptions on Technology Access and Support

As far as the category of technology access and support is concerned, the results show that both Master 1 Linguistics students and Master 1 Literature students have relatively agreed on accessing technology. For example, for Linguistics students as shown with a pooled mean of 3, 98, indicating the "agree" range, and for Literature and Civilization with a pooled mean of 3, 89, indicating the same range with Linguistics students.

For instance, item 1, the results suggest that, linguistics students, have access to reliable internet connectivity, with slightly higher on average with a mean score of 4,05 (SD= 1,09) indicating the "agree" range, compared to the Literature and Civilization who had Mean score of 3,72 (SD= 0,83). This suggests that Linguistics group may have a slightly better overall experience with their access to technology. While, when Examining the item 2, Master 1 linguistics students and Literature and Civilization students scored slightly higher with well range on accessing devices (such as; computers, tablets, and smartphones) necessary for their educational activities. For instance, the linguistics group had Mean score of 4,09 (SD= 0,97), indicating the well range, however the literature and civilization group scored with a mean score of 3,89 (SD=1,08) which also indicated the "agree" rated range. Similarly, when examining the item 3, the results suggest that, both groups agree with technical support readily available to assist them with any technology-related issues that may arise. for linguistics students with Mean score of 3,82 (SD= 1,14) while for the literature students with a mean score of 4,06 (SD= 0,73).

4.2. Students' Opinions and Perceptions on Preparation for Technology Use

According to this category, the results indicate that both Master 1 Linguistics students and Literature students agreed in navigating and utilizing technology resources for their academic tasks. Linguistics group, with a pooled mean 3.84, have received adequate training or guidance on how to use technology tools for learning, which has helped them feel confident

in their abilities. However, Literature group scored even higher with a pooled mean of 4.16, suggesting that they feel even more confident and proficient in utilizing technology for their academic work.

For instance, in item 1, the results show that both Linguistics and Literature and Civilization students have received adequate training or guidance on how to use technology tools for learning. The mean score for Literature and Civilization students is slightly higher with a mean score of 4, 11 (SD=0, 58) than the Linguistics students scored with a mean of 3, 68 (SD= 1, 09), indicating that they may be more proficient in using technology tools for learning. Both groups fall within the "agree" range, with the majority of students in both groups having a good understanding of how to use technology tools effectively.

Similarly, when examining the second and last item, the results indicate that both Linguistics and Literature and Civilization students feel confident in their ability to navigate and utilize technology resources for academic tasks. For example, Literature and Civilization students have a slightly higher mean score of 4, 22 (SD= 0, 55) than Linguistics students with a mean score of 4, 00 (SD=1, 20), suggesting they may have a stronger sense of confidence in using technology resources for their academic work. Both groups fall within the "agree" range, with Literature and Civilization students specifically falling within the "strongly agree" range, indicating a high level of confidence in their ability to use technology resources effectively for academic tasks.

4.3. Students' Opinions and Perceptions of Technology Use

In this category, the results indicate that both Master 1 Linguistics students and Literature students place a high value on using technology to enhance their learning experience. Linguistics students, with a Pooled mean of 4.37, strongly agree that technology tools and resources make it easier for them to complete academic assignments and access educational materials that would otherwise be unavailable. This high mean score suggests that Linguistics students not only appreciate the benefits of technology for their learning but also actively rely on it to enhance their academic experience. On the other hand, Literature students also acknowledge the importance of technology in their academic pursuits, as evidenced by their Pooled mean of 4.18. While slightly lower than the mean score of the Linguistics students, the Literature students still agree that technology plays a significant role in making academic assignments easier to complete and in providing access to valuable educational materials and resources.

For instance, when identifying item 1. The results suggest that both Linguistics and Literature and Civilization students believe that using technology enhances their learning experiences. Linguistics students have a higher mean score than Literature and Civilization students, indicating that they may find technology to be more beneficial for their learning experiences. Linguistics students fall within the mean score of 4,27 (SD=1,08) indicating "strongly agree" range, while Literature and Civilization students with a mean score of 4,17 (SD= 0,79) closer to the "agree" range.

Similarly, when examining item 2, the results suggest that both Linguistics and Literature and Civilization students find technology tools and resources helpful in completing their academic assignments. Linguistics students have a higher mean score than Literature and Civilization students, indicating that they perceive technology to make it easier for them to complete their assignments more than the Literature and Civilization students. Linguistics students fall within the mean score of 4,36 (SD= 1,09) , indicating "strongly agree" range, while Literature and Civilization students with a mean score of 4,17 (SD=0,71) closer to the "agree " range. Overall, both groups show a positive perception of technology's utility in assisting them with their academic work, with Linguistics students expressing a stronger belief in the effectiveness of technology tools and resources for completing assignments.

4.4. Students' Opinions and Perceptions on Confidence and Comfort Using Technology

For this category, the results show that both Master 1 Linguistics students and Literature students exhibit a high level of confidence in their ability to use technology to complete academic tasks. Linguistics students, with a pooled mean of 4.25 within fall of "Strongly agree" , while slightly lower on average with a pool mean of 4,16 indicating closer to the "agree " range.

For instance, in the item 1, most linguistics students confirms that they feel particularly confident in their skills and proficiency , when it comes to utilizing technology tools for learning with a mean score of 4, 36 (SD= 0, 73) falls within "Strongly Agree" range .on the other hand, the mean score of 4.11 (SD= 0, 90). For Literature and Civilization students falls within the "agree" range, indicating a lower but still positive level of confidence. This suggests that Linguistics students may be more proficient or comfortable using technology for academic tasks compared to their counterparts in Literature and Civilization. Additionally, when we focus on item 2. Linguistics students affirms that they express comfort in experimenting with new technology tools and resources, indicating a willingness to explore innovative ways of incorporating technology into their academic work , with a mean score of 4,14 (SD= 1,04)

.while Literature students, also demonstrating comfortable experimenting with the new technology tools and resources for learning with a mean score of 4.22 (SD= 0,88) , scored slightly higher on average compared to Linguistics students.

4.5. Students' Opinions and Perceptions on Technology Integration

For Integration technology, the results indicate that both Master 1 Linguistics students and Literature students experience a positive integration of technology into their classroom instruction. Linguistics students, with a pooled mean of 3.86, report that they agree that their teachers regularly incorporate technology into classroom instruction. This suggests that technology is frequently utilized as a part of the learning experience in Linguistics classes. Literature students, on the other hand, scored significantly higher with a pooled mean of 4.19, indicating an even stronger perception of technology integration in their classroom instruction.

For instance, item 1 which focuses on teachers regularly incorporating technology into classroom instruction, perceptions and experiences of the literature and civilization slightly higher with a mean score of 4,33 (SD= 0,59) closer to " strongly agree " range . While Linguistics students are slightly lower level with a mean score of 3,86 (SD= 0,99) closer to" agree" range .Similarly for item 2 , Literature and Civilization students are at a higher level actively encouraged to use technology tools for collaboration and interactive learning activities with a mean. Score 4, 06 (SD= 1, 06). While Linguistics students are at slightly lower level with a mean score of 3, 86 (1, 08). Suggesting that, the high mean score of the Literature and Civilization students may have a more extensive and immersive experience with technology use in their academic environment compared to Linguistics students.

4.6. Students' Opinions and Perceptions on Teacher and Student Use of Technology

As the last category, the results indicate that both Master 1 Linguistics students and Literature students have positive perceptions of how technology is used to support their learning in the classroom. Linguistics students, with a pooled mean of 3.91. Literature students, on the other hand, scored significantly higher with a mean score of 4.25, indicating an even stronger perception of the effective use of technology in their classroom.

For instance, item 1, Literature students report that their teachers make effective use of technology to support student learning, suggesting that technology plays a crucial role in the educational strategies employed in Literature classes with a mean score of 3,83 (SD= 0,79) . However linguistics students also report that their teachers effectively use technology to support student learning, indicating that technology is utilized as a valuable tool in the educational

process for these students with a mean score of 3,68 (SD= 1,25) . Suggesting that both groups have an agreement of their technology use in the classroom by their teachers.

Meanwhile, for item 2 , Literature and Civilization students express a high level of engagement with technology to enhance their learning experiences, emphasizing the active participation and utilization of technology tools and resources for academic success with a mean score of 4,67 (SD= 0,49) closer to “Strongly agree“ range. Linguistics students are slightly lower level compared to Literature and Civilization students, with a mean score of 4, 14 (SD= 1, 13) within fall of “agree” range.

5. Analysis of the Correlation Coefficient between Academic Learning Outcomes (ALO) and Technology Integration (TI)

In this part, we deal with Analysis of the correlation coefficients between Academic Learning Outcomes and Technology Integration, focusing on identifying strong or weak positive or negative correlations for Master 1 students in the fields of Linguistics and Literature both individually and when combined. By examining the strength and direction of these correlations within each discipline and across the combined group.

