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Computer-Mediated Communication as a Medium of TEFL for 1st Undergraduate Students in the English Language Department UHBC

A Thesis Submitted to the Department of English Language in Partial Fulfilment of the Requirements for the Degree of Doctor of Philosophy in Didactics of the English Language

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Declaration of Originality

I, the undersigned, hereby declare that the doctoral thesis entitled "Computer-Mediated Communication in Teaching English as a Foreign Language to First-Year Undergraduate Students: A Case Study of the English language Department at Hassiba Benbouali University of Chlef." supervised by Dr. Nacera BENALI REGUIEG, is the product of my own research and composition, and that it complies with the fundamental rules and standards of responsible referencing.

Mr. Aissa BENAIRED

Date: 09/09/2025

Signature

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Dedication

To those who believed in me:

To my parents, your sacrifices and unwavering support have been the foundation of my journey. To my relatives, thank you for your unconditional love, patience, and belief in me.

I dedicate this thesis to my family, whose inspiration, love, and presence have made this achievement possible.

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Abstract

This study examines the integration of Computer-Mediated Communication (CMC) in teaching English as a Foreign Language (EFL) to undergraduate students, with the aim of assessing its impact on learner engagement, autonomy, and communicative competence. Grounded in Moore's Transactional Distance Theory (TDT), the research explores how CMC tools such as discussion forums, chat platforms, and collaborative digital spaces mediate psychological and communicative distance between learners and instructors in virtual and hybrid learning environments. Adopting Creswell's mixed-methods research design, the study combines quantitative and qualitative data collection to provide a comprehensive understanding of CMC's pedagogical effectiveness. Quantitative data were collected through questionnaires administered to teachers and students, measuring learner motivation, participation, and language performance. Qualitative data were obtained from platform observations and instructor reflections, offering deeper insights into classroom dynamics and instructional strategies. The findings indicate that CMC significantly reduces transactional distance by fostering more interactive, learner-centred experiences. This, in turn, enhances language acquisition and promotes self-regulated learning. Furthermore, the study identifies key pedagogical strategies for optimizing CMC use in EFL contexts, including scaffolding communication tasks, balancing synchronous and asynchronous tools, and sustaining cognitive presence. The study offers practical implications for curriculum development and teacher training, advocating for the thoughtful integration of technology to support meaningful and context-sensitive EFL instruction.

Keywords: Computer-Mediated Communication, digital learning, EFL learners, Synchronous/asynchronous tools, transactional distance theory, TEFL.

List of Abbreviations and Acronyms

ADSL: Asymmetric Digital Subscriber Line

AVUNET: Algeria's Virtual University

CC: Communicative Competence

CLA: Communicative Language Ability

CLT: Communicative Language Teaching

CMC: Computer-Mediated Communication

CNEG (National Centre for Public Learning)

EFL: English as a Foreign Language

E-Learning: electronic learning

ESL: English as a second language

FL/L2: Foreign Language/ Second language

iTalk: (/aɪtɔːki/) is an online language learning platform which connects language learners and teachers through video chat

LMS: Learning Management System

MB: megabytes

MBTI: Myers Briggs Type Indicator (MBTI) model

ONFED: National Centre for Public Learning During the French Colonial Era

SFL: Support for Learning

TDT: Transactional Distance Theory

TEFL: Teaching English as a Foreign Language

TTL: Teaching through Technology Literacy

UFC: University of Continuing Education

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General Introduction

General Introduction

The rapid advancement of digital technology has revolutionised education transforming traditional teaching and learning methods. Among the most significant developments in this domain has been the increasing integration of **Computer-Mediated Communication (CMC)** tools into educational settings. These tools, which include email, discussion boards, video conferencing, and collaborative platforms, have become indispensable in distance education and teaching English as a foreign language (TEFL) programmes. In these contexts, CMC facilitates interaction between students and teachers, fosters peer collaboration, and supports self-directed learning. However, the use of CMC is not without its challenges. Despite its potential, many students, particularly in distance learning environments, face difficulties related to their self-perception, access to technology, and peer interaction.

The focus of this research is to understand how CMC tools can be effectively used to enhance the learning experiences of traditional-age female students enrolled in a TEFL program at Hassiba Benbouali University in Algeria. Specifically, the study seeks to investigate how CMC tools impact student engagement, peer collaboration, self-perception, and academic success in the context of distance learning. Through an analysis of the experiences of these students, the research aims to contribute to the broader understanding of how digital tools can address the challenges posed by transactional distance and create a more inclusive, engaging, and effective learning environment. This introduction outlines the research topic, key issues, objectives, significance, and guiding theoretical frameworks.

As educational systems around the world increasingly adopt online and hybrid learning models, the role of CMC tools has become more critical than ever. These tools have proven to be valuable in facilitating communication, interaction, and collaboration among students and teachers. In TEFL programs in which language acquisition relies heavily on communication,

CMC platforms offer unique opportunities for students to practice their language skills in real-time, engage in meaningful conversations with peers, and receive feedback from instructors. Moreover, CMC tools break down geographical barriers, allowing students from different locations to participate in the same learning experience. This ability to transcend traditional classroom boundaries makes CMC a vital component of distance learning, especially in contexts like TEFL, where interaction is key.

Despite the growing adoption of CMC tools in education, there remain significant gaps in our understanding of how these tools impact key areas of student learning, particularly in distance education. Transactional Distance Theory (TDT), developed by Michael G. Moore (1993), is particularly relevant to this research. TDT posits that the physical separation between students and instructors in distance education creates a psychological and communicative gap, which can negatively affect student learning. Moore argues that this gap, or **transactional distance**, can be reduced through structured learning environments and interactive dialogue between students and instructors. In the context of this study, CMC tools are examined as a potential solution for reducing transactional distance and enhancing student outcomes. By promoting interaction and communication, these tools help bridge the gap between learners and instructors, thus improving the overall learning experience.

With the rise of distance learning in higher education, several challenges have emerged that affect the quality of students' learning experiences. Among these challenges are issues related to self-perception, peer collaboration, and access to technology. Many students struggle to adapt to online learning environments due to a lack of confidence in their abilities, which affects their willingness to participate in discussions, seek help, or collaborate with peers. This is particularly true for female students in Algeria, who often face additional societal pressures that can impact their academic self-perception.

Moreover, the reliance on digital tools in online education has brought attention to the digital divide, which refers to the gap between individuals who have access to modern information and communication technology and those who do not. Students from disadvantaged backgrounds or rural areas often have limited access to reliable internet connections or modern devices, which can hinder their ability to engage fully with CMC tools. This lack of access can exacerbate feelings of isolation and frustration, further widening the gap between these students and their peers.

Considering these challenges, this research seeks to explore how CMC tools can be used to improve student outcomes in a TEFL distance learning programme. Specifically, the study focuses on how these tools can enhance student engagement, foster peer collaboration, and improve self-perception among traditional-age female students. By addressing these issues, the study aims to provide practical recommendations for overcoming the barriers posed by transactional distance and ensuring that all students, regardless of their background or location, have the opportunity to succeed in a CMC-based learning environment.

The primary objective of this research is to investigate the role of CMC tools in enhancing student learning outcomes in a TEFL distance learning programme. The study focuses on three key areas: self-perception, peer interaction, and academic performance. These elements are crucial for understanding how CMC tools influence the overall effectiveness of online learning in TEFL programmes. The specific objectives of the study are as follows:

1. To examine the relationship between self-perception and academic performance: The study explores how students' beliefs about their abilities influence their engagement with CMC tools and their academic success in a distance learning environment.

2. To explore the role of CMC tools in fostering peer interaction and collaboration: The study seeks to understand how digital communication platforms facilitate collaboration among students, particularly in group work and peer feedback.
3. To investigate how CMC tools reduce transactional distance: The study evaluates the effectiveness of CMC tools in bridging the psychological and communicative gap between students and instructors, thereby improving learner satisfaction and academic performance.
4. To assess the impact of digital literacy on students' ability to engage with CMC platforms: The research examines how students' proficiency with digital tools affects their engagement in online learning activities and their overall academic outcomes.

Through these objectives, the research aims to provide both theoretical insights and practical recommendations for the effective integration of CMC tools in TEFL distance education programs.

The study is guided by several research questions that investigate how CMC tools influence student learning outcomes in a distance learning TEFL program. These questions are as follows:

1. How does self-perception influence academic performance and engagement in CMC-based TEFL learning environments?

2. In what ways do CMC tools enhance peer collaboration and interaction in online learning environments?

3. How do CMC tools reduce transactional distance, and what impact does this have on student satisfaction and academic outcomes?

4. How does digital literacy affect students' ability to engage with CMC tools and succeed in online learning environments?

In alignment with these research questions, the study suggested the following hypotheses:

- ✓ Higher levels of self-perception are associated with better academic performance and greater engagement in CMC-based learning environments.
- ✓ CMC tools facilitate improved peer collaboration, leading to enhanced learning outcomes in TEFL programs.
- ✓ CMC tools reduce transactional distance, resulting in higher levels of learner satisfaction and academic success in distance education.
- ✓ Students with higher levels of digital literacy are more successful in engaging with CMC platforms and achieving academic success in online learning environments.

These hypotheses provide a framework for understanding how CMC tools can be leveraged to improve student outcomes in distance learning and TEFL programs.

This research makes important contributions to the fields of TEFL, distance education, and educational technology by providing evidence-based insights into how CMC tools can enhance student engagement, collaboration, and academic success. As digital technologies continue to transform the educational landscape, it is essential to understand how these tools can be used to overcome the challenges associated with transactional distance and create more effective learning environments.

The study's theoretical contributions are grounded in Transactional Distance Theory (TDT) and Self-Efficacy Theory (Bandura, 1997). By exploring how CMC tools reduce transactional distance, the research expands on Moore's TDT, offering new insights into how digital communication platforms can enhance interaction and dialogue between students and instructors. Additionally, the study applies Self-Efficacy Theory to examine how students'

beliefs in their abilities influence their engagement with CMC tools and their overall academic performance. This focus on self-perception provides valuable insights into how educators can foster confidence and motivation in students, particularly in online learning environments.

Moreover, the research addresses the digital divide by investigating how differences in digital literacy and access to technology affect students' ability to engage in online learning. In doing so, the study provides practical recommendations for ensuring equitable access to CMC tools and improving digital literacy among students.

The theoretical foundation of this research is based on three key educational theories:

1. **Transactional Distance Theory (TDT)**: Developed by **Michael G. Moore (1993)**, this theory posits that physical distance in education creates a psychological gap between students and instructors, which can hinder learning if not addressed. This research applies TDT to explore how **CMC tools** reduce transactional distance by facilitating interaction and communication in distance learning environments.

2. **Self-Efficacy Theory (Bandura, 1997)**: This theory explores how individuals' beliefs in their abilities influence their behaviour and academic success. The research examines how students' self-perception impacts their engagement with CMC tools, with a focus on how increased self-efficacy can improve academic outcomes.

3. **Constructivist Learning Theory**: This theory emphasizes the importance of active engagement, collaboration, and reflection in the learning process. By examining how **CMC tools** facilitate peer collaboration and interaction, the research explores the role of constructivist learning in digital education.

This study uses a mixed-methods approach, combining both qualitative and quantitative data collection methods to gain a comprehensive understanding of how students engage with

CMC tools in a distance learning environment. Qualitative data were collected through open-ended questions included in the questionnaire, providing insights into students' experiences and perceptions of CMC-based learning. Quantitative data were gathered through surveys and academic performance records, allowing for statistical analysis of the relationship between self-perception, peer interaction, and academic success.

The participants in this study were traditional-age female students enrolled in the TEFL program at Hassiba Benbouali University. The study focused on this demographic to better understand the unique challenges faced by female students in Algeria, particularly in terms of access to technology, digital literacy, and societal pressures. The thesis is divided into five main chapters:

The first chapter provides a comprehensive review of the existing literature on CMC tools, distance learning, and TEFL programs. It examines the key theories and concepts that inform the study and identifies gaps in the literature that the research seeks to address.

The second chapter outlines the research design, including the *qualitative* and *quantitative* methods used to collect and analyse data. It describes the study's participants, the data collection process, and the analytical framework used to interpret the findings.

The third chapter presents the findings of the study, focusing on how *CMC tools* impact *student engagement, peer collaboration*, and *self-perception*. The results are analysed in relation to the research questions and hypotheses.

The fourth chapter provides an in-depth interpretation of the findings, discussing their implications for teaching practice, educational policy, and future research. It also offers practical recommendations for improving the integration of CMC tools in TEFL and distance learning programs. This chapter summarizes the key findings of the study, reflects on the

broader significance of the research, and offers suggestions for future research in the field of CMC in education.

In conclusion, the research aims to provide a comprehensive understanding of how CMC tools can enhance student learning outcomes in distance education TEFL programs, with a particular focus on the experiences of traditional-age female students. By investigating the relationship between self-perception, peer interaction, and digital literacy, the study seeks to contribute to the broader field of educational technology and offer practical recommendations for improving the effectiveness of CMC-based learning.

Chapter One:

Computer-Mediated Communication:

Trends, Tools, and Impacts

1.1 Introduction

The aim of this chapter is to explore the evolution, features, and pedagogical implications of CMC, with a particular focus on its role in enhancing communicative competence in TEFL. Basing on key theories and empirical studies, the chapter will examine how CMC tools facilitate different aspects of language acquisition, including written, oral, intercultural, and pragmatic competence. Specifically, the chapter will frame the historical development of CMC in education; examine **key** theoretical frameworks underpinning its application, such as the Interaction Hypothesis, Sociocultural Theory, and Transactional Distance Theory; review seminal and contemporary research studies on how CMC tools have been used to develop various dimensions of communicative competence; discuss **the** benefits and challenges of implementing CMC in language learning contexts; and consider the future potential and limitations of CMC tools in TEFL and online education more broadly. By critically engaging with the literature, this chapter aims to provide a solid conceptual and empirical foundation for understanding how CMC is shaping the future of language education in the digital age.

1.2 Defining Computer-Mediated Communication (CMC)

CMC refers to any form of communication that takes place through the help of computers and digital networks. Even though it was initially coined as a means for text-based interaction, today, CMC encompasses a wide array of formats, ranging from email and instant messaging to video conferencing and social media. The definition has been updated in accord with technological developments realised in the formulation of digital communication tools, placing the concept in very intricate and multifaceted domains.

According to Crystal, "the Internet has evolved from a global information network into a multi-semiotic medium, combining visual, auditory, and linguistic dimensions to create a

virtual society" (2001, p. 27). This development in CMC from its early text-based roots is a transition toward a dynamic, multimodal system of communication supporting a wide variety of interactions. Its definition is thus very fluid and subject to change with successive developments in digital technology and the changes in communication practices that these entail.

The label 'computer mediated communication' essentially refers to any human communication achieved through, or with the help of, computer technology. As Gerry Santoro (1995: 11) has put it: "At its broadest, CMC can encompass virtually all computer uses including such diverse applications as statistical analysis programs, remote-sensing systems, and financial modelling programs, all fit within the concept of human communication." Another definition from John December (1997) where he stated that: "Computer Mediated Communication is a process of human communication via computers, involving people, situated contexts, engaging in processes to shape media for a variety of purposes." Also, he defines (1997) CMC as "a process of human communication via computers involving people, situated in particular contexts, engaging in processes to shape media for a variety of purposes"

Yet another 'classic' definition is proposed by Susan Herring (1996: 1), *CMC is communication that takes place between human beings via the instrumentality of computers.''* A historical look at CMC is essential for understanding its current uses and implications. It is quite apparently stated by Herring (1996) that when the concept of CMC was rather at the infancy stage, it was defined through asynchronous, text-based communication involving email and bulletin boards. With the increasing trend and advancement, the concept of CMC also started including options for synchronous communication using instant messaging tools and videoconferencing, thereby reducing the immediate differences of face-to-face communication and CMC. This has resulted in the vast application of CMC in many fields, with education

being one in which it has evolved into a very crucial instrument for learning and collaboration.

1.3 Evolution CMC in the Context of Education

CMC has always been referred to in education circles as a remote communication and collaboration tool. Warschauer, 2007, defined it as, "CMC provides a framework for extending the traditional boundaries of education, allowing for greater flexibility and accessibility in learning" p.37. This definition shows how CMC can overcome geographical barriers and both the learner, and the tutor make constructive contact distances apart.

It is the diverse teaching and learning frameworks that greatly shape the concept of CMC in education. In this case, through TEFL, language learners might discuss any topic with native speakers, work on collaborative projects, and access authentic language resources. According to Blake: "the use of CMC in language learning has increased the potential for students to use the target language and to develop their language skills within a wide range of interactive and immersive experiences that never existed before" (p. 514).

The use of CMC in education has also spawned a lot of pedagogical models that make use of the digital resources to enhance learning outcomes. According to Saba and Shearer, "the effective use of CMC in education requires a thoughtful and strategic approach, including both synchronous and asynchronous communication to support a diverse array of learning styles and needs" (p. 58). The very term is indicative of just how complicated an issue CMC is within education; it seems to be centred on its potential for changing existing patterns and routines of teaching and learning.

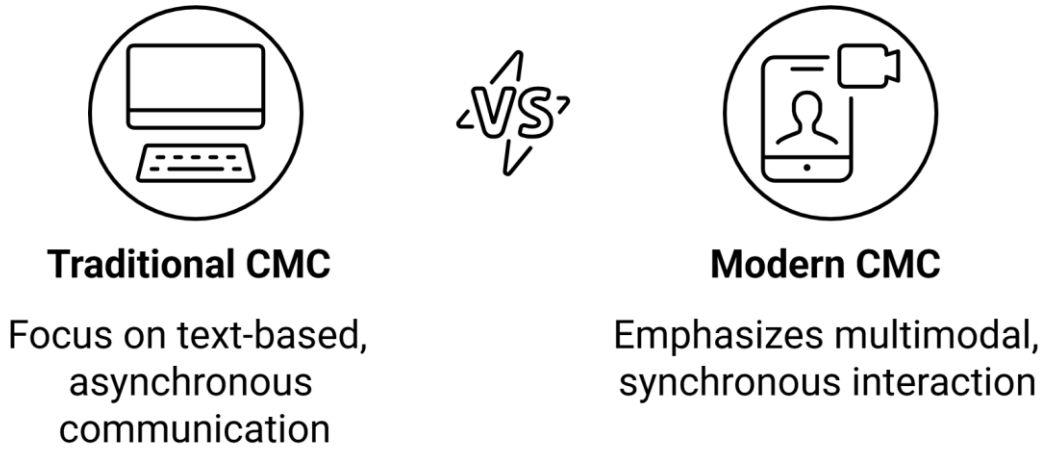


Figure 1.1: Evolution of CMC

Note: Diagram created by Aissa BENAIRED using Napkin, 2025

1.4 Characteristics of CMC

Computer-mediated communication is distinguished by a number of characteristic features that set it apart from face-to-face communication and which largely explains the successes recorded with computer-mediated communication in learning environments. These features include, but are not limited to, persistence, allowing users to revisit messages across time; distinction between real-time/synchronous and delayed/asynchronous; anonymity affecting interaction dynamics due to reduced social barriers; and multimodality encompassing various media types such as text, video, and audio-these features enhance flexibility in and engagement with learning environments.

1.5 Persistence

The other primary characteristic of CMC is persistence, which is the capability of the computer-based media systems to record and play back messages over some period in time. In digital communication, what is typed or spoken is not removed instantly, unlike face-to-face communication whereby spoken words are cleared immediately. In this case, participants in

the exchange have the ability to review and reflect on previous exchanges. It offers great value in educational contexts since continuous participation and reflection are continually motivated.

Anderson, Rourke, Garrison, and Archer explain, "Persistence of CMC is a unique feature supporting reflection and sustained engagement with content, allowing learners to revisit previous discussions and build upon earlier ideas" (p. 8). Persistence is most important in asynchronous learning environments, where students may well be engaging with course materials and conversations at different times. In the case of F2F conversations, archive messages are available, hence allowing learners to progress their learning from where they left off, even if it occurs asynchronously.

Persistence is also important in the documentation and evaluation of learning. With long-term archives of CMC interactions, educators are better able to map students' progress and provide feedback and assessment of learning. As Warschauer has noted, "The persistent nature of CMC provides a valuable resource for both students and instructors, offering a comprehensive record of the learning process that can be used for assessment and reflection" (p. 63). This feature of the CMC makes the learning process more open and accountable, offering greater possibilities of more effective and meaningful educational experiences.

1.5.1 Synchronicity

Synchronicity refers to the timing of communication exchanges in computer-mediated communication (CMC). CMC can be either synchronous, involving real-time responses, or asynchronous, where there is a delay between messages. There are different advantages and disadvantages associated with every style of communication, making each of these media appropriate for different educational situations and goals.

In synchronous CMC, including video conferencing or live chat, the participants are engaged in real time. This mode of use is much like face-to-face interaction; response is

immediate, and interactions may become dynamic. According to Crystal, "synchronous communication enables users to participate in live discussions, hence it is a medium suitable for undertakings that call for immediate interaction and collaboration" (p. 89). This synchronous CMC has the added advantage of immediacy; it becomes very ideal for activities that involve a requirement for immediate communication, such as group debates, live lectures, and virtual office hours.

On the other hand, asynchronous CMC allows participants to communicate at different periods. Such style is characterized by having a waiting period between communications, hence giving more flexibility but less immediacy. Asynchronous CMC thus comes in very handy in remote learning contexts, more so when participants are likely to be in totally different time zones or have varying schedules. According to Danet, 2001, "asynchronous communication allows people to do their learning activities at times that are separate and independent of each other, asynchronous interaction thus offers a flexible alternative to synchronous interaction" p. 101.

Either synchronous or asynchronous CMC may be used inappropriately to the aims and demands of the individual learning environment. While real-time synchronous cooperation and instant response are suitable with synchronous CMC, in asynchronous CMC, one obtains more flexibility and possibilities of reflection. On this note, there would definitely be space for both modes of communication in education, and proper usage may raise the whole learning experience to a higher level.

1.5.2 Anonymity

Another issue of CMC is anonymity, which themselves powerfully influence the interactional dynamics. Most CMC settings, as described above, provide some level of anonymity or pseudonymity that reduces social barriers to interaction. Anonymity will be

especially helpful in a classroom because it may provide an inclusive and encouraging atmosphere.

According to Thurlow, Lengel, and Tomic, "anonymity in CMC can be a double-edged sword, facilitating open communication while also enabling the expression of socially undesirable behaviours" (p. 62). Hence, because personal identity level is low in CMC, it can give a feeling that people need not feel responsible for what they do or say, hence behaving in ways they would not do in face-to-face situations. This behaviour is sometimes referred to as the "online disinhibition effect," and it can have both positive and negative effects.

On the contrary, it can foster feelings of liberty and safety over CMC, which allows users to express their ideas and opinions. More importantly, it will work best in an academic setting since anonymity will allow students to participate and respond without being condemned or criticized. Contrary to this, anonymity exonerates one from responsibility for certain ill-intended activities like bullying, trolling, or even passing misinformation.

These effects of anonymity in CMC interactions result from several influences in the communications environment, which include the design of the platform and the norms and standards that are set for the participants. Any moves to apply anonymity into the classroom must be done with extreme care, using design solutions that will minimize the negative effects of anonymity on the production of a healthy and reinforcing learning environment.

1.5.3 Multimodality

Multimodality is the embedding of several modes of communication into CMC, which may include the textual, audio, video, and interactive media modes. This feature enables CMC to break down the barriers of traditional communication and hence allows users to be involved in more dynamic and inclusive discursive processes. The multimodal character of CMC comes

into its own particularly within educational settings, thus increasing flexibility and diversity in learning processes.

As Warschauer postulates, "Multimodal CMC tools offer a range of communication options that can be tailored to the needs and preferences of learners, thereby enhancing their engagement and participation" (p. 37). This ability to embed many channels of communication within one platform increases the flexibility and accessibility of CMC, proving it to be a strong educational tool. For instance, videoconferencing solutions allow real-time connectivity among the student and instructors, while the discussion boards and messaging applications provide the means for asynchronous communication.

Within educational contexts, this can create highly complex immersive learning environments. For example, a language-learning platform would integrate video lectures with engaging interactive quizzes and real-time conversation with native speakers to deliver both comprehensiveness and fun in the learning experience. Application of multimodal technologies brings forth different styles of learning, which in turn enables the teacher to meet the unique requirements of the student.

