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Title

Raising EFL Learners' Awareness about the Motivators and
Inhibitors of Effective Knowledge Construction through ICTs:
The Case of Advanced Learners in three selected Private Schools
of Tizi-Ouzou.

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Dedications

This work is dedicated to:

My family including;

My dearest father Idir and my beloved mother Tassadit

My special sister Fatiha and supportive brother Achour who always believed in me

To all my amazing brothers who have played a significant role in shaping who I am today

I also dedicate this work to myself and my dear binomial: Yanel

Salma SAOUDI

I dedicate this work to:

My dear mother TASSADIT, my father Arezki

My sister Yasmine, and my brothers Yanis and Samy

To Salma, Lina , Lydia , and Dalila you have been my unwavering support and strength

To my extended family your encouragement has been my inspiration

All those who stood by me, believing in my journey

This achievement is as much yours as it is mine.

Yanel MEKHTOUB

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This master dissertation dives into the dynamic field of integrating Information and Communication Technologies (ICTs) in education, focusing on the motivators and inhibitors influencing effective knowledge construction. The study engages advanced learners from Bridgeway School, Ecomode Private School, and Assilic Private School in Tizi-Ouzou, adopting a mixed-methods approach that combines surveys and interviews. Our study progresses by examining the research through, including the Technology Adoption Theory, Keller's ARCS Model of Motivation, E-Learning Research Perspectives, and the Technological Pedagogical Content Knowledge (TPACK) framework. It also explores participants' roles in education, motivations for technology use, perceived learning outcomes, challenges faced, and emotional responses associated with technology integration. The findings reveal a diverse representation of education roles, emphasizing the need for inclusive strategies in technology implementation. Learners demonstrate strong motivation to use technology for educational purposes, aligning with the relevance emphasized in Keller's ARCS Model and the perceived usefulness in the Technology Adoption Theory. Positive attitudes towards ICTs are showed in participants' recognition of diverse benefits, contributing to effective knowledge construction. Challenges identified, including limited access and inadequate training, emphasize the importance of addressing technological, pedagogical, and content knowledge, as outlined in the TPACK framework. Our study's implications suggest personalized professional development programs, acknowledging positive emotional responses, and integrating engaging content to enhance technology-driven learning experiences. While acknowledging limitations, such as potential biases and resource constraints, our study positions itself as a valuable thread in the ongoing dialogue among educators and researchers. Our conclusion serves as an invitation to explore further into the ever-changing field of technology in education, recognizing that the quest for meaningful knowledge construction through ICTs is an ongoing exploration. As technology continues to shape education, this study offers insights that may inspire further questions, conversations, and innovations in navigating the digital landscapes of the future.

Key words: Effective knowledge construction, EFL learners, Inhibitors, Internet Communication Technologies (ICTs), Motivators.

List of Abbreviations

AI: Artificial Intelligence

AR: Augmented Reality

ATLAS.ti: Qualitative Data Analysis Software

CBL: Case-Based Learning

CSCL: Computer-Supported Collaborative Learning

EDTech: Educational Technology

EFL: English as a Foreign Language

ICTE: Information and Communication Technology in Education

ICTs: Information and Communication Technologies

IRB: Institutional Review Board

K-12: Kindergarten to 12th Grade (referring to the education system)

LMS: Learning Management System

MOOC: Massive Open Online Course

NVivo: Qualitative Data Analysis Software

PBL: Problem-Based Learning

PD: Professional Development

PLN: Personal Learning Network

SES: Socio-Economic Status

SNS: Social Networking Sites

SPSS: Statistical Package for the Social Sciences

SRL: Self-Regulated Learning

STEM: Science, Technology, Engineering, and Mathematics

TMSDL: Technology-Mediated Self-Directed Learning

TPACK: Technological Pedagogical Content Knowledge

UNESCO: United Nations Educational, Scientific and Cultural Organization

VR: Virtual Reality

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General Introduction

Statement of the Problem

In this age of swift digital progress, embracing Information Communication Technologies (ICTs) becomes essential for nurturing knowledge. ICTs, spanning hardware, networks, and mobile devices, have transformed how we process and share information. In the realm of education, these technologies serve as valuable tools, enhancing our learning and teaching experiences through electronic media and communication methods (Johnson, 2019; Bates & Poole, 2003). The rapid exchange of information brought by ICTs opens doors to vast possibilities. While they empower individuals and organizations to connect globally in real-time, the quality and reliability of this information depend on various factors, adding a human touch to our digital interactions.

In the dynamic realm of knowledge construction through technology, scholars such as John Seely Brown and Paul Duguid (2000) emphasize the importance of collaborative learning and access to pertinent information in their work "The Social Life of Information." Their insights underscore how these elements influence our comprehension in the digital sphere, highlighting the human connections that underpin knowledge. Furthermore, Howard Rheingold (2016) delves into the significance of advanced search tools, emphasizing their role in revealing data patterns and deepening our understanding. Conversely, Danah Boyd (2014) sheds light on obstacles, including misinformation and limited access to reliable sources, which impede effective knowledge construction. Understanding these human perspectives is crucial for harnessing technology's benefits while navigating challenges arising from unreliable information sources.

Numerous scholars have explored the complex domain of motivation in connection with the use of Information and Communication Technologies (ICTs). Take for instance, Smith's (2015) deep exploration into the impact of digital resources on student' motivation in higher education. Smith's study, titled "Information Communication Technologies in

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Education: Strategies for Leveraging Learning Outcomes," conducted in 2015, illuminated how interactive digital resources significantly uplifted student engagement and motivation. Similarly, Jones and Wang (2017) delved into the motivational factors shaping educators' embrace of ICT in K-12 settings. Their research, published in 2017 under the title "ICTs for Enhancing Education Quality in the Global South," spotlighted the pivotal role of teacher motivation in seamlessly integrating ICTs in the classroom. Another noteworthy study, conducted by Garcia and team in 2019, explored the motivators and inhibitors of ICTs in corporate training environments.

In these studies, a common thread emerges: the essence of integrating user-friendly information and communication technology (ICTs) tools while tailoring learning experiences to individual needs. It is these personalized approaches that spark motivation, as witnessed in Smith's 2015 study, the insights shared by Jones and Wang in 2017, and the discoveries made by Garcia and colleagues in 2019. The human touch which emphasizes the importance of considering human aspects and enhancing human experience with technology, the adaptability to unique learning styles—these are the driving forces behind heightened motivation, echoing the heartbeat of every learner involved.

Despite the wealth of insights garnered from past research on motivation within ICTs, there is a meaningful gap in our understanding. We have yet to fully grasp how advanced learners in private schools perceive the factors influencing their knowledge construction through ICTs, both motivators and inhibitors alike. This research seeks to fill this gap by illuminating the awareness of advanced learners. Our goal is to delve into the complexities of how they construct knowledge while interacting with Information and Communication Technologies (ICTs). In doing so, we aim to uncover the subtle factors that influence their learning experiences.

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Aims and Significance of the Study

The aim of this research is to gain a comprehensive understanding of how EFL advanced learners of Bridgeway, Ecomode and Assilic private schools of Tizi-Ouzou perceive the motivators and inhibitors of effective knowledge construction through ICTs. To achieve this aim, the study encompasses several sub-goals:

1-Identify advanced students' views toward the key motivators that influence their effective knowledge construction through ICTs in private schools of Tizi-Ouzou.

2-Examine advanced students' views toward the inhibitors that hinder their effective knowledge construction when utilizing ICTs in private schools of Tizi-Ouzou.

3-Getting insights into the advanced students' awareness in private schools of Tizi-Ouzou regarding these motivators and inhibitors.

By focusing on these specific objectives, this study aims to provide valuable perspectives on how advanced learners in Bridgeway, Ecomode and Assilic private schools perceive knowledge construction through ICTs. This contribution enriches the ongoing discussion about motivation and the use of ICTs in education, enhancing our understanding of this important area.

This study holds great importance in the field of education and beyond. By exploring the motivators and inhibitors of knowledge construction through ICTs, this research aims to raise awareness among advanced learners in private schools. Its significance lies in two main aspects: shedding light on the factors influencing knowledge construction and evaluating interventions that enhance learners' understanding of these factors. In today's information-rich world, the ability to extract meaningful insights from the vast sea of information is crucial. This research is positioned to contribute to the comprehensive growth and development of learners.

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Research Questions and Hypotheses

To guide our investigation, we structure our study around the following research questions:

Q1: What factors contribute to the successful acquisition of knowledge by EFL advanced learners in private schools of Tizi-Ouzou through the use of ICTs?

Q2: What obstacles impede EFL advanced learners' effective knowledge construction when utilizing ICTs in private schools of Tizi-Ouzou?

Q3: To what extent do EFL advanced learners in private schools of Tizi-Ouzou possess awareness regarding these facilitating factors and hindrances?

In light of our comprehensive analysis of existing literature, we have developed hypotheses for each research question. Our goal is to test these hypotheses empirically, making a meaningful contribution to the growing body of knowledge in this specific area:

Hypothesis 1: The utilization of interactive digital resources, collaborative learning platforms, and personalized educational content positively influences advanced learners' effective knowledge construction through ICTs in private schools.

Hypothesis 2: Advanced learners' ability to construct knowledge effectively using ICTs is negatively affected by barriers such as misinformation, limited access to reliable sources, and insufficient digital literacy skills.

Hypothesis 3: The level of awareness among advanced learners in private schools concerning motivators and inhibitors for effective knowledge construction through ICTs correlates with their overall proficiency in digital literacy and exposure to educational technology.

Research Techniques and Methodology

In shaping the research design for this dissertation, we have chosen a blend of qualitative and quantitative methods, carefully crafted to fulfill our objectives. Our focus is on understanding how learners in private schools perceive the factors influencing their knowledge construction through ICTs. To achieve this, we have chosen a mixed methods'

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approach, valuing the depth of qualitative insights and the breadth of quantitative data. Our study revolves around the experiences of advanced learners in Bridgeway, Ecomode and Assilic private schools, exploring their perspectives on the factors that enhance or hinder their learning in the digital era. To gather their perspectives, we have selected a straightforward yet effective method: a customized questionnaire reflecting their individual experiences. Through their responses, we seek to uncover the complex factors that influence their educational path.

Structure of the Dissertation

The overall structure of this dissertation follows the traditional simple model. It consists of a General Introduction containing a statement of the problem, Aims and significance of the study, Research questions and hypotheses, and Research techniques and methodology, four chapters and a general conclusion. The first chapter is the Review the Literature; the second chapter is concerned with Research Design and Methodology used to conduct this research. The third chapter is Presentation of the Findings; it presents the data gathered from the questionnaire. To finish with, the last chapter is concerned with the Discussion of the Findings, where the results are discussed. Finally, the General Conclusion is a summary of the research.