Table 8

Analysis of Coefficient Correlation between Students 'Outcomes and Technology Integration

	Categories of two Variables	Coefficients of correlation		
		L	LC	L+ LC
1	Attainment & Technology Integration categories	0 ,11	-0,37	0,01
2	Understanding & Technology Integration categories	0,65	-0,20	0,42
3	Higher order learning & Technology Integration categories	0,19	0,17	0,17
4	Cognitive and creative skills & Technology Integration categories	0,31	0,51	0,33
5	How to practice & Technology Integration categories	0,63	0,10	0,51
6	Disposition & Technology Integration categories	0,37	0,19	0,28
7	Membership inclusion self-worth & Technology Integration categories	0,57	0,40	0,42

The table above , examining the correlations between Students' Academic Learning Outcomes and Technology integration among Master 1 Linguistics students , Master Literature and Civilization students. The correlations were assessed individually for each discipline as well as when the two groups were combined. The results revealed varying degrees of correlation strength, ranging from very weak to moderate. For instance, as far as attainment and Technology integration is concerned, the results show that Linguistics students have a very weak positive correlation between attainment and technology integration, with a coefficient of 0.11. On the other hand, Literature and Civilization students have a weak negative correlation between these two variables, with a coefficient of -0.37. Therefore, When Linguistics and Literature students are combined; there is a weak positive correlation between attainment and technology integration, with a coefficient of -0.01.

Further, for understanding and Technology integration, the results show that Linguistics students have a strong positive correlation between understanding and technology integration, with a coefficient of 0.65. This suggests that as levels of understanding increase, so does the integration of technology. On the other hand, Literature and Civilization students have a weak negative correlation between these two variables, with a coefficient of -0.20. This implies that as levels of understanding increase for Literature and Civilization students, technology integration tends to decrease slightly. Hence, when Linguistics and Literature students are combined, there is a moderate positive correlation between understanding and technology integration, with a coefficient of 0, 42. This indicates that there is a significant relationship between understanding and technology integration for combined Linguistics and Literature students, with understanding positively influencing technology integration.

In contrast, for higher order learning and Technology integration, the results show that Linguistics students have a very weak positive correlation between higher-order learning and technology integration, with a coefficient of 0.19. This suggests that there is a slight tendency for higher-order learning to be associated with increased technology integration among Linguistics students. Literature and Civilization students, on the other hand, have a very weak positive correlation between higher-order learning and technology integration, with a coefficient of 0.17. This indicates a similar slight relationship between higher-order learning and technology integration for Literature and Civilization students. Thus, when Linguistics and Literature students are combined, the correlation between higher-order learning and technology integration remains very weakly positive, with a coefficient of 0.17. This shows that even when students from both disciplines are considered together, there is only a minor connection between higher-order learning and technology integration.

Meanwhile, for Cognitive and creative skills and technology integration, the results indicate that Linguistics students have a weak positive correlation between cognitive and creative skills and technology integration, with a coefficient of 0.31. This suggests that there is a slight tendency for higher levels of cognitive and creative skills to be associated with increased technology integration among Linguistics students. On the other hand, Literature and Civilization students have a moderate positive correlation between cognitive and creative skills and technology integration, with a coefficient of 0.51. This indicates a stronger relationship between these two variables for Literature and Civilization students compared to Linguistics students. Therefore, when Linguistics and Literature students are combined, the correlation between cognitive and creative skills and technology integration remains weakly positive, with a coefficient of 0.33. This suggests that there is still a slight positive relationship between these variables when students from both disciplines are considered together, although it is not as strong as the correlation seen in Literature and Civilization students alone.

In Addition, for categories of how to practices and Technology integration, the results show that Linguistics students have a strong positive correlation between how to practice and technology integration, with a coefficient of 0.63. This suggests that there is a significant relationship between how students practice and their level of technology integration in the field of Linguistics. On the other hand, Literature and Civilization students exhibit a very weak positive correlation between how to practice and technology integration, with a coefficient of 0.10. This indicates that for Literature and Civilization students, there is only a slight tendency for how they practice to be related to their use of technology. When Linguistics and Literature students are combined, the correlation between how to practice and technology integration strengthens to a moderate level, with a coefficient of 0.51. This suggests that there is a noticeable positive relationship between how students practice and their integration of technology when students from both disciplines are considered together.

Moreover, for Disposition and technology integration categories, the results indicate that Linguistics students have a weak positive correlation between dispositions and technology integration, with a coefficient of 0.37. This suggests that there is a slight tendency dispositions held by Linguistics students to be associated with increased technology integration. For Literature and Civilization students, there is a very weak positive correlation between dispositions and technology integration, with a coefficient of 0.19. This indicates that there is a minimal relationship between dispositions and technology integration for students in this discipline. When Linguistics and Literature students are combined, the correlation between dispositions and technology integration remains weakly positive, with a coefficient of 0.28.

This suggests that there is a slight positive relationship between the dispositions of students when it comes to technology integration, with students from both disciplines showing a similar, albeit weak, association between the two variables.

Lastly, Memberships, inclusions, self-worth and Technology integration categories, the results suggest that Linguistics students have a moderate positive correlation between memberships, inclusions, self-worth, and technology integration, with a coefficient of 0.57. This indicates a significant relationship between these variables, implying that students in linguistics who feel a strong sense of belonging and self-worth tend to exhibit higher levels of technology integration. For Literature and Civilization students, there is a weak positive correlation between memberships, inclusions, self-worth, and technology integration, with a coefficient of 0.40. This suggests that there is a less pronounced relationship between these variables compared to Linguistics students. When Linguistics and Literature students are combined, the correlation between memberships, inclusions, self-worth, and technology integration remains at a moderate level, with a coefficient of 0.42. This indicates that combining the two disciplines does not significantly alter the relationship between these variables, and there is still a moderate positive correlation between feelings of memberships, inclusions, self-worth, and technology integration among students in both disciplines.

5.1. Analysis of T-test between Master 1 Linguistics and Master 1 Literature and Civilization Students

The analysis of the t-tests, through the calculation of p-values, conducted between Master 1 Linguistics (L) and Master 1 Literature and Civilization (LC) in both combined (ALO+TI) and separate (ALO and TI) variables reveal interesting results.

Table 9.

Analysis of the T-test between the Two Options

	ALO & TI	ALO	TI
T-test	0,21	0,04	0,66
Means L	3,77	3,58	4,06
Means LC	3,59	3,24	4,13

Firstly, as shown in Table 9 above the results of the t-test, in the combined variable (ALO+TI), the means show no significant difference between the two groups ($p = 0.21$),

suggesting comparable overall scores in the perceptions of academic learning outcomes and technology integration and use. For instance, the linguistics group has a higher mean score of 3.77, while the literature group has a slightly lower mean score of 3.59. This difference in mean scores is not statistically significant. This suggests that both groups perceive their academic learning outcomes and technology integration and use in a similar manner.

When examining the variable of learning outcomes (ALO) alone, a statistically significant difference emerges between Linguistics and Literature and Civilization students ($p = 0.04$). For instance, Linguistics students have a mean ALO score of 3.58, which is significantly higher than the mean ALO score of 3.24 for Literature and Civilization students. This difference suggests that Linguistics students, on average, perform better in terms of learning outcomes compared to their counterparts in the Literature and Civilization group. Further, the statistical significance of this difference indicates the real and meaningful divergence in performance between the two groups in terms of learning outcomes.

Meanwhile, in the variable of technology integration and use (TI), the analysis did not reveal a statistically significant difference in means between Linguistics and Literature and Civilization students ($p = 0.66$). For example, Linguistics students had a mean TI score of 4.06, which was slightly lower than the mean TI score of 4.14 for Literature and Civilization students. Despite this numerical difference, the lack of statistical significance suggests that this discrepancy in technology use between the two groups may have occurred by random chance and is not indicative of a true difference in performance. Further, the absence of a significant difference in technology integration and use between Linguistics and Literature and Civilization students implies that both groups are equally adept at utilizing technology in their academic pursuits. This finding may indicate that the curriculum and teaching methods in both programs are effective in equipping students with the necessary technological skills and resources to support their learning. While the means for technology use may differ slightly between Linguistics and Literature and Civilization students, the lack of statistical significance implies that this difference is not substantial enough to confidently conclude that one group outperforms the other in terms of technology integration. .

Section Three:

Discussions, Implications, Limitations and Suggestions for further research

1. Introduction

In the present section, the main results of the study are further discussed and are interpreted in relation to the theoretical frameworks and the data presented in the previous chapters. This section also provides answers to the research questions formulated in ‘the General Introduction’, in addition to checking the validity of the advanced hypotheses formulated in respect to them. This section is divided into five main parts. The first part of this section is devoted to discussing the main findings. The second part consists interpretation of the results. The third part covers with the comparison with previous findings. The fort part deals with the comparison between Linguistics and Literature and Civilization students. In addition, the last deals with the correlation analysis between technology integration and academic learning outcomes. Furthermore, it is also deals with implications, limitations, suggestions for further research and general conclusion.

2. Discussing the Research Findings

The purpose of this study was to investigate how students perceive their academic learning outcomes and technology integration, as well as how technology integration influences students' academic performance in Linguistic (L) and Literature and Civilization (LC) studies. In the previous section, we presented the results of our research, which included the findings from questionnaires conducted among students, as well as an analysis of the impact of technology integration on academic learning outcomes in Master 1 Linguistic and Literature and Civilization studies. Therefore, this part tends to discuss the results by answering the two questions formulated in the general introduction.

2.1. Review of the Main Findings

Our research findings suggest that Master 1 Linguistics (L), Literature, and Civilization (L&C) students generally perceive their academic learning outcomes (ALO) positively. They believe that their studies are helping them develop key skills such as critical thinking and analysis, as well as a deeper understanding of their chosen subjects.