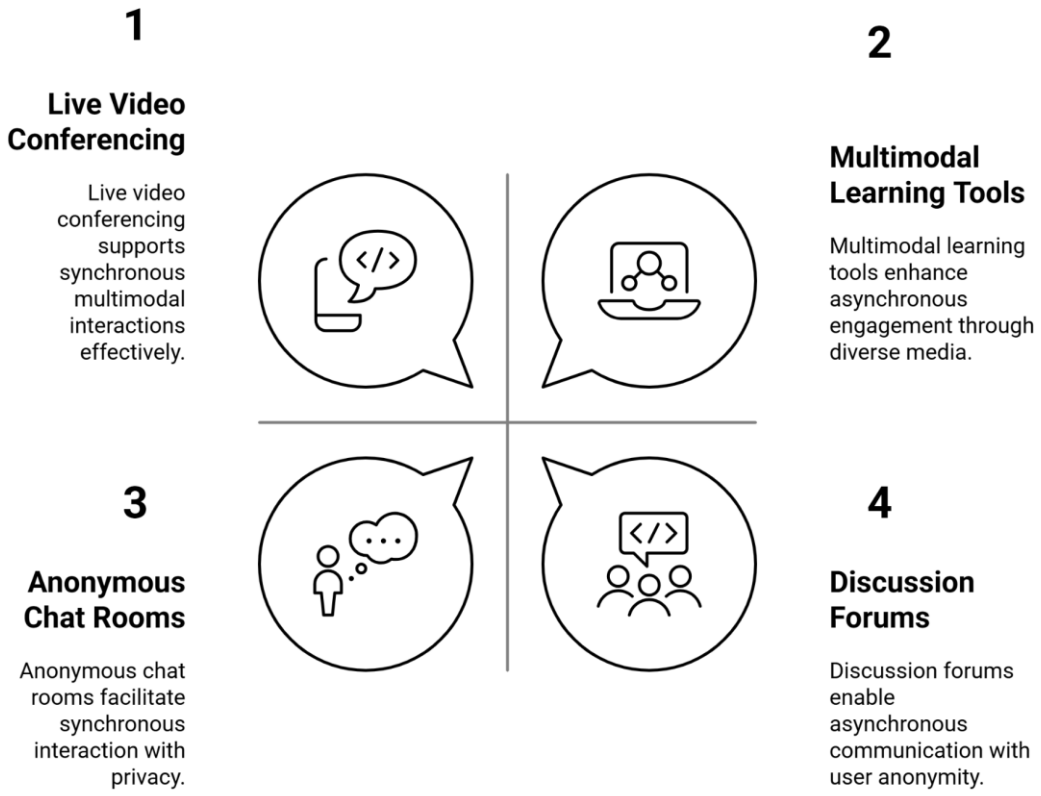


Figure 1.2: Characteristics of CMC

Note: Diagram created by Aissa BENAIRED using Napkin, 2025

1.6 Types of CMC

Synchronous and asynchronous categorize CMC. In synchronous CMC, the exchange flow of communication is in real time since the participants have a live exchange, which is usually conducted by live chats, videoconferencing, or instant messaging. As such, it allows for participant dynamic interactivity to collaborate. In comparison, asynchronous intervals afford the participants enough time through emailing, discussion forums, and social media postings. The only thing is that this communication allows much reflection and avoids scheduling conflicts; the result sometimes becomes the disjointed talking partner. As the learning context outlines, all types have benefits and issues.

1.6.1 Synchronous Communication

Synchronous CMC is the real-time communication mechanism. It is instantaneous; hence, swift replies follow from active conversation. For synchronous interactions, videoconferencing technologies, live chats, and instant messaging have become very popular in educational environments; they also offer various advantages for teachers as well as for students.

Crystal writes, "Synchronous communication allows users to participate in live discussions; it is, therefore, the proper medium for activities that involve immediate interaction and collaboration" (p. 80). Group discussions, live lectures, and virtual office hours are some of the effective ways that synchronous collaboration can be incorporated into the learning environment. This kind of communication allows for quick sharing of ideas and thus makes learning livelier and more participatory.

This strategy can encapsulate the benefits of face-to-face engagement into live communication. As an example, video conferencing facilities allow both students and teachers to communicate in real time through verbal and non-verbal cues to lessen the possibility of miscommunication. As non-verbal signals convey such a large proportion of meaning, successful and clear communication further develops language skills.

However, synchronous communications raise severe problems, especially in distance learning situations. The need to be online at the same time provides a participation barrier to learners living in different time zones or having different schedules. Moreover, any weakness on either the transmitter or the receiver effects communication quality. Even if the issues are resolved, the problems remain an attractive tool for synchronous communication in contemporary classroom settings, retaining their very advantageous position related to real-time participation and collaboration.

1.6.2 Asynchronous Communication

In CMC, asynchronous communication indicates that periods for the participants to communicate are staggered. Not as instantaneous, there is a time delay between most cues which grants larger liberties. Especially for settings educationally unique, asynchronous communications tools email, discussion, forums, social media postings offer a wide variety of benefits for instructors as well as their students.

Asynchronous communication, according to Danet (2001, p. 102), "allows persons to engage in learning activities at separate and independent times, so providing a flexible alternative to synchronous interaction". In a distant learning environment where participants may be perhaps across many time zones or with varied schedules, this adaptability can be helpful. This is better timing for students who talk and do their homework, and it enables them to communicate more deliberately.

Asynchronous communication allows the participants time for introspection and hence allows them a review of the answers and further investigation into them more thoroughly. Thus, it could establish more profound and more worthwhile debates as students will have a chance to contribute to the subject actively. The ability to include several learning styles is also a feature that makes asynchronous communication different from synchronous communication, for some students need more time to think over the information and keep up with the discussion.

However, the retarded character of asynchronous communication may mean that contact becomes fragmented where the flow of the conversation breaks up between responses. Previous research indicates that fragmentation does not allow turn-taking and conversation repair strategies to evolve. As well as strategies for maintaining continuity in discussions, facilitators may also need to set up rules and expectations for using an asynchronous communication platform to help in fighting the challenges.

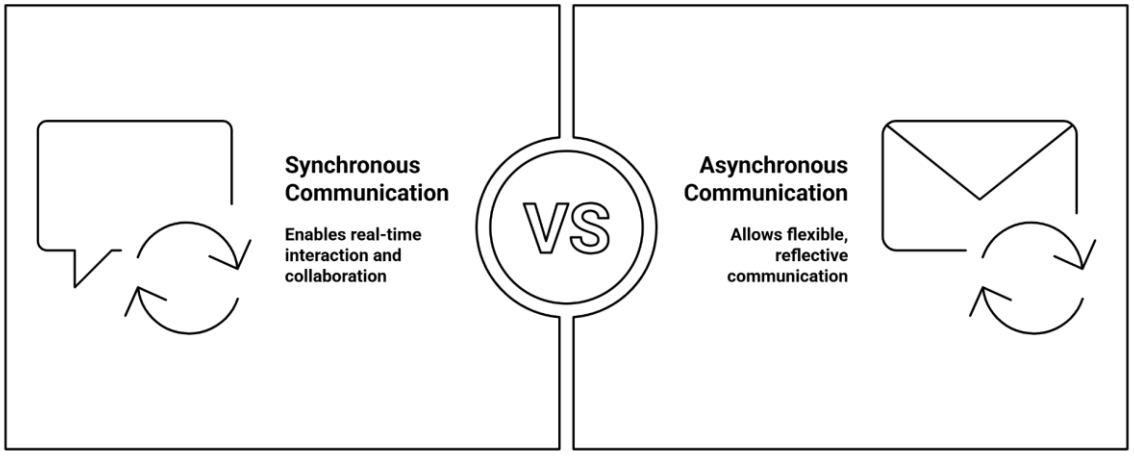


Figure 1.3: Types of CMC

Note: Diagram created by Aissa BENAIRED using Napkin, 2025

1.7 Usefulness of CMC

Computer mediated communication facilitates education through global accessibility in that students and educators can communicate from any part of the world. They can also access resources without limitations of regional barriers. CMC encourages participation in improved contributions by parties who at first, would be shy enough to contribute to face-to-face environments. The main educational advantage of CMC is that it allows one to learn in a flexibly individualized way, with many resources and tools that are supportive of deeper engagement with course materials in a manner truly adaptive and interactive.

1.7.1 Global Accessibility

Undoubtedly the most blatant advantage of CMC is that it is worldwide. It enables students and educators from anywhere in the world to communicate with each other. Within the context of distance education, in particular, this allows learners to log onto course materials and discussion from anywhere in the world. The use of technology is one dimension of how distance education has changed throughout the years and technology has often been a driving

force during that development. However, even more important is how the pedagogical models have developed from self-studies, without any support from the tutor to collaborative work among students at a distance. The development of distance education has been a process of several stages, often called generations (Garrison & Anderson, 2003). It is important to emphasise that even if it is possible to distinguish between different generations in the development of distance education, this development has not been a linear process, and several of the generations have co-existed (Garrison & Anderson, 2003).

Saba and Shearer put forward the view, "Geographical barriers in education were effectively demolished by the use of CMC, which makes it possible for learners to engage either with the content or peers irrespective of physical location" (p. 21). Consequently, owing to the global access allowed by CMC, cultural exchange and intercultural communication are made possible for students to communicate with other peers with different cultural backgrounds and world perspectives.

Apart from educational gains, this global access of CMC has deep implications for social equity and inclusion. To make education more easily available to people in remote or underserved communities, the educational divide will be significantly lessened by CMC, adding to better social mobility opportunities. This potential can only be met if there is consideration for closing the digital gap by having all students equally receive the technology and tools needed.

1.7.2 Enhanced Participation

Other important advantages of CMC are that it allows more people to participate. Since CMC is flexible and open to all, people with speech problems or social anxiety problems may express themselves more freely. It tends to be easier for people who might experience social anxiety in face-to-face situations.

"CMC tools give learners a supportive environment where they can participate in discussions and cooperative activities without the pressures of face-to--face interaction," Warschauer notes (p. 63). In classrooms, this higher involvement is very vital as successful learning depends on real participation.

In a conventional classroom environment, CMC lets students be more reserved and participate in group projects maybe they wouldn't be able to or would be unwilling to undertake. This fosters a more inclusive classroom in turn. Students will have more time, for instance, to consider what they want to say and express it more precisely in the online discussion forums. This might lead to a more diversified, deeper conversation with many various voices and points of view heard.

Particularly in a collaborative learning setting where active participation and interaction define the effectiveness of the learning process, participation is enhanced. By establishing an online environment where students may exchange ideas, provide and receive feedback, and complete project work together, CMC technologies include group chat and collaborative workspaces may help to make teamwork more realistic. Since students are completely absorbed in the building of information, this kind of collaborative learning will provide better comprehension and retention of the given content.

1.7.3 Educational Benefits

Other than getting more people to participate in class, the CMC is also very good for education in many other ways. Students are allowed to look at course materials and discuss as they see fit, letting them know when they are most interested in learning. This makes it easy on all students, whatever their needs may be, as they are able to make changes based on how they best learn and how often they need to do something.

Berge and Collins say, "CMC lets students take charge of their learning, interacting with material and peers in a way that works best for them" (p. 78). Once more, the ability to go back and start old conversations and read saved messages allows students to learn more mindfully because they can look at and reflect upon old conversations again.

Personalized learning is also an option in CMC. It provides the possibility for each student to access materials and tasks tailored according to his or her needs and objectives. The flexible learning systems are using the instruments of CMC for the provision of specific feedback and suggestions to each student in view of his or her achievement and progression. It is more possible they'll do better in school if they can focus on what they need.

Moreover, CMC can increase the quality of education by providing schools with much more resources and expertise. Examples are the online classes that include talks and chats with subject experts. These make learning more fun and teach students useful things. The newest data and resources lie at the heart of the newest research and development in every area of study. CMC tools bring ease of access to them.

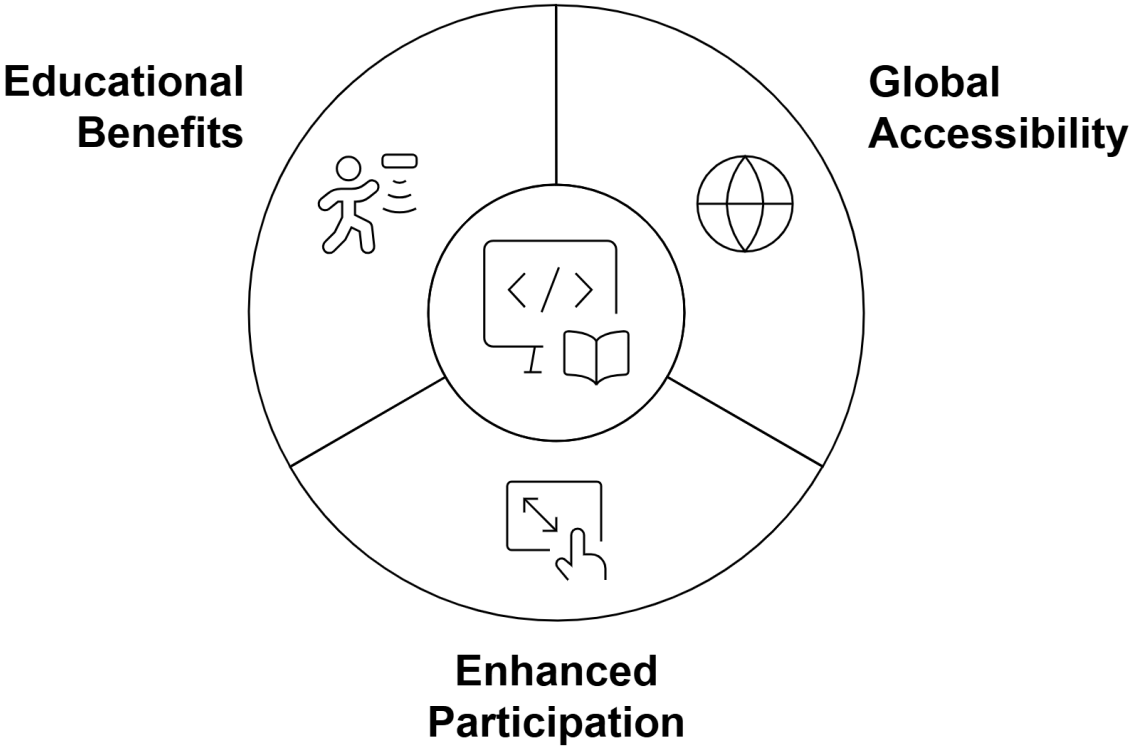


Figure 1.4: Usefulness of CMC

Note: Diagram created by Aissa BENAIRED using Napkin, 2025

1.8 Drawbacks of CMC

Computer mediated communications negative aspects in an educational environment include the following: CMC also involves some associated disadvantages; uneven access to technology and uneven opportunities for digital literacy bring inequalities in learning. Such strong dependence on technology can possibly suppress the ability to think critically and to solve problems. And finally, is communication apprehension because of the absence of non-verbal cues, which brings greater stress and unease among the learners. Again, these various disadvantages point toward the need for inclusive approaches, technical assistance, and anxiety-reducing practices in CMC settings.

1.8.1 Digital Divide

While CMC confers many benefits, the work looking into its deficiencies is more so in the learning environment. One of the major concerns at the moment relates to digital divide issues. Students are not at par in terms of access to technology and resources that facilitate CMC-based learning. This obviously will create unequal learning opportunities and outcomes for students coming from poor backgrounds and those from the rural areas where there is minimal access to the Internet.

Warschauer comments, "the digital divide thus remains a major obstacle to equal educational opportunity and CMC typically exacerbates existing inequities" (p. 44). This is such an extensive phenomenon as the digital divide, apart from access to technology, which also includes digital literacy or the ability to use digital tools effectively for the purpose of learning and communication. Any student without a good and reliable place to get on the internet, proper hardware, or digital literacy may already be disadvantaged and unable to participate in any meaningful way within a CMC-based learning environment. This may further contribute to a drop in interest, low level of involvement, and bad learning effects.

This would involve access to technology, training in digital literacy skills, and learning environments that are socially inclusive and consider a diversity of needs among students within a classroom. Some of these first steps could include projects to get each child a computer or Internet access, along with classes or other tools to help them learn how to use technology. Also, teachers can make games with CMC-based tasks that all students can use, even if they do not all have the same technology.

1.8.2 Technological Dependence

Another concern is that, more likely than not, people will become overly dependent on technology. The more the tools of CMC used in schools, the greater is the risk that through

overdependence, both students and teachers may learn how not to communicate or learn. This is the reason students who are overly dependent on electronic systems may not be able to carry out critical thought or problem solving because they allow these systems to give the answers, instead of doing the harder work of the mind.

Furthermore, it appears to need almost no trouble in technology to completely wreck the learning experience. For example, many schools were not very prepared for the pandemic and are still struggling with adapting to online lessons. Meanwhile, the huge dependence of education upon technology raises questions regarding how much money and time will be needed in the future to maintain these digital systems.

The school should therefore provide the equipment, training, and support that the classroom would need to use the CMC tools. This could be an up-front challenge for those institutions not equipped with resources to match demands in a fast-moving technological race.

Moreover, the use of tools in CMC may just increase new issues for the educator, who has to change pedagogies to include digital tools and learn to handle online interactions. This will call for continuous professional education and support, alongside a predisposition to experiment with approaches and technologies. It is difficult not to be overwhelmed and burned out by fast technology changes for instructors trying to keep up.

1.8.3 Communication Anxiety

Another issue to do with CMC is shyness in communication. While it makes the environment more helpful at times, it makes things more stressful at others for those who do not feel safe speaking online or who have problems with being unable to read body language. This kind of concern may make a person less likely to participate and show interest, which would be bad for learning.

Blake adds, "Videoconferencing is to be used in language learning with caution, as it is apt to increase anxiety and probably add more barriers to communication" (2000, 514). Since CMC does not possess non-verbal cues-of which body gestures and facial movements are of the most importance to understand the tone and meaning of messages-it will be very hard to set a tone that everybody understands in general. This could lead to mistakes and poor communications, adding on more stress and pain in such situations.

To this end, the teacher can ensure that everyone is aware of the rules and norms of behaviour regarding CMC and measures to be less apprehensive and more confident. For students' comfort and security online, teachers could provide low-stakes practice with comments, general support, and praise.

Another problem associated with CMC is that of communication anxiety. While in some cases it offers a supportive environment for some learners, in other cases, it can raise the anxiety levels of learners who are not comfortable communicating digitally or those who have an issue with the lack of non-verbal cues. The presence of this kind of anxiety may reduce participation and engagement, hence ultimately negatively affecting learning outcomes.

According to Blake, "the use of video conferencing in language learning must be carefully managed to ensure that it does not increase anxiety or create additional barriers to communication" (2000, p. 514). Since CMC lacks non-verbal cues, such as facial expressions and body language that allow for the clarification of the tone and intention of messages in process, setting a tone for an interpretation clear to participants may become quite difficult. Those situations could lead to mistakes, miscommunication, further anxiety, and uneasiness.

The educator can contribute to reducing this form of communication apprehension by explaining the rules and expectations of ways to participate in CMC, along with ways to reduce apprehension and develop confidence. Educators might also provide opportunities for low-

stakes practice and feedback in addition to general encouragement and support to help students feel more comfortable and confident online.

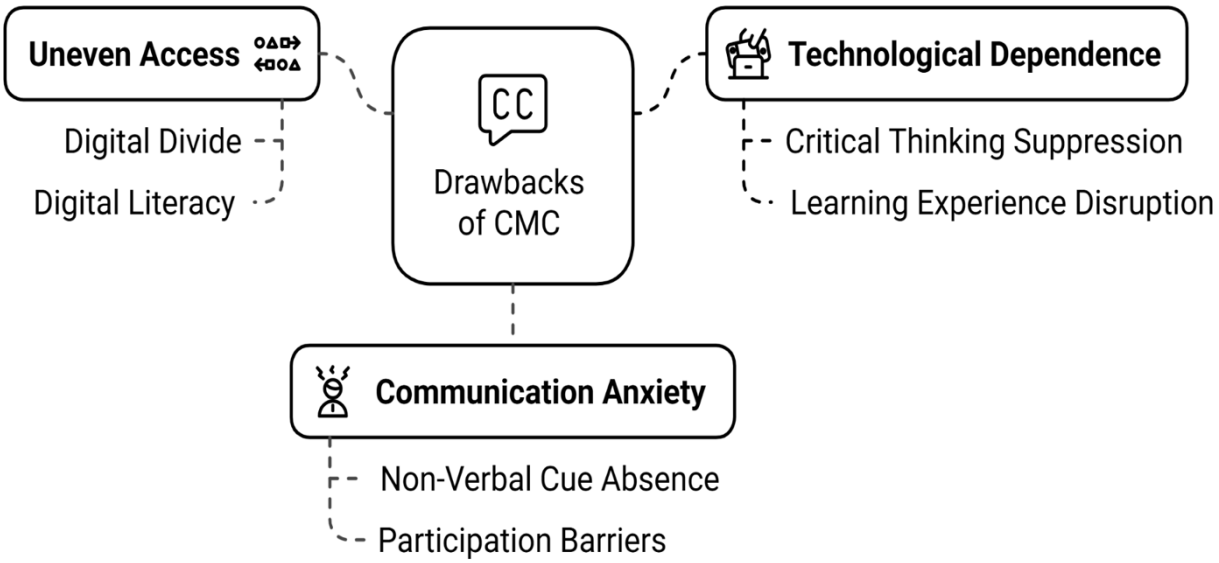


Figure 1.5: Drawbacks of CMC

Note: Diagram created by Aissa BENAIRED using Napkin, 2025

1.9 Moore's Transactional Distance Theory

The Transactional Distance Theory by Moore helps explain how CMC works in the educational environment. TDT describes the psychological space between students and teachers; it is called the transactional distance. This again will be a function of interaction between dialogue, structure, and learner autonomy. High levels of dialogue and autonomy reduce transactional distance, while rigid structures and lack of interaction enhance it. It is the meaningful exchange of words creating contact; structure deals with how well the course is organized, and learner's autonomy pertains to students' capacity to self-direct in learning. These three ingredients, when well-handled, amount to a supportive learning environment.

1.9.1 Transactional Distance

Most likely the most influential theory for understanding how CMC works in schools is Moore's TDT. According to TDT, between students and teachers in a setting of CMC, there exists a psychological and communication space called transactional gap. According to Moore, transactional distance depends on how three things work together: conversation, organisation, and student agency. It simply means that transactional distance may be either long or short, depending on how the variables interact. High levels of dialogue and learner autonomy go with a low transactional distance. The concept of "transaction" originates from John Dewey and is further developed into the theory of Transactional Distance by Moore (Moore & Kearsley, 2005). A certain degree of "transactional distance" occurs in all types of education, also in campus courses where students and teachers meet face-to-face (Moore, 1993b).

Transactional distance refers to more than just a question of physical distance; it is a complex dynamic construct representative of the relationships between students, instructors, and the learning environment. In a CMC context, these relations are affected by several factors, such as course design, communication quality of the participants, and the degree of learner autonomy. An appropriate management of transactional distance will need an understanding of its role in the process of building an effective, engaging learning environment on the base of CMC. According to Huang et al. (2015a), "In Moore's original model, the extent of the transactional distance is determined mainly by three factors: (1) dialogue between the instructor and the learner, (2) the rigidity or flexibility of course structure, i.e. course design elements such as course objectives, instructional strategies and evaluation methods, and (3) learner autonomy that is associated with learner directedness, indicating the amount of control that the learner exerts during the learning process" (p.106)

For example, high transactional distance within a course would mean little or no interaction between students and instructors, rigid and unclear course structure, and limited learner autonomy. On the contrary, a course with low transactional distance would involve frequent and meaningful dialogues, flexible and well-organized course structures, and high learner autonomy. An educator can reduce transactional distance and create a more supportive and effective learning environment by finding a careful balance in the interplay among these elements of dialogue, structure, and autonomy.

1.9.2 Dialogue

In CMC, dialogue is thought to be the exchange between students and teachers. It is viewed as a means toward reducing transactional distance by easing the ability to 'speak' to one another and increase understanding. The way in which people 'speak' to one another in CMC is also different, depending upon the medium. Videoconferencing, for example, can be synchronous in nature while email and chat boards are asynchronous.