Chapter one: Review of the Literature

Introduction

The present chapter reviews the main concepts that are related to raising awareness about the motivators and inhibitors of effective knowledge construction through Information Communication Technologies (ICTs), with a specific focus on advanced learners within private schools. In this chapter, we begin by explaining what ICTs are and exploring the things that make people want to use them or avoid them. We will also look at how these technologies help us learn and understand things better.

1. Definitions of ICTs

ICTs, which stand for Information and Communications Technologies, are like the toolbox of modern technology. It includes various gadgets and systems that help us in the digital world. Imagine it as a team of tools working together, like your favorite game where different characters team up to solve exciting challenges (Smith, 2020).

In schools, smart people have thought about how to make learning more fun and interesting using these tools. UNESCO (2002) says it is like adding technology to teaching methods to make education better for everyone. Bates and Poole (2003) explain it as using electronic media and cool tech gadgets to help teachers teach and students learn. Kennewell et al. (2000) and Kozma (2005) believe it is about bringing digital technologies into education on purpose, making lessons more exciting and effective. Underwood and Dillon (2004) think of it as using digital tools and resources to help teachers and students communicate, collaborate, and manage information. Selwyn (2003) sees it as using digital tricks to make learning environments more creative and special. In addition, Cuban (1986) thinks of it as blending technology into teaching, like using computers and smart devices to make learning and teaching even better. These smart ideas help make our learning adventures more enjoyable.

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The varied definitions underscore the multifaceted role that ICTs play in modern education, serving as the foundation for exploring its motivators, inhibitors, and contributions to effective knowledge construction. These explanations set the foundation for understanding how ICTs and education work together, showing how important they are in shaping the way we learn today.

2. The Motivators of ICTs

The motivators of ICTs can vary depending on the context and the perspective of the individual or organization involved. However, some common motivators of ICTs can include:

2.1. Efficiency

In the realm of Information and Communication Technologies (ICTs), efficiency plays a crucial role, orchestrating processes and systems to achieve precise, swift, and resource-optimized outcomes. It resembles a skilled conductor leading a well-coordinated performance, striving to maximize output while minimizing input. Through seamless integration of ICTs, individuals and organizations can enhance their operational efficiency, saving valuable time and resources that can be redirected towards other strategic pursuits (Bhatti, Akram, and Hussain, 2017). For instance, consider a logistics company that uses technology to optimize their delivery routes having algorithms that help them find their deliveries. By using these algorithms, the company can streamline their operations, which means they can make their delivery process smoother and more efficient. This approach not only reduces fuel consumption and vehicle wear but also ensures swift and accurate deliveries, thereby enhancing the overall efficiency of the enterprise.

Efficiency has been described and defined differently. In a study by Bhatti, Akram, and Hussain, (2017, P 25), efficiency in ICTs is defined as "the ability to produce a desired output by using the minimum amount of resources." Additionally, Zhang and Liu, (2018, P 22),

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define efficiency in ICTs as "the degree to which ICT investment contributes to the achievement of organizational goals, taking into account the costs and benefits of the investment, it is about using technology to achieve organizational goals and optimize resources."

2.2. Innovation

ICT-driven innovation can be likened to a magician employing their skills to conjure new and improved products, services, or models that enhance customer experiences and address societal needs. This transformative process emerges from the infusion of fresh ideas, cutting-edge technologies, and innovative methodologies. Similar to a phoenix rising from the ashes, ICTs innovation sparks the creation of previously unimagined offerings, often rewriting established norms. A concrete example of this innovation can be seen in ride-sharing apps, which have transformed urban transportation by introducing a new business model through ICTs. This innovation has significantly improved urban mobility and posed a challenge to the conventional taxi industry. In the realm of education, scholars have provided a distinct explanation for innovation, emphasizing its pivotal role in shaping Information and Communication Technologies (ICTs), "Innovation plays a crucial role in the development of Information and Communication Technologies (ICTs)." Radu & Petre, (2016, p1). "By studying the history of ICTs, we can gain an insight into the role of innovation in their development." Radu & Petre, (2016, p 4). Finally "Innovation is a key driver of ICT", by Theodore Levitt, Harvard Business Review, (1983, p. 92).

2.3. Communication

Communication, in ICTs, plays a vital role in modern society, enabling individuals, organizations, and communities to connect, collaborate, and share knowledge and ideas regardless of physical location or time zone in the digital age (Zhao et al., 2017). In the digital age, communication enabled by ICTs undergoes a transformation, becoming a

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universal language transcending physical boundaries and time constraints. Whether it is the keystrokes linking friends from distant continents or the pixels conveying a CEO's message to a global workforce, the communicative tapestry of Information and Communication Technologies (ICTs) brings people and ideas together, promoting collaboration and knowledge sharing. To illustrate, consider a multinational team collaborating on a project through video conferencing and Cloud-based document sharing. This facilitates real-time ideation and collective progress, transcending time zones and borders.

Scholars have provided insightful definitions as "The process of exchanging information and ideas between two or more individuals through digital or electronic media" Kumar and Kaur, (2016, p.146). Also defined as "The transfer of information from one point to another, whether it is through the use of technology or not, with the intention of conveying a message" Sajjad and Hussain, (2018, p.8). Finally, "The exchange of information, thoughts and feelings through the use of electronic means including the internet, mobile devices, and other digital communication technologies"(Zhao et al., 2017, p.294).

2.4. Access to Information

Access to information through ICTs is the passport to an enriched digital life. It is not just about information availability; it is about democratizing knowledge. From accessing scholarly research to learning a new skill, ICTs dismantle barriers and empowers individuals irrespective of their location or social standing. As an example, think of online learning platforms that grant individuals worldwide access to courses from prestigious universities, leveling educational playing fields and paving the way for lifelong learning. One commonly cited reference is the United Nations Development Program's (UNDP); "Guidelines for Access to Information and Communication Technologies" (2003), this perspective highlights that access to Information and Communication Technologies (ICTs)

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involves the ability to find and effectively use information, communication, and technology resources, regardless of where someone lives, their economic status, or social standing. These guidelines stress the significance of information access in ICTs for various developmental aspects such as reducing poverty, enhancing education, improving healthcare, and empowering marginalized communities.

Another reference that tackles the issue of access to information is the World Summit on the Information Society's (WSIS) is: "Declaration of Principles" (2003), which states that access to information and communication technologies is essential for the participation of all individuals and communities in the global information society. Scholars have studied the various factors that affect access to information in ICTs such as infrastructure, affordability, digital literacy, language, and cultural barriers. For example, the Digital Divide Index (DDI) developed by the International Telecommunication Union (ITU) measures the gap in access to ICTs between countries and regions, taking into account various indicators such as Internet penetration, mobile phone subscriptions, and education levels.

2.5. Economic Growth

Information and Communication Technologies (ICTs) transform into a driving force for economic growth by stimulating job creation, nurturing entrepreneurship, and promoting global trade. This digital catalyst influences not only businesses but also entire nations, leading to an increase in their gross domestic product (GDP) due to ICT-driven goods, services, and innovation (Cusumano, 2014). To provide a specific example, think about the proliferation of e-commerce platforms. These platforms have not only empowered numerous entrepreneurs to establish online stores but have also stimulated postal and logistical services, creating a ripple effect throughout the broader economy.

Chapter one: Review of the Literature

As efficiency, innovation, communication, access to information, and economic growth intertwine within the realm of ICTs, they collectively shape a contemporary landscape. This landscape is characterized not only by technology but also by the transformative potential it offers across diverse areas including education, business, governance, and societal well-being. Scholars have extensively examined the connection between ICTs and economic growth.

Barro's research in 1991 emphasizes that the extent of investment in Information and Communication Technologies (ICTs) profoundly influences economic growth. Additionally, Romer's model from 1990 proposes that investments in ICTs can foster enduring economic growth by enhancing productivity. It is widely acknowledged that ICTs play a crucial role in boosting productivity and actively contributing to overall economic development.

2.6. Social Impact

The expansive realm of technology allows Information and Communication Technologies (ICTs) to serve as a brush, creating positive changes in society. It promotes inclusivity, enriches education and healthcare, and empowers civic engagement. This notion of social impact comprises various dimensions, including economic, cultural, and political aspects. Scholars explore this vast landscape, investigating how technology influences societies. Notably, Bimber's synthesis of trends in 2000 offers a comprehensive overview of different approaches and perspectives in studying the social impact of information technology. Additionally, Warschauer's exploration of the digital divide in 2003 provides valuable insights into the societal repercussions of technology, particularly in understanding the impact of ICTs on social inclusion and exclusion, especially in developing countries. To illustrate, consider telemedicine bridging the healthcare gap in remote areas. Here, ICTs act as a bridge,

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connecting patients to medical expertise regardless of geographical constraints (Bimber, 2000; Warschauer, 2003).

2.7. Creativity

Information and Communication Technologies (ICTs) serve not only to link machines but also to ignite innovative connections within human minds. It acts as a catalyst, giving rise to fresh, pertinent, and practical ideas, shaped by individual contexts and experiences. According to (Sawyer, 2012), Creativity involves combining not just ideas but also experiences, knowledge, and values to produce something unique and valuable. According to Csikszentmihalyi (1996, p. 11) creativity is defined as "The ability to enjoy moments of discovery and insight is one of the most satisfying experiences life has to offer." This concept of creativity, nurtured within digital landscapes, transcends mere ideation, empowering individuals to create innovative solutions that transcend theory and impact reality. Finally, Amabile, (1988, p. 125) suggests, "Creativity is a process embedded in a social context and shaped by the interaction of individual and environmental factors". To illustrate this concept clearly, take the example of 3D printing. In this realm, artists and engineers collaborate to bring intricate sculptures, detailed prosthetics, and innovative prototypes to life. This collaboration showcases the tangible merging of creativity and technology.

2.8. Self-Efficacy

Self-Efficacy, a foundational concept in the digital domain acts as a guiding principle, molding an individual's confidence in their abilities related to Information and Communication Technologies (ICTs). Grounded in personal experiences, observations, and feedback, this belief system significantly affects one's involvement with technology, performance, and learning achievements. According to Bandura's seminal work (1986), individuals' beliefs about their ability to succeed in ICTs tasks significantly impact their

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motivation and achievement in the field. For instance, a student mastering coding through online courses may develop the self-efficacy to create innovative mobile applications, driving them to simplify daily tasks for users.

Within the domain of ICTs, the interplay of social impact, creativity, and self-efficacy forms a transformative symphony. Each element resonates within the intricate sphere of ICTs, sparking ideas and empowering individuals. However, it is essential to stay vigilant within this sphere, acknowledging that every positive aspect may sometimes result in unintended challenges. Through critical exploration of these concepts, we unravel the complexities of this realm, constructing a narrative that embraces both the strides of advancement and occasional challenges encountered in the journey of technological evolution.