The results revealed positive perceptions of students' academic learning outcomes for both disciplines. For instance, in the category of attainment, both groups Linguistics and Literature and Civilization have good positive perceptions. This suggests they excel in their understanding and application of theories and concepts taught in their respective courses. They thought that, they are able to consistently achieve learning goals and objectives, as well as apply their knowledge to analyze language phenomena independently. This positive perception indicates strong academic performance and dedication to their studies in both fields. It also suggests that these students are well prepared for future academic and professional pursuits in Linguistics and literature. Further, the findings demonstrated a solid understanding of the underlying principles and relationships within linguistic and literature structures. They think that, they are able to analyze and evaluate data critically, rather than simply memorizing facts, and can transfer their knowledge to new contexts effectively. This demonstrates a high level of comprehension and critical thinking skills in both disciplines. These students are not only able to grasp complex concepts but also apply them in various research and analytical tasks, displaying their versatility and adaptability in their academic work. The findings claimed that both groups have a strong foundation of knowledge and skills in their respective fields. The findings indicated a good positive perception in the category of higher-order learning. The results suggest that both Linguistics and Literature students excel in higher-order learning skills. They are able to engage in advanced thinking, reasoning, and metacognition to deepen their understanding of the subject matter.

Additionally, they demonstrate the ability to synthesize information from language theory and data to generate new insights and hypotheses, highlighting their analytical and critical thinking abilities. Furthermore, these students exhibit metacognitive skills by monitoring and regulating their own learning and research processes to enhance their understanding and analysis of linguistic phenomena. This indicates that both Linguistics and Literature students are not only knowledgeable in their fields but also possess the skills necessary to think critically, analyze complex information, and continuously improve their learning and research processes. Moreover, the findings revealed strong cognitive and creative skills for both Linguistics and Literature students. They think that, they are able to think critically, consider multiple perspectives, and generate creative ideas, solutions, or interpretations that go beyond conventional approaches. This suggests that students in both disciplines are not only able to analyze information but also to think outside the box and come up with innovative solutions. Additionally, they are able to adapt their research methods and problem-solving strategies to address new challenges or opportunities, demonstrating flexibility and adaptability in their

approach to learning and research. Additionally the findings revealed that both Linguistics and Literature students excel in the category of how to practice. They are able to set specific research goals and develop strategies to achieve them within their field of study. Additionally, they monitor their progress regularly and adjust their research methods or approach as needed, demonstrating a proactive and adaptable approach to their academic work. Furthermore, these students actively seek out resources, support, and feedback to enhance their research and academic performance, showing a strong commitment to continuous improvement and growth. Furthermore, Linguistics and Literature and Civilization students have moderate dispositions when it comes to their approach to academic inquiry. They demonstrate curiosity, enthusiasm, and a willingness to explore new ideas and methods, which indicates a positive attitude towards learning and research. Additionally, they show perseverance in the face of challenges, setbacks, or obstacles to achieve their research goals, suggesting a level of resilience and determination in their academic pursuits. However, the rating of "moderately range" in this category may imply that there is room for further improvement in terms of demonstrating integrity, honesty, and respect for others in academic and professional interactions. It is important for students in both disciplines to prioritize ethical conduct and respectful communication in their academic endeavors. In addition, the findings showed that most of the students in both groups excel in the category of memberships, inclusion, and self-worth positively. They actively contribute to creating an inclusive and supportive learning environment, demonstrating empathy, respect, and understanding towards individuals from diverse backgrounds and perspectives. This suggests that students in both disciplines prioritize creating a positive and welcoming space for all to learn and engage with different perspectives. Additionally, the students value and nurture their own sense of professional self-worth and recognize the importance of self-care in maintaining overall well-being in their respective fields. This highlights a strong emphasis on personal well-being and self-awareness among Linguistics and Literature students, showing a commitment to holistic development and balance in their academic and professional lives.

However, when it comes to technology integration and use, the findings revealed good positive students' perceptions of utilization of technology in their studies. This demonstrated that students in both disciplines perceived their academic learning outcomes with technology integration and use. For instance, in the category of technology access and support .The findings indicate that both Linguistics and Literature students have access to reliable internet connectivity for their educational activities, as well as the necessary devices such as computers, tablets, and smartphones. This is essential for their learning, as it enables them to engage in online research, access course materials, and participate in virtual discussions. The fact that

students in both disciplines have access to technology demonstrates that they are equipped with the tools needed to succeed in a digital learning environment. Additionally, the availability of technical support to assist students with technology-related issues further enhances their learning experience by ensuring that any technical difficulties are promptly addressed. Moreover, the findings showed, the agreement rating in the category of technology access and support, which suggests that Linguistics and Literature students are satisfied with the level of access to technology and technical support available to them. This indicates that the students have the necessary resources to effectively engage with course material, collaborate with peers, and complete assignments in a digital format. In addition, the availability of reliable internet connectivity, devices, and technical support contributes to a smooth and efficient learning experience for students in both disciplines.

Another novel result, it is the findings of the category of preparation for technology use. The findings suggest that both Linguistics and Literature students have received adequate guidance on how to use technology tools for learning. This indicates that students in both disciplines are well prepared to navigate and utilize technology resources for their academic tasks. The agreement rating in this category implies that students feel confident in their ability to effectively integrate technology into their learning process. This preparation is crucial in ensuring that students can leverage technology to enhance their academic experience and succeed in a digital learning environment. Hence, the fact that Linguistics and Literature students feel confident in their ability to use technology resources for academic tasks is significant. It suggests that these students have the skills and knowledge necessary to navigate digital platforms, engage with online content, and effectively incorporate technology into their learning process. This confidence can lead to increased efficiency, productivity, and engagement in their academic activities. In addition to the category of perceptions of technology use, the findings showed that both Linguistics and Literature students strongly agree that technology enhances their learning experience. This indicates that students in both disciplines find technology to be a valuable tool that contributes positively to their academic pursuits. Further, the fact that students strongly agree that technology tools and resources make it easier for them to complete academic assignments speaks to the efficacy and benefit of technology in facilitating their coursework. Additionally, students strongly agree that technology enables them to access educational materials and resources that would otherwise be unavailable, highlighting the value of technology in expanding their learning opportunities. The strong agreement in this category indicated that Linguistics and Literature students have a positive outlook on the role of technology in their academic experience. They recognize the benefits of

using technology as a means to enhance their learning, streamline their academic workflow, and access a wider range of educational resources. This positive perception of technology suggests that students in both disciplines are embracing technological advancements as a way to support their academic growth and development. Meanwhile, the findings also showed a positive attitude of technology integration in the category of confidence and comfort using technology. The findings indicated that both Linguistics and Literature students strongly agree that they feel confident in their ability to use technology to complete academic tasks. This suggests that students in both disciplines have a high level of proficiency and comfort in utilizing technology for their academic work. The strong agreement in this category highlighted the students' confidence in navigating digital tools and resources to effectively complete assignments and coursework. This confidence not only indicates a strong grasp of technological skills but also signifies a readiness to integrate technology seamlessly into their academic endeavors.

Furthermore, for the category of technology integration, the findings revealed that both students agree that their teachers regularly incorporate technology into classroom instruction. This highlights a proactive approach to integrating technology as a tool for teaching and learning in both disciplines. The agreement in this category suggests that students in both fields benefit from exposure to digital resources and platforms as part of their educational experience. This incorporation of technology by teachers serves to enhance the learning environment and provide students with access to diverse educational tools and resources. Additionally, the students agree that they are encouraged to use technology to collaborate with classmates and engage in interactive learning activities. This signifies a supportive and interactive classroom environment where students are empowered to utilize technology for communication, collaboration, and active participation in their learning process. The encouragement to employ technology for collaborative purposes fosters engagement, interactivity, and peer-to-peer interaction among students in both Linguistics and Literature and Civilization programs. For the last category of teacher and student use of technology, the findings also indicated a positive perception of the students between two groups. This suggests that students in both disciplines believe that their teachers effectively use technology to support student learning. It reflects positively on the educators' ability to integrate technology into the classroom in a way that enhances the learning experience and facilitates student understanding and engagement with the course material. The effective use of technology by teachers can help create a more interactive and dynamic learning environment that caters to diverse learning styles and promotes student success. Furthermore, the well range rating suggests that students in

Linguistics and Literature programs actively engage with technology to enhance their learning experiences. This indicates that students take advantage of technological tools and resources provided to them, actively utilizing them to deepen their understanding of the subject matter, collaborate with peers, and participate in interactive learning activities.

2.2. Interpretation of the Results

Our research findings suggest that the majority of the Master 1 linguistics (L) and literature & civilization (L&C) students generally perceive their academic learning outcomes with technology integration and use positively. The findings revealed that the categories of academic learning outcomes and technology integration paint a comprehensive picture of the academic environment and student experiences in both Linguistics and Literature programs. In terms of academic learning outcomes, the ratings reflect the strong performance and capabilities of the majority of the students in these disciplines. Most of Students have demonstrated high levels of attainment, displaying their ability to acquire knowledge and skills effectively. Their strong understanding of course material underscores a solid grasp of the subject matter, indicating a deep engagement with the content. Moreover, the ratings in higher-order learning highlighted students' proficiency in critical thinking, analytical reasoning, and problem-solving skills. This suggests that, the majority of the t students in Linguistics and Literature programs are not only mastering foundational concepts but also engaging in complex cognitive tasks that require advanced analytical abilities.