It depends on the quality and amount of contact and upon the ability of teachers to provide swift and relevant feedback for discussion to help reduce the trade distance. Effective dialogue, according to Saba and Shearer, 2018, in CMC environments "is characterized by free-flowing communication, respect for peers, and a common commitment towards achieving instructional goals" p. 58. Other than making people communicate with each other and learn to understand each other better, conversation can make them feel more connected to the community around them.

Later Moore in Theory of Transactional Distance (1993) expanded the definition to include interactions between learners where he stated that: “Dialogue is developed by teachers and learners during the interactions that occur when one gives instruction, and the others respond.” In the same context he added, “A dialogue is purposeful, constructive and valued by

each party. Each party in a dialogue is a respectful and [an] active listener; each a contributor, and [each] builds on the contributions of the other party or parties" (p. 23). That is a dialogue is a meaningful and respectful exchange where all participants actively listen, contribute, and collaboratively build upon each other's input.

This is very important for students who are learning online or at a distance, because they may feel really disconnected from their teachers and coworkers. Meaningful conversation will help to build the classroom as a safe space for everyone to learn in and feel welcome to take part. One of the most challenging issues of engaging individuals in discussion with one another in the context of CMC is providing equal opportunities to speak and be heard. This could consist of explicit tools and procedures for structured questions, managed platforms, live commentary, and other means to provide guarantees of openness to participation and fairness within the discussion.

1.9.3 Structure

It tells you how the course is laid out and mapped. That can change the financial distance by giving clear guidelines and directions to the kids. Course plan, learning goals, teaching tools, and ways to grade students make up the framework in a CMC setting.

An adequately structured course would reduce transactional distance, since things are clear to the learner as to what is expected of him and how he can achieve his set learning objectives. "The level of structure in a course is inversely related to the level of learner autonomy, with more structured courses requiring less autonomy and vice versa" (Moore, p. 150). An appropriate framework for a CMC course would help to structure the process of learning and ensure that all necessary support is provided for students to succeed in their studies.

In the event of good planning, the course clearly outlines the goals and standards, together with resources to attain them. It might, therefore, help clear up some of the questions and mistakes that are there and add to the gap between the parties. The structure of the course needs to be left open enough to address all needs and wants of students. This may involve more than one route for students to achieve their goals, with opportunities for self-directed learning and with choices that will facilitate control over what happens during the learning event.

The challenge for the teacher is to strike a balance between order and freedom in creating a learning environment in which people can be independent yet involved. The clear and open method of running the course will be a hard task, so that on one hand, students receive the help needed, and on the other hand, have an opportunity to study and work with the information by themselves.

1.9.4 Learner Autonomy

So, this means that the level of student freedom or power over their own learning will affect how well the CMC works for schools. "Learner autonomy" in a CMC setting usually means "self-directed learning," which means that students plan their own lessons, handle their time, and look for tools they can use to help them learn.

Low trade distance is possible when students have a lot of freedom. They can easily take charge of their own learning and become more interested in the subject. Moore defined an autonomous learner as:

> “Emotionally independent when pursuing a learning task, motivated primarily by his [sic] need for self- approval. He [sic] is also likely to have a high degree of instrumental independence, since he [sic] is experienced in coping with learning problems in a self-reliant manner” (Moore, 1980, p. 24).

Also,

> Bower and Hedberg found that a student-centred design in desktop conferencing increased student discourse more than six times compared to a teacher-centred approach. A student-centred design also resulted in students working more autonomously and contributed more to the content-based discussion (Bower & Hedberg, 2010).

Definition of student freedom is an important part of successful CMC-based learning; students can change how they learn to fit their needs and wants. People who can learn at their own pace and focus on what interests them may be more driven, interested, and happy. Learner liberty can also help students develop their critical thinking and problem-solving skills because it gives them the power to choose their own learning tools and ask for help when they need it.

There is a problem when a test uses CMC to help students become more independent if the students do not have the skills or courage to make good use of their learning experience. In this way, teachers need to help and guide students as they learn the skills they need to do well in a setting where they are learning on their own. Giving students the resources and tools to set goals, control their time, and track their progress could be an example of this. At the same time, they should be given time to think about the process and ask for feedback.

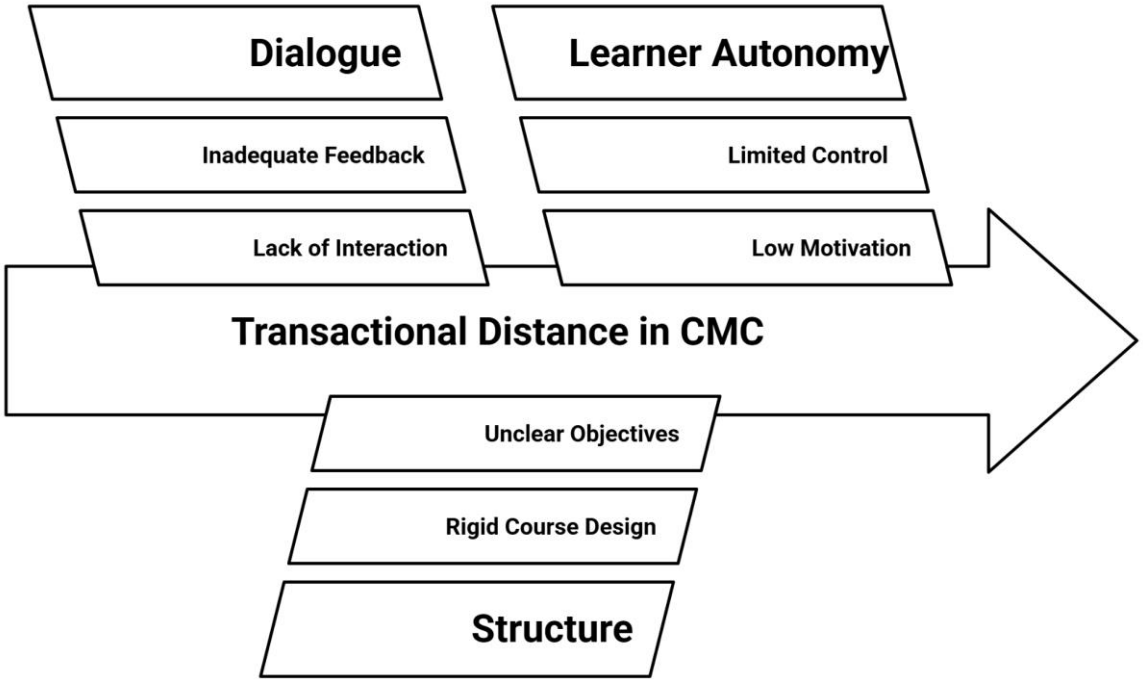


Figure 1.6: Understanding Moore's Transactional Distance in CMC

Note: Diagram created by Aissa BENAIRED using Napkin, 2025

1.10 Application of TDT

TDT by Moore is very relevant to course design using CMC and/or blended learning environment. According to TDT, effective online course design should be a balance between dialogue, structure, and learner autonomy to bring transactional distance to a minimum and engagement to a maximum. It proposes that in a blended learning environment, online and face-to-face instruction might coexist to achieve, e.g., guided discussions, self-directed learning, and reflection. Thus, by enabling interaction and promoting flexibility, TDT can contribute to increasing student satisfaction and the optimal achievement of various goals in different learning environments.

1.10.1 Designing Effective CMC-Based Courses

Much of the research regarding TDT has been conducted across school types, specifically in the mobile and online learning spaces. It gives a way of thinking about the complexity of online learning and how to plan lessons so that they reduce financial distance and increase student interest.

An important application of TDT is in the development of online courses. There are three facets of an online lesson upon which the teacher can focus to make the lessons engaging, flexible, and lead to student success: conversation, structure, and pupil liberty. For instance, Moore's 2003 study proved that students who reported a high level of contact and discussion with teachers were happier and more satisfied with their online classes.

According to Moore, "The successful application of TDT in online course design involves creating opportunities for meaningful dialogue, providing clear structure and expectations, and encouraging learner autonomy" (p. 79). When designing courses based on CMC, educators must be able to balance these three aspects of TDT so that they can create a learning space appropriate for all students.

This may include real-time and remote options, clear and consistent organization, and engaging students in their own learning. In addition, remember that CMC success is bound to be impacted by linguistic and cultural differences, and the teacher should have provided appropriate support and accommodations to ensure equity in access to the learning opportunity.

1.10.2 Application of TDT in Blended Learning

It has also been used in blended learning, where online and face-to-face learning are integrated. For instance, in a study by Garrison and Kanuka, blended learning environments

that incorporated controlled online discussions and opportunities for self-directed learning as aspects of TDT proved that students became more engaged and did better academically.

> There are different forms of distance education. Some courses have physical course meetings, a model of distance education that is often called blended learning. Other courses can be studied completely at a distance. Literature often emphasises that course meetings are very valuable (Bonk & Graham, 2006a; Dafgård, 2002; Dziuban, Moskal, & Hartman, 2005; Garrison & Vaughan, 2008; Graham, 2006; Grepperud, 2008; Masie, 2002; Nilson & Lindgren, 2006; Sloman, 2007; Woolls, Dowlin, & Loertscher, 2002).

The authors explained, "Blended learning offers a unique opportunity to apply TDT in a manner that capitalises upon the strengths of both online and face-to-face instruction, creating a more complete and effective learning experience" (p. 96). If you are going to use TDT in a blended learning approach, then you need to make sure that the online and face-to-face components fit together well.

This could be done through online tools building on and extending class activities, then providing time for reflection and discussion. Or it could be done through the use of face-to-face discussions to process issues and challenges that present themselves through online learning. Besides, teachers should remember that students in mixed learning settings have different needs and tastes, hence they should be provided with a variety of choices and useful materials to learn.

The application of TDT to online learning has led to additional interest, happiness, and success of students. With the right amount of order, freedom, and conversation in the classroom, a teacher can create a helpful yet difficult space that would encourage students to take an active role in their learning themselves. In blended learning, freedom enables students

to contribute in the way that best suits their needs and tastes. That is why it is important to all student groups.

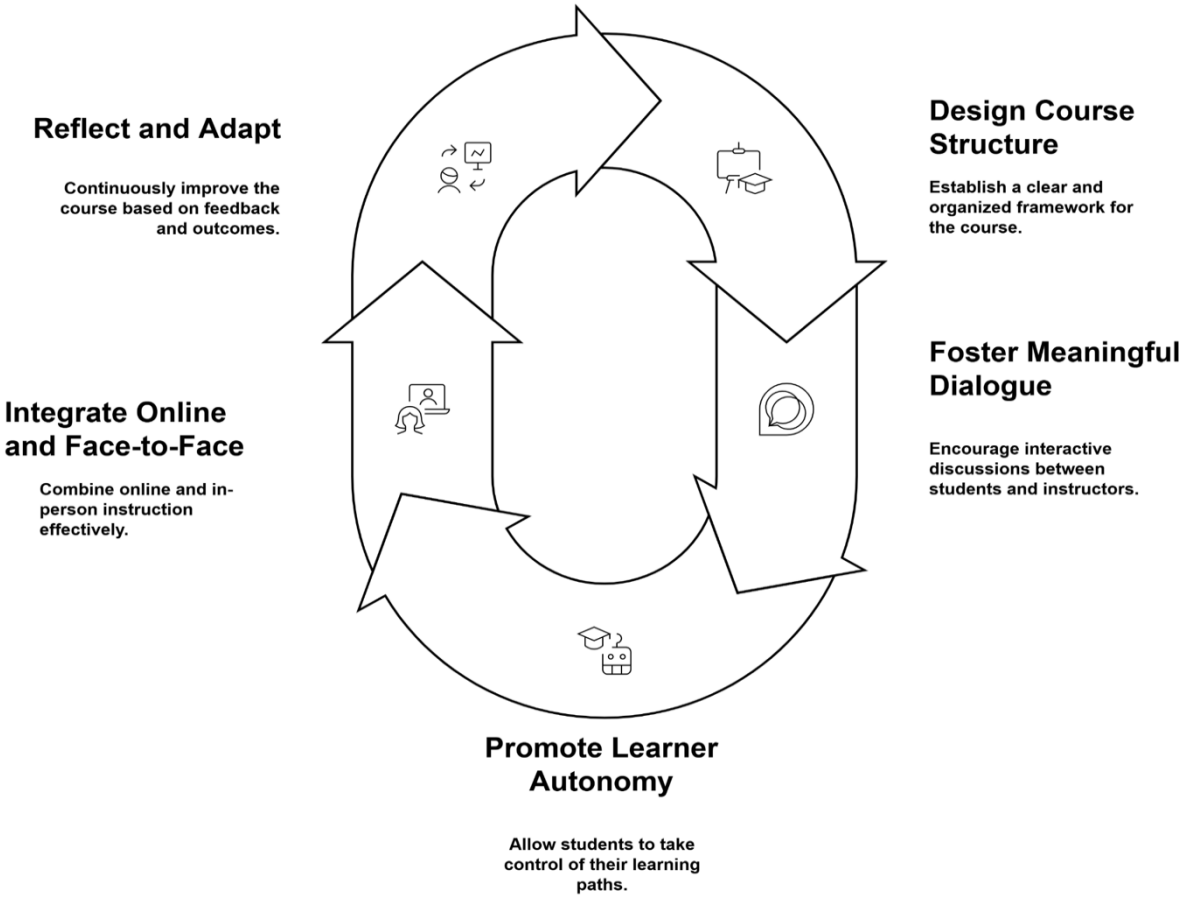


Figure 1.7: Application of TDT

Note: Diagram created by Aissa BENAIRED using Napkin, 2025

1.11 Technology Use in Student Affairs

Another of the areas in which the CMC has greatly improved is the programmatic support, e-transaction, and online social media in student affairs. In this regard, CMC tools facilitate efficiency in academic advising, avenues for online learning, peer support, and access to

services such as registration and financial aid. Such tools help the institutes handle students' academic and personal needs more efficiently. Moreover, it creates a community for the students, advertises events, and facilitates quick contact, although this does need some guidelines in consideration of privacy. Overall, CMC enhances student engagement in service delivery in higher education.

Different media possess unique features that shape how information is delivered and perceived in educational contexts. Each medium has its characteristics, e.g. text is intended to be read, images are designed to be watched, and sounds are expected to be heard (Moore & Kearsley, 2005). The presentational attributes of a medium make it more suitable for some topics and learning tasks than for others (Koumi, 2006). There are variations for each medium, often determined by the technology used for distribution (Moore & Kearsley, 2005). Understanding these distinctions is crucial for selecting the most effective medium to support specific learning objectives and tasks.

1.11.1 Programmatic Support and Education

Use of Computer-Mediated Communication in matters of student affairs has been on the rise as schools struggle to find out how best to use digital tools in supporting students to improve on their learning, engagement, and service delivery. CMC tools have become so necessary in driving automated support, easing online transactions, and driving social media engagement, among others. These tools make people feel connected and supported within education.

In student relations, programmatic support means the provision of a service or tool to improve learning or meet students' personal and academic needs. All of this will be easier to access and function better with CMC tools, thus leading to better service for a bigger range of students. It is expected that the first major area of influence that CMC has had is to provide

better academic advice to its students. The online guidance sites allow students to sit and get help or seek any academic tools on an appointment basis, all without being around campus. This is quite helpful, especially for students who cannot attend school for a number of reasons, maybe because of the distance, time, or many other various reasons. According to Kelsey and Amant, "the use of CMC in academic advising has increased accessibility so that students can obtain their advising in a timely and individualistic manner independent of physical location" (p. 80). Moreover, most CMCs have document sharing, live chat, and videoconferencing features that make the environment better for more productive and interesting counselling meetings.

An academic assistant is only one of the many ways in which CMC offers supplementary educational programs. Other tools include classes, lectures, and peer coaching. Gradually, more and more of the in-class offerings are being offered online, allowing a greater percentage of students to participate. For example, with online classes and webinars, students can engage in professional development activities from any location, making the learning experience better for everyone. This change to online delivery has been accelerated during the COVID-19 pandemic. That is, increasingly, people learn online and seek help online.

1.11.2 Online Transactions

Student affairs work has integrated online activities that have been imperative in enhancing and facilitating the delivery of administrative services to the students. Most colleges that are currently using these CMC tools have moved quite a few student services, like online registration, counselling, and financial aid, among others. With these tools in place, students do not often visit university buildings and can, therefore, easily cope with their schoolwork in their absence from the premises.

For example, the online registration systems allow students to enrol in courses, view plans,

and adjust the number of courses taken from any Internet-connected computer. This is a type of convenience that is brilliant for busy students and distance learners. Similarly, the online financial aid forms permit students to apply for loans, grants, and awards, and look into their aid status without them ever having to drop by the financial aid office. These online procedures enhance the speed and efficiency of such transactions but also give students more control over their finances and schoolwork.

Also, online systems for making payments make it easy for any student to pay his or her school fees on time, hence making transactions less painful. By allowing students to pay online, the possibility of students' failures in paying on time is reduced by the school and also relieves management staff from hassle. Every activity is going online as higher education becomes digital and automated. It is part of the change which might contribute toward making the whole student experience better.

1.11.3 Social Media

Social media is becoming increasingly the primary way college students connect and form communities. Many institutions have embraced websites like Facebook, Twitter, Instagram, and even LinkedIn to find and keep in touch with their students, communicate important information, and help promote activities and events. Students use these sites to connect with other students, to talk about their experiences, and join online groups that help them feel a greater sense of belonging, which leads to more involvement. People have been using social media to send video since about 2009 (Lehman, Dufrene, & Lehman, 2010; Multisilta, Suominen, & Östman, 2012), but the implementation of new media in formal education is often slow. Although people began sharing videos on social media very early, the integration of such new media into formal education has lagged behind, progressing at a much slower pace.

Some of the real positives of social media in relation to student issues are that one can get

a message across quickly to large numbers of a wide diversity of people. The immediacy lends itself well to situations in which getting a message across quickly may be very important. Colleges could use it to let students know what's going on, like when to register or what is happening on campus or even emergency messages. This is a good example of immediacy to a situation in which quick comments are quite necessary. Thurlow, Lengel, and Tomic emphasize, "Social media has been an effective way for universities to connect with students where they are and help them feel like they belong" (p. 75).

Apart from enabling the interaction between people, social media is helpful in other ways toward students, including sharing resources and working on projects together as well as getting comments from teachers and other students all this being done most in schools. Description of such groups will make class fun while giving students more participation in talking to each other and working together in life. Besides, the undergoing use of social media will enhance the promotion of leisure events and student groups where many students will not be left behind.

Privacy concerns and the possibility of bad relations are two of the biggest problems concerning the use of mass social media for student matters. Accordingly, guidelines should be put in place for the responsible and moral use of social media so as not to implicate the organization. Although it is not problem-free, there are so many promising aspects for getting students involved with and building communities, there are a lot of very useful tools for this digital age.

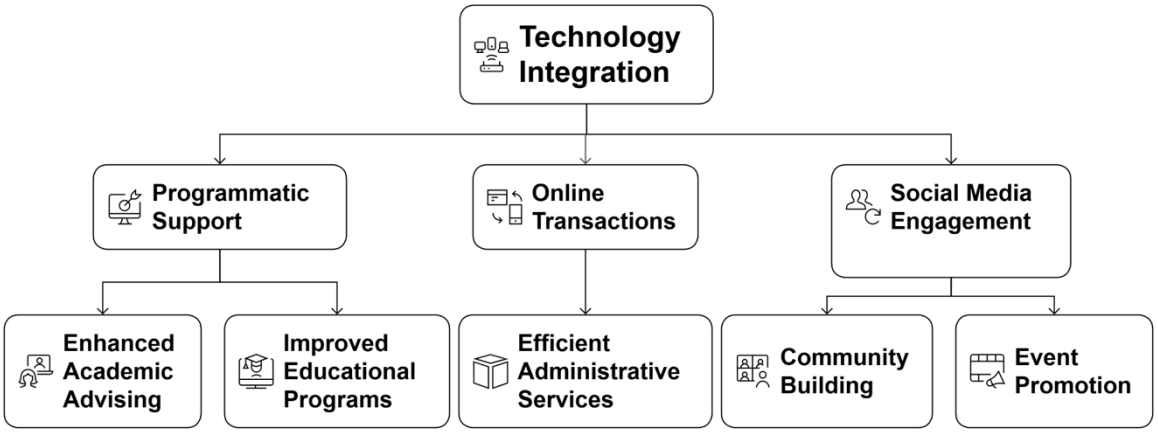


Figure 1.8: Technology Use in Student Affairs

Note: Diagram created by Aissa BENAIRED using Napkin, 2025

1.12 CMC Tools

CMC has greatly advanced programmatic support, increased online transactions, and enhanced the use of social media in application to student affairs. The CMC tools help to make registration and financial aid services much more accessible; make it easier to conduct academic advising, online learning, and peer support. Therefore, meeting the needs of the students academically and personally with an institution becomes more achievable. Besides, social media develops student communities, promotes events, and allows rapid communication, though it does require guidelines on how to use the sites with worries about privacy. Overall, CMC enhances student engagement in service delivery in higher education.

1.12.1 Online Communication Platforms

CMC has a number of tools designed for easy talking and connecting with other people online, including e-mail, Skype, message boards, social media sites, etc. All these tools are very useful to make it easier for people to talk to each other and be able to work together in school settings. An example of one type of CMC tool applied in teaching is the use of an online

chat room. One easy way for students to communicate with each other while on campus can be through email, since it offers them a chance to exchange messages, send materials, and provide comments. Even though some of the more modern tools for contact are slowly being adopted by people, email remains very popular in schools since it is reliable, easy to use, and easy to get to. Email offers the opportunity for teachers and students to communicate with each other at any time; this is particularly useful when answering questions, sharing files, or planning activities.

One popular use of CMC is in a chat thread, whereby individuals can express their views and learn from others while participating and learning from afar. Some of these come with bigger learning management systems like Canvas, Moodle, and Blackboard. Students in these LMS can open chats to discuss things that are relevant to the class. Discussion boards are not in real time, so students can join or reply at their convenience. You have time to reflect on the answer and learn even more about the subject.

> The course may offer different ways of accessing the course content and discussing it with others, e.g. resources as videos, discussion boards, blogs, wikis, Google Sites, and opportunities of commenting via social media platforms, although the LMS used in the course for paying students is not accessible. The flexibility varies as some activities might be scheduled, and others might be synchronous (in real-time). As anyone can attend, the variation of students' background is considerable, which the course can benefit from (7 Things You Should Know About ... MOOCs, 2011).

This diversity in tools, timing, and participant backgrounds enhances the course's richness and adaptability, offering both challenges and valuable learning opportunities.

According to Danet, "asynchronous communication allows people to do their learning activities at times that are separate and independent of each other, thus providing flexibility to

synchronous interaction" (p. 101). These ideas pertaining to real-time communication have been used in schools that use conference tools such as Microsoft Teams, Zoom, and Skype. All these tools permit teachers and students to communicate with one another in real time, and so live lessons and chats, along with group projects, can take place. In this respect, videoconferencing supports real-time communication with a person as if one were talking face-to-face, which thus becomes an extremely useful tool for learning or collaborative work from a distance. Warschauer comments, "Videoconferencing offers options that best fit communication needs and learner preferences to increase learners' engagement and participation" (p. 95).

1.12.2 Student Affairs and Student Learning

CMC tools have thus made an important contribution to making student life something bigger than just what happens in the classroom. The tools used can either engage learners in a conversation, provide feedback, or even engage them in group work; this calls for collaborative engagement in learning. For example, discussion boards enable individuals to interact with each other in real-time and exchange ideas whereby one can work with the other to learn. It is also within the capability of an instructor to moderate discussions, respond to questions, and give feedback on these platforms. By participating in the online discussions, students enhance their speech, critical thinking, and learning of course content.

Create online learning groups in social networking sites such as Facebook and LinkedIn, where students can associate interactively by sharing learning resources and seeking advice. These social sites in the set-up increase the learning process since more interactions occur, and they get the opportunity to associate beyond the set curriculum limits. According to Kelsey and Amant (2008), "CMC tools extend the learning environment beyond the classroom, providing students with additional opportunities to engage with content and peers" (Kelsey & Amant,

2008, p. 87)

CMC tools are helpful in improving student situations either by making it easier for students to talk to and interact with the school or to help them learn. For example, a good number of colleges make use of CMC tools to undertake polls, elicit feedback, and keep watch on the satisfaction of their students. This data is therefore put into action in making further decisions and bettering services for students.