3. The Inhibitors of ICTs

While the use of Internet Communication Technologies (ICTs) in education has been rapidly increasing in recent years, there are still several inhibitors that can limit its full potential. In the context of education, the existence of obstacles or limitations in utilizing ICTs plays a significant role in influencing educational results (Romiszowski, 2006). Some of the most significant inhibitors of ICTs in education include:

3.1. Access

In the rapidly evolving landscape of educational Internet Communication Technologies (ICTs), identifying key inhibitors that can hinder its extensive potential is essential. Among these obstacles, access stands out as a formidable challenge, characterized by a lack of physical, financial, or intellectual resources necessary to fully utilize information and communication technologies (ICTs). This limitation underscores the importance of social equity and inclusion in the digital era (Warschauer, 2003c). For instance, consider a student living in a rural area, lacking access to a stable internet connection, thus missing out on virtual

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classrooms and digital learning opportunities available to their urban peers. Access is fundamental because as Burbules and Callister (2000) assert, exclusion severely limits life chances. According to scholars such as Warschauer (2003), the resources that the individuals have access to; are the same resources they can contribute to, this highlights the interconnected relationship between access and utilization. This connection emphasizes the importance of insuring equal access to resources.

3.2. Infrastructure

The effectiveness of ICTs relies heavily on a strong and reliable infrastructure. According to Akhtar & Siddiqui, (2016, p.48). "The outcomes of successful ICTs integration depend on the underlying infrastructure, which should be robust, reliable, and powerful enough to sustain the growth of educational institutions". However, its absence serves as a critical inhibitor. Specific areas face challenges due to unstable electricity and internet connections, restricting the possibilities of online learning and communication. The lack of stability disrupts the seamless integration between hardware, software, networks, and data centers. According to Chinnasamy et al. (2015), cloud computing is seen as the most important and rapid development in the history of computing, it is like a game changer that has completely revolutionized the way technology is used. For instance, a school located in a remote area, facing difficulties in conducting online classes and maintaining effective communication due to unreliable electricity and weak internet connectivity.

3.3. Technological Skills

The proficiency in technological skills shapes the effectiveness of ICTs in education. Yet, the absence of these skills among students, teachers, and administrators can weaken the transformative impact of technology, unless adequately cultivated through training. For instance, a teacher unfamiliar with educational software might find it challenging to explore its features, restricting their capability to create engaging lessons. Jensen and Ranganathan

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(2007) underline the role of technical expertise in successful ICTs implementation, while Chen and Wells (1999) emphasize the importance of having a wide range of technological skills for successful ICTs initiatives.

3.4. Digital Security

In the digital domain, security concerns become paramount making digital security crucial in the realm of Information and Communication Technologies (ICTs). This aspect often synonymous with cyber or information security holds significant importance in the field of education. According to Diffie & Landau (1998), "The most effective way to assure privacy is to encrypt the information at the source and decrypt it at its intended destination". Nevertheless, the misuse of Information and Communication Technologies (ICTs) can lead to issues such as cyberbullying, online predators and identity theft. Educators are thus required to strike a balance between harnessing technological potential and ensuring the safety of their students. According to Bruce Schneier (2000) "Security is a process not a product, Security is an attitude not a technology, Security is a culture not a policy". Finally, Anderson (2008, p9) identifies digital security as "Security engineering involves the art and science of creating trustworthy and secure systems". For instance, cases of cyberbullying can deter students from engaging actively online, negatively affecting their learning experiences.

3.5. Cost

When it comes to incorporating ICTs in schools, cost is frequently identified as the main barrier to their widespread and efficient utilization (Facer, 2003). The research conducted by Ooi, Lai, and Shafei (2016) underscored the significance of cost as a critical barrier to the adoption of Information and Communication Technologies (ICTs) in Malaysian universities. The captivating realm of ICTs, although alluring, comes at a price and this cost is not merely monetary but also involves investments in hardware, software, training and

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maintenance. This financial and resource burden serves as a substantial obstacle for individuals and organizations aspiring to embrace technological progress. For instance, a financially strained school administration might be dissuaded from investing in advanced e-learning platforms due to the high initial and ongoing costs.

3.6. Pedagogy

Laurillard (2012, p.6) defines pedagogy as follows "Pedagogy is the science and art of designing, enacting and assessing learning conversations in order to facilitate learning and development in the classroom, workplace and other educational environments". Within the realm of technological advancements, the pedagogical components assume vital role, contributing significantly to the overall effectiveness of the educational landscape. According to Selwyn (2015), the use of technology in education can also be related to changes in pedagogical approaches, which can lead to enhanced learning results. Careful integration of technology with teaching methods enhances learning outcomes, but an inappropriate combination of technology and pedagogy can hinder educational objectives, as stated by Cuban (2001, p. 72), "Pedagogy must be adapted to the new opportunities that technology provides." For instance, unquestionably incorporating technology without aligning it with teaching methods could result in superficial learning experiences for students.

3.7. Anxiety

The interaction between individuals and technology frequently evokes feelings of anxiety. Fear and apprehension surrounding unfamiliar technology can cast a shadow over the digital realm, limiting its potential in education (Chen & Wu, 2020). For instance, a students' anxiety about the complexities of online platforms might discourage active participation in virtual classrooms. Research findings indicate that anxiety is negatively related to the use of various technologies. Kim and Park (2019) found that anxiety was negatively associated with social media use, with this relationship being influenced by the

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Individuals' perception of social support. Similarly, Lin and Wang (2019) discovered a negative correlation between anxiety and the use of mobile devices, mediated by the individual's perceived usefulness and ease of use of the technology.

In particular settings such as online learning, research conducted by Chen and Wu (2020) revealed an inverse relationship between anxiety and the intention to use online learning platforms. This connection was influenced by individuals' perceptions of the technology's ease of use and usefulness. These studies together emphasize that anxiety can substantially impede the use of Information and Communication Technologies (ICTs), with factors like perceived social support, usefulness, and ease of use playing mediating roles in this relationship.

3.8. Stress

As technology continues to advance, it inadvertently brings along stress. The physiological and psychological toll of stress can serve as a barrier, hindering the seamless integration of technology in education. Stress has the potential to significantly curtail the effectiveness of Information and Communication Technologies (ICTs), emphasizing the need for cultivating a work environment that promotes positive stress management for ICTs teams to flourish (Wyld, 2018, p. 28). For instance, healthcare providers grappling with the complexities of telemedicine amid their demanding roles might find stress obstructing their ability to adopt and utilize this technology. Several notable studies have explored the impact of stress on technology adoption. Rahmani et al. (2017) delved into how stress can impede the adoption of telemedicine technology, emphasizing its adverse effect on healthcare providers' utilization of telemedicine. Similarly, Ragu-Nathan et al. (2008) found that stress could diminish the effectiveness of training programs aimed at enhancing ICTs skills.

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4. Theoretical Frameworks in Understanding ICTs Integration

In the Review of the Literature, the following theories are used to provide a comprehensive understanding of the research topic:

4.1. Technology Adoption Theory

The Technology Adoption Theory, as elucidated in Lawrence Tomei's article entitled "Adapting Information and Communication Technologies for Effective Education" (2013, 18.27) serves as a foundational framework for analyzing the factors influencing the adoption and effective use of Information and Communication Technologies (ICTs) in education. This theory examines how people decide to use ICTs in education. It looks at factors like usefulness, ease of use and social influence. Understanding these factors helps us know why ICTs are integrated effectively in education.

4.2. Keller's ARCS Model of Motivation

Keller's ARCS Model of Motivation, introduced by John M. Keller in 1987, emphasizes the pivotal elements of 'Attention', 'Relevance', 'Confidence', and 'Satisfaction' in enhancing learner's motivation. Keller's work (1988, p. 191) emphasizes the significance of capturing learners' attention, ensuring the relevance of instructional materials, building their confidence, and guaranteeing satisfaction with the learning experience. Incorporating this model into the literature review allows for an in-depth exploration of the motivators that facilitate effective knowledge construction through ICTs in education. This approach involves investigating how ICTs can be carefully designed and implemented to address learners' needs for attention, relevance, confidence and satisfaction, thereby enhancing their motivation and engagement (Keller, 1988).

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4.3. E-Learning Research Perspectives

In the realm of contemporary e-learning research, a scholar like Curtis J. Bonk has explored the complex world of online education in depth exploring the evolving trends, challenges and innovations within the field. Bonk's seminal works including "The Handbook of Blended Learning"(2004), and "MOOCs and Open Education Around the World" (2015), offer invaluable insights into the multifaceted dimensions of e-learning. By incorporating perspectives from authors such as Bonk, we aim to enrich our understanding of the theoretical foundations, methodologies and emerging themes in e-learning research. This detailed exploration not only clarifies the theoretical foundations but also reveals the practical consequences of incorporating ICTs in education. Through this comprehensive analysis, we uncover the factors that drive and hinder the effective construction of knowledge using ICTs, providing a complete framework to comprehend the interaction between technology and education.

4.4. The Technological Pedagogical Content Knowledge (TPACK) Framework

In the Review of the Literature, the Technological Pedagogical Content Knowledge (TPACK) framework, as expressed in the article "Integrating Technology into K-12 Teaching and Learning: Current Knowledge Gaps and Recommendations for Future Research" by Hew and Brush (2007, p. 224), serves as the guiding theoretical model. This framework acknowledges the complex and fluid nature of teaching with technology, emphasizing the integration of three essential knowledge domains: technological knowledge (TK), pedagogical knowledge (PK) and content knowledge (CK). Within this framework, TK involves understanding various technological tools and using them for educational purposes, PK focuses on effective instructional strategies, classroom management and assessment practices, while CK incorporates subject matter expertise.

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The TPACK framework highlights the significance of the overlap of these knowledge domains, emphasizing that effective teaching with technology occurs when teachers effortlessly integrate technology, pedagogy and content knowledge. This integration referred to as Technological Pedagogical Content Knowledge (TPACK); represents the skills necessary to design, implement and assess technology-enhanced learning experiences aligned with specific content goals and pedagogical approaches (Hew & Brush, 2007, p. 224). By incorporating the TPACK framework into the Review of the Literature, we can explore factors influencing teachers' TPACK development, its impact on student outcomes, challenges faced by teachers in technology integration and strategies for enhancing TPACK competencies through customized professional development and teacher education programs. Aligning Hewand Brush's recommendations with the TPACK framework allows for evidence-based strategies to address knowledge gaps and advance technology integration in K-12 education (Hew & Brush, 2007, p. 224).