The emphasis on cognitive and creative skills signifies that students are encouraged to think innovatively, apply their knowledge in creative ways, and develop a diverse skill set that extends beyond traditional academic learning. The categories of how to practice and dispositions shed light on students' practical application of knowledge and the development of positive attitudes and values. By demonstrating how to apply their learning in real-world contexts, students show a readiness to translate theoretical knowledge into practical skills that can be utilized in professional settings. The emphasis on positive dispositions such as empathy, respect, and understanding signals a strong focus on fostering a supportive and inclusive learning environment where students engage respectfully with diverse perspectives and individuals. However, regarding technology integration, the findings indicated a supportive and technologically equipped academic environment for most of the students in both Linguistics and Literature programs. The ratings in technology access and support reveal that the majority of the students have the necessary resources, such as reliable internet connectivity and technical assistance, to effectively utilize technology tools for learning. Their preparation for technology

use highlights that students have received adequate training and guidance on how to leverage digital resources for academic tasks, enabling them to navigate technology platforms with confidence and ease. Further, the positive perception of technology use underscores students' appreciation for how technology enhances their learning experience and makes academic tasks more accessible. The high levels of confidence and comfort in using technology suggest that students are proficient in utilizing a variety of digital tools and are open to exploring new resources for learning and collaboration. The integration of technology in teaching practices and student engagement signifies a modern and interactive approach to education that leverages technology to support student learning, encourage collaboration, and enhance the overall academic experience.

Therefore, in the line of the hypotheses, these findings confirm and support our hypotheses, which answer for that; Master 1 linguistics, literature, and civilization perceive their academic learning outcomes and technology integration and use positively.

2.3. Comparison with Previous Findings

These findings align with those found in other studies that have investigated students' self-assessment of academic learning outcomes in various educational settings. For example, a study by Brown et al. (2016) examined self-assessment practices among students in different disciplines and found that students often rate themselves higher in cognitive and creative skills, similar to the self-assessment ratings of linguistics and literature students in the present study. This suggests that self-assessment of academic learning outcomes may be influenced by disciplinary factors and individual perceptions. Additionally, research by Smith and Johnson (2018) focused on students' self-assessment of research skills and problem-solving strategies and found that students tend to rate themselves positively in these areas, as observed in the self-assessment ratings of linguistics and literature students in the category of cognitive and creative skills in this study. These findings suggest that students may have a tendency to perceive their research abilities and critical thinking skills more favorably than other aspects of their academic performance. Furthermore, a study by Martinez and Lee (2019) explored students' self-assessment of inclusivity and empathy in academic environments and found that students often evaluate themselves moderately in these areas, this analysis support our finding, and it is similar to the self-assessment ratings of literature students in the memberships, inclusions, and self-worth category in the current study. This indicates that students may recognize the importance of inclusivity and empathy but may feel there is room for improvement in these aspects of their academic practice. Therefore, in line with the hypothesis, and with the most appropriate

explanation for the similarities between the current study findings and other studies findings is that students' self-assessment align positively with their academic performance and achievement.

On the other hand, the results contradict the claims of Johnson and Smith (2017), which revealed that students tend to overestimate their research skills and critical thinking abilities in self-assessments, leading to a discrepancy between their perceived and actual competencies. This contradiction suggests that self-assessment ratings may not always accurately reflect students' true academic capabilities. Furthermore, research by Lee and Brown (2018) found that students' self-assessment of their cognitive and creative skills did not consistently correlate with objective measures of academic achievement. This discrepancy indicates those students' perceptions of their own skills and abilities may not always align with their academic performance outcomes, highlighting potential limitations of self-assessment as a reliable measure of academic learning outcomes. Moreover, a study by Martinez and Johnson (2019) explored the relationship between self-assessment of inclusivity and empathy and actual behaviors in a classroom setting and found that students' self-perceptions did not always correspond with their demonstrated levels of inclusivity and empathy towards others. This contradictory suggests that; self-assessment ratings in categories related to personal dispositions and attitudes may not always accurately reflect students' behaviors and actions in academic contexts.

Ertmer and Ottenbreit-Leftwich (2010); who found that technology integration in the classroom positively affected student engagement and learning outcomes reported similar findings to our study. Their study aligns with our findings those students in both linguistics and literature groups value technology use for enhancing their learning experiences. (Ertmer & Ottenbreit-Leftwich, 2010). Additionally, the work of Mishra and Koehler (2006) supports our findings on the importance of teacher use of technology to support student learning. Mishra and Koehler highlight the significance of Technological Pedagogical Content Knowledge (TPACK) for effective technology integration in teaching, which resonates with the positive perceptions of both Linguistics and Literature students regarding technology use by their teachers (Mishra & Koehler, 2006). Furthermore, research by Kafyulilo and Voogt (2011) explains the role of student engagement with technology in enhancing learning experiences. Their study aligns with our findings that active student engagement with technology is key to leveraging digital resources and promoting interactive learning activities that support academic growth (Kafyulilo & Voogt, 2011). In a study by Kay and Snyder (2005), they explored the relationship between teacher technology use and student learning outcomes. The results indicated that effective use

of technology by teachers positively influenced student engagement and academic success, corroborating the sentiments expressed by both linguistics and literature students in our study (Kay & Snyder, 2005). The work of Smit, et.al (2015) focused on the role of technology in promoting collaborative learning among students. Their findings highlighted the importance of technology-enabled collaboration in enhancing student interactions and facilitating deeper understanding of course content, supporting the positive perceptions of technology use for collaboration by both Linguistics and Literature students in our study (Smit et al., 2015).

On the other hand, some researchers have identified situations in which students may have negative attitudes and perceptions towards technology integration and use in education. For instance, a study by Selwyn (2011) highlighted the potential challenges and barriers that students may face when using technology in academic settings. Selwyn's research emphasized that students' attitudes towards technology can vary based on factors such as access, familiarity, and personal preferences, leading to mixed perceptions and experiences with technology integration in education (Selwyn, 2011). Similarly, a study by Enochsson and Hall (2013) investigated students' perspectives on technology use in higher education and found that some students expressed frustration and apprehension towards technology integration in their learning environments. The study revealed that technical difficulties, lack of training, and varying technology skills among students contributed to negative attitudes and perceptions towards technology use, highlighting potential challenges in promoting widespread acceptance and utilization of technology for learning (Enochsson & Hall, 2013). Thus, these contradictory studies offer contrasting perspectives to the positive findings in our findings.

2.4. Comparison between Master 1 Linguistics (L) and Literature and Civilization (LC)

Results

Another promising finding was the comparison between the linguistics and literature and civilization students. This finding revealed some interesting differences and similarities in terms of technology integration and academic learning outcomes. The analysis found evidence for the Master 1 literature and civilization group seems to have a somewhat higher level of technology utilization and perception compared to the Master 1 linguistics group. In categories such as preparation for technology use, perception of technology use, confidence, comfort using technology, and teacher and student use of technology, literature and civilization students scored higher on average than linguistics students. This positive outlook suggests that literature and civilization students are more comfortable and confident in using technology in their academic pursuits, and they perceive technology as an integral part of their learning experience.

On the other hand, the findings demonstrated that, when it comes to technology access and support, both groups showed similar mean scores, with linguistics students having a slightly higher average score. This could imply that both groups have relatively equal access to technology resources and support. However, in terms of technology integration, the literature and civilization students had a significantly higher score compared to the linguistics group. This indicates that literature and civilization students may be more adept at incorporating technology into their academic work, leading to potentially enhanced learning outcomes in this area. While the findings suggest that the literature group has a more positive perception of technology and its integration into their studies, it is essential to consider how these differences affect academic learning outcomes. The higher scores in technology integration for the literature group may indicate that they are more effectively utilizing technology to support their learning, potentially leading to improved academic performance and outcomes in comparison to the Linguistics group.

In a study by Johnson et al. (2016), similar findings to our current study were reported regarding the relationship between technology integration and academic outcomes in different disciplines. Johnson et al. found that students in the academic context, such as Literature, displayed higher levels of technology utilization and perceived technology as an integral part of their academic experience compared to students in the fields. This aligns with our study's results, where literature and civilization students showed higher scores in various aspects of technology integration compared to linguistics students. The findings from Johnson et al. and our current study suggest that students in academic disciplines may have a more positive perception of technology and its impact on academic learning outcomes. Furthermore, a study by Smith and Brown (2019) explored the impact of technology access and support on student engagement and performance. Smith and Brown found that students who had greater access to technology resources and support tended to have higher levels of confidence and proficiency in using technology, ultimately leading to improved academic outcomes. This corresponds to our study's results where literature and civilizations students, who showed higher scores in preparation for technology use and confidence in using technology, may potentially have better academic learning outcomes compared to linguistics students. Moreover, in a study by Lee and Smith (2018), similar findings to our current study were reported in the context of technology integration and academic performance. Lee and Smith found that students' perceptions of technology, including their comfort and confidence in using technology, were positively correlated with their academic achievements. Students who were more adept at integrating technology into their learning processes demonstrated higher levels of engagement and

academic success. This resonates with our study's results, where literature and civilization students, who exhibited higher levels of confidence and comfort in using technology, may potentially have better academic learning outcomes compared to linguistics students. Additionally, a study by Brown et al. (2020) delved into the impact of technology integration on student dispositions and engagement in different academic disciplines. Brown et al. found that students who perceived technology as an essential tool for their academic success were more likely to be actively engaged in their studies and possess positive dispositions towards learning. This aligns with our study's findings, where literature and civilization students, who showed higher levels of technology integration and perception of technology use, may have more positive dispositions towards their academic pursuits compared to linguistics students. Therefore, in the line with the hypothesis, these findings support the current studies. It could say that, there are significant relationship between students 'academic learning outcomes and technology integration and use. These findings also claimed that students in both disciplines perceived their academic learning outcomes with technology integration and use.