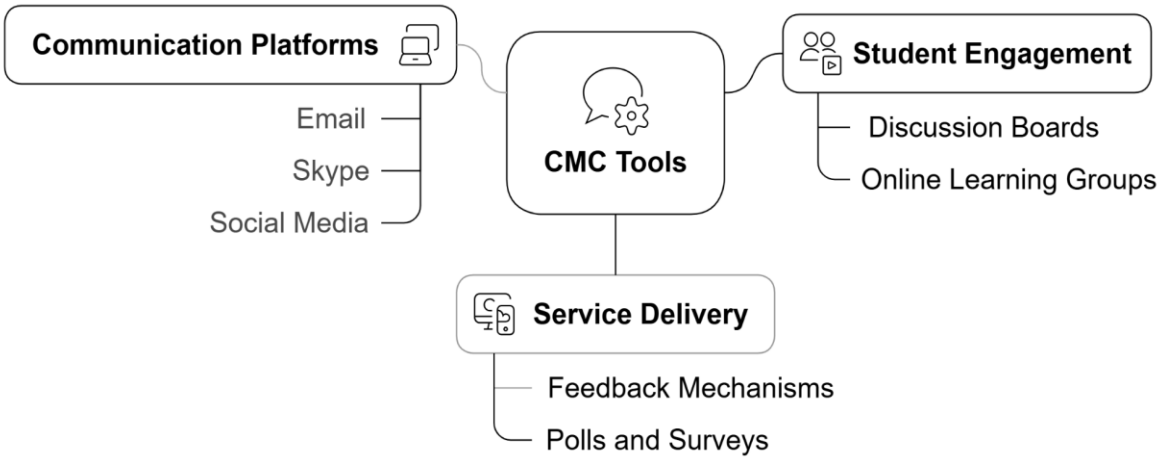


Figure 1.9: Student and CMC Tools

Note: Diagram created by Aissa BENAIRED using Napkin, 2025

1.13 New Pedagogical Models in TEFL

In the TEFL concept, integration has brought new teaching methodologies by using technology. Online teaching in English can offer flexibility, personalized learning, and accessibility from any place around the globe. Therefore, interactivity will increase because videoconferencing and follow-up on progress will have to be implemented more and more. Hence, the facilitator role has come full circle to one of a 'teacher' responsible for managing online resources while a sense of community is established; likewise, that of a student-to be

independent, in that learners are expected to assume responsibility for their learning and interaction with online materials and collaboration via CMC tools. Such roles enhance a teaching and learning experience in TEFL.

> The pedagogical model is based on the assumption that the learner is a dependent personality, one who simply carries out the teacher's directions, where learners enter the educational situation with little or no experience. Readiness to learn is a function of the age of the learner; learning is a process of acquiring subject matter content. Finally, in this model motivation to learn comes from external pressures exerted by parents or teachers (Knowles, 1984, p. 8).

1.13.1 Teaching English Online

Ever since CMC has made its foray into TEFL, that is, Teaching English as a Foreign Language, some new models of teaching have evolved where the emphasis has been placed on the technological aid to learn the language better. With these models, there is a significant change required in the way the teacher and the student learn. The assessment of lessons and awarding grades also undergoes a change.

The diffusion of CMC has enabled online English learning, which has a number of advantages compared to traditional face-to-face education. Online teaching can give teachers more freedom regarding the timing and content of their classes and can, therefore, be used by more students. There are also usually a lot of helpful tools within online platforms that may make learning more fun, such as real-time feedback, engaging tasks, and video material.

One of the best things when teaching English online is that you can reach children in various parts of the world. More specifically, this will benefit the child who cannot seem to find good English classes where he resides. Online platforms like VIPKid and iTalki allow students to log on and connect with qualified English teachers worldwide. In this way, one can study with

a native speaker and get personalized help. One-on-one coaching is also possible over these platforms and can be bespoke as per the needs and objectives of every student.

Another good thing about teaching English online is the use of different computer-mediated communication tools to help students learn. Video-Conferencing tools, for example, allow teachers and students to discuss with each other in real-time; online chat boards provide an avenue for persons to collaborate in learning. Online platforms also often offer features such as automatic marking and progress tracking, which may help a teacher keep an eye on his students' progress and give them feedback where necessary.

1.13.2 The Teacher's Role in Teaching English as a Foreign Language

The role of the teacher has drastically changed since CMC was fused into TEFL. As earlier mentioned, teachers are no longer the transmitters of knowledge but facilitators, guiding students on how to use the tools of CMC and equipping them with the linguistic tools necessary to speak effectively in a virtual environment. This hence calls for teachers to be well conversant with the use of CMC tools and in a position to make learning enjoyable and engaging by utilizing them to the fullest.

Furthermore, this goes beyond the expectations of the teacher's role in a regular classroom. The teacher needs to take care of the development and sharing of online material, lead online discussions, and provide feedback to students in a CMC class. That, coupled with the requirement that they are supposed to change their teaching style accordingly with respect to the needs of each student, together with the problems and possibilities brought about by the use of such CMC tools.

Conceivably the most critical of all tasks that a teacher can do in a CMC environment is making learners feel part of the community. This would be accomplished by using appropriate

CMC tools, including online communities, discussion parties, and collaboration amongst people within group projects. Supportive colleagues and warm, online atmospheres could make students feel connected and engaged an essential requirement for learning.

1.13.3 The Student's Role in Teaching English as a Foreign Language

Also, with CMC on board, the role of a student in TEFL has changed. Students are more in charge of their own learning. Students use CMC tools to connect with course materials, with each other, and with teachers to get feedback. Students need to be more independent and self-directed about their learning because they have more responsibility.

Students in a CMC environment are expected to have knowledge about how to properly use the tools on the internet, plan their time, and become involved in their own learning. This includes participating in online discussions, completing assignments set, and searching for more sources to supplement the learning process. Students are also expected to develop good interactional skills within a digital environment using the CMC tools to co-operate with others and communicate with teachers.

One of the best factors about CMC is that students can engage in much help and tools online. This may include using online books, apps that help one in learning a language, and teaching services, all of which can make learning better. Besides, CMC tools allow learners to learn at their own pace and time and hence manage their studies easily with other obligations.

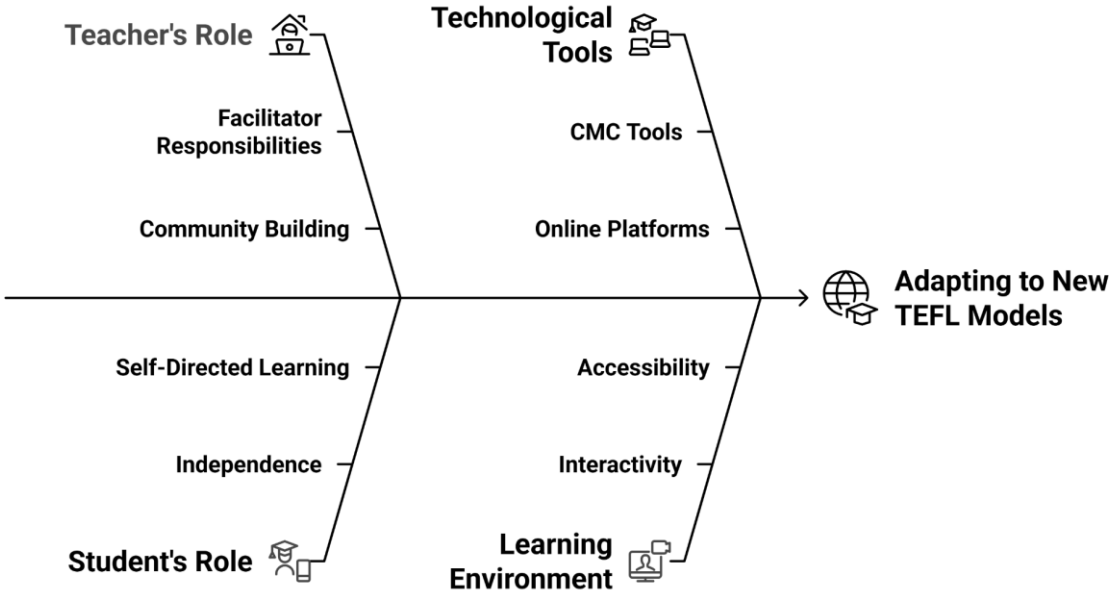


Figure 1.10: New Pedagogical Models in TEFL

Note: Diagram created by Aissa BENAIRED using Napkin, 2025

1.14 Educational Management

Technological environments, however, require instructional modalities to change to meet the needs of the students. CMC tools enhance teaching by considering online conversations and video tools, along with group projects. Flexible learning options incorporate traditional in-person instruction along with online options. Videoconferencing and discussion boards extend the classroom interactions, while the distance learners take advantage of the CMC tools to include email and online resources as a means to access education anywhere. It is in this direction; the blended learning model might integrate the best of face-to-face interaction with the flexibility and access of an online learning environment toward more dynamic and engaging educational experiences.

a. Instructional Modalities in Technological Environments

Setting up educational management in the setting of CMC means altering the ways of teaching lessons to meet students' needs. If one is going to teach using CMC, then traditional ways of teaching will have to be modified. For example, curriculum additions would have to be made for online conversations, video tools, and group projects. “Video-based materials can be compared to course books but in video format. This category of video is used for presenting the content of the course, and it is characterised by learning from video and student-content interaction (Moore, 1993b, p.93)”. This means that, video-based materials serve a similar function to course books, delivering instructional content in a visual format that encourages learners to engage directly with the material, facilitating student-content interaction. As a dynamic alternative to traditional texts, such videos support independent learning by making content more accessible and engaging through multimedia presentation.

The pedagogies that can be practiced in technological settings are many, varied, and even adaptable, and teachers can easily tailor-make their lessons to meet the requirements and interests of their learners. Many learning options can be applied at CMC, including on-site, online, and blended learning.

CMC tools, like videoconferencing and online discussion boards, may be applied to enhance the traditional classroom setting and on-site learning in TEFL. This putative combination gives learners even more tools and opportunities to interact with each other, making learning more interesting and dynamic. Videoconferencing is a way through which teachers can be able to reach out to schools around the world or bring guest speakers into their classrooms. Online discussion boards are another way for class talk to continue. Students, hence, keep on talking and understanding what is taught.

CMC tools are very vital in TEFL distance learning. This is targeted at facilitating easier communication and information exchange amongst students and teachers. These CMC tools, like email, discussion boards, and videoconferencing, allow students to access course materials from anywhere in the world, take part in discussions, and get feedback from instructors. This is especially a very valuable freedom to students who cannot visit classes physically due to living too far away or a lack of sufficient time.

According to Moore, "the use of CMC in distance learning has increased access to education, enabling students to take part in courses and programs that otherwise they couldn't access" (p. 70). Blended learning in TEFL takes the best features from both standard face-to-face teaching and computer-based learning and puts them to work in such a way that flexible and interactive learning experiences can be created.

In the blended learning approach, students learn partly online and partly in person, using CMC tools to help in learning more during in-person sessions. This approach allows teachers to employ the best characteristics of both CMC and regular teaching in a way that makes the process of learning more comprehensive and meaningful.

Saba and Shearer argue, "Blended learning models that include CMC offer the best of both worlds, providing the flexibility and accessibility associated with online learning, along with the personal interaction and immediacy found in face-to-face instruction" (2018, p. 76).

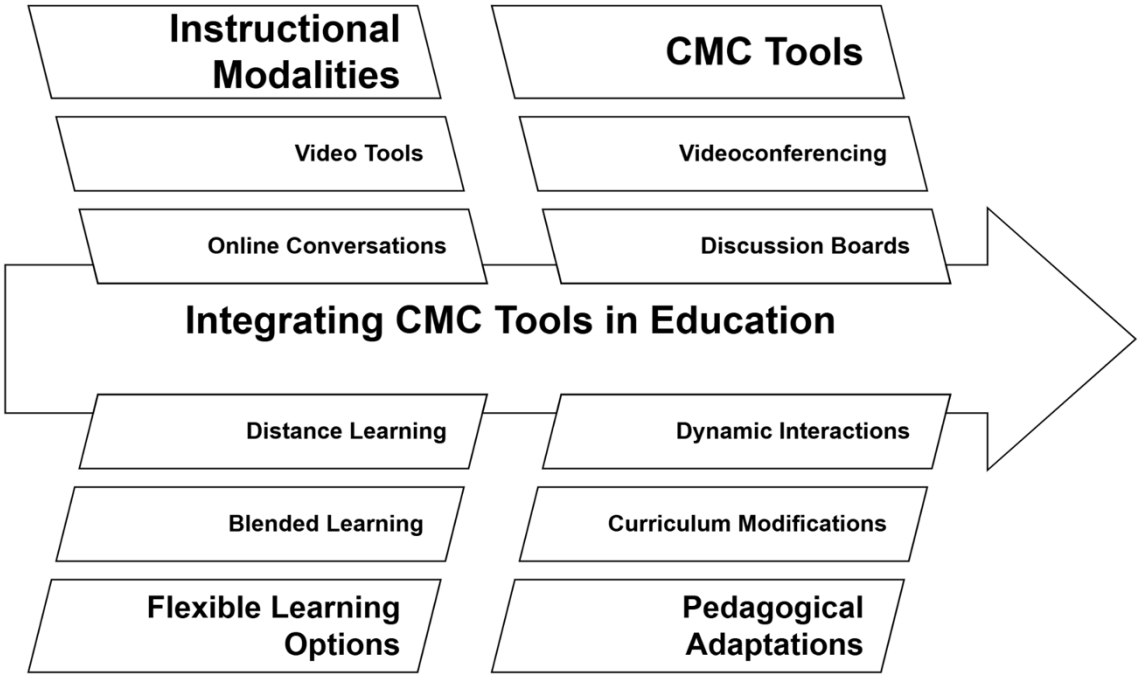


Figure 1.11: Educational Management

Note: Diagram created by Aissa BENAIRED using Napkin, 2025

1.15 Conclusion

When introduced in the classroom, CMC provides a chance to the facilitators to enhance the students' communicative competence, especially in language learning. Some problems, based on the inability to communicate effectively, blurring boundaries between the informal and formal language use, should however not be ignored. The Interaction Hypothesis, Sociocultural Theory, and Transactional Distance Theory are a few ideas that educators may use to integrate CMC technology in their classrooms, making them more effective and engaging places to learn to overcome the challenges of CMC's application and completely understand how it may enhance communication abilities, further research is required.

CMC has completely changed the nature of the classroom and how teachers and students relate with one another. Learning has been made more inclusive, adaptive, and engaging for

students of all walks of life because of the rich resources available through CMC. The majority of the features that present extensive opportunities for improving learning education are persuasiveness, synchrony, anonymity, and multimodality, some of the unique features of CMC.

Moreover, the transactional distance can now be reduced and student involvement enhanced with the help of the valuable framework provided by Moore's TDT and its application in the settings of CMC. The balance among student's agency, teacher's guidance, and class discussion may help teachers better meet the needs of their students within the classroom.

On another note, this digital era of education is ever-changing, exemplified by student affairs utilizing technology, CMC tools, and new pedagogical approaches in TEFL. The issues pertaining to the digital divide, overdependence on technology, and communication anxiety state have to be overcome if educational institutions are going to keep on adopting and integrating CMC into their curriculum.

In this regard, appropriate and effectual use of CMC can result in improved learning, student growth, and a far more integrated and inclusive community of learners in the long run. It becomes incumbent upon the teaching fraternity, researchers, and policymakers to work together in finding out the best practices and strategies for exploiting CMC in the classroom as the knowledge base continues to expand in this area.

Chapter Two:

Learning Situation and Research Design

2.1. Introduction:

This chapter, therefore, describes the method followed to investigate this very role in an EFL first-year undergraduate classroom of students at Hassiba Benbouali University of Chlef, Algeria. The current research study has been guided by Moore's Transactional Distance Theory where the three elements, 'dialogue', 'structure' and 'learner autonomy' were taken as inseparable parts of distance education. This serves as the theoretical basis of how CMC may influence students' perception, feelings, and performance due to interactivity in communication and issues of intercultural competence in an EFL pedagogical context.

2.2. Learning Situation

Most recently, however, it has reformed the face of traditional classroom dynamics in the case of EFL through technology integrated into language learning. Another emerging area that may be of great interest is the practice of CMC. It opens even broader opportunities for interaction, communication, and intercultural competence. This research will investigate the practice of CMC in university level EFL classes. Its participants are first-year undergraduates from Chlef University, Hassiba Benbouali. Guided by the transactional distance theory of Moore, this paper explores how CMC can influence a learner's engagement and his language acquisition. More precisely, the paper tries to assess just how well CMC would contribute to the development of skills in learners in a world where processes are increasingly being digitized.

2.2.1 Communicative Competence Overview

Dell Hymes coined the term "communicative competence" in 1966 to counter the usage by Noam Chomsky of the terms "linguistic competence" and "performance". For Chomsky, it was what theoretically could be learned and known, what a learner potentially understood and produced in the grammar of the language. For Hymes, this basically underestimated the social

nature of language use. However, in 1972, Hymes went further, and he developed the concept to include communicative competence, which implied not only the grammatical correctness of the language used but also its use in real communicative situations.

According to Chomsky (1965), competence is the linguistic ability which deals with the production of grammatically correct sentences, which may never have been heard or seen before. This competence shall be taken to mean the knowledge which the learner possesses of the phonological, grammatical, and lexical systems of a language. The major reason in Chomsky's view of linguistic competence is accuracy because the production of right forms precedes other considerations. This definition has, however, been accused of giving a serious cold shoulder to the social and functional dimensions of language use, as observed by Hymes in 1972 and later by Halliday in 1979. In opposition to Chomsky, Hymes in 1972 and 1974 developed the notion of communicative competence. Much broader and eclectic was the definition of language competence.

Hymes also refuted the idea that language is a system of grammatical rules only; it is a system for the use of communication, involving more than mere correctness. He went ahead to claim that communicative competence included four factors: "(1) the possibility of grammatical correctness, (2) the feasibility of utterances relative to cognitive ability, (3) the appropriateness of language in specific contexts, and (4) the actual realization of communication in real-life situations.". Hymes has defined communicative competence as knowledge of the language and the ability to apply this knowledge of language use in actual communication.

Building upon this framework given by Hymes, different authors tried to extend this definition and refine the concept of communicative competence. Widdowson (1978) also put across that knowledge of linguistic conventions involves not only an abstract but also an aspect of practice in reality in the behaviour. He paid attention to usage as the knowledge of the system

of the language opposite to use, which took interest in its actualization in communication. Both, Widdowson argued, were necessary for adequate performance. The Canadian linguists, however, Canale and Swain 1980 and Canale 1983 further elaborated the claim by proposing a four-dimensional model of communicative competence, of grammatical competence, sociolinguistic competence, discourse competence and strategic competence.

Bachman (1990) gave another dimension to the problem of communicative competence when he proposed a model of Communicative Language Ability (CLA). He claimed that CLA consists of both competence or knowledge and the ability to exploit that competence in actual communication. In that respect, Bachman pointed out that language competence falls into two major categories: organizational competence and pragmatic competence. The first one includes grammatical and textual competence, while the latter "involves the functional use of language in creating illocutionary and sociolinguistic competence". Following Bachman, pragmatic competence shares many features with sociolinguistic competence; see, for example, Canale and Swain 1980, Canale 1983.

2.2.2 Importance of Communicative Competence:

From the above definitions and models, one could find out that what Communicative Competence (CC) supporters say CC is a uniform issue, namely, CC is the actual ability of using the language system effectively and appropriately in all kinds of cultural contexts. It is also not enough that EFL/L2 learners be cognitively apprised of the rules of the language or its usage without practical ability acquired by actually putting them into use through real communication. Communicative competence, therefore, is not only a matter of linguistic precision but also a learner's capability to negotiate social and cultural parameters in language use.

2.2.3 Communicative Language Teaching (CLT)

Communicative Language Teaching (CLT) thus has a theoretical base in the theory of language as communication, with the ultimate goal being the development of the communicative competence of learners. It is not so much a unified theory, but rather an eclectic approach that draws on many sources to focus on language being a tool of actual communication, rather than a system of rules to be mastered. CLT simply appears to combine functional and structural views on language in a more communicative view of the language according to Widdowson 1978 and Littlewood 1981. The practitioners of CLT have faith that meaningful target language use may enhance the learning of learners' communicative competence.

2.2.4 Key Characteristics of CLT

CLT has formed the basis of much discussion and argument amongst language teaching scholars since its inception in the early 1970s. There are several key features which differentiate CLT from more traditional approaches. For instance, Nunan (1991) established five principal features of CLT: (1) an emphasis on communication in the target language, (2) the use of authentic texts, (3) experiences providing the learner with an opportunity to hypothesize about the foreign language/learning problem prior to clarification and focus on presentation, (4) an emphasis on the life-world context and (5) an attempt to ensure classroom language is linked with real-life language. Unlike traditional, grammar-based methodologies, CLT focuses on meaning and communicative intention rather than rote memorization of rules.

2.2.5 Classroom Practices for CLT

The classroom activities are also always done in small groups so that students get used to practicing meaningful communication done in various contexts and roles. Games, role-play, simulation, and problem-solving tasks help reinforce students' use of real language production.

Error correction hardly ever, if not never, does using the native language in CLT. Larsen-Freeman (1986) stressed that activities developed in line with CLT should enable students to interact with one another, continually negotiating meaning, rather than merely rehearsing the language patterns.

2.2.6 Role of authentic material in CLT

In fact, CLT highly considers authentic materials, as these provide the learner with a chance to develop strategies for understanding native speakers' use of the language. For example, Widdowson (1996) and Dubin (1995) consider that authentic materials provide students with a high degree of exposure to actual use, thus allowing them to develop communicative competence in relevant ways. Those leading the way in CLT, such as Canale and Swain (1980), also support the use of authentic materials for learning. Goals and Principles of CLT.

Then Savignon (1991) introduces CLT as one that embraced both the goals of language learning and the process in social interaction and communicative competence. It is the centrality of the learner to the CLT that then triggers the teacher's role from that of an authoritative figure to facilitation of communication. Breen and Candlin (1980) identified two major roles for the teacher in the CLT classroom: as a facilitator of the communication among learners and as an independent participant in the process of learning. A change in classroom interaction, therefore, underlines a movement away from teacher-centred and toward the learner-centred principles.

2.2.7 Strong and Weak Versions of CLT:

Howatt 1984 also identified the strong and weak forms of CLT. While the former puts emphasis on a try to give the learners an opportunity to use the language for communicative purposes as part of a general language teaching program, strong form in the latter identifies that it is communication through which language is acquired and not learned and then

subsequently activated. Learners here use the language "as much to learn it as to learn how to use it." This approach emphasises that language learning is not only about acquiring knowledge but also about developing practical, communicative competence through active use.

2.3. Communicative Language Teaching (CLT) in Algeria

Since English is taught as a foreign language, the only opportunities to practice it may be found in the classroom. The weak version of CLT is, therefore, more relevant here since students ought to be given opportunities to use meaningful English in the classroom at all possible times. However, unlike their ESL counterparts in target language countries, Algerian EFL learners seldom get to chance upon such opportunities to use or immerse themselves in an English-speaking environment out of the classroom. Consequently, CLT in Algeria aims to ensure maximum classroom language use for communicative purposes."

Competence in communication, communicative language teaching, and the theory of transactional distance relate to one another when issues about large communication, and more so, educational scenarios are concerned. In other words, communicative competence addresses not only grammatical correctness but appropriateness in life interaction; these are the two crucial goals of CLT: to teach language not as an abstract system of rules but as a means of communication. In that regard, CLT offers the pedagogical framework through which communicative competence should be developed by engaging in interactive, meaningful language use. This becomes particularly important in very high transactional distance contexts, defined by Moore's Transactional Distance Theory as the psychological and communicative gap between learners and instructors in distance learning environments.

In this case, focusing on interaction and communication in CLT closes the gap by way of engaging learners and reducing transactional distance through increased student activity, personal feedback, and authentic communicative practices. Together, they provide a platform

that insists that traditional and distance learning share the need for overall priority on communication to provide ways through which learners can interact effectively and use their earned languages appropriately in various social contexts.