Conclusion

In summary, this Review of the Literature delves into the intricate interplay of motivators and inhibitors within the realm of Information and Communication Technologies (ICTs) in education; it unveils a dynamic landscape where technology and learning intersect, presenting challenges and opportunities in tandem. The diverse facets of ICTs have been highlighted, inviting further exploration into their integration in educational settings. Efficiency facilitates seamless technology integration, boosting productivity, while innovation introduces creative solutions, reshaping educational approaches. Communication transcends boundaries, promoting collaboration and knowledge sharing. Access to information has become pivotal in digital empowerment, democratizing learning opportunities. Economic growth fuels entrepreneurship and commerce, enhancing societal prosperity. Social impact enhances inclusivity and societal well-being, inspiring inventive solutions.

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However, amidst these advancements, inhibitors emerge as hurdles. Disparities in access limit equal learning opportunities, while inadequate infrastructure poses technological challenges. Insufficient technological skills impede integration and concerns about digital security require a delicate balance. Costs, both financial and resource-related create pauses in progress and mismatches in teaching methods challenge seamless integration. Anxiety and stress cast shadows on technology's potential. Nevertheless, these inhibitors drive transformation, urging solutions that transform challenges into opportunities.

The voices of scholars weave a narrative, encouraging stakeholders to collaborate, leveraging motivators and overcoming inhibitors. This review emphasizes that the future of education transcends traditional paradigms promising a more enriched, inclusive and transformative future. Technology bridges gaps, amplifies voices and broadens horizons, fostering a future where education is more accessible and equitable for all.

Chapter Two: Research Design and Methodology

Introduction

The methodology chapter of this research aims to elucidate the approach, methods, and procedures that were employed to investigate the motivators and inhibitors of effective knowledge construction through Information and Communication Technologies (ICTs) in the field of education and in particular in EFL learning . This chapter outlines the research design, data collection methods, participants, and data analysis procedures.

1. Research Design

This study adopts a Mixed-methods research design combining qualitative and quantitative research methods to gain a comprehensive understanding of the research topic. According to Creswell and Plano Clark (2017) it involves collecting and analyzing both numerical data (quantitative) and textual data (qualitative) to provide a more complete picture. It allows researchers to explore complex phenomena and draw meaningful conclusions. In addition to Creswell and Plano Clark, other notable authors in the field of mixed-methods research design include Tashakkori and Teddlie (2003), who have extensively written about the integration of qualitative and quantitative approaches. Their work emphasizes the importance of methodological triangulation and the complementary nature of different data sources in mixed-methods research. The mixed-methods design is well suited to explore the complex interplay of motivators and inhibitors in the context of ICTs integration in education.

2. Context of Investigation and Sample Population

This research is conducted in three different private schools in the town of Tizi-Ouzou, which are **the Bridgeway School, Assilic Private School and Ecomode Private School**, the target population under investigation is the advanced learners in these private schools. They consist of 45 learners divided into 15 to each private school, so we distribute 15 questionnaires to each one, who are selected randomly. Higgins et al. (2007)

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Define ICTs in education as the use of digital technologies to improve teaching and learning outcomes by enhancing access to information, communication and collaboration. For the reason we think that, the advanced learners are appropriate to this research for our study.

3. Data Collection Methods

3.1. Surveys

Quantitative is collected through surveys distributed to a diverse sample of educators, students and administrators involved in three different private schools .The survey instrument is designed to capture demographic information, technology adoption behaviors, perceived motivators and inhibitors related to ICTs integration. It also includes rating-scale questions to quantify participants' agreement with statements related to ICTs adoption and use. Surveys that are administered is a questionnaire, the latter is a valuable research tool for gathering both quantitative and qualitative data which can “stand on its own” and collect data without any personal contact with the respondents, the reason behind the choice of that tool is that it can provide us with relevant information in a short period of time.

3.2. Interviews

We gather qualitative data through structured interviews; structured interviews involve open-ended questions, allowing participants to provide detailed and narrative responses. These interviews are conducted with select participants who possess expertise or vast experience in the field of ICTs integration in education. During the interviews, participants will be encouraged to share their perceptions, experiences and narratives regarding the motivators and inhibitors of effective knowledge construction through ICTs. The interviews are audio-recorded to capture rich qualitative data, which are subsequently transcribed and analyzed thematically.

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4. Participants

The study's participants are drawn from a diverse range of educational contexts, including: K-12 educators and administrators, Higher education instructors and faculty, Students at various educational levels, E-learning platform developers, administrators and Educational policymakers and stakeholders.

The questionnaire is designed to capture demographic information, technology adoption behaviors, perceived motivators and inhibitors related to ICTs integration in education. By involving participants from various educational contexts and roles, we aim to gather comprehensive insights into the motivators and inhibitors that influence knowledge construction through ICTs.

5. Data Analysis Procedures

5.1. Quantitative Data Analysis

Quantitative data collected through the structured questionnaire undergo rigorous analysis using statistical software such as SPSS (Statistical Package for the Social Sciences). The data analysis process includes several steps to extract meaningful insights:

5.1.1. Data Cleaning: Initially, we carefully check the collected data for any mistakes, missing information, or unusual values. If we find any issues, we correct them to make sure the data is accurate and reliable for our analysis.

5.1.2. Descriptive Statistics: We calculate descriptive statistics such as frequencies, means and standard deviations. These numbers give us a summary of how participants responded, showing us common patterns and the average values in the data. This analysis helps us understand the main trends and characteristics of the participants' responses.

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5.1.3. Inferential Statistics: We use inferential statistics to explore connections between different variables and identify important factors that influence the adoption and usage of ICTs. Methods like correlation analysis and regression analysis help us examine these relationships. For example, we might study whether participants' background information is related to their motivation in adopting ICTs for knowledge construction or not. These analyses provide valuable insights into the factors affecting ICTs usage among participants.

5.1.4. Hypothesis Testing: We create research hypotheses, and then we use specific statistical tests to evaluate them. These tests involve comparing the data we have from our sample to the broader population to figure out if the differences or connections we observe are statistically meaningful. Using these statistical tools provide a thorough quantitative analysis, helping us identify patterns and relationships within the data.

5.2. Qualitative Data Analysis

We analyze the qualitative data gathered from structured interviews using thematic analysis, a method that involves systematically identifying, coding and interpreting recurring themes and patterns within textual information. Here is how the analysis has been conducted:

5.2.1. Data Transcription: We transcribe the audio recordings of the interviews verbatim, converting spoken words into written text. This process creates a textual dataset, ensuring that participants' responses are accurately preserved in written form for analysis.

5.2.2. Data Familiarization: Researchers carefully read and review the interview transcripts multiple times to gain a deep understanding of the content. This immersion in the data helps identify emerging themes and patterns, allowing for a comprehensive analysis.

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5.2.3. Coding: Researchers utilize qualitative data analysis software such as NVivo or ATLAS.ti to categorize specific themes or concepts found in the text. This involves assigning descriptive codes to relevant portions of the text, facilitating organized analysis of the qualitative data.

5.2.4. Theme Development: Researchers analyze the coded segments, organizing them into broader themes through iterative coding and discussions. These themes encapsulate the overarching concepts that surface from the data analysis process.

5.2.5. Interpretation: Through careful thematic analysis of qualitative data, participants' viewpoints and experiences are deeply explored, shedding light on the intricate motivators and inhibitors influencing ICTs integration in education. This method intricately connects these themes to the research questions, offering profound insights into effective knowledge construction through ICTs. The process is enriched by detailed narrative descriptions and direct quotes from participants, ensuring the depth and authenticity of the findings.

5.2.6. Ethical Considerations: Ethical considerations are paramount in this research, they include obtaining informed consent, maintaining confidentiality, minimizing harm, ensuring voluntary participation, and conducting the research with integrity and honesty ensuring that the participants are aware of the study's purpose, data collection procedures, and their rights as participants. Following ethical guidelines is essential to ensure the well-being and rights of participants and to maintain the integrity and credibility of the research. Bryman and Bell (2015) and Creswell and Plano Clark (2018) emphasize the importance of obtaining informed consent from participants, protecting their privacy and confidentiality, and

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minimizing any potential harm or discomfort. These authors also highlight the need for researchers to maintain integrity, honesty, and transparency throughout the research process. By following these ethical guidelines, researchers can ensure that their studies are conducted ethically and responsibly.

6. Limitations

This research might face limitations, such as possible bias in survey responses, challenges in generalizing findings due to diverse participant backgrounds and potential time and resource constraints during data collection. Nevertheless, these limitations are acknowledged and managed to the best of our ability.

Conclusion

The research methodology outlined in this chapter aligns with the study's objectives of exploring the motivators and inhibitors of effective knowledge construction through ICTs in education. By employing a mixed-methods approach, the study aims to provide a comprehensive and clear understanding of the complex factors influencing ICTs integration.

The combination of quantitative surveys and qualitative interviews allow for a robust analysis of motivators and inhibitors, ultimately contributing to the advancement of ICTs integration in educational settings. Ethical considerations and limitations have been carefully managed to ensure the integrity and validity of the research findings.

Chapter three: Presentation of the Findings

Introduction

In this chapter, entitled "Presentation of the Findings," we focus on presenting the outcomes of our study. The chapter is divided into two sections. The first section reveals the findings from a questionnaire distributed randomly among forty five (45) learners from three private schools: Ecomode, Assilic, and Bridgeway. The second section discusses the results obtained from structured interviews conducted with three learners from the same private schools.

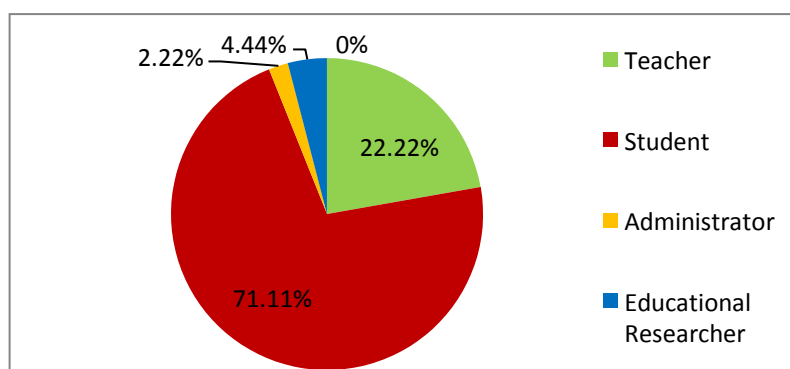
1.1. Presentation of the Results of the Questionnaire

The survey results, encompassing three (03) sections namely participants' background information, their attitudes and experiences regarding technology integration in English as a foreign language learning, and their perceptions about obstacles to effective technology integration in education, have been analyzed using both descriptive statistical methods and Qualitative Content Analysis.