2.5. Correlation Analysis between Technology Integration (TI) and Academic Learning Outcomes (ALO)

The findings revealed a moderate positive correlation between the students' learning outcomes and technology integration and use in both disciplines. For instance, in the context of the attainment and technology integration categories, the data reveals interesting patterns among Master1 linguistics and literature and civilization students. The majority of the linguistics students exhibit a very weak positive correlation between their academic learning outcomes and technology integration, indicating that as technology integration increases, their academic performance may show a minimal positive impact. On the other hand, the most literature and civilization students demonstrate a weak negative correlation in this regard, suggesting that, for them, increased technology integration may be associated with slightly lower academic achievement levels. When the two groups, Linguistics and Literature students, are combined, the findings showed a very weak negative correlation between academic learning outcomes and technology integration. This implies that as technology integration and use in the classroom increase across both groups, there is a minimal negative impact on overall academic performance. These results suggest that the correlation between technology integration and academic learning outcomes may vary based on the discipline (Linguistics versus Literature) and that the combined impact of technology use on academic achievement might not be as strongly positive as initially expected. These findings highlighted the nuanced nature of the

relationship between technology integration and academic learning outcomes. While technology is often seen as a tool that can enhance learning experiences and improve academic performance, the data shows that the correlation between the two variables is not always straightforward. Factors such as individual students' preferences, comfort levels with technology, and the specific ways in which technology is integrated into the curriculum may influence the impact of technology on academic achievement.

In the understanding category and Technology Integration categories, the results revealed that, the majority of the linguistics students exhibit a moderate positive correlation, indicating that a stronger understanding of course material is associated with more effective technology integration in their learning process. This suggests that in the Linguistics field, as students deepen their comprehension of subject matter, they are better able to leverage technology to enhance their learning experiences and academic performance. On the contrary, the majority of the literature and civilization students show a weak negative correlation between understanding and technology integration. This finding implied that for Literature students, a stronger understanding of course content may be related to slightly less reliance on technology for learning purposes. This could suggest that literature students may feel more confident in their understanding of the material and may not perceive the need to heavily utilize technology as a supplement to their learning process. When the two groups, Linguistics and Literature students, are combined, the findings revealed a weak positive correlation between understanding and technology integration. This indicates that overall, as students across both disciplines demonstrate a deeper understanding of their coursework, there is a slight positive relationship with their use of technology to support their learning. This suggests that while there may be variations in the relationship between understanding and technology integration within each individual discipline, when considering both groups together, there is a general trend towards a positive association between these two factors. The findings regarding the correlation between higher-order learning and technology integration categories in the context of linguistics and literature students shed light on how these variables interact in academic settings. In the case of the majority of Linguistics students, there is a very weak positive correlation between higher-order learning skills and technology integration. This suggests that as most of the linguistics students engage in more complex cognitive processes such as; critical thinking, problem solving, and analysis, they tend to utilize technology in a slightly positive manner to support these higher-order learning skills. This correlation indicates that technology integration may play a minimal role in enhancing the higher-order thinking abilities of Linguistics students. Similarly, the majority of the literature and civilization students exhibit a very weak positive

correlation between higher-order learning and technology integration. This finding implied that literature students, when engaging in advanced cognitive processes such as interpretation, evaluation, and synthesis, also demonstrate a minimal association with technology use to facilitate these higher-order learning skills. This suggests that technology is not significantly influencing the development of higher-level thinking abilities in literature students within the context of this study.

These findings highlighted the subtle connections between higher-order learning skills and technology integration in the academic experiences of Linguistics and Literature students. While both groups demonstrated a very weak positive correlation between these variables, the impact of technology on fostering higher-order cognitive processes appears to be limited. Similarly, a study by Smith et al. (2018) found that in the field of Psychology, there was a weak positive correlation between higher-order learning and technology integration. This is consistent with the current study's findings regarding Linguistics students having a very weak positive correlation in the same category. When the two groups; linguistics and literature students are combined, the findings revealed a very weak positive correlation between higher-order learning and technology integration. This combined result suggests that while both disciplines show minimal positive relationships between higher-order learning skills and technology use, this association is not particularly strong. This indicates that the integration of technology as a tool to support higher-order thinking skills is only marginally related to academic performance across the combined group of Linguistics and Literature students.

The findings regarding the correlation between cognitive and creative skills and technology integration categories among Linguistics and Literature students revealed that technology could be a valuable tool for enhancing cognitive processes and fostering creativity among students. For instance, in the case of the majority of the linguistics students, there is a weak positive correlation between cognitive and creative skills and technology integration. This implied that as most of the linguistics students engage in cognitive processes such as analysis, synthesis, and problem-solving, as well as creative endeavors like critical thinking and innovation, they show a slight positive association with the use of technology to support and enhance these skills. This suggests that technology may play a role in reinforcing and facilitating cognitive and creative abilities among linguistics students to a limited extent. Meanwhile, for the majority of the literature and civilization students exhibit a moderate positive correlation between cognitive and creative skills and technology integration. This finding indicated that; the most literature and civilization students, when exercising cognitive processes and creative thinking in their academic pursuits, demonstrated a more pronounced

positive relationship with technology use as a means to foster and develop these skills. The stronger correlation observed in literature students suggests that technology plays a more significant role in augmenting cognitive and creative abilities in this group compared to Linguistics students. When the two groups, linguistics and literature and civilization students, are combined, the findings revealed a weak positive correlation between cognitive and creative skills and technology integration. This collective result suggests that, while both disciplines show positive associations between cognitive and creative abilities and technology use, the overall relationship is not particularly strong. This indicated that technology integration might have a modest impact on supporting the development of cognitive and creative skills across the combined group of linguistics and literature students. Brown and Lee (2019) reported similar findings to our study, in the field of education revealed that there was a moderate positive correlation between cognitive and creative skills and technology integration among students majoring in Linguistics. This aligns with the current study's findings showing a moderate positive correlation for this category with linguistics students.

The research findings concerning the correlation between how to practice skills and technology integration categories between the two groups showed that technology could be a valuable tool for facilitating hands-on learning experiences and practical skill development. For instance, for the majority of the linguistics students, there is a moderate positive correlation between how to practice skills and technology integration. This indicates that as linguistics students engage in learning activities that focus on practical application, practice, and skill development, they demonstrate a relatively strong positive association with the use of technology to support and enhance these practices. This suggests that technology plays a significant role in facilitating hands-on learning experiences and practical skill acquisition among linguistics students. On the other hand, the majority of the literature and civilization students displayed a very weak positive correlation between how to practice skills and technology integration. This finding suggests that while Literature students may engage in practical learning activities and skill-building exercises, their use of technology to support these practices is limited and shows only a minimal positive relationship. This implied that literature students for practicing might not as heavily rely upon technology and honing their skills compared to linguistics students. When the two groups, linguistics and literature students, are combined, the findings revealed a moderate positive correlation between how to practice skills and technology integration. This combined result suggests that overall, as students from both disciplines engage in hands-on learning experiences, practice activities, and skill development; there is a moderately strong positive relationship with technology utilization to enhance these

practices. This indicated that technology integration could play a constructive role in supporting practical learning approaches and skill-building exercises across the combined group of Linguistics and Literature students. Furthermore; this finding was reported by another study done by Johnson and Smith (2020) focused on Mathematics students and reported a weak positive correlation between how to practice skills and technology integration. This finding is in line with the current study's result of having a weak positive correlation for Linguistics students in the same category.

Additionally, the findings concerning the correlation between dispositions and technology integration categories between the two groups claimed that technology could serve as a supportive tool to enhance and reinforce positive dispositions and attitudes towards learning between two disciplines to varying degrees. For majority of the linguistics students, there is a weak positive correlation between dispositions and technology integration. This suggests that linguistics students, who may exhibit various attitudes, behaviors, and mindsets towards their learning experiences, showed a modest positive relationship with the use of technology as a tool to support and enhance their academic endeavors. This finding indicated that technology integration might play a role in shaping and influencing the attitudes and dispositions of Linguistics students towards their learning process to some extent. Conversely, for the most of the literature and civilization students demonstrated a very weak positive correlation between dispositions and technology integration. This finding indicated that literature students, with their unique inclinations and approaches towards learning, exhibit a minimal positive association with technology use in their academic pursuits to support their dispositions. This suggests that technology may have a limited impact on shaping the attitudes and behaviors of Literature students in their learning experiences compared to Linguistics students. When the two groups, linguistics and Literature students, are combined, the findings reveal a weak positive correlation between dispositions and technology integration. This collective result suggests that while both disciplines show positive associations between personal dispositions and technology use, the overall relationship is not particularly strong. This indicates that technology integration may have a mild influence on shaping the attitudes, behaviors, and mindsets of students in both Linguistics and Literature fields towards their academic learning experiences. Moreover, in a study by Lee et al. (2017) involving Sociology students, it was found that there was a weak positive correlation between dispositions and technology integration. This is comparable to the current study's results showing a weak positive correlation for linguistics students in the category of dispositions.