Communicative competence, communicative language teaching, and transactional distance theory all interrelate in regard to effectiveness in respect to communication in various contexts, particularly educational settings. Communicative competence is concerned more with pragmatic appropriateness rather than grammatical accuracy, and such would be the basis of CLT with the goal to teach language as one for communication and not rule-based learning. CLT provides the pedagogical justification for developing communicative competence through interactive, meaningful language use-something particularly crucial when transactional distance is high: psychological and communicative space, according to Moore's Transactional Distance Theory, between learners and instructors in distance learning environments. Such would be the gap that CLT would fill in by directing its attention to interaction and communication with the intention of reducing transactional distance through more active participation, personalized feedback, and more realistic communication practices. These two frameworks point to the role of communication in traditional and distance learning to enable the learners to communicate and make use of their language knowledge efficiently in various social contexts.

It is an instructional model that involves separation of the learner and the instructor and delivers its methods of instruction through various forms of communication technologies. Correspondence courses marked the initial development in the 18th century, followed by enormous changes in the modality of distance education. It is the adoption of radio, then television, and later the internet, which turned flexible and accessible models from that of distance learning. It has evolved further into virtual classrooms with e-learning and other online

facilities where learners will be able to share learning materials from any part of the globe, with independence and interaction in learning.

2.3.1 Distance Education:

Distance education has its very roots in correspondence courses dating back to the 18th century. According to Venkatesh and Davis, at that time those were mainly print based; thus, the exchange of mail between instructor and student proposed remote learning programs. The first important example in this field was shorthand lessons by mail from Boston. Further evolution in the field of distance education then transitioned from the use of print-based through radio and television up to the Internet (Bates, 2005; Holmberg, 1998).

2.3.2 Digital Education:

The introduction of personal computers and Internet technologies was when digital education first appeared in the last decade of the 20th century. It brought about an overall change in learning environments due to new tools for teachers and students. Digital education therefore started to take hold both in traditional educational settings and distance learning environments when online platforms became common, early in the 2000s. This is confirmed by Moore & Kearsley, 2005)

2.3.3 Digital Distance Education:

Digital distance learning is, thus, an intersection of the digital copy with traditional distance learning. This type began to take form in the 1990s, when the Internet began to spread further and allowed newer and more involved forms of interactivity and real-time communication between learners and educators. It further developed through the spread of online learning platforms and tools that enabled distance learning at a far bigger scale (Moore & Kearsley, 2005).

2.3.4 Transactional Distance Theory

The theory of transactional distance was first constituted in 1973 by Michael G. Moore and afterward further refined across several successive years. It described the psychological and communicational mismatch that would possibly ensue within any pedagogical setting and was generally pretty overt in cases of distance education. At the very core of Moore's theory is the notion that the distance is not geographical but dialogical, structural, and learner-autonomy-related (Moore, 1973; 1980). This theory has undergone further testing and fine-tuning in myriad studies that include research in the dynamics of online education. Saba & Shearer 1994).

2.3.5 The Evolution of Distance Education

Distance education has evolved, from its very early correspondence course forms to today's technology-driven models of high interactivity. In particular, this progression has been characterised over time from print-based materials through the inclusion of digital technologies to a fully integrated online learning experience.

Beginning in the 18th century, correspondence courses of distance education were utilised whereby students used to receive lessons via the mail. This mode facilitated education where the learners were far from educational institutions. These are correspondence programmes, such as shorthand lessons pioneered in Boston, which initiated the entire process now identified as distance learning (Bates, 2005; Holmberg, 1998, as cited in Moore & Anderson, 2003, p. 49). Although limited in interaction, this model allowed self-paced learning and flexibility.

The application of technology to education has become core during the advanced 20th century. The learning process resorted to the use of radio and television, making the environment much more interactive than ever before. This was increased manifold with the multimedia approach in education, thus reaching out to enormous audiences. It finally

transformed education into an entirely digital form from the 1990s when the Internet appeared. Cyberspace made it possible for people to interact almost instantaneously, giving the word 'education' a completely new meaning and providing the platform from which digital education has evolved today (Moore & Kearsley, 2005, as cited in Moore & Anderson, 2003, p. 87).

Hence, the models of distance education and digital technology are combined into what is now called "digital distance education". In the 1990s, this model offered a form of online instruction, virtual classrooms, and learning management systems that enabled active and more interactive learning processes. Such kind of education facilitated access to education throughout the world, hitherto impeded by the geographical and temporal barriers, in ways never seen before. (Moore & Kearsley, 2005, as cited in Moore & Anderson 2003, p. 367).

Moore's Transactional Distance Theory conceptualizes the complex transaction developed as an educational methodology through digital distance. He introduced his theory in 1973; it hence gave a way to explain the special challenges of this kind of education. It describes a psychological and communicative gap between students and instructors in the distance learning environments in terms of its constructs: dialogue, structure, and learner autonomy. "Distance in education is not just a geographic separation but also pedagogic, and it will be overcome by a combination of increased interaction and a solid educational organisation". (Moore, 1973, as cited in Moore & Anderson, 2003, p. 155.)

It has evolved from the pioneer correspondence course to fully interactivity-capable digital learning environments. While digital technologies have enabled access and interactivity in courses of study, theoretical frameworks like Transactional Distance Theory emerged that show how transactions between an instructor and learner are crucial in delivering effective learning experiences. It is this capability of education to move with changing technological landscapes and demands of the learners that have made it an indispensable and adaptable

instrument in today's global setting.

Distance education has always been a basis for expanding learning access, moving from simple correspondence methods to advanced digital platforms. Through the internet, it was a natural extension from distance education to e-learning: exploiting digital tools so that educational environments can be more interactive, flexible, and thus accessible.

E-learning was defined as "electronically mediated asynchronous and synchronous communication for educational purposes" (Moore & Kearsley, 2005, p. 25, as cited in Moore & Anderson, 2003). E-learning is the direct offspring of conventional distance education, but unlike its early prototypes, which allowed only sparse interaction through print and mail, it takes full advantage of digital technologies-learning management systems, virtual classrooms, and interactive media-to make for an exciting learning experience.

That is why digital distance education appeared when the integration of the Internet and multimedia in education took place and rapidly changed traditional approaches for more active and learner-centred kinds of learning. This can be enhanced through Transactional Distance Theory, which purports that a reduction in the "transactional distance" through the use of digital communication tools-the psychological and communicative gap between the learner and instructor-improves educational outcomes. (Moore, 1973, as cited in Moore & Anderson, 2003, p. 155).

The key academic revolution is the change of audiences everywhere through e-learning effectively coming together with distance education. According to Moore and Kearsley, "The role of technology in e-learning is not just to deliver information but to foster communication, interaction, and collaboration" (2005, as cited in Moore & Anderson, 2003, p. 87). This would mean that the mission of distance education would be carried forth by e-learning-a modernization of expanding access to knowledge with responsiveness to the needs of today's

learners.

In brief, e-learning presents a logical consequence and continuation of the principles advanced for distance education, ways of removing barriers and offering more flexible, interactive, and individualized learning.

2.3.6 Covid-19 and the Shift to Distance Education in Algeria

This move to distance education was accelerated by the onset of the Covid-19 pandemic. The move, however, was in Algeria's case harder than imagined and the virus forced universities and schools to continue online learning. It is at this juncture that Computer-Mediated Communication, or CMC, tools stepped in-filling in the gap between educators and their students, presenting new ways through which interactivity could be fostered in a socially distanced learning environment. Pandemic was a turning point for the Algerian education system, realizing the urgent need to adopt effective digital tools to continue with education.

Traditionally, the given mode of education in Algeria was the usual face-to-face classroom teaching. However, the pandemic rendered this impossible and prompted an abrupt shift to online modes of education. Universities took refuge in hybrid education, so lessons were conducted online, with very minimal physical contact. Yet, despite these setbacks of reduced teaching hours and unpreparedness, the pandemic did reinforce notions of digital literacy and infrastructure that quite simply had not existed within Algerian institutions.

2.3.7 The Adoption of CMC Tools for More Efficient Distance Learning

These were achieved by means of emails, forums, and real-time chats between teachers and students involved in distance learning. To some extent, these tools did improve the interaction and rate of interactivity between teachers and students. According to the Transactional Distance Theory by Moore, the psychological distance between learners and instructors was minimized to bring efficiency in the learning process. They were not only linguistic but also intercultural

tools to support learning; in an EFL context, this was a very important factor.

2.3.8 CMC Tools and Their Long-Term Impact on Algerian Education

Online learning became an avenue of necessity, but the pandemic brought in the avenue for a system of more pedagogically integrated digital education in Algeria. CMC tools will probably reassert themselves as a power shaping Algerian education after the pandemic because of the worth, they bring by empowering communication and autonomy in learning. Eventually, these tools will further the causes of language acquisition, bridge the chasms of distance, and even make education available.

The Covid-19 pandemic was a real blessing in disguise, considering the speed at which e-learning spread all over the world. No disruption in education institutions had been worse, and online learning had been taken as an obligation of time to make up for any gap that was encountered within the educational circle. Therefore, it became the mainstream of education overnight, promptly providing the flexibility and accessibility required by the learners. The pandemic surely proved the potential of e-learning across boundaries, whereby students and teachers connect from their places and maintain the flow of knowledge. E-learning, in other words, was able to respond to this immediate call of distancing education and was also set on the ground for more integrated digital environments that the post-pandemic world was going to witness. This shift has indeed brought the world's focus to how technological possibilities can ease modern educational delivery, remodelling the teaching-learning paradigm for today's life that is dependent on digital solutions.

2.4. E-Learning

Everything today is done online: shopping, government, business, health, e-books, e-libraries, e-learning. The students can learn at any time and in any place with e-learning. It has been in use for a long time in higher education, where it has proved to bring effectiveness in

learning. It is a new tool for the modern world, getting increasingly popular among high school students in Algeria with more available devices for communication. It started overseas in the early 1990s and has pretty much taken off since then, but it was not until around 2006 that distance learning really started to catch on in the US. According to a recent survey, there were 6.36 million students enrolled in US distance learning programs in the autumn of 2016, almost 6% more than the previous year. Now, we are starting to see it spread across the country.

Some developing countries, like Algeria, are still trying with difficulty to make e-learning widely applied in higher education. The purpose of this paper is to identify the reasons for which E-learning has not yet been diffused in the Algerian and to clarify how much effort the Ministry of Higher Education is putting to make E-learning feasible, since they consider it, a resource expected to characterize the future of education.

2.4.1 The Status of English around the World and in Algeria

In due course of time, it gained much significance in the world. It is now supposed to be a lingua franca-global language. It could not be ignored at all in the present times of globalization of the market-oriented economy; even in some cases, the politically and economically powerful countries mark it as a mother tongue. Yet, it is either the second or a foreign language in the rest of the world. That is the reason, according to Crystal 1997, the global language will be spoken by more people in comparison with any other language. Already English has reached this level. This is not so surprising at first because those who own different languages can operate in English just like Europeans. This kind of "vital linguistic tool" (Harmer, 2002, p. 2) may be used for many various kinds of people, like businessmen, scientists, travellers, etc., from all parts of the globe.

Clearly, those who are not native English speakers want to learn the English language urgently, since they probably need to do business with people from other countries, study

abroad, or travel to other parts of the world, or even just simply have a conversation with a total stranger in English. Of course, all these things you can also do for the second option-in person or virtually through chat programs and social networking sites. To do the latter, at least you should know basic English.

Based on Crystal (1997, p.10), the economy was very important to the United States' presence in the world during the 20th century. It helped the country stay strong and grow. Now economics is more important than politics. The US dollar was also made with English.

2.4.2 English as a Foreign Language in Algeria

There have been many changes around the world because of globalization and socioeconomic factors. These changes have affected the languages that people speak in each country, like Algeria. Even though Algeria didn't have its own government until 1962, all of its schools only taught French, which is now the most common foreign language. As a colony, the country had a French-speaking elite, and French was the main language spoken. Arabic, on the other hand, was picked for religious and political reasons, since the country is part of both the Islamic and Arabic worlds. The government quickly saw how important English was and made it a subject that everyone had to learn, so this didn't last long. Algeria's schools have changed a lot over the years. Because of all these changes, learning English has become more important. The primary aim of acquiring the English language should be to enable the seamless integration of our society into the modern world. Simply put, it means that one must become an essential part of a growing population of people who use English for almost all purposes (Brutt-Griffler, 2017). Mastering English is not just about language proficiency, but about actively participating in a globalized, interconnected society where English serves as a key medium for communication, innovation, and opportunity. Adopting this broader viewpoint will help you understand the essence of your own identity as well as that of your peers. (Brutt-

Griffler, 2017); This means that by embracing a more open-minded and inclusive perspective, especially one that considers different cultures, languages, and experiences, you gain deeper insight into who you are and how you relate to others. It encourages self-awareness and empathy, helping you better understand your values, background, and the diverse identities of the people around you.

The learning of language had been instructed at the pre-tertiary level for five years in middle school for two years and in secondary school for three years. These reforms were done in 2004, which increased the years of English teaching to seven years with one year assigned to middle school and four years assigned to secondary school. According to the Ourghi, all learners should study EFL. The author argues that the subject forms part of the curriculum across all streams of learning, be it literary, scientific or technological, and adds to the value of the overall learning experience of the learner, Ourghi, 2002, p.24. Equally important, however, is the realization that the coefficients and timetables are immensely different for diverse classes compared to those reserved for the dispensation of the English language. There have been attempts to include English language teaching in primary schools in the past twenty years, although pilot projects never went beyond the regional stage because of political and sociolinguistic barriers. By the end of junior secondary school, pupils should demonstrate competence in listening and speaking in English and be able to read and write simple material for functional purposes in the local context. They ought to state what they want to say with an adequate sense of purpose.

Setting up an English department has almost been established in almost every university with English as a specialized subject at the tertiary level. Besides, through the 2004 reforms, this language was made to be incorporated in the curriculum of all other fields of study, in particular technical and scientific ones. It is for this reason that knowledge of the English

language is finding greater importance, becoming the premier method of communication and publishing in business and science. This, within Algeria, is bound to become more pronounced with time. In fact, things have started to change because of growing interdependence, and the impact globalization is having on the country's youth. Even deeper is their understanding of the imperatives of identification and comfort with the English language as a medium of instruction and, in general, a critical ticket to educational and employment opportunities.

2.4.3 The Difficulty of Learning English in Algeria

Undoubtedly, English has been attaining an ever-growing importance globally, especially as a foreign language. In Algeria, EFL starts in the first year of middle school; however, most students seem to fail to attain a sufficient level of proficiency. This has made English one of the toughest subjects for students, which greatly contributes to school failure. Several obstacles hinder effective teaching and learning of EFL; challenges emerge at various stages of education. In pre-tertiary, English language courses are not in line with the level of students' skills; therefore, a big number falters and fails to meet expectations put by course designers. Furthermore, language learning requires consistent practice across the four skills: listening, speaking, reading, and writing; however, two main reasons stand in the way: students lack opportunities to practice, especially in the practical skills, and an already overwhelming curriculum burdens them.

This situation is exacerbated by an absence of admission standards and entry tests designed for tertiary EFL programs: thousands of students enter such programs, and many of these students have extremely low proficiency in English. This problem is particularly relevant to the students of English, on whom this research is targeted. To add to this, lack of foundational skills taught for adequate duration, in adequate numbers, the late start of the academic year, frequent holidays, and double absenteeism among teachers and students have hampered the

learning process. Moreover, students also do not create any opportunities for self-learning as they go out on long vacations without reading or practicing the language. Their study efforts are typically limited to preparing for end-of-semester exams, where cheating has become rampant. Since most English exams, aside from oral expression, are written, students tend to neglect their speaking skills, focusing solely on writing. Consequently, they become what Ruan & Jacob (2009) describe as "deaf-and-dumb" learners unable to engage in meaningful conversation. This situation is further aggravated by the fact that there is insufficient instructional time for speaking and a near-total absence of listening and reading skills in the curriculum.

Generally, in their studies, university lecturers received theoretical education without any practical teacher training before becoming lecturers. That very reason is because this haziness in the way of preparation contributes to a nationwide problem at universities, described as "time-consuming and low efficiency," where students study English for years with little noticeable improvement. It is so because, despite a general guideline of a curriculum, set by the ministry establishing the policy for education, as far as the exact content is concerned, it is left to the teacher's own choice. In this way, there is more discontinuity, which year in and year out breaks and repetitions keep on happening. The teaching methodology is also far too outdated and very much teacher-centred; classes are too big, and teachers are insufficiently trained to move towards more interactive or innovative methods of teaching other than the traditional lecture method.

Digital literacy and contemporary technologies are hardly implemented due to the lack of sufficient resources and infrastructure. Even where technology is used, it is probably more often because individual teachers bring in their personal laptops and projectors to help illustrate lessons. For that matter, in many faculties there still is no access to the Internet and any

functional language labs, that could help the students develop their speaking and listening skills. In fact, when present, poor maintenance of the language labs and incompetence from teachers in the use of digital tools constitute even the most demotivating factor for motivated instructors to use the available resources.

It is also to do with how the teaching of English as a foreign language is being handled in Algeria. For example, the syllabi are, to my opinion, designed without proper consideration for what, actually, takes place on the ground, a fact which has made me even ponder just how much those who designed them do understand the actual challenges in the field. Which is especially the case with the "Competency-Based Approach" that stresses an ability to communicate, even though it is oral proficiency. Still, practically all assessments are written and by their scoring system that emphasizes learners stressing pursuit of high scores rather than acquisition of communication skills.

Moreover, higher education makes scant difference for an entering student to be more productive since the basic skills are taught cursorily and at a level that is not commensurate with the student's needs. It has also been noticed that the use of technology is still forbidden in Algerian EFL classrooms despite it being successfully used and valued in international EFL teaching environments. Of course, this unwillingness to accept technology explicitly reduces the potential for building a more interactive and dynamic language learning environment.

2.4.4 Teaching through Technology Literacy (TTL) in Algerian Schools

Over the past decade, various governments have implemented numerous measures to fully integrate technology into education. As part of the 2002 educational reform, technology was officially incorporated into the national education system and policy (Guemide & Benachaiba, 2012). This reform mandated that all secondary schools and later, middle schools establish computer labs with at least 15 internet-connected computers, and computing became a required

subject. Though all students in the first year of high school are now compelled to take courses in computing, the wider vision of the government is to infuse technology in all subjects so that students learn through computers rather than about computers. The aim, therefore, of making sure that students achieve technological proficiency is shared between middle and secondary schools.

The government has given universities funds to establish computer laboratories and provide students with unlimited access to the Internet. The universities also have autonomy in formulating policies that concern technologies; hence, universities are allowed to create their own virtual classrooms, libraries, and enable them to distribute learning materials for free. This was also paralleled by the development of the Academic Research Network, an exclusive network at 2 MB/S with a planned update to 32 MB/S that links up all universities in the country. "It allows for developing virtual libraries and carrying out a distance education with videoconferences." (Benhamadi, 2002). The other component of this project, under "Virtual Libraries," basically aims at increasing and facilitating sharing and access to academic publications: theses, dissertations, articles, and papers. The second will include videoconferencing, where the policymakers indicate that this will tend to address the problem of a lack of supervision in these more remote areas. This is through a sub-project on "Tele Enseignement" intended for the provision of universities with indispensable teaching resources for remote teaching. The introduction of the LMD system in 2004 gave yet more strength to the technological aspect of vocational training, with requirements for technology and a foreign language course to be put in for all specializations at universities.

With the guidance of UNESCO, which designed the process towards technology infusion, and Japan which provided USD 750,000 for the funding of a schedule preparation to train teachers on technology; the Algerian government was working with various bodies and

countries in enhancing technology infusion in education. (Guemide & Benachaiba, 2012). The "eLearning" project, in the pipeline since 2006, was implemented in association with "Thomson" and "Microsoft" to produce 4,000 lessons that were likely to motivate the adoption and introduction of computers and communication technologies within the teachers' classrooms in the country (Hamdy, 2007). The Med-Twinning created a network of schools in Algeria to those in Italy, while the e-link project is in the pipeline in the same year aimed at linking Algerian students to their American counterparts. This has already met with success in a dozen high schools in Algiers and Blida. Now, more are being planned for the year 2008.

The role that technology played in education became an issue of great concern to the government of Algeria; hence many projects have been initiated in the past decade. The projects had broad targets, which should reach everybody concerned with schooling in whatever capacity, whether teachers, students, administration, or inspectors. No project achieved much, if anything, worth mentioning, despite huge investments made and employment of international expertise backed by world-famous firms. Indeed, most-if not all-of these projects were doomed to fail right from the beginning. Each of these failures could be attributed to certain causes combined briefly described herein.

2.4.5 Issues of Technology Usage in Algerian Schools

The Algerian government has turned out to be so attached to introducing technology into education. The fact that these many initiatives of their governments have continuously failed raises a number of questions, especially the question: "Why were such projects so ineffective?" The reasons differ from one project to another and from one person in charge to another. For example, with the introduction of computing as a subject in schools, it is evident that school laboratories are minimally equipped at best. It is also true that many laboratories have fewer computers and some are not connected to the internet at all. Furthermore, the computing

curriculum is outdated and completely non-vocational, having subjects that students find very irrelevant.

Besides these the students attend only two hours per week on computing which is terribly insufficient. Making this issue even worse, in case of the non-availability of specialist teachers for teaching technology the technology teaching duties are assigned to other educators on the basis of fewest number of hours. While the government invests massively in setting up computer labs every year, thousands of technology students graduate from Algerian universities. Students take fewer lessons in the subject at school, often given by a non-specialist teacher, which diminishes the possible effects of such investments.

In addition, most projects of technology integration face the scraping off immediately with the changes in leadership, further illustrating uncouth long-term strategies in ensuring project sustainability. Most of the proposals put forward for such initiatives are either too ambitious or just unrealistic; most ground-up initiatives start afresh without lessons from previous failures. Many promises on incorporation of technology in schools remain unredeemed. Indeed, for example, the projects initiated on site by 2014, integrating technology classes in elementary and middle schools, digitizing curricula, replacing paper textbooks with electronic ones, remained incomplete. In some of these projects, in fact, some of them did go out of "ink on paper" yet hardly had more than a lab-proved status. Some actually did work, such as "e-link" and "Med-Twinning" but were never scaled up to wide access.

Also, a small budget allocated for technology integration is also expended very ineffectively. While the government had intended to equip every university with a computer laboratory and videoconferencing equipment, many departments do not have them. Therefore, the general goal of ensuring complete technology integration in educational institutions is defeated.

Similarly, facility problems afflict Algerian educational facilities, due either to mismanagement or reluctance to act on the part of budgets or responsible authorities. Where the facility does actually exist a computer lab, for example-other problems are present: insufficient resources, lack of maintenance, or simply the fact these labs are never used-they stay locked behind closed doors and, practically dust-gathering, end. Another major problem is the indifference of both teachers and students, resulting in the lack of implementation of labs.

The other faculties have the installations but are not utilized by the students simply because they do not know the password. In fact, there is only a handful of universities with virtual libraries in the country; even those perform abysmally poor; many links no longer work. Another project that could not have been realized in such circumstances was an "ARN" project whose goal was to interlink universities and provide students the possibility of having higher education via a virtual library.

The laboratories and programs are built, but no step is taken to popularize these facilities among teachers and students or make their regular use a reality. Most of the projects are centralized in Algiers and other major cities, hence the others are left with no opportunity to make use of such projects. The computer teacher training program syllabus adopts a completely theoretical approach that lacks any consideration for practical and hands-on learning of teaching computers. It lacks a number of much-needed skills that should have been part of the course, leaving the prospective teacher not able to fit technologies into his teaching.

In fact, despite the announcement of the Ministry of National Education that it gives 30 to 60 hours of training to the teachers, most of the computer courses taken within those training programs rarely go to the full of more than 10 hours. No pedagogical training is demanded from university instructors before they start working as instructors. Without any form of guidance or even inspiration, integration of technology once more becomes more of a personal

choice rather than a guided and supported practice.

Some believe that the audience is unaware of the programs or how to use them, or how to access them. Projects of this nature should involve those who will benefit from them in such a manner that they own them and ensure a time for sustainability, even when leaders change. All these share common ground in the fact that they can be solved or ameliorated with some good planning, realistic objectives, and good training of the staff involved. Section one presented the status quo of EFL and technology in Algerian schools. As seen, a lot of problems were described. Second section specified the design of this research mentioning how and what type of tools would be used.

2.4.6 Digital Literacy and Internet Initiatives in Algeria

Along with many other countries, Algeria was actively pursuing digitization to be abreast of current technological changes taking place around the world. For instance, the country had made considerable progress in e-government and e-learning. However, during the analysis of the benefits accruing from digitization, the researchers took note that Algeria still has long-shot challenges as far as the technological infrastructure setup is concerned, although various projects sprout in different directions.