Section one: Participants' Background Information

The first section of the questionnaire aims to gather demographic information about the participants including their natures in education, years of experience, motivation levels for learning English and their training background related to technology in education.

Question1: What is your nature in education?



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Diagram 01: Participants' Natures in Education

We can see from the diagram that among participants, students represent the majority of (71.11%), (22.22%) of them represent teachers, and (4.44%) of the participants are educational researchers, while the minority of (2.22%) are represented as administrators. No other natures were reported, ensuring a focused study.

Question 2: How long have you been in this role?

Number of years	Less than 1 year	1-5 years	6-10 years	More than 10 years	Total
Ecomode school	04	04	03	04	15
Assilic school	04	05	04	02	15
Bridgeway school	03	03	04	05	15
Number of responses	11	12	11	11	45
percentages	24.44%	26.67%	24.44%	24.44%	100%

Table 1: Participants' Experience in Education Roles

Table one displays the experience of all the participants per school. There is a total number of 45 participants who have taken part in this study or 15 of each school. Participants varied:(24.44%) had less than 1 year experience,(26.67%) of them claimed having at least 1-5 years, both 6-10 years and more than 10 years have the same percentage of (24.44%).

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Question 3: How motivated are you to learn English?

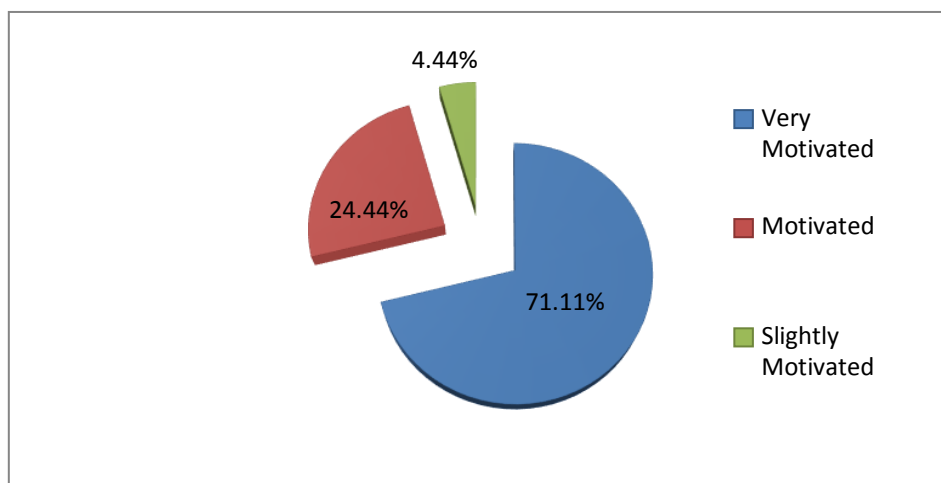


Diagram 02: Learners' Motivation to Learn English

We notice from this pie chart that a large number of participants (71.11%) expressed being very motivated and a percentage of (24.44%) of them communicated being motivated, only (04.44%) of them assert that they are slightly motivated.

Question 4: Do you receive training or support related to using technology in education?

options	Yes, regularly	Yes, occasionally	No	Total
Ecomode school	07	08	00	15
Assilic school	07	03	05	15
Bridgeway school	06	04	05	15
Number of answers	20	15	10	45
Percentage	44.44%	33.33%	22.22%	100%

Table 2: Technology training and support for The Learners

The table demonstrated that (44.44%) of the participants reported receiving training regularly, however 33.33% of the participants announced receiving training occasionally, only (22.22%) answered by "NO" .

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Section 2: ICTs integration and motivations in EFL learning

In this section, we explore how participants utilized technology in their learning activities, their reasons for doing so, their confidence levels with technology and the effects they noticed on their engagement and participation when technology was incorporated into lessons. This analysis offers valuable insights into the participants' attitudes and experiences regarding the integration of technology in English as a foreign Language (EFL) learning.

Question 5: Do you use technology in your learning activities?

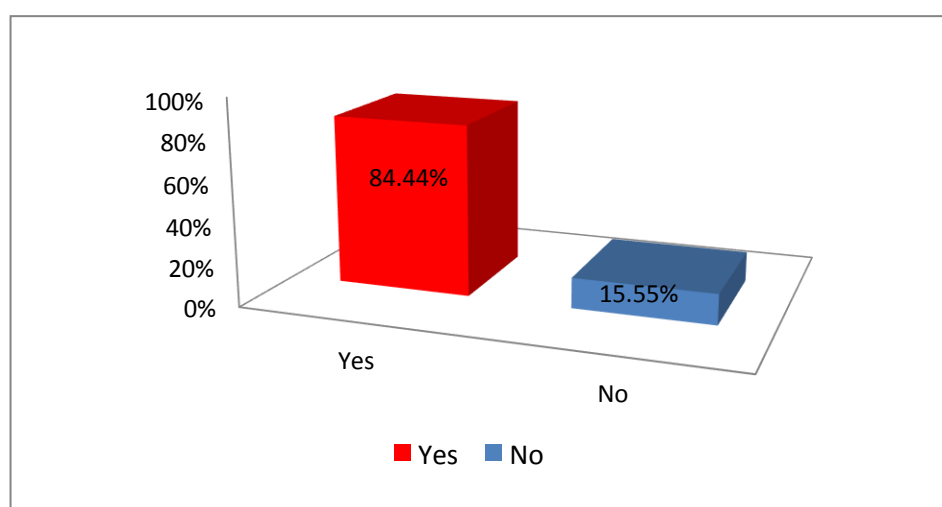


Diagram 3: Learners' Use of Technology in Learning

The results show that (84.4%) of the participants asserted using technology in their learning activities, while (15.55%) of them answered with “no”, which means that they do not use technology in their learning activities

Question 6: When you use technology, what motivates you the most to do so?

Options	1	2	3	4	5	6	Total
Ecomode school	08	10	06	11	02	00	37
Assilic school	02	05	10	07	02	01	27
Bridgeway school	10	03	04	04	03	00	24
Number of responses	20	18	20	22	07	01	88

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Percentage	22.72%	20.45%	22.72%	25%	7.95%	1.13%	100%
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Table03: Motivators for Technology Use by the Learners

This table demonstrates that approximately (22.72%) of participants found that increasing learners’ engagement was a key motivator. Similarly, another (22.72%) emphasized the value of having access to a wide range of educational resources; about (20.45%) mentioned that technology's impact on learning outcomes drove their digital integration. Additionally, (25%) highlighted the efficiency of teaching and learning with technology. Notably, (7.95%) valued personalized learning experiences. Lastly, (1.13%) mentioned other reasons, indicating the importance of understanding individuals' unique motivations for adopting technology.

Question 7: How far do you agree that technology enhances the learning experience in educational settings?

Agreement rate	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total
Ecomode school	08	07	00	00	00	15
Assilic school	07	06	01	01	00	15
Bridgeway school	04	05	03	03	00	15
Number of responses	19	18	04	04	00	45
percentage	42.22%	40%	8.89%	8.89%	00%	100%

Table 04: Perceptions of Technology Impact by the Learners

This table shows that about (42.22%) of the respondents stated that they “Strongly Agree” technology enhances the learning experience in educational settings and (40%) of them affirmed their agreements too, a total of (8.89%) asserted being neutral, while another (8.89%) mentioned that they disagree the enhancing of technology in their learning experience and no one (00%) answered by “strongly disagree”.

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Question 8: How comfortable are you with using technology for educational purposes?

Options	Very Comfortable	Comfortable	Neutral	Uncomfortable	Very uncomfortable	Total
Ecomode school	05	08	02	00	00	15
Assilic school	06	08	01	00	00	15
Bridgeway school	07	03	05	00	00	15
Number of responses	18	19	08	00	00	45
Percentage	40%	42.22%	17.78	00%	00%	100%

Table05: Learners' Comfort with Technology Use

This table demonstrates that (40%) of the participants are very comfortable using technology for educational purposes, moreover, (42.22%) confirmed being comfortable giving positive attitudes about technology use, while a percentage of (17.78%) of them reported being neutral and no participant (00.00%) answered being uncomfortable.

Question 9: Have you observed any improvement in your engagement and participation when technology is integrated into lessons?

Options	Yes, consistently	Yes, occasionally	No, not really	Not applicable	Total
Ecomode school	10	04	01	00	15
Assilic school	09	02	03	01	15
Bridgeway school	08	03	00	04	15
Number of answers	27	09	04	05	45
Percentage	60%	20	8.89%	11.11%	100%

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Table 06: The Integration of Technology for the Improvement of the Learners' Engagement and Participation

The results show that the majority of participants about (60%) validated the positive impact of technology on engagement. Additionally, (20%) acknowledge occasional improvements, while (8.89%) convey that they have not really observed any improvement using technology, (11.11%) consider this question not applicable.

Question 10: How often do you use online collaboration tools (e.g., virtual classrooms, discussion forums) for educational purposes?

Options	Daily	Weekly	Monthly	Rarely	Never	Total
Ecomode school	04	04	00	04	03	15
Assilic school	06	04	00	04	01	15
Bridgeway school	04	05	00	00	00	09
Number of answers	14	13	00	08	04	39
Percentage	35.89%	33.33%	00	20.51%	10.25%	100%

Table 07: Frequency of Online Collaboration among the Learners

According to these information, we observe that online collaboration for educational purposes is quite common among participants. The majority, with a percentage of (35.89%), reported engaging in online collaboration on a daily basis. Additionally, (33.33%) mentioned collaborating on a weekly basis. On the other hand, a smaller percentage of (20.25%) reported collaborating rarely, while (10.25%) stated that they never engaged in online collaboration. There is no participant (00.00%) reporting collaborating on a monthly basis. These findings highlight the significance of regular online collaboration in the educational setting.

Question 11: In your opinion, how has technology positively impacted education?

Most of the participants' responses (40) 88.88% highlighted a range of positive impacts, including interactive learning, access to vast resources, virtual field trips,

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collaborative projects, digital assessments, educational applications catering to diverse learning styles, interactive simulations, online discussions, continuous learning opportunities, eco- friendly digital textbooks, personalized lesson planning tools, enhanced practical understanding through virtual labs, enjoyable learning via online quizzes and games, diverse perspectives through expert video lectures, and global connections fostering cultural understanding. Only (11.11%) did not respond to this question.

Section 3: ICTs Integration and Barriers in EFL Learning

In this section, our focus was put on understanding the difficulties and hurdles encountered by the participants while utilizing technology for educational purposes. We examined the specific challenges they faced, technical issues that arose, their confidence levels in tackling these challenges and their perceptions regarding the barriers hindering effective technology integration in education.

Question 12: Have you faced any challenges or barriers when using technology for education?