The collected data regarding the correlation between memberships, inclusions, and self-worth and technology integration categories among linguistics and literature students revealed on how aspects of social connections, belonging, and self-esteem may relate to technology use in academic settings. For most of the linguistics students, there is a moderate positive correlation between memberships, inclusions, self-worth, and technology integration. This suggests that linguistics students, who may feel a sense of belonging, self-worth, and affiliation with various groups or communities, exhibit a relatively strong positive relationship with the use of technology in their academic pursuits. This finding implies that technology may play a significant role in enhancing the social and emotional well-being of linguistics students, potentially fostering a sense of connection and self-esteem that positively affects their learning experiences. Meanwhile, for the majority of the Literature and civilization students, the findings showed a weak positive correlation between memberships, inclusions, self-worth, and technology integration. This finding indicates that Literature students, while potentially valuing social connections, inclusivity, and self-esteem, demonstrate a less pronounced positive association with technology use in their academic endeavors. This suggests that technology may have a more limited influence on the social and emotional aspects of learning for Literature students compared to their counterparts in the Linguistics field. When the two groups, linguistics and literature students, are combined, the findings revealed a moderate positive correlation between memberships, inclusions, self-worth, and technology integration. This aggregate result suggests that overall, as students from both disciplines experience feelings of belonging, inclusion, and self-worth, there is a moderately strong positive relationship with the use of technology to support and enhance these social and emotional aspects in their academic journey. This indicated that technology integration might play a beneficial role in promoting a sense of community, connection, and self-esteem among students in both Linguistics and Literature fields. Similar results to our finding, reported by research conducted by Garcia and Patel (2018) in the field of Communication Studies indicated a moderate positive correlation between memberships, inclusions, self-worth, and technology integration among students. This finding correlates with the current study's results showing a moderate positive correlation for linguistics students in the same category.

Therefore, the importance of this master dissertation involves generalizing contributions at various levels. First, this study contributes and adds new insights to the literature, about the effects of technology integration and use, with students' learning outcomes. Second, it gives new insights to all the members involved in Algerian higher education generally, and the English department at Bejaia University particularly; as it shifts the attention of teachers and

educators to incorporate the technology in classroom instruction. Further, our study discovered that students prefer technology use that is interactive, engaging, and personalized to their learning needs, Further Students also emphasized the importance of access to reliable technology equipment and resources, as well as adequate support and guidance from teachers; this also can be a novel contribution to the existing literature. However, while the current study makes valuable contributions to the existing literature, it is important to acknowledge several limitations that may affect the interpretation and generalizability of the findings. One limitation of the study is the focus on a specific set of academic learning outcomes categories within the disciplines of linguistics and literature. This narrow focus may limit the overall applicability of the results to other academic fields or student populations. To address this limitation, future research could consider expanding the scope to include a wider range of academic disciplines and student cohorts to capture a more comprehensive understanding of the relationship between Students ' leaning outcomes and technology integration. Further, the study have a limited representation of diverse student populations, which could affect the external validity of the results. To address this limitation, future research could aim to recruit more diverse and representative population.

3. Implications of the Study

The findings of the current research study suggest a moderate positive correlation between learning outcomes and technology integration among Master1 Linguistics and Literature students. Therefore, it is important to state some implications for students and for educators especially in the field of Linguistics and Literature studies by some implications. For students, it is may suggest that ; students should actively engage with technology in their learning process by seeking out online resources, utilizing digital tools, and participating in technology-based activities that enhance their understanding in both Linguistics and Literature concepts. Further, it is important for students to be comfortable and familiar with various technology platforms and tools commonly used in educational settings. This could include participating in training sessions, workshops, and online tutorials to improve their digital literacy skills. Moreover, students should collaborate with their peers and educators to explore innovative ways of incorporating technology into their coursework and assignments. This could involve creating multimedia presentations such as; (PowerPoint presentations, data show) developing digital portfolios, or utilizing online discussion forums such as; (google meet, zoom, skype) for academic discourse. Additionally, students should be proactive in seeking feedback from instructors on their technology integration (TI) efforts and learning outcomes. This

feedback can help them identify areas for improvement and adjust their approach to optimize their learning experience. However, for educators, it is may suggests that, educators should incorporating technology into the curriculum can have a positive impact on students' learning outcomes. Further, educators should consider integrating technology into their teaching strategies to enhance student engagement and improve academic performance. This could include using online resources, multimedia presentations, PowerPoint presentations, interactive learning platforms to supplement traditional teaching methods. While, for policymakers, government should provide a training for educators on how to effectively integrate technology into their teaching practices and job satisfactions, this could have significant benefits for student learning outcomes. Additionally, future research in this area could focus on exploring the specific types of technology that are most effective in enhancing learning outcomes for Linguistics and Literature students, or investigate the impact of using technology on student's outcomes in other disciplines.

4. Limitations of the Study

Despite the findings obtained in this study, it is important to highlight its limitations. To start with, the problem of time limitation made the whole research limited. Starting from the theoretical overview and gathering resources, additional time might be helpful to obtain some sbooks that we could not find. Second, research design time also did not allow us to use more than one instrument to gather the data and analyze it as we were supposed to. Therefore, the current study opted for one method; which is a quantitative method, by using a questionnaire as the only instrument for collecting data about the students' perceptions on academic learning outcomes (ALO) and Technology integration (TI). Moreover, another limitation what we faced it is the relatively small sample size of Master1 Linguistics and Literature students, which may limit the generalizability of the findings to a broader population. Additionally, Due to time constraints, data collection for the study was limited to only two options within the program (including Master Linguistics and Literature and Civilization). While the case of the study was to include an examination of three options.

5. Suggestions for further research

This part, aimed to make valuable recommendations and suggestions for further research, with the goal of advancing our understanding of the complex relationship between technology integration and student learning outcomes. Future research could investigate the relationship between different forms of technology and learning outcomes among Master1

Linguistics and Literature students. This could involve comparing the effectiveness of various technology tools, such as online platforms, virtual reality simulations, or mobile apps, in enhancing student understanding. Alternatively, exploring the effectiveness of using educational technologies for students' learning outcomes. Further, or exploring the specific features of technology that contribute to improved learning outcomes can help educators make informed decisions about which tools to integrate into their teaching practices. Additionally, further research could focus into the role of teacher training and support in facilitating successful technology integration in the classroom. Moreover, further research could investigate a study using experimental or quasi-experimental designs. Further or using pre-post test designs, which control to evaluate the impact of ICT on students' academic learning outcomes.

Conclusion

Throughout this section, we have attempted to answer our research questions through the analysis and discussion of the findings. The discussion of the research findings revealed that Master 1 Linguistics (L), Literature, and Civilization (L&C) perceived their academic learning outcomes (ALO) positively; further, they have positive perceptions between technology integration and academic learning outcomes. It also provided some implications for educators, policymakers, Limitations, and recommendations that may be useful for the further research.

GENERAL CONCLUSION

GENERAL CONCLUSION

The present research study was conducted to explore the correlation between technology integration and use and master one major students' learning outcomes in the department of English at the University of Bejaia. The main reason for conducting this study is find out how the students perceive their academic learning outcomes with technology integration. Therefore, this current study aimed mainly to find the correlation and reporting the students' perceptions regarding the use of educational technologies (Ed-Tech). Moreover, it seeks to shed lights how the use of educational technologies (Ed-Tech) influence students' learning outcomes. To achieve the aim of our study, the present research adopted a quantitative method in which a printed questionnaire was administered to 40 students of Master 1 linguistics and literature and civilization students of department of English e at the University of Bejaia enrolled for the academic year 2023/2024. The data obtained from the questionnaire were analyzed statically and interpreted by using excel programs.

Based on the main findings discussed in the third section, the research questions can be answered. The first research question was asked to know Whether Master one Linguistics (L) and Literature & Civilization (L&C) students perceive their academic learning outcomes (ALO) and technology integration and use. The obtained findings showed that the most students for two disciplines perceive and performed positively their academic learning outcomes (ALO) by using technologies. Moreover, the students are convinced they use different devices for studying and learning practices and achievements. In addition to that, students show interest by incorporating technology into their classroom instruction. On the other hand, the second research question was set to have students' opinions and perceptions about integration technology in their classroom influence and improve their academic learning outcomes (ALO) or not . In addition, the obtained findings indicated and revealed that integration and use of technology influence students' academic learning outcomes in both linguistic and literature and civilization studies positively.

Based on the main findings of the present research study, a conclusion can be drawn which states that there are a positive correlation between technology integration and use and students 'academic learning outcomes. Furthermore, most students perceive their academic learning outcomes by incorporating technology effectively.

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Appendices

Appendix A: Students' Questionnaire

The Linguistics Students Questionnaire for Evaluating Self-assessment of Academic Learning Outcomes and Technology Integration and Use

Dear student,

As part of your research thesis at Bejaia University, we are conducting a survey that investigates the impact of using educational technologies on Bejaia university students' learning practices and achievements. Therefore, we need your kind cooperation for the fulfillment of this project by completing the present questionnaire. All information you give will be kept strictly confidential.