In fact, the year 1993 is considered to be the very beginning of the Internet in Algeria. DZNET is a group considered at the very core of this movement. They are closely responsible for interconnecting different networks beyond Algeria. There were two other major players that were putting heavy contributions into Algeria's technological advancement: ALUUG-ALgerian UNIX Users Group and CERIST or Research Centre for Scientific and Technical Information. Until its being placed under the Ministry of Higher Education and Scientific Research, CERIST was an autonomous body. The ministry develops scientific research and their relations with other technical services within Algeria and at international levels. Its

international partners include CNUCE Centro Nazionale Universitario di Calcolo Elettronico-Italy. The CERIST was thus the first ISP in Algeria, having started operations in 1998, even before the official establishment of the Ministry of Post and Information and Communication Technologies in 2000. Algeria Post and Algeria Telecom came into existence at this time, with service providers like Djaweb developing to support research at the time.

In later years, Algeria introduced the technology of ADSL through Fawri and then introduced 3G with the help of local mobile operators (Djoudi 2018). For more catch-up in this rapid movement of technological advancement, Algeria took multiple Digital Literacy projects for many sectors. These include the "A Computer for Every Home" program of 2003, health networks by National Health Development Agency-ANDS, the Technopole of Sidi Abdallah to spur investment in digital technology, Net Enterprise programs to facilitate sustainability for business, and Technobridge Incubator to facilitate start-ups (Hamdy, 2007).

From an educational perspective, the many policies on Digital Literacy were issued by the Ministry of Education in Algeria, concurrent with other reforms done on the system of education. These had huge inflows of investment mostly attracted into the sector, creating most of their partnerships with international organizations such as UNESCO, the European Union, and UN agencies. Three billion dinars were announced to be reserved to the education sector in June 2002 with the ambition of equipping every school with computers by the year 2005. Computing became an obligatory component of the curricula in high schools and a must-incorporated module within the discovery unit at the university level, hence ensuring computer literacy. The Ministry of Higher Education and Scientific Research is said to report that all universities have facilities for computer labs with internet access provided for students, staff, and faculty members besides the establishment of digital libraries. Hamdy, 2007, p. 4-5.

Indeed, the framework does not consider those special issues faced by Algerian

universities. In fact, education, owing to the facility created by digital literacy and virtual learning environment, should be easier in need, for instance, housewives, workers, employees, people in remote areas, and other social, political or economic reasons that prevent attendance of people at school. Guemide et al., 2012 state that several other e-learning projects are in the process in Algeria to reduce these gaps and to create equal opportunities for all the citizens. "For instance, some of the earliest productions were CNEG, or National Centre for Public Learning during the French colonial era, which assumed the name of ONEFD. As the name indicated, sure enough this was a facility for broadcasting lessons through radio and television, but publishing course materials in newspapers at the same time with correspondence courses destined to adults".

CNEPD was the second most important partner in vocational training, providing education at a distance in various fields, including tourism, administration, and computing. The University of Continuing Education, UFC, is another partner of the Avicenna Virtual Campus within a project led by UNESCO dating back to 2002. This was alongside the objective of providing centres with internet access, training teachers and staff in Digital Literacy, improving e-learning courses and the evaluation of students. The other point was the provision of an open Virtual Library containing e-learning courses in multiple languages (Djoudi, 2018). In recent times, sophisticated e-learning projects and virtual undertakings have cropped up in Algeria. Djoudi lists examples in these categories, which extend from e-learning platforms and virtual environments to degree programs, certifications, associations and accreditations.

One significant stride towards e-learning in Algeria includes the AVUNET or Algeria's Virtual University. It makes available a web-based multilingual portal for distance and blended learning that consists of three basic elements: an authoring system that permits course design and student self-assessment; a management and collaboration server; and a community of

practice to freely distribute knowledge through tutorials and collaboration aids. It also provides for online support to the students, marking important terms for future reference, and proximity notifications to other users.

The other example of an innovative activity piloted at Setif University would be the Agent-based Learning Platform. The platform also offers self-assessment and asynchronous support that could reduce the load or burden on the teacher while offering students flexibility and time-space awareness. Apart from computers, smartphones and tablets are also very useful tools through which students can upload sound files and proceed to some listening and speaking exercises. These kinds of activities, if practiced well, will lead the students toward fluency and becoming good listeners. Even the simple functions of mobile devices, like SMS, may be set in the system to be used for submitting responses by the students.

There is also the integration of learning style adaptations, consistent with the Myers-Briggs Type Indicator (MBTI) model, which serves to more closely align students' reasoning and organisational preferences. That way, learning becomes individualised in regard to written, spoken, visual or audio-visual content. Similar projects are undertaken in Algerian universities to establish semantic links between general concepts and learning materials themselves (Behaz & Djoudi, 2012; as cited in Djoudi, 2018, p. 11). E-learning programs, platforms, and portals on educational degrees, certifications, and associations have therefore entered Algeria in recent times. A clear example of such a system could be the open-source Moodle platform, which, while very new to Algeria, offers quite a significant attraction. In Moodle, teachers and students can create different documents, facilitate distance tutoring, assign tasks, go through courses, self-assess, and survey through online modes. Use of Moodle is, however, appreciated though limited at present within this country amongst students and Adult Learners alike.

The Qatari Supreme Education Council created an online learning platform in 2014 called

Dirassatti-arabic for "my studies," offering online learning materials for all aspects of school curricula, from video lessons to quizzes and test sheets across multiple grades. Future developments will also make Dirassatti available with materials for university-level courses for some of its subjects.

iMadrassa.com is another LMS, this time for primary and secondary level students. In the same country, digital content supported the curriculum of the Ministry of National Education. For tracking grades and absences or timetables, there was Dirassatic, the online application; parents were directly informed about these issues. Similar systems exist and could probably operate on a university level as well (Djoudi, ibid.). Other platforms and learning management systems provide online tutoring and assessments in current subjects such as languages, project management, office automation, and graphics. Because of the high demand today for workers with such experience in the job market, most businesses and organizations are seeking those that can offer expertise in such experiences. DZCampus.com is an Algerian organization involved in employee training on a similar platform to enhance the business at their company using videoconferencing technologies (Djoudi, 2018). Other than these, some of the other major initiatives include the pre-paid "eLearning" service card by Djaweb or Algeria Telecom; "Computer Skills Certification" or "International Computer Driving License" issued by the CNEPD; Tarbiatic Project, a virtual and online school; eduDz, an e-learning platform for students of Algeria; ALC or Algerian Learning Centres online courses of English-language; and CVL@b, the abbreviation for the Collaborative Virtual Laboratory. All such projects put together numerous other dimensions and types for digital learning infrastructure for Algeria.

2.4.7 Understanding Digital Literacy and Internet Projects in Algeria

Like most countries busy playing the catch-up game with developments in technology, Algeria engages in multiple projects to computerize main sectors identified as e-government

and e-learning. Most of such researchers' view is that Algeria is far from developing a strong technological base despite a number of launched projects.

Algeria first introduced Internet connectivity in 1993, by which time it started using e-mail. This was followed by DZNET, which acted as the international gateway providing connectivity to national networks. Meanwhile, in Algeria, two important local protagonists were born: ALUUG-UNIX Users Group and CERIST-Research Centre for Scientific and Technical Information. Before it merged into the Ministry of Higher Education and Scientific Research, CERIST was responsible for caring for scientific research and technical data exchange in Algeria and cooperating with other institutions from many other countries in the world, such as CNUCE (Centro Nazionale Universitario di Calcolo Elettronico) of Italy. In the year 1998, CERIST was the first ISP in Algeria, created well before the creation of MPTIC in the year 2000, and for that matter, even before the creation of the two big companies called Algeria Post and Algeria Telecom. The ministry introduced many ISPs, among them is Djaweb, which played an important role regarding the support of the researchers. In the coming decade, other technologies such as ADSL -Asymmetrical Digital Subscriber Line- and 3G were introduced in Tunisia after the investment of local mobile operators. (Djoudi, 2018.)

Algeria also became one of the late starters to further some more digital literacy programs across various sections of society in recent times to march ahead with quick technological changes: "Computer for Every Home" in 2003, a health network developed by ANDS (National Health Development Agency), a technopole at Sidi Abdallah to attract investments in digital literacy, an enterprise net for sustaining companies, and an incubator-Technobridge-to assist the start-ups (Hamdy, 2007). The Ministry of Education also issued a number of policies in digital literacy, within the context of education reform processes going on, followed by disbursement of increasingly more funds for the sector. Such initiatives were also in

collaboration with the international organizations such as UNESCO, the EU and UN agencies. In June 2002, 'a policy provided three billion dinars for education and the Minister of Education announced that all schools would have computers by the year 2005.'. IT became a required curriculum at secondary schools and an additional module at the university discovery units to keep digitally enabling them. The Ministry of Higher Education and Scientific Research ensured that all the universities 'were now equipped with computer labs, Internet access for the faculty, students and staff along with digital libraries. (Hamdy, 2007, pp. 4-5.)

Well, that is not quite the reality in the universities of Algeria. In theory, digital literacy and virtual environments create equal opportunities for people who are in most need of learning, like housewives, workers, people of remote areas, students who could not pursue their further studies due to different social, political, or economic reasons. The number of Algerian e-learning institutions which worked for the bridging of these gaps is very high as depicted by Guemide et al. (2012).

One of these earlier programs established was called the CNEG-meaning in French, National Centre for Public Learning-then it became known as the ONEFD or Office National de l'Education et de la Formation à Distance. Classes broadcast through radio and television were offered; courses printed through newspapers and correspondence material for adults distributed. Another large institution is the CNEPD which offers specialized vocational education in the fields of computing, tourism, and administration. The UFC also joined the Avicenna Virtual Campus in the framework of a UNESCO-led project in 2002. The Avicenna project aimed to equip educational centres with internet access, train staff and teachers in incorporating digital literacy into their teaching and improve the design of e-learning courses and student evaluations. Another goal was to create an open virtual library of e-learning courses in multiple languages (Djoudi, 2018). In this regard, Djoudi pointed out examples of state-of-

the-art programs within the latest virtual projects related to e-learning in Algeria, found in learning platforms or other similar virtual environments, degree programs, associations, certifications, and accreditations.

Chief among these is the AVUNET: an open, web-based, multilingual e-learning environment for distance learning and lifelong blended learning. It consists of three main large modules: a course authoring system for course design and self-assessment execution; a management and collaboration server where all the utilities of instruction, testing, and information exchange are in a community of practice; and a learner interface where a student may connect to online support, save favoured expressions, and signal other users.

Another platform developed is an Agent-Based Learning Platform, which in its turn has been tested once with students and teachers at the University of Setif in Algeria. The above-mentioned platform enables learners to build online social networks that would promote learner flexibility while enhancing their awareness of the constraints regarding time space. Agents also enable asynchronous support and self-assessment, thus shifting the burden from a teacher. In this case, also, mobile phones and tablets turn out to be as functional as computers, for various web-based applications with server-side processing support different mobile devices. It helps learners to develop good listening and speaking skills through continuous exposure to the target language by means of uploading sound files and providing other learners with listening and speaking tasks using the learning platform. It will further include less complex mobile technologies like SMS that learners may use as an alternative in their responses.

Other examples of educational resources are the ones that allow dividing the body of knowledge into the student's favourite mode, be it written, audio, visual, or audio-visual, after the MBTI model. Other projects developed by Algerian universities consider combining the semantic relations existing between abstract conceptions and teaching documents (Behaz &

Djoudi, 2012; Djoudi, 2018). The Algerian universities have also developed some e-learning programs, platforms, and portals for both students and teachers, particularly in enhancing their degrees, certifications, associations, and accreditations. While the open-source Moodle platform is comparatively well-known throughout higher education, its use in Algeria has remained limited because it was only recently introduced. With Moodle, one can upload documents and give feedback. He or she also facilitates distances through tutoring by being able to assign tasks, courses anytime to do self-evaluation, and posting of an online survey. However, with the introduction of various online programs few numbers of students and adult learners have fully accessed it.

For example, in 2014, an online learning system was designed under the name of Dirassatti, which means "my studies" in Arabic. Such a system collects learning objects from various school subjects in different levels, such as video lessons, exercises, quizzes, and evaluation sheets. This system is foreseen to be enlarged soon for university courses in some particular fields. Another example, iMadrassa.com, is an LMS designed for primary and secondary schools. Through this portal, a student has an electronic lesson based on the official curricula provided by the Ministry of National Education. Another platform, Dirassati, is online management software intended for parents of the primary, secondary, and high schools who log in and receive information connected with student grades, absences, or any schedule. Of course, such a system can also be relevant for universities, part deux (Djoudi, ibid).

Others are specialized in online tutoring, with LMSs that contain training modules and tests in areas such as project management, languages, computer office automation, graphics, and secretarial management. All these platforms, according to a number of companies and institutions currently operating in Algeria through such online platforms for the training of their personnel to enhance business performance, are highly requested on the labour market. For

instance, one such platform, DZCampus.com, uses an LMS which implies a videoconferencing system (Djoudi, 2018). Finally, many other programs-these are only a few discussed briefly here. Some of them include the following: the Tarbiatic Project, a Virtual School; eduDz, an e-learning space for Algerian students; "eLearning" prepaid service card for Djaweb-algeria telecom; the "Computer Skills Certification" or "International Computer Driving License" issued to the students when they complete the online course in computer skills by CNEPD; the English-language online courses, ALC -Algerian Learning Centres and online CVL@b, that is the collaborative virtual laboratory and Web-Based Groupware application, a specialty information literacy through experimental work.

2.5. Research Design

The current study uses thematic analysis to provide the analysis framework for qualitative data and follows a qualitative-dominant mixed-methods design. Utilising an interpretivist epistemology (which assumes that knowledge is socially created and place-based), this decision follows reasonably (Guba & Lincoln, 1994). In particular contexts that integrate elements of learner agency, technology mediation, and language learning, thematic analysis is advantageous in yielding deeper understandings of complicated phenomena by being a more inductively driven and fluid approach (Braun & Clarke, 2006; Nowell et al., 2017).

Mixed-methods research involves the integration of analysis with details of the methods, including collecting, analysing, interpreting, and reporting both qualitative and quantitative data, so to responsibly and effectively answer research questions (Bryman, 2012; Creswell, 2015; Creswell & Plano Clark, 2011). In this study, a mix of quantitative data from structured questionnaires and qualitative data - derived from computer-mediated communication (CMC) analysis using thematic analysis - builds on other mixed-methods research into the CMC effects and pedagogical descriptive issues in Teaching English as a Foreign Language (TEFL).

The option to use qualitative analysis in addition to quantitative analysis recognizes that CMC interactions cannot just be understood as language in use; instead, they are embedded sociocultural practices at work (Herring, 2004; Warschauer, 1999). As such, qualitative methods, especially thematic analysis, are required in order to identify hidden themes within discourse and gain valuable understanding of the relationship(s) among language, identity and technology in digitally mediated learning environments (Creswell & Poth, 2018).

2.5.1 Population of the Study

All in all, it comprises a sample population of 139 respondents, which is made up of 109 first-year undergraduates in the department of English and 30 instructors of undergraduate English at the Hassiba Benbouali University of Chlef. This, therefore, implies that the subjects are purposively selected to have a presentation of a sample that is representative and important for testing the effect of CMC tools in TEFL. Any research, a researcher intends to carry out, must entail a selection of subjects. These latter are the ones who shall be treated, questioned, or watched as they behave; the method chosen in selecting these subjects mostly depends on the kind of research. (Lodico, Spaulding & Voegtle, 2006, pp.139-140).

Since it involves the cases, subjects, or using the most recent term participants, who are supposed to supply the research with the required data, the sample is a source of data that will help the researcher answer the questions or test the hypotheses. Furthermore, vital for the sample are the goals of the research and the choice involved. (Perry, Jr, 2005, pp. 55-56).

2.5.2 Data Collection Instruments

Data for the present research is collected with the help of following data collection instruments: it consists of both primary and secondary data collection instruments.

Questionnaires as the first tool of data gathering, they are important in conducting research

with a population sample and give the trends, attitudes, or opinions of this population in numerical terms. Typical examples of survey research include cross-sectional and longitudinal studies that are geared toward generalisation from a sample to a population and utilize questionnaires as modes of data collection (Babbie, 1990. Qtd in Creswell, 2009). In this research, questionnaires for the students and teachers were prepared. They were made on the scales that had been developed by Moore and Kearsley in 2012 related to distance education maintaining perceptions, attitudes, and effectiveness of CMC tools.

CMC interaction data also includes the direct information data that was collected directly from students' chitchat conversations, comments and submissions, and emailing data. It gave evidence-based direct proof of how the CMC tools are utilized as a part of the learning process.

Qualitative approaches were taken in order to provide a more thorough and contextualized understanding of learners' interactions, attitudes and communicative mobilizations in CMC contexts. Quantitative approaches are useful for identifying trends and patterns, but they tend to have limited value in terms of explaining exactly how and why learners engage with CMC settings (Duff, 2008; Richards, 2003).Contrastingly, qualitative approaches allow the researcher to examine the learner experiences with a subjective and emic orientation, which is important in order to understand learner agency, motivation and affect in virtual learning contexts (Miles et al., 2014).

Bodomo (2010) states that CMC creates new forms of textuality, new interaction, and new types of community; all of which complicate prior models of classroom discourse. The new practices and spaces that are emerging are relevant to the researcher because they require kinds of interpretive methodologies able to trace patterns of discourse, communicative choices and 'norms' of interaction as they emerge and change. Likewise, thinkers such as Warschauer and Kern (2000) have written about the kinds of new cultural and ideological spaces that

technology-mediated contexts can provide in relation to social practices, not just new pedagogical tools.

Supporting the use of qualitative analysis are past studies in which interpretive frameworks were applied to investigate CMC. For example, Chang (2007) used asynchronous discussion boards to examine the role of the discussion boards in students' writing development and found that students' metacognitive awareness increased when they were able to reflect on peer feedback in a non-linear manner and at their own pace. Kadri (2018) also demonstrated the aspect of autonomy and motivation among EFL learners in a blended learning environment, which indicated that a qualitative approach was necessary to unpack those developments.

2.5.3 Data Collection Procedure

The process began with the administration of questionnaires to both students and teachers in the Department of English at Hassiba Benbouali University of Chlef, Algeria. These questionnaires were shared online on Google Forms, hence making its accessibility ease thus aiding the subjects to provide relevant responses that they had. The data collection process length was four weeks, with follow-up done to better the rates of responses.

Besides the questionnaires, the data were also collected from the real samples of students' emails, chats, posts and comments. These pieces gave a lot of rich qualitative data and helped to further learn more about how participants communicate and use digital platforms. Using these different types of data sources was meant to decrease the possibility of bias and increase the reliability of the research results through triangulation.

2.5.4 Sampling Strategy and Data Sources

Purposive sampling was used for the study's qualitative phase, which involved carefully choosing scholarly sources that represent a range of thematically related but diverse viewpoints

on CMC in language instruction. Peer-reviewed journal articles, doctoral and master's theses, and monographs addressing CMC-mediated pedagogy, student engagement, writing instruction, and learner identity were among these sources.

In qualitative research, purposeful sampling is frequently employed to guarantee that "information-rich cases" are included (Patton, 2002, p. 230). Three requirements were satisfied by the chosen sources:

1. They specifically addressed CMC in contexts involving the acquisition of second or foreign languages.

2. They provided pedagogical analysis, interpretive insights, or empirical data appropriate for thematic coding.

3. They followed strict academic guidelines appropriate for research at the doctoral level

Included among the sample were studies by Bodomo (2010) on the linguistics of digital discourse, Chang (2007) on the integration of online platforms in EFL writing instruction, Erofeeva (2018) on the use of mobile apps in oral language practice, and Kadri (2018) on the effects of CMC in blended learning environments. These works represent a range of CMC modalities email, forums, mobile applications, voice tools and cover diverse learner populations. The aim was not to generalize across all language learners but to extract *thematic depth* from high-quality academic analyses, consistent with qualitative traditions (Creswell & Poth, 2018; Nowell et al., 2017).

2.5.5 Data Analysis

The demographic (**quantitative**) data and distribution, which described data, were responded to in this chapter. The relationship of the variable under analysis with hypotheses

being tested was through inferential statistics in the form of the chi-square test and analysis of correlation, based on TDT data.

Simultaneously, **qualitative** data from students' chat conversations, comments, posts, and emails were thematically analysed, following Creswell's (2014) approach. Qualitative data are thematically analysed to reveal that some themes indirectly derive are related to those developed in the CMC across TEFL study conducted in another study. The contextual factors are the subject of exploration of the qualitative data held in relation to the experiences of the students and the teachers, or more precisely, the experiences noted regarding the CMC tools.

The research was analysed using TDT theoretical perspectives. "Dialogue, structure and learner autonomy" theory was used and it is one of the main analysis frameworks for the effect that CMC tools have in relation to communication, engagement and final learning outcomes in TEFL context.

2.5.6 Thematic Analysis Procedure

The thematic analysis was conducted using the six-phase framework outlined by Braun and Clarke (2006), which provides a transparent and replicable structure for qualitative inquiry. This model was chosen for its applicability to a wide range of data types and its compatibility with both inductive and deductive approaches. Each phase was executed with methodological rigor and documented through analytical memos and coding logs to ensure trustworthiness.

2.5.6.1. Phase 1: Familiarization with Data

The researcher engaged in extensive reading of selected dissertations, journal articles, and book chapters that examined the relationship between CMC and language learning. During this phase, notes were taken to identify initial impressions, surprising claims, and emerging patterns related to learner interaction, motivation, identity, and academic performance in CMC

environments.

2.5.6.2. Phase 2: Generating Initial Codes

Coding was performed manually. Segments of text that captured pedagogical shifts, learner perspectives, or discursive behaviours were tagged with descriptive labels such as "digital anxiety," "asynchronous reflection," "informal register," and "peer negotiation." Both *semantic content* (surface meanings) and *latent content* (underlying ideologies or assumptions) were coded.

2.5.6.3. Phase 3: Searching for Themes

Codes were collated into potential themes through an iterative process. For example, the codes "writing habits," "abbreviated spelling," and "chat syntax" clustered under a broader theme: *Informality vs. Academic Norms.* Other emergent themes included *Learner Autonomy, CMC as Empowerment,* and *Pedagogical Transformation.*

2.5.6.4. Phase 4: Reviewing Themes

Themes were compared across sources for internal homogeneity and external heterogeneity, as suggested by Nowell et al. (2017). In other words, data within a theme needed to cohere meaningfully, while each theme had to be sufficiently distinct from others.

2.5.6.5. Phase 5: Defining and Naming Themes

Each theme was defined in detail and named to reflect its conceptual core. For instance, *CMC as Empowerment* focused on how learners experienced increased agency and confidence when interacting in mediated environments.

2.5.6.6. Phase 6: Producing the Report

Themes were translated into analytical narratives supported by direct evidence from the literature. Block quotations were used to illustrate complex arguments or recurrent sentiments.

The following section elaborates on each theme with detailed analysis.

2.6. Thematic Analysis: Presentation of Findings

This section presents the findings derived from thematic analysis, highlighting key themes and patterns identified within the qualitative data.

2.6.1 Theme 1: CMC as Communicative Empowerment

Across multiple studies, learners expressed that CMC platforms created opportunities for *freer, more confident expression*, especially for those who were anxious or less dominant in traditional classroom discussions. Synchronous and asynchronous modalities were credited with democratizing classroom discourse and enhancing participation equity. In her qualitative case study, Erofeeva (2018) observed: “Participants emphasized that using voice-recording features in language learning apps allowed them to rehearse and re-record until satisfied. This not only reduced speaking anxiety but also led to deeper engagement with phonological features of the target language” (p. 47). This suggests that voice-recording tools can enhance language learning by building confidence and fostering more focused pronunciation practice.

Bodomo (2010) reached similar conclusions in his discourse analysis of online learner forums. He argued that: “CMC allows for more balanced power dynamics in language interaction. Unlike traditional classrooms where teacher talk dominates, online spaces enable learners to initiate, sustain, and close discourse events, leading to greater participation and control over learning” (p. 63). Which highlights how CMC empowers learners by giving them more agency and equal footing in communication, fostering active involvement and autonomy in the learning process.