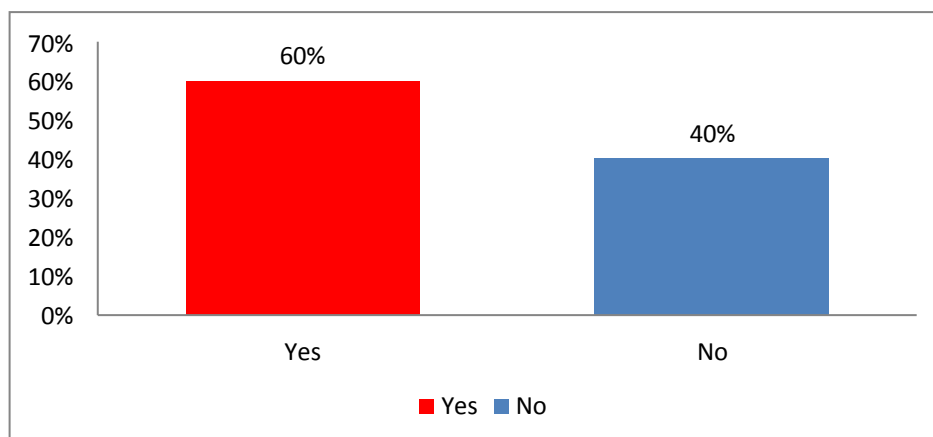


Diagram 4: Challenges in Using Technology by Learners

The majority (60%) of the participants faced challenges when using technology for education indicating the prevalence of obstacles in the integration process. While (40%) of the participants reported not facing challenges and obstacles when incorporating technology into their teaching methods.

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Question 13: If yes, please briefly describe the main challenges from the list below.....?

1. Limited access to technology
2. Lack of technical support or training
3. Resistance to change among educators
4. Budget constraints
5. Privacy and security concerns
6. Other (please specify).....

Options	1	2	3	4	5	6	Total
Ecomode school	08	03	01	02	08	00	22
Assilic school	02	03	01	01	02	02	11
Bridgeway school	11	07	05	02	01	04	30
N. of responses	21	13	07	05	11	06	63
Percentage	33.33%	20.63%	11.11%	7.94%	17.46%	9.52%	100%

Table 8: description of challenges faced by learners in using Technology

The challenges that the respondents mentioned are: “Limited access to technology” was a major concern for (33.33%) of the participants highlighting the need for improved infrastructure. “Inadequate teacher training” was emphasized by (20.63%) underlining the importance of professional development. “Privacy issues and student data” were a concern for (11.11%), “Resistance from traditional teaching methods” was mentioned by (7.94%), and “unequal internet access” and “lack of technical support” were emphasized by (17.46%) and (9.52%).

Question 14: In your experience, which of the following is the most significant technical issue or challenges when using technology for education?

Options	1	2	3	4	5	6	Total
Ecomode school	03	04	02	01	05	00	15
Assilic school	07	04	00	02	02	00	15
Bridgeway school	06	03	04	02	00	00	15

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N. of answers	16	11	06	05	07	00	45
Percentage	35.56%	24.44%	13.33%	11.11%	15.56%	00%	100%

Table 9: Significance of Technical Issues in Education

When participants were asked about the most significant technical challenges, they encountered while using technology for education, their responses were as followed (35.56%) of participants identified “limited access to technology” as the most significant hurdle. Furthermore, (24.44%) highlighted “lack of technical support and training”. Additionally, “resistance to change among educators” was mentioned by (13.33%), “budget constraints” was emphasized by (11.11%), and “Privacy and security concerns” noted by (15.56%) of participants.

Question 15: How confident are you in addressing technical issues or challenges when using technology for education?

Options	V. confident	Confident	Neutral	Not v. confident	Not confident at all	Total
Ecomode school	01	06	05	03	00	15
Assilic school	02	05	08	00	00	15
Bridgeway school	06	04	02	03	00	15
N. of responses	09	15	15	06	00	45
Percentage	20%	33.33%	33.33%	13.33%	00%	100%

Table 10: Learners’ Confidence in Addressing Technical Challenges

Participants demonstrate varying levels of confidence in addressing technical challenges, with (20%) feeling very confident, (33.33%) feeling confident, equally (33.33%) noted being neutral, (20%) feeling not very confident. No participant reported feeling not confident all; indicating a moderate level of confidence.

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Question 16: What do you think are the key obstacles to using technology effectively in education?

Participants identified several key obstacles hindering effective technology integration in education. A common thread emerged regarding funding limitations, leading to insufficient resources and lack of teacher training. Teacher expertise and standardized tools were highlighted as essential factors, emphasizing the need for comprehensive training programs. Resistance from traditional teaching methods, coupled with outdated curricula, posed challenges to seamless integration. Educators expressed a desire for more hands-on training opportunities and emphasized the importance of adapting teaching methods to embrace technological advancements. Overall, limited funding, coupled with inadequate teacher training and resistance from traditional approaches, emerged as prominent barriers, highlighting the need for targeted interventions and comprehensive support systems for educators.

Question 17: Can you suggest any strategies or initiatives to improve the integration of technology in education?

In this section, participants shared valuable insights on strategies and initiatives to enhance technology integration in education. They emphasized the significance of regular workshops and professional development programs for teachers, equipping them with necessary skills. Financial support emerged as a crucial factor, urging governments to invest more in school technology infrastructure. Mentorship programs were seen as being effective ways to help teachers transition to technology-based teaching methods. Collaboration between schools and technology companies was suggested for additional resources, along with hands-on workshops for both teachers and students. Participants highlighted the role of online platforms in offering accessible training modules for continuous professional development. Modernizing technology infrastructure was emphasized, indicating a comprehensive

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approach to effective technology integration in educational settings. These suggestions highlight the importance of continuous support, financial backing, and collaborative efforts to create a technology-rich learning environment.

1.2. Presentation of the results of the interview

In this section, the findings from structured interviews with three randomly selected participants from the three selected private schools are presented.

Question one: How do you feel when you use computers or tablets for learning activities in school?

According to the three different participants from each private school, using computers or tablets for learning activities is interesting, which makes studying fun; it makes them happy since computers help them learn in creative ways, they also feel curious to discover more.

Question two: Can you share an example of a fun learning experience you had with technology in your classroom?

For this question, three participants have shared their experiences with us about technology as follow; the first out of three once had a fun experience with 3D models of cells having virtual science experiment on the tablets, which makes them feel like real scientists. The second one shared his fun experience while having an amazing virtual tour of famous museums making them learn about history and art together, as for the last participant had a project creating digital presentations about different countries using internet which helped them learn about other cultures.

Question three: What do you think technology helps you learn better?

For this question, all the respondents provided a common answer mentioning that technology enhances their learning experience by making it more interactive and engaging. They find that interactive learning through technology helps grasp concepts more effectively.

Chapter three: Presentation of the Findings

Question four: Is there anything you find challenging when using computers or the internet for schoolwork?

As this question has been asked to the same three different participants, the outcomes are organized as follows; the first one responded to this question by stating that using internet can be challenging when the internet is slow, the second one claimed that using computers can sometimes be challenging too when it freezes. The third one finds internet challenging having no access to websites and no reliable sources, but the three of them shared a common answer which is the interruption of their learning while the challenging happen.

Question five: Do you think learning with technology is different from traditional methods?

If yes, how?

For this question, all the respondents state that learning with technology is different from traditional methods. The three of them provided a shared response that through using technology, they can explore and learn at their own space, talk to students from other countries and discuss with classmates online, unlike the traditional methods

Conclusion

This chapter has reported our study's findings. It has shown the results obtained from both the questionnaire distributed to private schools' learners and the interview held with three of them selected randomly on the topic of the motivators and the inhibitors of Internet Communication Technologies (ICTs) in an EFL sphere.

The results of the questionnaire answered by forty five (45) learners in three different private schools show that the majority of participants have a positive attitude towards Information Communication Technologies. Additionally, the insights acquired from the interview with the learners in the three selected private schools highlight the diverse impact of technology on their learning experiences. The results presented in this chapter are discussed in more details in the following chapter.

Chapter four: Discussion of the findings

Introduction

In this chapter, entitled "Discussion of the Findings," the focus is on analyzing and interpreting the outcomes gathered from the questionnaire distributed among EFL advanced learners in the three selected private schools, along with the structured interviews conducted with representatives from each school. The objective is to identify results that confirm, contradict, or partially align with the hypotheses outlined in the study's introduction. This chapter is divided into two sections: the first section discusses the questionnaire data, while the second section interprets the interview results.

1. Discussion of the Participants' Questionnaire

1.1. Participants' Background Information

In examining the demographics and roles of our participants, we contextualize these findings within the broader literature and theoretical perspectives we discussed earlier. The diverse group of participants, mainly comprising students (71.11%) emphasizes the active role of students in knowledge construction, aligning with the social nature of learning. The substantial representation of students in our study underscores the significance of considering their experiences and perspectives in discussions on integrating ICTs into education.

Teachers, making up (22.22%) of our participants, hold an important role in shaping the educational landscape. This finding aligns with existing literature on the challenges and roles of educators in technology integration (Cuban, 1986; Akhtar & Siddiqui, 2016). Cuban's notion of the "oversold and underused" dilemma (2001) sheds light on the complex reality faced by teachers, where the promise of technology often exceeds its practical application. The diverse roles of teachers in our study, including educational researchers (4.44%), align with the multifaceted nature of their responsibilities and challenges in integrating ICTs.

The inclusion of administrators (2.22%) in our participant pool serves as key decision

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makers, influencing the institutional environment for ICTs integration. The limited representation of administrators in our study emphasizes the need for more research into their specific challenges and perspectives, acknowledging the pivotal role they play in implementing educational technology.

The socio-cognitive aspects of learning emphasized by theoretical frameworks like Bandura (1986) underscore the importance of considering diverse viewpoints. The diversity within our participant group, spanning students, teachers, educational researchers and administrators, aligns with these theoretical underpinnings. As Tashakkori and Teddlie (2003) argued, incorporating a variety of stakeholder perspectives enhances the depth and richness of mixed-methods research, providing a comprehensive understanding of the complex dynamics involved in ICTs integration in education.

In summary, the demographic composition revealed through the questionnaire aligns with established theoretical frameworks and literature, highlighting the significance of a multifaceted perspective in exploring ICTs integration in education. The varied roles of students, teachers, researchers and administrators collectively contribute to a comprehensive understanding of the challenges and opportunities associated with the use of ICTs in educational settings.

Looking into how motivated participants are and the training they receive in technology; provides insights aligned with our existing literature and theoretical perspectives. The majority expressing high motivation for learning English (71.11%) resonates with Keller's ARCS model (1987, 1988), which emphasizes Attention, Relevance, Confidence, and Satisfaction for positive learning environments. In our context, participants' intrinsic motivation lays a favorable foundation for effective technology integration in language learning.