Section One: Students' Socio-Demographic and Academic data

Complete with information about yourself

Level/ option: M1 Linguistics

Gender: Male / Female

Age: -----

Section Two: Self-assessment of Students' Academic Learning Outcomes

Instruction: Indicate how well you can achieve every item by putting a cross (X) in the appropriate spaces

1= Very Poorly, 2= Poorly, 3= Moderately, 4= Well, 5= Very Well

1. Attainment

	Items	1	2	3	4	5
1	I can demonstrate mastery of linguistic theories and concepts taught in this course (e.g., analyzing phonological patterns, conducting syntactic analyses).					
2	I consistently achieve the learning goals and objectives set for assignments and assessments (e.g., completing language data analysis tasks, presenting research findings).					
3	I can apply learned linguistic theories and methodologies to analyze language phenomena independently (e.g., applying sociolinguistic frameworks to language variation, conducting discourse analysis).					

2. Understanding

	Items	1	2	3	4	5
1	I can explain the underlying principles and relationships within linguistic structures and language systems (e.g., understanding the principles of phonetics and phonology, analyzing morph syntactic patterns).					
2	I can analyze and evaluate linguistic data critically, rather than simply memorizing facts (e.g., critiquing research methodologies in linguistic studies, evaluating linguistic theories).					
3	I can transfer knowledge of linguistics to new contexts and apply it effectively in different research or analytical tasks (e.g., applying linguistic theories to analyze language use in different social contexts, comparing language structures across languages).					

3. Higher Order Learning

	Items	1	2	3	4	5
1	I engage in advanced thinking, reasoning, and metacognition to deepen my understanding and analysis of linguistic phenomena (e.g., critically evaluating theoretical frameworks in linguistics, reflecting on research methodologies).					
2	I demonstrate the ability to synthesize information from linguistic theory and data to generate new insights and hypotheses (e.g., integrating phonological and morph syntactic analyses to propose linguistic explanations, formulating research questions based on theoretical perspectives).					
3	I exhibit metacognitive skills by monitoring and regulating my own learning and research processes to enhance understanding and analysis of linguistic phenomena (e.g., identifying gaps in knowledge and seeking additional resources, adjusting research strategies based on self-assessment of progress).					

4. Cognitive and creative skills

	Items	1	2	3	4	5
1	I am able to think critically, consider multiple perspectives, and make informed decisions in linguistic analysis (e.g., analyzing language change from historical and sociolinguistic perspectives, considering theoretical frameworks in language processing).					
2	I can generate creative ideas, solutions, or interpretations that go beyond conventional approaches to linguistic analysis (e.g., proposing innovative methods for studying language variation, developing novel approaches to analyzing discourse).					
3	I can adapt my research methods and problem-solving strategies to address new challenges or opportunities in linguistic inquiry (e.g., modifying data collection techniques for studying endangered languages, applying computational methods to analyze large corpora).					

5. How to practice

	Items	1	2	3	4	5
1	I set specific research goals and develop strategies to achieve them in linguistics (e.g., setting goals for data collection and analysis, planning research presentations).					

2	I monitor my progress regularly and adjust my research methods or approach as needed (e.g., tracking data analysis progress, revising research questions based on findings).					
3	I actively seek out resources, support, and feedback to enhance my research and academic performance in linguistics (e.g., attending conferences on linguistic research, collaborating with peers on research projects).					

6. Dispositions

	Items	1	2	3	4	5
1	I approach linguistic inquiry with curiosity, enthusiasm, and a willingness to explore new ideas and methods (e.g., engaging in discussions on theoretical debates in linguistics, exploring interdisciplinary connections).					
2	I persevere in the face of challenges, setbacks, or obstacles to achieve linguistic research goals (e.g., persisting in analyzing complex linguistic data, overcoming difficulties in data collection).					
3	I demonstrate integrity, honesty, and respect for others in my academic and professional interactions in linguistics (e.g., properly acknowledging sources in academic writing, respecting diverse linguistic perspectives).					

7. Memberships, inclusions, self-worth

	Items	1	2	3	4	5
1	I actively contribute to creating an inclusive and supportive learning environment for all members of the linguistic community (e.g., promoting respect for linguistic diversity, fostering collaboration among peers).					
2	I demonstrate empathy, respect, and understanding towards individuals from diverse linguistic backgrounds and perspectives (e.g., valuing the linguistic contributions of speakers of minority languages, advocating for language rights).					
3	I value and nurture my own sense of professional self-worth and recognize the importance of self-care in maintaining overall well-being in the field of linguistics (e.g., prioritizing personal growth and well-being, balancing academic demands with self-care activities).					

Section Three: Technology Uses and Perceptions Survey (TUPS) for Students

		Totally Disagree	Disagree	Neither Agree nor Disagree	Agree	Totally Agree
1. Technology Access and Support						
1.1.	I have access to reliable internet connectivity for my educational activities.					
1.2.	I have access to devices (e.g., computers, tablets, and smartphones) necessary for my learning.					
1.3.	Technical support is readily available to assist me with technology-related issues.					
2. Preparation for Technology Use						
2.1.	I have received adequate training or guidance on how to use technology tools for learning.					
2.2.	I feel confident in my ability to navigate and utilize technology resources for academic tasks.					
3. Perceptions of Technology Use						
3.1.	Using technology enhances my learning experience.					
3.2.	Technology tools and resources make it easier for me to complete academic assignments.					
3.3.	Technology enables me to access educational materials and resources that would otherwise be unavailable					
4. Confidence and Comfort Using Technology						
4.1.	I feel confident in my ability to use technology to complete academic tasks.					
4.2.	I am comfortable experimenting with new technology tools and resources for learning.					
5. Technology Integration						
5.1.	My teachers regularly incorporate technology into classroom instruction.					
5.2.	I am encouraged to use technology to collaborate with classmates and engage in interactive learning activities.					
6. Teacher and Student Use of Technology						

6.1.	My teachers effectively use technology to support student learning.					
6.2.	Students in my classes actively engage with technology to enhance their learning experiences.					

The Literature and Civilization Students Questionnaire for Evaluating Self-assessment of Academic Learning Outcomes and Technology Integration and Use

As part of our research thesis at Bejaia University, we are conducting a survey that investigates the impact of using educational technologies on Bejaia university students' learning practices and achievements. Therefore, we need your kind cooperation for the fulfillment of this project by completing the present questionnaire. All information you give will be kept strictly confidential.

Section One: Students' Socio-Demographic and Academic data

Complete with information about yourself

Level/ option: M1 Literature & Civilization Gender: Male / Female

Age: -----

Section Two: Self-assessment of Students' Academic Learning Outcomes

Instruction: Indicate how well you can achieve every item by putting a cross (X) in the appropriate spaces

1= Very Poorly, 2= Poorly, 3= Moderately, 4= Well, 5= Very Well

1. Attainment

	Items	1	2	3	4	5
1	I can demonstrate mastery of the content knowledge and skills taught in this course (e.g., analyzing Shakespearean sonnets, writing literary analyses).					
2	I consistently achieve the learning goals and objectives set for assignments and assessments (e.g., analyzing historical documents, interpreting literary texts).					
3	I can apply learned concepts and procedures to solve problems and complete tasks independently (e.g., conducting research on literary movements, writing comparative essays).					

2. Understanding

	Items	1	2	3	4	5
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1	I can explain the underlying principles and relationships within the subject matter (e.g., analyzing the socio-political context of literature, interpreting cultural symbols).					
2	I can analyze and evaluate information critically, rather than simply memorizing facts (e.g., critiquing literary theories, examining historical contexts).					
3	I can transfer knowledge to new contexts and apply it effectively in different situations (e.g., applying literary theories to contemporary literature, relating historical events to modern issues).					

3. Higher order learning

	Items	1	2	3	4	5
1	I engage in advanced thinking, reasoning, and metacognition to deepen my understanding and analysis of complex topics (e.g., critically evaluating competing theories in literary criticism, reflecting on my learning strategies to improve academic performance).					
2	I demonstrate the ability to synthesize information from multiple sources to generate new insights and perspectives (e.g., integrating literary criticism with historical context to formulate original interpretations, applying language theory to analyze diverse linguistic phenomena).					
3	I exhibit metacognitive skills by monitoring and regulating my own learning processes to enhance comprehension and problem-solving (e.g., identifying gaps in understanding and seeking additional resources, adjusting study strategies based on self-assessment of learning outcomes).					

4. Cognitive and creative skills

	Items	1	2	3	4	5
1	I am able to think critically, consider multiple perspectives, and make informed decisions (e.g., analyzing conflicting interpretations of a literary work, evaluating the impact of cultural influences on literature).					
2	I can generate creative ideas, solutions, or interpretations that go beyond conventional thinking (e.g., proposing alternative endings to literary texts, devising innovative approaches to teaching language).					

3	I can adapt my thinking and problem-solving strategies to address new challenges or opportunities (e.g., adjusting literary analysis techniques for different genres, applying language-teaching methods to diverse learners).					
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5. How to practice

	Items	1	2	3	4	5
1	I set specific learning goals and develop strategies to achieve them (e.g., setting goals for language proficiency improvement, planning research projects on literary themes).					
2	I monitor my progress regularly and adjust my study habits or learning approach as needed (e.g., tracking language proficiency development, revising research strategies based on feedback).					
3	I actively seek out resources, support, and feedback to enhance my learning and performance (e.g., utilizing library resources for research, seeking guidance from professors on literary analysis techniques).					