The theme of empowerment was further enriched by Kadri’s (2018) findings, where participants in a blended learning environment reported: “A sense of ownership over their

academic writing, particularly when given the autonomy to revise drafts based on peer feedback exchanged asynchronously" (p. 134). This underscores that giving learners autonomy in revising their work through asynchronous peer feedback fosters a stronger sense of ownership and engagement with their academic writing.

These observations affirm that CMC functions not only as a medium but also as a *pedagogical intervention*, enabling marginalized voices to gain prominence in language learning contexts.

2.6.2 Theme 2: Informality vs. Academic Norms

While CMC fosters linguistic experimentation and authenticity, it also introduces informal discourse conventions that may conflict with academic writing expectations. Several studies highlighted *learner confusion or transference of informal features* from digital conversations into formal assignments.

Ghaskil (2019) documented these challenges in his doctoral investigation of Algerian EFL learners: "Students regularly incorporated abbreviations like 'b4' or omitted punctuation in academic essays, indicating a form of cognitive interference between CMC literacy and formal academic genres" (p. 64). This reveals that frequent exposure to CMC language can interfere with students' ability to adapt to formal academic writing conventions. Chang (2007), in his analysis of weblog use in writing instruction, similarly noted: "Despite scaffolding, some students continued to adopt a chat-like tone in argumentative essays. Their writing exhibited features such as emoticons, shortened sentences, and personal interjections, blurring genre boundaries" (p. 98). This indicates that even with guidance, the influence of digital communication styles can persist, challenging students' ability to maintain appropriate tone and structure in academic writing

However, this theme was not entirely negative. Researchers such as Kern (2006) and Thorne (2008) have argued that these tensions can be pedagogically productive if used to teach genre awareness and register shifts. As Thorne (2008) suggests: “Instead of pathologizing digital literacy as a threat, educators should harness it as an opportunity to teach stylistic versatility and metalinguistic awareness” (p. 537). This suggests that educators should view digital literacy not as a problem, but as a valuable tool for developing students’ adaptability and deeper understanding of language use across contexts.

2.6.3 Theme 3: Learner Autonomy and Motivation

Another recurring theme was the *increase in learner autonomy and intrinsic motivation* when CMC tools were integrated thoughtfully into language curricula. Asynchronous communication, in particular, was noted for allowing learners to engage with materials at their own pace and revisit conversations for deeper understanding. Kadri (2018) reported: “Students in the experimental group expressed a stronger sense of agency, often taking the initiative to seek feedback or propose revisions. This contrasted sharply with the control group, where learners were more passive” (p. 145). This demonstrates that empowering students through active learning environments can significantly enhance their sense of agency and engagement compared to more traditional, passive approaches.

Likewise, Bodomo (2010) emphasized that digital writing spaces facilitated personalized learning trajectories: “CMC texts are inherently self-paced and student-driven, supporting autonomous behaviours such as self-correction, research, and peer coaching” (p. 69). This highlights how digital writing environments promote learner autonomy by enabling self-directed actions like revising, researching, and collaborating at one's own pace.

These findings resonate with Deci and Ryan’s (2000*) self-determination theory,* which posits that environments that support autonomy, competence, and relatedness promote deeper

learning.

2.6.4 Theme 4: Pedagogical Transformation and Technological Barriers

The final theme addressed the *pedagogical shifts* required to integrate CMC and the *structural barriers* that often impede implementation. While many educators recognized the value of CMC for enhancing engagement and collaboration, they also cited time constraints, lack of institutional support, and inadequate training as deterrents. Kadri (2018) highlighted: "Teachers expressed excitement about using forums and collaborative documents but lamented the steep learning curve and lack of recognition for digital pedagogy in formal evaluations" (p. 151). This points to a tension in digital teaching: while educators are eager to innovate with collaborative tools, institutional support and acknowledgment often lag behind.

Bodomo (2010) suggested that for CMC integration to be sustainable, it must be embedded within *curricular frameworks* and supported by ongoing professional development. As he noted: "Technological tools are only as effective as the pedagogical designs they support. Without rethinking assessment, feedback loops, and classroom dynamics, CMC risks becoming a superficial add-on" (p. 74). This emphasizes that the true impact of technology in education depends on thoughtful pedagogical integration, without it, CMC remains a surface-level enhancement rather than a meaningful learning tool. This theme underscores the need for *systemic change,* not merely individual innovation, to fully realize the potential of CMC in language education.

2.7. Trustworthiness and Credibility of the Analysis

Ensuring trustworthiness in qualitative research requires explicit strategies to support the credibility, dependability, confirmability, and transferability of the findings (Lincoln & Guba, 1985). In this study, multiple measures were employed to establish methodological rigor throughout the thematic analysis process.

First, the use of methodological triangulation the combination of qualitative thematic analysis with existing quantitative data enhanced the credibility of interpretations by enabling the cross-verification of patterns. As Patton (2002) suggests, “triangulation strengthens a study by combining methods and data sources to get at the meaning behind the numbers” (p. 248). This underscores that triangulation enhances research validity by integrating multiple methods and data sources to uncover deeper insights beyond mere statistical outcomes.

Second, *dependability* was addressed by maintaining an audit trail of the coding process. Each stage of the thematic analysis was documented with memos, reflexive notes, and justification for theme inclusion or exclusion. This documentation process allows other researchers to trace the analytical logic used in interpreting the data (Nowell et al., 2017).

Third, the *confirmability* of findings was enhanced through peer debriefing and comparison with similar themes identified in other empirical studies. By grounding interpretations in existing scholarly literature and ensuring that data, rather than researcher assumptions, guided conclusions, the study maintains a high level of analytical neutrality.

Lastly, while qualitative research does not aim for statistical generalization, *transferability* was supported by providing thick descriptions of the context, data sources, and participant perspectives cited within the original studies. This allows readers to determine the relevance of findings to their own settings (Creswell & Poth, 2018). This means that clearly presented findings enable readers to judge how applicable the results are to their specific contexts or educational environments.

2.8. Limitations

The current study is, in one sense, characterised as a single case, which may limit generalisation to other sand enquiries and other works in the sphere of education. All facts were considered in the interpretation of the results and discussion.

Limitations within the research study may influence the results. First, there could be some bias in the information provided by the students and the teachers, as sometimes an individual's perception might not correspond to his or her pattern of behaviour, according to Podsakoff et al. (2003). The present research is conducted in only one institution, Hassiba Benbouali University; therefore, generalisation may not be suitable for other universities or a different group of people (Bryman, 2016). Another issue is that since technology changes rapidly, the CMC tools to be studied will be out of date, and the findings will be less useful (Selwyn, 2016). Moreover, different levels of participants' digital literacy will change their ways of using and perceiving the CMC tools, adding another level of variation that is hard to control (Hargittai, 2002). These problems could be fixed by using three different types of data and looking at bigger-picture situations. Such an approach would then make the results of the research more valid and useful. While this is a rigorously conducted study, it has certain limitations. We point these out here to place findings within their proper context and inform future research.

A principal limitation of this study is the use of secondary sources. Though the three studies we chose represent sound academic and peer-reviewed research, they operated within specific contexts (e.g., country, learner population, digital platform), and it is difficult to say whether they generalise universally. Therefore, our findings are best understood as transferable rather than generalisable.

Delimitations were also part of the process to support coherence. In particular, we were deliberate to limit analysis to computer-mediated communication in foreign and second language learning contexts, understanding the research focus to be on writing, interaction, and learner identity. Therefore, we understood it appropriate to exclude studies overtly focused on technical infrastructure, computational linguistics, or teacher training, as they did not address the central research questions. These decisions in the interest of demonstrating analytic depth,

but in doing so, the choices regarding data exclusion led some CMC applications (e.g., AI feedback tools, gamification) to not be considered.

2.9. Conclusion

The present chapter illustrates the planning and implementation of the qualitative methodology used in this research, emphasizing thematic analysis as part of a triangulated research design. This chapter has identified the following four interacting and important themes through a careful review and analysis of the peer-reviewed literature; CMC as communicative empowerment, tensions between informal and academic discourse, learner autonomy and motivation, and pedagogical change.

These findings have not only provided conceptual understandings of the implications of CMC for education but practical guidance around digital communication theory and application for the integration of digital communication tools in language curricula. Thematic analysis provides explanatory power to quantitative findings as rich language examples while revealing the tricky intertwining of language-learning, technology and identity.

Additionally, the chapter demonstrates methodological rigor in providing a transparent account of the research process in ethical terms. By triangulating qualitative findings with the findings of surveys, the research contributes to a growing body of evidence that can help solidify that when implemented well, CMC can transform language learning, not in digitized learning content only, but how students engage with language, and peers, while shaping their evolving identities.

Chapter Three:

Results and Discussion

3.1. Introduction

This chapter will present the analysis related to the data collected from both teachers and students via questionnaires, as described in the methodology chapter. The findings are related to the use of Computer-Mediated Communication tools in the TEFL program at Hassiba Benbouali University of Chlef and examine how those tools of CMC impact teaching practices and student engagement. The analysis that follows conveys an idea of the range of ways in which things were experienced and perceived by participants and provides insights that will be useful for the subsequent discussion of educational implications in distance learning.

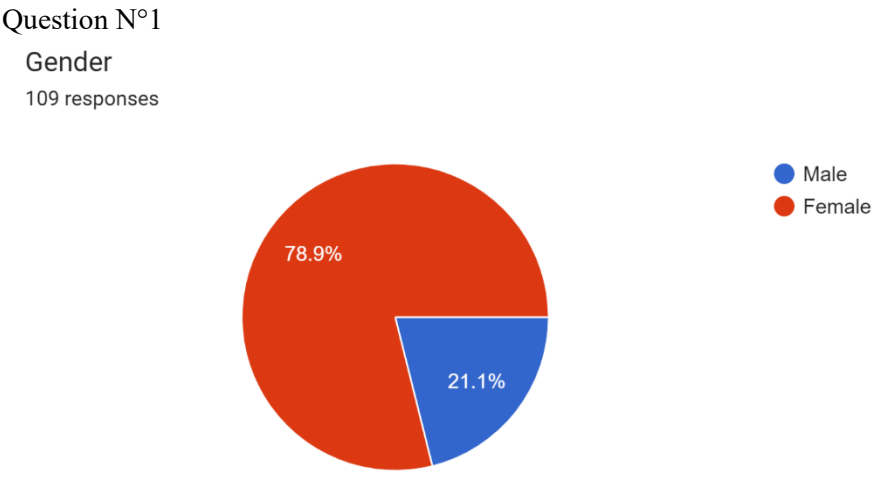
3.2. Analysis of Students' Questionnaire

There were seven sections in the questionnaire: demographic information, familiarity with digital communication, the impact of usage on academic English, students' motivation and learning competencies, classroom experience and assessment of feedback, assessment of CMC in learning, and students' preparedness for the use of CMC in the learning experience.

3.2.1. Section 01: Background details of the participants

Figure 3.1.1

Question N°1



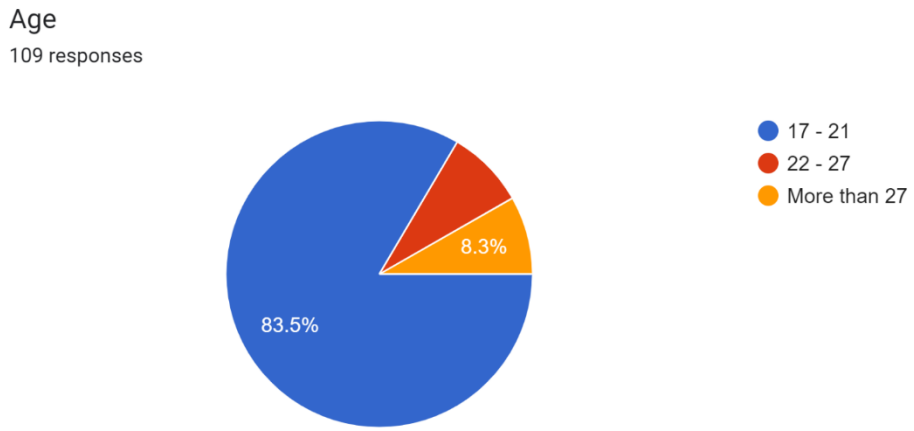
Note. Percentage of males = 21.1%, Percentage of females = 78.9%, total N = 109 responses.

The data on the gender distribution obtained from the questionnaire shows a very high

level of disparity at 78.9% female, with just 21.1% male. This is a case of major imbalance, which possibly might tilt findings in general, especially in regard to Computer-Mediated Communication in the setting of TEFL with respect to gender-specific experiences or perceptions.

Figure 3.1.2

Question N°2

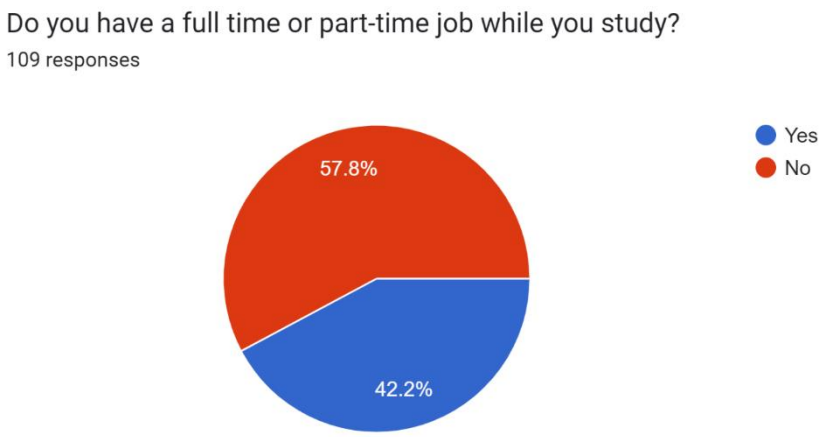


Note. Age between 17-21= 83.5%, Age between 22-27= 8.2%, Age more than 27= 8.3%

The data obtained from the questionnaire on age distribution provides some background information to understand the profile of the respondents. The pie chart indicates that 83.5% of the respondents are within the age range of 17 to 21 years. Other small percentages are between the ages of 22 to 27, and an even smaller percentage within the over 27 years category. This puts the age distribution in line with the typical first-year undergraduate student; therefore, most of the respondents would probably be in their late teens or early twenties. There is a huge role that this demographic information can play in determining how students would engage with technology and whether they would be well prepared for CMC tools to integrate into their learning environment.

Figure 3.1.3

Question N°3



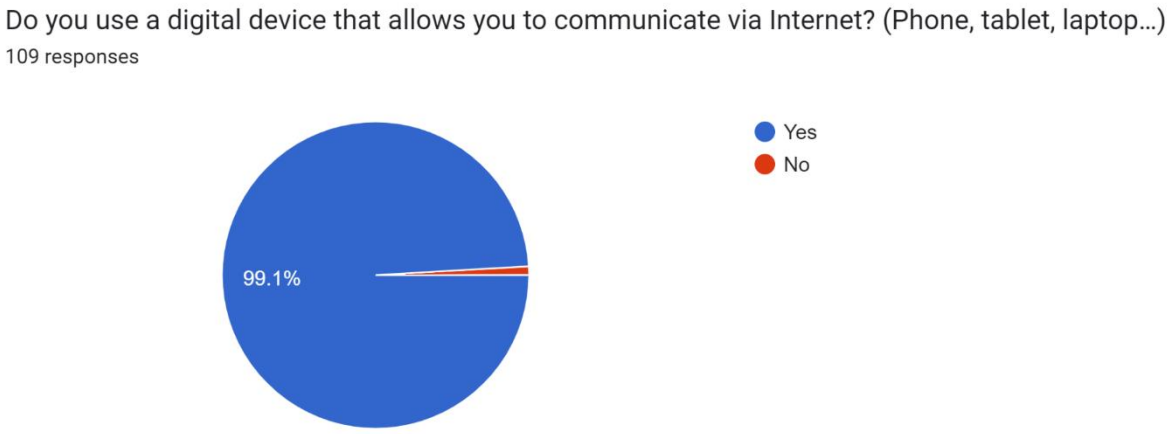
Note. Percentage of "yes" answers= 42.2%, Percentage of "no" answers= 57.8%

The latest data is about the employment status of students during the study process. According to this pie chart, 42.2% of the students who responded have a full-time or part-time job during their studies, while 57.8% are not working during their studies.

3.2.2 Section 02: Familiarity with Digital Communication

Figure 3.2.1

Question N°1

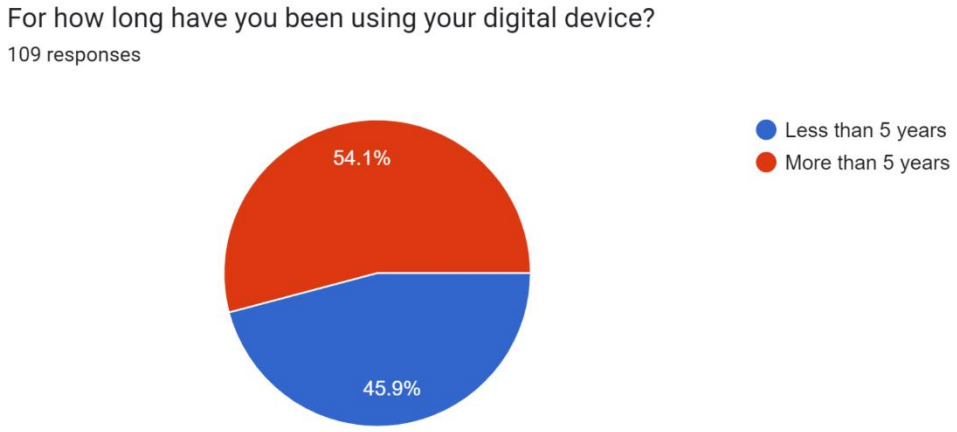


Note. Familiarity "yes" = 99.1%, non-familiarity "no" = 00.9%

Indeed, according to the data from question 1, section 1, 99.1% of those who respond use some kind of digital appliance that permits communication via the Internet, whereas 0.9% do not. In this case, this gross majority gives evidence as to the high degree of knowledge about digital communication tools the subjects have.

Figure 3.2.2

Question N°2

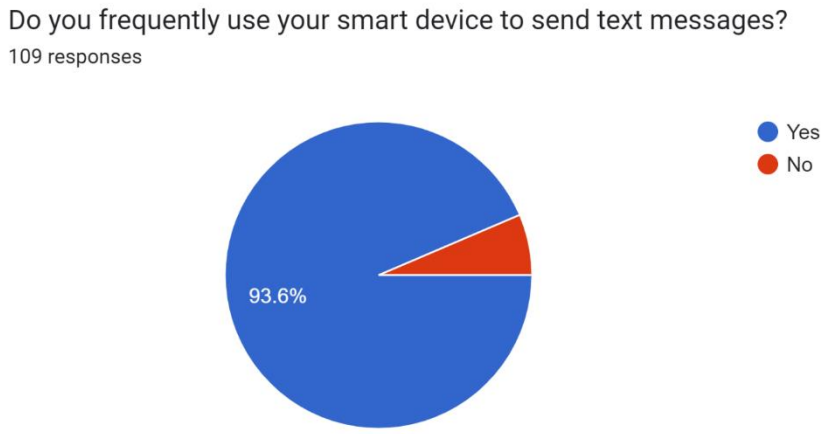


Note. Percentage of "Less than 5 years" = 45.9%, Percentage of "More than 5 years" = 54.1%

In the meantime, data retrieved on the time elapsed since students first started using their digital devices indicated 54.1% of the respondents using after five years and 45.9% of the respondents between zero and five years. Therefore, the time length of wearing helps in comprehending the experience, comfort level, and familiarity in the use of digital technology.

Figure 3.2.3

Question N°3

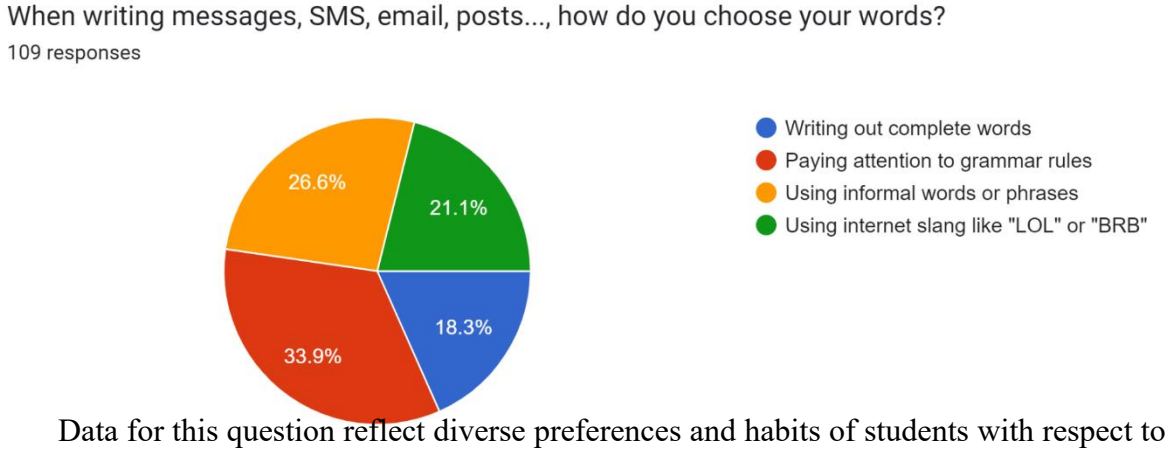


Note. Frequency of use "yes" = 93.6%, non-frequency of use "no" = 6.4%

Data on the frequency of use of smart devices for sending text messages show that 93.6% of the surveyed respondents usually do so, and 6.4% do not. Therefore, with the consideration that the high percentage rate of usage for frequent text messaging evinces familiarity and comfort with these digital tools of communication among students, the data stands as follows.

Figure 3.2.4

Question N°4

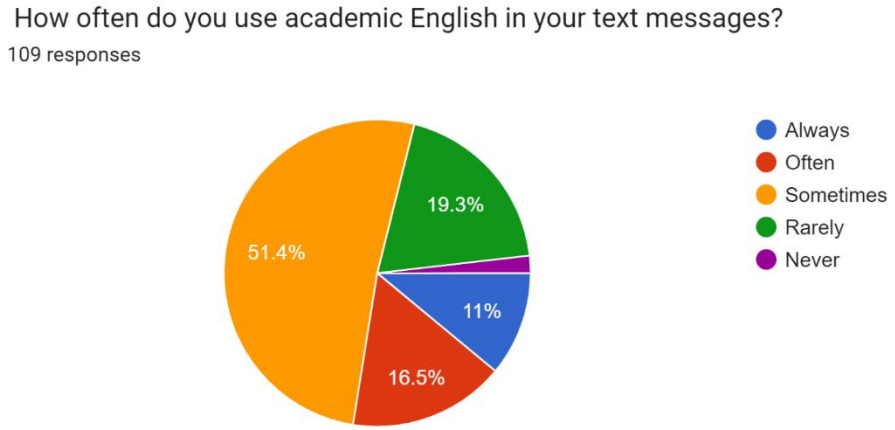


Data for this question reflect diverse preferences and habits of students with respect to

the choice of words in writing messages, SMS, emails, and posts. Information obtained from the pie chart shows that 33.9 percent of respondents pay much attention to the application of grammar rules, whereas 26.6 percent make use of informal words or phrases. Some 21.1 percent like using Internet slang, including abbreviations like "LOL" or "BRB," while 18.3 percent write out full words.