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The distribution of motivation levels aligns with self-determination emphasizing autonomy, competence, and relatedness. The (24.44%) reporting being motivated highlights diverse factors at play, echoing the understanding that learners may be driven by various intrinsic and extrinsic factors. Acknowledging and addressing this diversity is crucial when designing technology-integrated language learning experiences.

The link between motivation and technology training aligns with literature on teacher professional development (Bates & Poole, 2003). The (44.44%) reporting regular technology training aligns with Bates and Poole, emphasizing effective training in enhancing educators' confidence and competence. Keller's ARCS Model of Motivation fits strongly with what we found, particularly in the aspect of Attention and Relevance. Learners' motivation reflects the perceived relevance of technology in enhancing their language learning experience. Aligning this with the TPACK framework, it emphasizes the intersection of technological knowledge, pedagogical strategies, and language content and this suggests taking a complete approach to technology integration.

High motivation, coupled with training, creates a conducive environment for embracing technology in language learning. This resonates with Bandura's Social Cognitive Theory (1986), emphasizing reciprocal determinism. The positive learning environment created by high motivation and training reinforces successful technology integration.

In conclusion, findings on motivation levels and technology training align with established theories. High motivation and regular technology training collectively contribute to an environment conducive to successful technology integration in language learning, emphasizing the interconnectedness of motivational factors and effective technology adoption.

Chapter four: Discussion of the findings

1.2. ICT Integration and Motivations in EFL Learning:

Our research findings on technology integration and motivations in EFL learning resonate with established literature, incorporating insights from influential educational theories and frameworks. The widespread use of technology in learning activities (84.4%) aligns with Selwyn's observations and Cuban's exploration, signaling a growing recognition of technology's value in facilitating learning experiences.

Motivators, including increased student engagement (22.72%), align with Keller's ARCS model (1987) and contemporary educational perspectives like the TPACK framework. Participants' recognition of engagement as a motivator reflects an understanding of technology's interactive nature in enhancing learning. Motivation related to the impact on learning outcomes (20.45%) emphasizes perceived usefulness. This resonates with Zhao et al.'s (2017) work on the positive impact of modern communication on learning experiences, highlighting technology's role in improving educational effectiveness. Access to diverse educational resources (22.72%) emphasizing technology's transformational impact. Participants valuing diverse resources highlight technology's potential to enrich the learning environment.

Positive perceptions (82.22%) emphasize the participants' positive impact of technology on learning outcomes, most of them said that using technology makes learning better. This matches up with the main ideas of the Technology Adoption Theory, emphasizing the perceived usefulness and positive impact on outcomes. Moreover, it fits with E-Learning Research Perspectives, as participants recognize the multifaceted benefits of technology in diverse learning contexts.

Our research uncovered that participants' high comfort with using technology for educational purposes (82.22%) resonates with the insights of Selwyn (2015) and Cuban

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(2001), who extensively discussed the increasing familiarity and comfort with technology in educational settings. Selwyn's observations on the normalization of technology use and Cuban's insights into the integration of computers in classrooms set the stage for understanding the observed comfort levels. This suggests that learners are not only adapting to but also embracing technological tools, indicating that modern educational environments thrive in tech-savvy atmospheres.

The strong correlation between learners' comfort with technology and the observed improvements in engagement emphasizes the need to address digital competencies in educational settings (Bates & Poole, 2003). As highlighted by these scholars, effective technology use requires not only access but also the development of skills and comfort, contributing significantly to meaningful engagement.

In conclusion, our findings regarding learners' comfort and observations align with the theoretical underpinnings of technology integration in education. The high comfort levels observed among participants reflect the normalization of technology in educational contexts, and the reported improvements in engagement resonate with contemporary frameworks, highlighting the transformative potential of technology in enhancing the learning experience. These aligned factors provide valuable insights into the symbiotic relationship between learners' comfort with technology and the observed positive impact on engagement.

1.3. ICTs Integration and Motivators in EFL Learning

In our research, we found that the reported regularity of online collaboration (69.23%) aligns with the insights of Warschauer (2003) and Rheingold (2016). Both scholars emphasize the transformative role of collaborative tools in education, highlighting the importance of online collaboration for fostering a richer learning experience. Our findings fit with their discussions, suggesting that participants actively engage in collaborative activities, utilizing

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digital tools to enhance interaction and knowledge sharing.

Moreover, the positive impacts on education, such as interactive learning and access to diverse resources, mirror the principles of the TPACK framework. The Technology, Pedagogy, and Content Knowledge (TPACK) framework posits that effective technology integration requires a balance between technological, pedagogical and content knowledge. The reported positive impacts align with the pedagogical aspect of TPACK, indicating that technology enhances the teaching and learning process, fostering interactivity and resource-rich experiences.

The emphasis on diverse resources echoes the works of Bates and Poole (2003), which highlight the significance of effective ICTs infrastructure design for educational purposes. By citing these scholars, our findings suggest that participants perceive technology not only as a tool for collaboration but also as a gateway to various educational resources. This supports the idea that well-designed ICTs infrastructure contributes to a comprehensive and enriched learning environment.

In conclusion, the reported regularity of online collaboration and the positive impacts on education align with the theoretical foundations of collaborative learning and effective ICTs integration. These findings substantiate the ideas put forth by Bates and Poole, providing empirical evidence that online collaboration tools significantly contribute to the multifaceted landscape of educational experiences. The integration of these collaborative tools goes beyond mere technological adoptions showcasing a balanced interplay between pedagogical considerations and technological affordances, as emphasized by the TPACK framework.

In our research, we found that the challenges identified in technology use, particularly limited access (33.33%) and inadequate teacher training (20.63%), resonate with the findings of Akhtar and Siddiqui (2016). Their exploration of challenges and inhibitors of ICTs

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integration in higher education institutions highlighted issues related to access and training, aligning with the challenges reported by our participants. This correspondence underscores the persistent nature of challenges in ICTs integration, as acknowledged by these scholars.

The absence of participants feeling "not confident at all" aligns with the self-efficacy theory (Bandura, 1986), suggesting that individuals generally exhibit a level of confidence in their abilities when they possess the necessary skills and knowledge. Bandura's theory emphasizes the role of self-belief in shaping behavior, and the participants' reported confidence levels may indicate a baseline level of self-efficacy in addressing technical challenges.

In conclusion, the challenges identified by participants align with the existing literature on ICTs integration, particularly the works of Akhtar and Siddiqui. The reported confidence levels find support in the diffusion of innovation theory, emphasizing the evolving nature of individuals' attitudes toward technology adoption. Moreover, the absence of participants reporting "not confident at all" aligns with Bandura's self-efficacy theory, emphasizing the role of individuals' belief in their capabilities when dealing with technological challenges.

2. Discussion of the Advanced Learners' Interview

2.1. Key Positive Impacts:

Our interview data uncovers compelling positive impacts in the realm of technology integration. The resonances between qualitative data and the positive impacts highlighted in the interviews align seamlessly. This convergence is consistent with the argument by Zhao, Li, Li, and Wang (2017) that a comprehensive understanding of phenomena is achieved by examining diverse data sources.

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The identified positive impacts such as interactive learning, access to diverse resources, virtual experiences and enhanced practical understanding echo the sentiments of scholars like Kozma (2005). Kozma's perspective on technology fostering constructivist learning aligns with our emphasis on interactive learning, suggesting that technology plays a pivotal role in active engagement and participatory learning experiences.

Furthermore, these positive impacts reinforce the findings of Johnson (2019), advocating for the transformative potential of ICTs in reshaping the learning landscape. By emphasizing these positive impacts, our research underscores the broader implications of technology integration, extending beyond mere efficiency to significantly contribute to the richness and depth of the learning experience.

Our research identifies barriers to effective technology integration, and these barriers resonate strongly with challenges outlined in existing literature. The acknowledgment of funding limitations echoes the insights of Cuban (2001), emphasizing the pivotal role of financial constraints in impeding successful technology adoption in educational settings. These challenges underscore the need for strategic interventions, aligning with the arguments put forth by Warschauer regarding the importance of addressing resource-related hurdles.

The recurrent theme of inadequate teacher training aligns with the assertions of Selwyn (2003, 2015) and Cuban (1986, 2001) regarding the significance of professional development for educators. The persistent nature of this barrier emphasizes the imperative for sustained and targeted training programs, reinforcing the arguments made by these scholars.

Resistance from traditional teaching methods emerges as a prominent barrier in our study, consistent with the observations of Cuban (1986, 2001). The resistance to change and the importance of adapting teaching methods to embrace technological advancements are central tenets in Cuban's work, suggesting that overcoming traditional pedagogical inertia is

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pivotal for successful technology integration.

The congruence between the identified barriers and the literature underscores the persistent challenges that educators and institutions face in integrating technology effectively. The insights drawn from Cuban and Selwyn's works provide a theoretical foundation for understanding these challenges, emphasizing the need for comprehensive and sustained strategies to overcome barriers and facilitate successful technology integration.

Our research elicits strategies for improving technology integration proposed by participants during interviews. These strategies resonate with recommendations from scholars in the reviewed literature, reflecting a coherent and informed perspective on enhancing technology integration in education.

The suggestion of regular workshops corresponds with the emphasis on continuous professional development highlighted by Cuban (1986, 2001) and Selwyn (2003, 2015). Both scholars underscored the importance of ongoing training to address the dynamic nature of technology in educational settings.

The call for financial support aligns with the sentiments of Cuban (2001), who highlighted the critical role of adequate funding in ensuring the success of technology integration initiatives. The participants' emphasis on financial backing reinforces the notion that without sufficient resources, the implementation of effective technology integration strategies is severely hindered.

The proposed mentorship programs align with the idea of collaborative learning environments and support networks advocated by scholars like Selwyn (2015). Collaborative approaches, as suggested by participants in the form of collaborations between schools and technology companies, fit with the need for partnerships and support from external entities.

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The alignment between what the participants suggest and what the literature tells us highlights how practical and relevant these proposed strategies truly are. By drawing on the theoretical insights of Cuban and Selwyn, our study not only identifies barriers but also gives us real, practical solutions that align with the wider conversation about integrating technology in education.

In summary, the strategies proposed by participants during interviews align with the recommendations of scholars, emphasizing the importance of continuous professional development, financial support and collaborative efforts. These findings contribute to the existing body of knowledge, offering practical insights for educators, policymakers and institutions aiming to foster effective technology integration in educational settings.

Conclusion:

In conclusion, we have delved into the intricate layers of our study's findings in this chapter weaving insights from both quantitative and qualitative data. The alignment of our findings with the established theoretical frameworks and the hypotheses lends us credibility to our exploration of motivators and inhibitors in ICT's integration.