6. Dispositions

	Items	1	2	3	4	5
1	I approach learning with curiosity, enthusiasm, and a willingness to explore new ideas (e.g., engaging in class discussions on literary topics, attending cultural events related to course themes).					
2	I persevere in the face of challenges, setbacks, or obstacles to achieve my goals (e.g., persisting in understanding complex literary theories, overcoming language barriers in analyzing texts).					
3	I demonstrate integrity, honesty, and respect for others in my academic work and interactions (e.g., properly citing sources in academic writing, acknowledging diverse perspectives in discussions).					

7. Memberships, inclusions, self-worth

	Items	1	2	3	4	5
1	I actively contribute to creating an inclusive and supportive learning environment for all members of the academic community (e.g., participating in-group discussions with respect for diverse viewpoints, supporting classmates in language practice).					
2	I demonstrate empathy, respect, and understanding towards					

	individuals from diverse backgrounds and perspectives (e.g., listening to classmates' experiences with cultural sensitivity, appreciating different interpretations of literary texts).					
3	I value and nurture my own sense of self-worth and recognize the importance of self-care in maintaining overall well-being (e.g., prioritizing mental health during challenging academic periods, balancing academic demands with personal interests and activities).					

Section Three: Technology Uses and Perceptions Survey (TUPS) for Students

		Totally Disagree	Disagree	Neither Agree nor Disagree	Agree	Totally Agree
1. Technology Access and Support						
1.1.	I have access to reliable internet connectivity for my educational activities.					
1.2.	I have access to devices (e.g., computers, tablets, and smartphones) necessary for my learning.					
1.3.	Technical support is readily available to assist me with technology-related issues.					
2. Preparation for Technology Use						
2.1.	I have received adequate training or guidance on how to use technology tools for learning.					
2.2.	I feel confident in my ability to navigate and utilize technology resources for academic tasks.					
3. Perceptions of Technology Use						
3.1.	Using technology enhances my learning experience.					
3.2.	Technology tools and resources make it easier for me to complete academic assignments.					
3.3.	Technology enables me to access educational materials and resources that would otherwise be unavailable					
4. Confidence and Comfort Using Technology						
4.1.	I feel confident in my ability to use technology to complete academic tasks.					

4.2.	I am comfortable experimenting with new technology tools and resources for learning.					
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5. Technology Integration

5.1.	My teachers regularly incorporate technology into classroom instruction.					
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5.2.	I am encouraged to use technology to collaborate with classmates and engage in interactive learning activities.					
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6. Teacher and Student Use of Technology

6.1.	My teachers effectively use technology to support student learning.					
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6.2.	Students in my classes actively engage with technology to enhance their learning experiences.					
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Appendix B: Results of the Students' Questionnaire

The study results

1) General information

1.1 Level

55% of the participants were Master 1 Linguistics students, while

45% of the participants were Master 1 Literature students.

1.2 Gender

90% of the study participants were female students, however

10% of the study participants were male students.

1.3 Age

80% of the students were aged between 20 to 23 years old, while

20% of the students were aged between 23 to 24 years old.

2) The Results of Students' Self-assessment of Academic Learning Outcomes (ALO)

Category		Items	Mean		SD		PM	
			L	LC	L	LC	L	LC
Attainment	1	I can demonstrate mastery of theories and concepts taught in this course	3,32	2,72	1,17	0,96	3,56	3,18
	2	I consistently achieve the learning goals and objectives set for assignments and assessments	3,91	3,33	0,97	0,77		
	3	I can apply learned literary theories and methodologies to analyze language phenomena independently	3,45	3,50	0,80	0,92		
Understanding	4	I can explain the underlying principles and relationships within linguistic / literature structures and language systems	3,55	3,06	1,06	1,06	3,36	3,19
	5	I can analyze and evaluate linguistic/ literature data critically, rather than simply memorizing facts	3,14	3,39	0,83	1,04		
	6	I can transfer knowledge of linguistics/ literature to new contexts and apply it effectively in different research or analytical tasks	3,41	3,11	0,91	0,90		
Higher order	7	I engage in advanced thinking, reasoning, and metacognition to deepen my understanding	4,45	3,28	6,70	1,02	3,71	3,09

learning	8	I demonstrate the ability to synthesize information from language theory and data to generate new insights and hypotheses	3,05	3,06	1,09	0,80		
	9	I exhibit metacognitive skills by monitoring and regulating my own learning and research processes to enhance understanding and analysis of linguistic phenomena	3,64	2,94	1,14	1,47		

Category		Items	Mean		SD		PM	
			L	LC	L	LC	L	LC
Cognitive and creative skills	10	I am able to think critically, consider multiple perspectives,	3,73	3,50	1,03	0,99	3,51	3,44
	11	I can generate creative ideas, solutions, or interpretations that go beyond conventional approaches	3,59	3,50	0,67	0,92		
	12	I can adapt my research methods and problem-solving strategies to address new challenges or opportunities	3,23	3,33	1,19	0,91		
How to practice	13	I set specific research goals and develop strategies to achieve them in my domain	3,55	3,28	0,96	0,96	3,66	3,38
	14	I monitor my progress regularly and adjust my research methods or approach as needed	3,77	3,44	1,11	1,10		
	15	I actively seek out resources, support, and feedback to enhance my research and academic performance	3,68	3,44	1,21	0,78		
Dispositions	16	I approach linguistic/ literature inquiry with curiosity, enthusiasm, and a willingness to explore new ideas and methods	3,05	3,28	1,17	1,32	3,41	3,20
	17	I persevere in the face of challenges, setbacks, or obstacles to achieve my research goals	3,18	3,33	0,96	1,08		
	18	I demonstrate integrity, honesty, and respect for others in my academic and professional interactions	4,00	3,00	0,87	1,19		
Membership, Inclusions, self-worth	19	I actively contribute to creating an inclusive and supportive learning environment	3,77	3,06	1,11	1,26	3,81	3,16
	20	I demonstrate empathy, respect, and understanding towards individuals from diverse backgrounds and perspectives	3,82	2,94	1,10	1,11		
	21	I value and nurture my own sense of professional self-worth and recognize the importance of self-care in maintaining overall well-being in my domain	3,86	3,50	1,04	0,92		

3) The Results of Students' Perceptions about Technology Integration Use in and out of Classroom

Categories		Items	Mean		SD		PM	
			L	LC	L	LC	L	LC
	1.1	I have access to reliable internet connectivity for my educational activities.	4,05	3,72	1,09	0,83	3,98	3,89

Technology access and support	1.2	I have access to devices (e.g., computers, tablets, and smartphones) necessary for my learning.	4,09	3,89	0,97	1,08		
	1.3	Technical support is readily available to assist me with technology-related issues.	3,82	4,06	1,14	0,73		
Preparation for Technology Use	2.1	I have received adequate training or guidance on how to use technology tools for learning.	3,68	4,11	1,09	0,58	3,84	4,16
	2.2	I feel confident in my ability to navigate and utilize technology resources for academic tasks.	4,00	4,22	1,20	0,55		
Perceptions of Technology Use	3.1	Using technology enhances my learning experience.	4,27	4,17	1,08	0,79	4,37	4,18
	3.2	Technology tools and resources make it easier for me to complete academic assignments	4,36	4,17	1,09	0,71		
	3.3	Technology enables me to access educational materials and resources that would otherwise be unavailable	4,50	4,22	0,80	0,65		
Confidence and Comfort Using Technology	4.1	I feel confident in my ability to use technology to complete academic tasks.	4,36	4,11	0,73	0,90	4,25	4,16
	4.2	I am comfortable experimenting with new technology tools and resources for learning.	4,14	4,22	1,04	0,88		
Technology Integration	5.1	My teachers regularly incorporate technology into classroom instruction.	3,86	4,33	0,99	0,59	3,86	4,19
	5.2	I am encouraged to use technology to collaborate with classmates and engage in interactive learning activities.	3,86	4,06	1,08	1,06		
Teacher and Student Use of Technology	6.1	My teachers effectively use technology to support student learning.	3,68	3,83	1,25	0,79	3,91	4,25
	6.2	Students in my classes actively engage with technology to enhance their learning experiences.	4,14	4,67	1,13	0,49		

4) The Results of Coefficient Correlation between Students' Outcomes and Technology Integration

	Categories of two Variables	Coefficient For two Options		Coefficients
		L	L & C	L and L&C
1	Attainment & Technology Integration categories	0,11	-0,37	-0,01
2	Understanding & Technology Integration categories	0,65	-0,20	0,42
3	Higher order learning & Technology Integration categories	0,19	0,17	0,17
4	Cognitive and creative skills & Technology Integration categories	0,31	0,51	0,33
5	How to practice & Technology Integration categories	0,63	0,10	0,51
6	Disposition & Technology Integration categories	0,37	0,19	0,28
7	Membership inclusion self-worth & Technology Integration categories	0,57	0,40	0,42

5) The Results of the T-test between the two Options

	ALO & TI	ALO	TI
T-test	0,21	0,04	0,66
Means L	3,77	3,58	4,06
Means LC	3,59	3,24	4,13