As we navigate the complex landscape of technology in education, our study not only contributes empirical evidence but also emphasizes the importance of a comprehensive approach. Bringing together Technology Adoption Theory, Keller's ARCS Model of Motivation, E-Learning Research Perspectives, and the TPACK framework provides us a strong foundation for understanding and enhancing ICT's integration.

Looking ahead, we encourage a continuous dialogue among educators and researchers to nurture a dynamic and adaptive ecosystem for technology in education. The motivations and challenges we have identified serve as a compass, guiding this dialogue toward innovative solutions and sustainable practices.

General Conclusion

Our study Our study has been an exploration into the multifaceted realm of Information and Communication Technologies (ICTs) integration in education where we particularly focused on the motivators and inhibitors of effective knowledge construction among advanced learners in Bridgeway School, Ecomode Private School and Assilic Private School. As we conclude this academic research, it is important to reflect on the significant findings, theoretical alignments and practical implications that have emerged throughout our research.

Our study started with the acknowledgment of the ever-evolving landscape of education, transformed by the widespread influence of technology. In our first chapter, we set the stage for our exploration, elucidating the research problem, our objectives and why we choose to investigate between the motivators and inhibitors in ICTs' integration. We also provided a bit about the theories that help us with our study, emphasizing the relevance of the Technology Adoption Theory, Keller's ARCS Model of Motivation, E-Learning Research Perspectives, and the Technological Pedagogical Content Knowledge (TPACK) framework.

Our research design and methodology chapter was like a detailed map, guiding us through the steps of data collection and data analysis. Adopting a mixed-methods approach, combining surveys and interviews to get a complete view of what our participants experienced. Exploring Tizi-Ouzou with its three private schools, gave us a varied perspective. We made sure to follow ethical guidelines, emphasizing on getting permission, confidentiality, and participant rights, emphasize the ethical integrity that helped us keep our research honest and fair

The chapter dedicated to presenting the findings was like opening a window to a world of insights, helping to understand why learners use technology and what challenges they face. We looked at the numbers and stories from our participants exploring their natures, why they use technology, what they think they learn and what issues they run into. This section was like

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a link, connecting big ideas from theories to real things we observed, making our study strong with both theory and actual experiences.

In the next part of our journey, we took a close look at what we discovered. It was like carefully examining and understanding our findings. In this chapter, the big ideas from theories acted like guiding stars, helping us make sense of the different aspects of using technology in education. The roles of our participants were like characters in a story about learning, showing us how students, teachers, researchers and administrators all have unique perspectives that matter.

The alignment with Keller's ARCS Model of Motivation showed through learners' strong motivations, highlighting the importance of technology in enhancing language-learning experiences. This was coupled with the Technology Adoption Theory, where perceived usefulness, ease of use and social influence emerged as pivotal factors shaping attitudes towards ICTs.

The qualitative insights from interviews added depth to the study, exploring the emotional dimensions associated with technology use. Fun learning experiences, perceived benefits and challenges formed the threads of this qualitative tapestry, creating a complete picture of how learners interact with technology.

Our study further aligned with the Technological Pedagogical Content Knowledge (TPACK) framework, emphasizing the need for comprehensive teacher training to address challenges related to technology integration. The multifaceted perspectives revealed in e-learning research perspectives were mirrored in our participants' recognition of technology's diverse benefits.

Furthermore, when we connect our findings with the theoretical frameworks, it is not just about making our study more academically strong; it is also about setting the stage for real-world applications. The positive motivations, diverse experiences and recognized challenges provide educators with valuable insights to inform strategic planning and

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interventions.

These implications echo a need for personalized professional development programs based on TPACK principles. We see the importance of acknowledging the positive emotional responses, integrating engaging content, and acknowledging the multifaceted benefits of technology are ways for enhancing the quality of technology-driven learning experiences.

Our study strongly supports what we guessed in the beginning. Firstly, the fact that advanced learners enjoy using technology stuff and feel positive about it perfectly matches our first hypothesis. This confirms how important it is to have an emotional connection for effective learning. Subsequently, the issues learners' face with technology, like slow internet nor freezing computers, strongly support our second hypothesis. It shows we really need to keep giving technology support and personalized help. Finally, learners being aware of the challenges and their proactive approach to find solutions totally support our third hypothesis. This shows how important it is to have learners who are aware and ready to solve problems.

In summary, our research consistently validates our hypotheses, highlighting the important role of positive emotions, personalized learning experiences and informed learners in the successful integration of technology in learning. This emphasizes the necessity for a comprehensive approach that centers around learners. While acknowledging the limitations of our findings, the insights we gained offer solid advice for teachers and decision-makers. As we keep researching, we are on a journey to make learning spaces inclusive and full of useful technology.

Our study's findings have significant implications for educators involved in ICTs integration. Acknowledging the positive motivations, diverse experiences, and identified challenges provides a foundation for targeted interventions and strategic planning. Aligning professional development programs based on TPACK principles and incorporating collaborative learning platforms fits with our study's outcomes. Acknowledging the positive emotional responses, integrating engaging and relevant content can further enhance

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technology-driven learning experiences.

Despite the valuable findings and contributions of our study, we should acknowledge certain constraints and shortcomings. Possible bias in survey responses, diverse participant backgrounds and resource constraints during data collection may impact the generalizability of findings. Acknowledging these limitations is essential to contextualize the findings. Though our study provides valuable insights, it is important to approach the extension of these results to broader contexts with caution.

As we close this dissertation, it is important to acknowledge its limitations. There could be biases in how participants responded to the surveys and the diverse backgrounds of our participants, along with limitations in resources during data collection, make us cautious about generalizing our findings. Yet, despite these challenges, the valuable insights we gained remain rich and profound.

Looking ahead, the concluding chapter serves as an invitation for a continuous dialogue among educators and researchers. The motivations and challenges we identified in our exploration act as a guiding compass, pointing the way for an ongoing conversation that leads towards innovative solutions and sustainable practices in the constantly changing world of technology in education.

In the field of technology-enhanced education, our study stands as a delicate thread, adding its unique contribution to the wider conversation on integrating ICTs. Our human side, expressed through the experiences, feelings and dreams of the learners, weaves seamlessly with the theoretical foundations, forming a complete and meaningful study. As we conclude this academic adventure, we carry with us the understanding that the quest for meaningful knowledge construction through ICTs is not a final stop but an ongoing exploration. Each chapter encourages us to explore further into the dynamic and ever-changing world of technology in education.

In our shared journey of constant discovery, let this dissertation serve as proof of the

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combined efforts needed to navigate the intricacies and welcome the possibilities that technology introduces to the field of education. May our journey of exploration inspire more questions, conversations and innovations, guide us into an era where the integration of technology not only enriches learning experiences but also nurtures a generation skilled at navigating the digital landscapes of the future.

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Appendix 1

Questionnaire

Dear students,

We are conducting a study on the motivators and inhibitors of effective knowledge construction through information and communication technologies (ICTs) among advanced learners in private schools. This questionnaire is part of our data collection process, and we appreciate your participation in this important research. The purpose of this questionnaire is to gather information about your perceptions and awareness of the factors that facilitate or hinder effective knowledge construction through ICTs. Your responses will be kept confidential and will only be used for research purposes. Please take your time to carefully read and respond to each question. Your honest and thoughtful answers will help us better understand the role of ICTs in learning and improve educational practices in private schools.

Section 1: Participant Information

1.1. What is your role in education?

- Teacher
 - Student
 - Administrator
 - Educational researcher
 - Other (please specify)
-
-

1.2. How many years have you been in this role?

- Less than 1 year
- 1-5 years
- 6-10 years
- More than 10 years

1.3. How motivated are you to learn English?

- Very motivated
- Motivated
- Slightly motivated

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1.4. Do you receive training or support related to using technology in education?

- Yes, regularly
- Yes, occasionally
- No

Section 2: ICT Integration and Motivations in EFL learning

2.1. Do you use technology in your learning activities?

- Yes
- No

2.2. If you use technology, what motivates you the most to do so? (Select up to three)

- Enhances student engagement
- Improves learning outcomes
- Provides access to more resources
- Makes teaching/learning more efficient
- Allows for personalized learning
- Other (please specify):.....
.....
.....

2.3. How far do you agree that technology enhances the learning experience in educational settings?

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

2.4. How comfortable are you with using technology for educational purposes?

- Very comfortable
- Comfortable
- Neutral
- Uncomfortable
- Very uncomfortable

2.5. Have you observed any improvement in your engagement and participation when technology is integrated into lessons?

- Yes, consistently
- Yes, occasionally
- No, not really

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- Not applicable

2.6. How often do you use online collaboration tools (e.g., virtual classrooms, discussion forums) for educational purposes?

- Daily
- Weekly
- Monthly
- Rarely
- Never

2.7. In your opinion, how has technology positively impacted education?

.....
.....

Section 3: ICT Integration and Barriers in EFL learning

3.1. Have you faced any challenges or barriers when using technology for education? (Select one)

- Yes
- No

3.2. If yes, please briefly describe the main challenges or barriers you've encountered from the list below (you can choose more than one) (Select all the apply)

- Limited access to technology
- Lack of technical support or training
- Resistance to change among educators
- Budget constraints
- Privacy and security concerns
- Other (please specify).....

3.3. In your experience, which of the following is the most significant barrier to effective technology integration in education?

- Limited access to technology
- Lack of technical support and training
- Resistance to change among educators
- Budget constraints
- Privacy and security concerns
- Other (please specify):

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3.4. How confident are you in addressing technical issues or challenges when using Technology for education?

- Very confident
- Confident
- Neutral
- Not very confident
- Not confident at all

3.5. What do you think are the key obstacles to using technology effectively in education?

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

3.6. Can you suggest any strategies or initiatives to improve the integration of technology in education?

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

Thank you for your time and cooperation.

Appendix 2

This interview is designed as part of our research, it aims in gathering advanced learners' concerning their perceptions of the motivators and inhibitors of effective knowledge construction through Information and Communication Technologies (ICTs) in private school settings, as well as these awareness of these factors. These questions are designed to be open-ended, allowing young learners to express themselves freely and encouraging positive engagement during the interview. Accordingly, your insights as advanced learners are valuable in exploring this topic. We promise to keep your confidentiality. Thank you in advance for your participation.

Here are five simple and engaging interview questions tailored for young learners based on the questionnaire:

1. How do you feel when you use computers or tablets for learning activities in school?
2. Can you share an example of a fun learning experience you had with technology in your classroom?
3. What do you think technology helps you learn better?
4. Is there anything you find challenging when using computers or the internet for schoolwork?
5. Do you think learning with technology is different from traditional methods?
If yes, how?

Thank you for collaboration