Figure 3.2.5

Question N°5

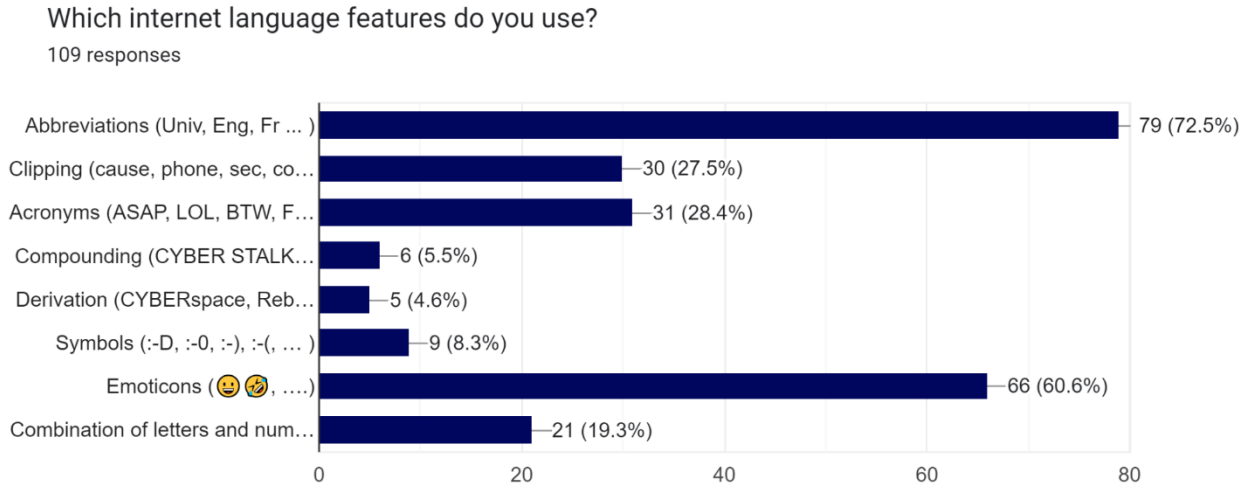


Note. Always=11%, Often= 16.5%, Sometimes=51.4%, Rarely=19.3%, Never= 1.8%

The frequency of use of academic English in text messages was distributed as follows: 51.4% of the respondents use it "sometimes," 19.3% "rarely," 16.5% "often," 11% "always," and 1.8% "never." Thus, this distribution actually covers a very wide range of practices, including when most of the students use academic English in bursts within their informal communication.

Figure 3.2.6

Question N°6

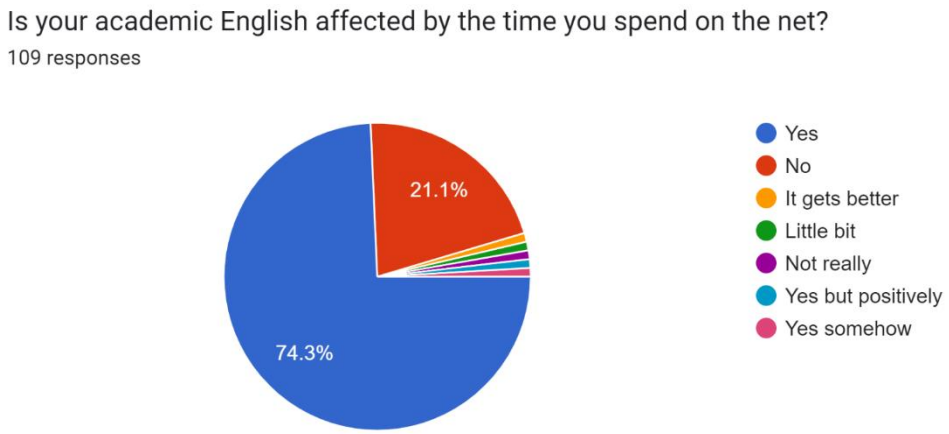


Note. Abbreviations= 72.5%, Emoticons= 60.6%, Acronyms= 28.4%, Clipping= 27.5%, Combinations of letters and numbers= 19.3%, Symbols= 8.3%, Compounding= 5.5%, Derivation= 4.6%.

The data on the use of features of internet language describe the different habits of communication used by students. Abbreviations are used by 72.5%, emoticons by 60.6%, acronyms by 28.4%, clipping by 27.5%, letter-number combinations by 19.3%, symbols by 8.3%, compounding by 5.5%, and derivation by 4.6%. Therefore, the above distribution depicts a clear favouritism towards some types of internet language features over others.

Figure 3.2.7

Question N°7

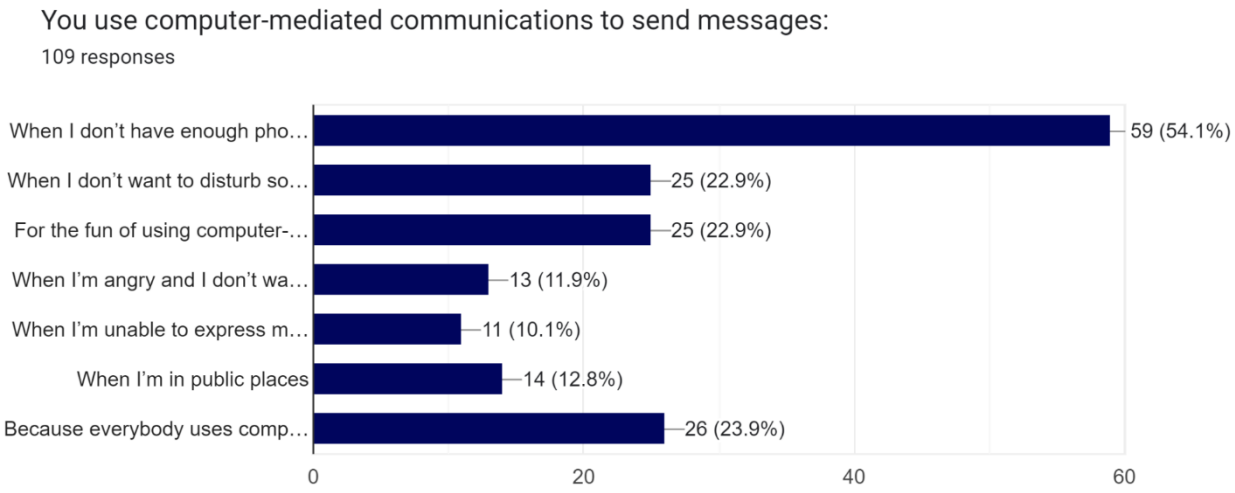


Note. Yes= 74.3%, No= 21.1%, It gets better= 0.9%, Little bit= 0.9%, Not really= 0.9%, Yes, but positively= 0.9%, Yes, somehow= 0.9%.

The data on whether students feel that their academic English is affected by the time they spent on the internet shows 74.3 percent believing it to be affected, whereas 21.1 percent do not. The remaining responses are all mixed, with very small percentages showing increasingly sophisticated views such as "It gets better," "Little bit," "Not really," "Yes but positively," and "Yes somehow." This distribution suggests that there is a strong sense in the majority of students that their use of the Internet is related to their academic English skills. However, when asked how the time they spent on the internet could influence their Academic English, their responses differed. Consequently, the influence of spent time on the internet on Academic English proficiency is different. High online exposure may improve the vocabulary, understanding, and fluency of the language, and frequent exposition to informal kinds of language may be going to harm Academic English. The effects balance depending on what type and level of content is accessed.

Figure 3.2.8

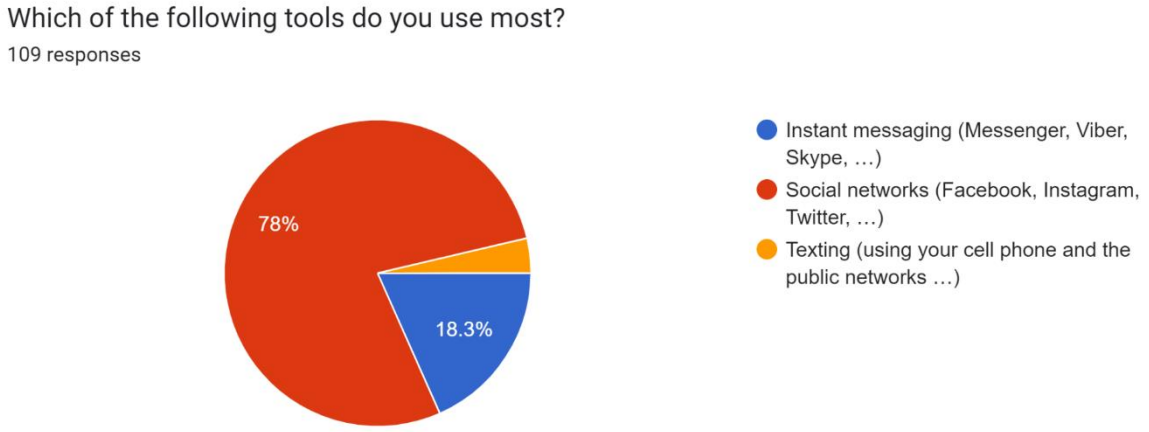
Question N°8



Data on the motives that make one send a message through computer-mediated communication are because they do not have enough phone credit, 54.1%; because they do not want to disturb anybody, 22.9%; and because it is fun to use computer-mediated communication, 22.9%. Less frequent reasons include: I am angry and do not feel like talking, 11.9%; I cannot express myself verbally, 10.1%; public places, 12.8%; and everybody uses computer-mediated communication, 23.9%.

Figure 3.2.9

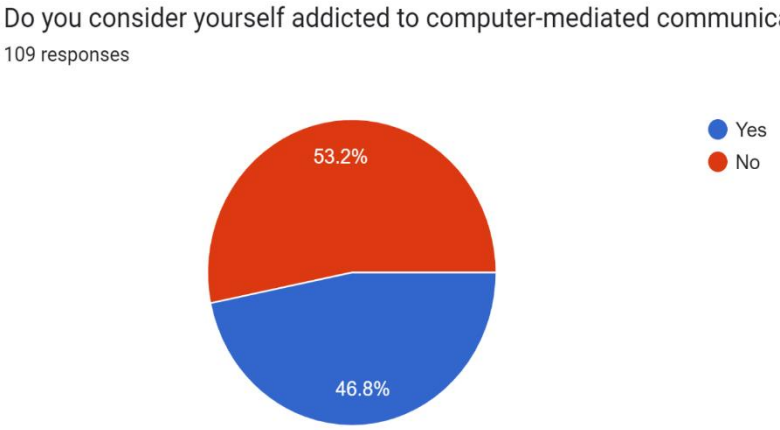
Question N°9



In terms of the most used communication tools, 78% of the respondents use social networks the most like Facebook, Instagram, and Twitter, among others while 18.3% use instant messaging tools like Messenger, Viber, or Skype; a very small percentage, though, still make use of cell phone and public network text messaging.

Figure 3.2.10

Question N°10

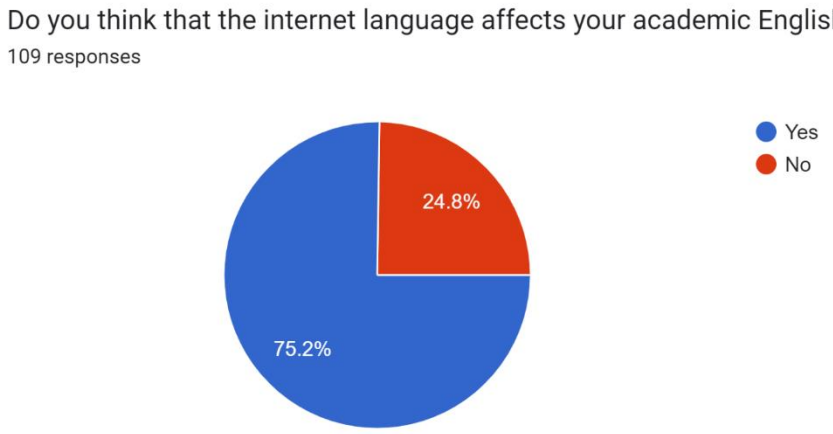


Note. "yes" = 46.8%, "no" =53.2%

The data on whether students regard themselves as having an addiction to CMC are almost perfectly split, with 46.8% of the subjects answering "yes" and 53.2% answering "no." This means that almost half of the students feel they have a high reliance upon, or usage of, CMC tools.

Figure 3.2.11

Question N°11

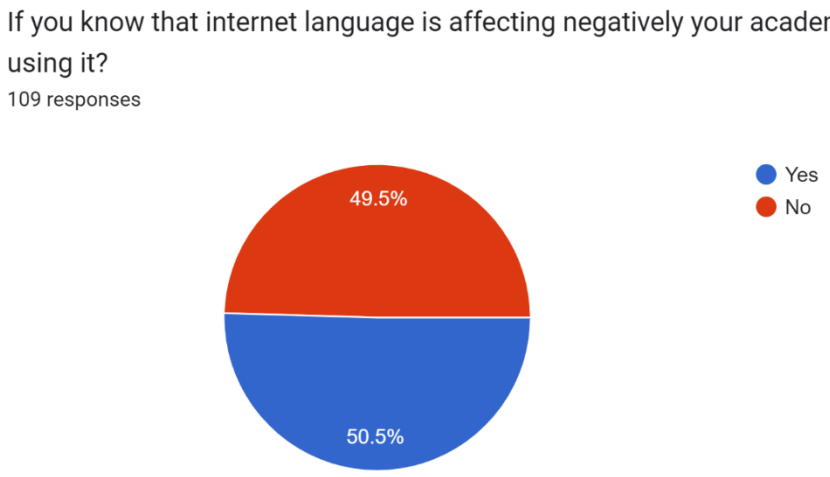


Note. "yes" = 75.2%, "no" =24.8%

The data on whether students think Internet language has an effect on their academic English shows 75.2% of the subjects answered in the affirmative, while 24.8% did not. This overwhelming majority suggests that most students feel there is a high impact of Internet language on their academic English.

Figure 3.2.12

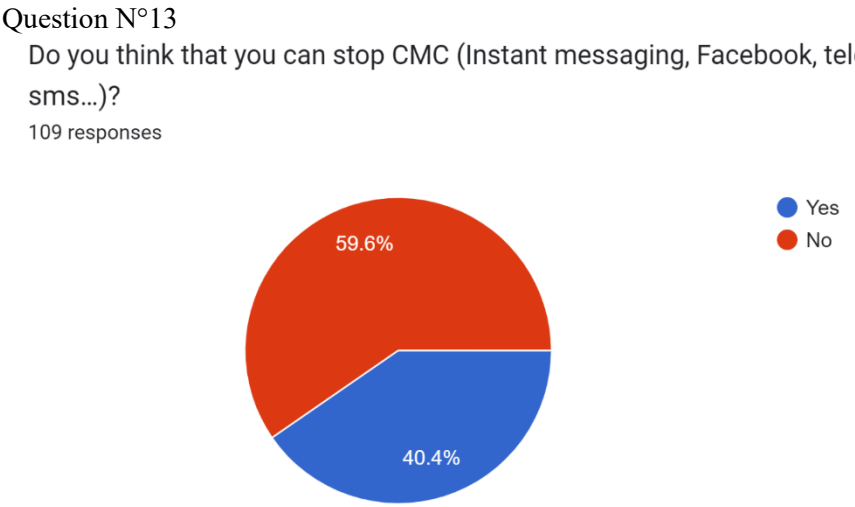
Question N°12



Note. "yes" = 50.5%, "no" =49.5%

The responses to the question of whether students would continue using internet language if they knew it were negatively affecting their academic English are almost equally divided: while 50.5% of them would, 49.5% would not. This near equal division makes for a challenging situation when trying to improve the effect of internet language on academic English skills.

Figure 3.2.13

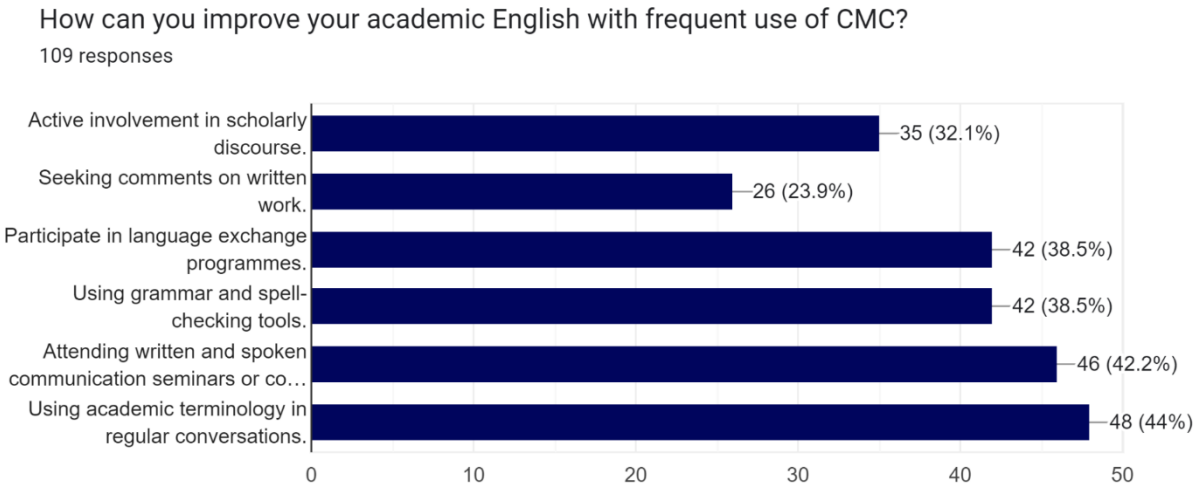


Note. "yes" = 40.4%, "no" =59.6%

The distribution of data regarding whether students believe they are capable of ceasing to use Computer-Mediated Communication tools like instant messaging, Facebook, Telegram, Instagram, Twitter, and SMS shows 59.6% of the respondents believing they cannot, and 40.4% believing they can. This demonstrates that most of the students feel a very strong reliance on CMC tools.

Figure 3.2.14

Question N°14

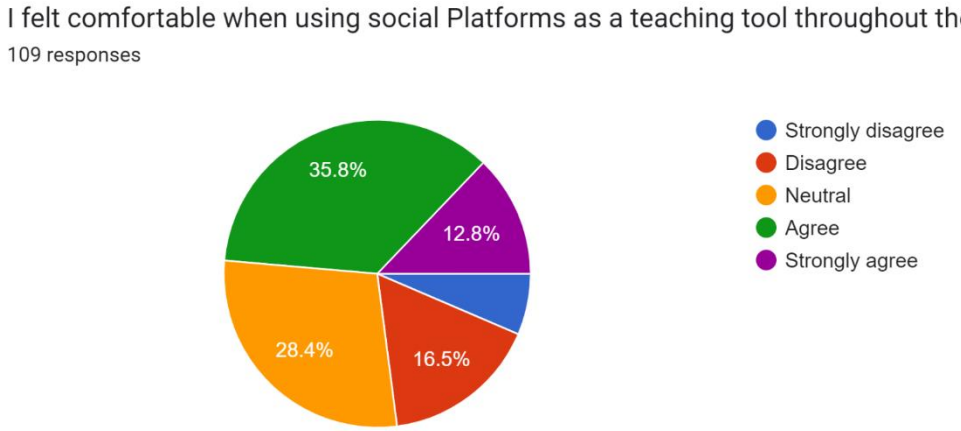


The strategies that the data brought out on how students believe they can improve their academic English with the frequent use of computer-mediated communication tools are: Using academic terminology in regular conversations 44%, Attending written and spoken communication seminars or courses 42.2%, Language exchange programs 38.5%, Grammar and spell-checking tools 38.5%, Active scholarly discourse 32.1% and Seeking comments on written work 23.9%.

3.2.3 Section 03: Students' Level of Motivation and Learning competencies

Figure 3.3.1

Question N°1

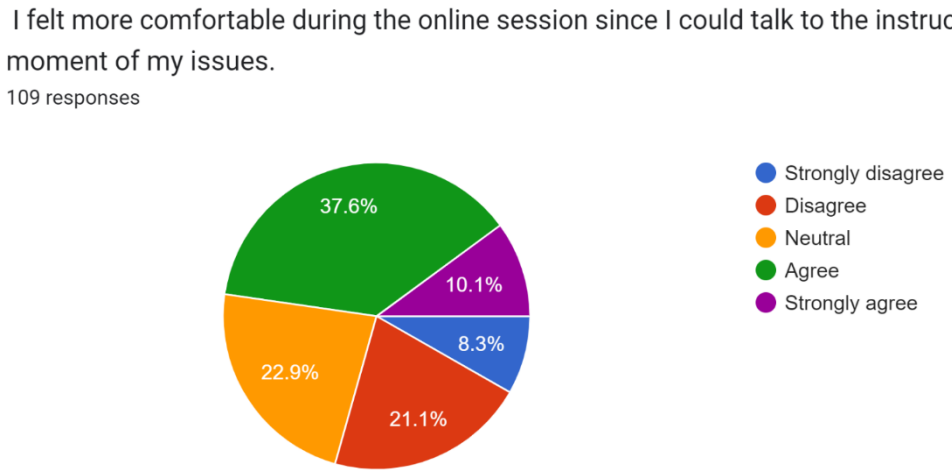


Note. Strongly Disagree= 6.4%, Disagree= 16.5%, Neutral= 28.4%, Agree= 35.8%, Strongly Agree= 12.8%

These are demonstrated in the responses to the question of whether students feel comfortable using a social platform as a tool for understanding subjects of coursework during online classes. From the responses, it can be seen that 35.8% of students feel comfortable, 12.5% strongly agree, 28.4% are neutral, 16.5% disagree, while 6.4% strongly disagree. This distribution shows the levels of comfort that can be found among students in using social platforms for learning purposes.

Figure 3.3.2

Question N°2

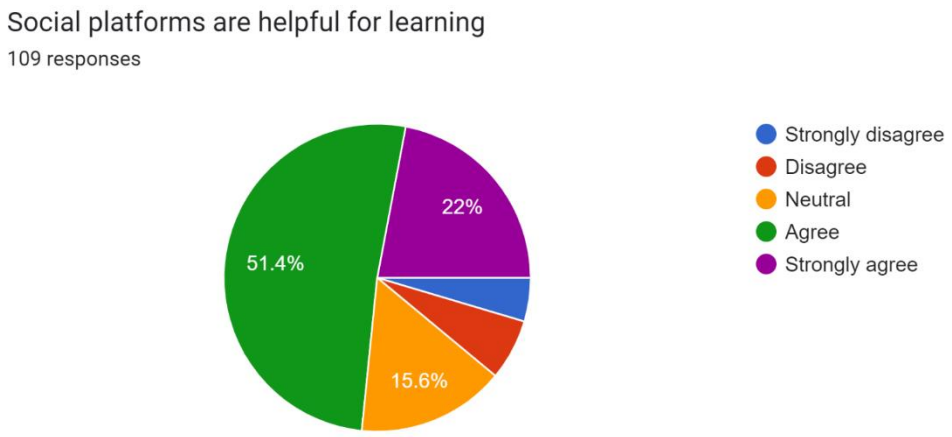


Note. Strongly Disagree= 8.3%, Disagree= 21.1%, Neutral= 22.9%, Agree= 37.6%, Strongly Agree= 10.1%

Information on the comfort level of students regarding the ability to talk privately with the instructor during online sessions varied. In particular, 37.6% of them agree that this ability made them more comfortable, 10.1% strongly agree, 22.9% are neutral, 21.1% disagree, and 8.3% strongly disagree. This distribution shows that though a fair number of students usually prefer the ability to communicate in private with the instructor during an online class, there are some who stay either neutral or think otherwise.

Figure 3.3.3

Question N°3

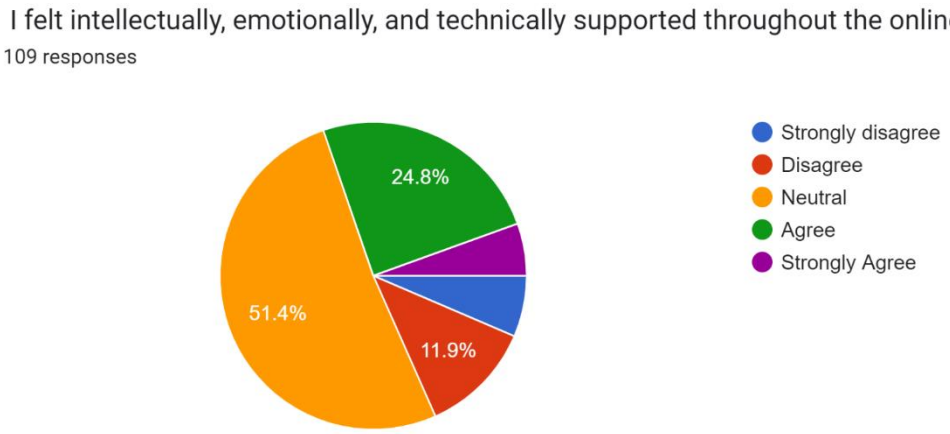


Note. Strongly Disagree= 4.6%, Disagree= 6.4%, Neutral= 15.6%, Agree= 51.4%, Strongly Agree= 22%

In general, the data support that most feel that social platforms are helpful in learning at 51.4%. Twenty-two percent strongly feel they are helpful, 15.6% have no opinion, 6.4% disagree, and 4.6% strongly disagree. Put another way, a higher majority of student respondents consider the social platforms they use as helpful tools in their learning. For example, for an open-ended question on how those platforms help in learning.

Figure 3.3.4

Question N°4

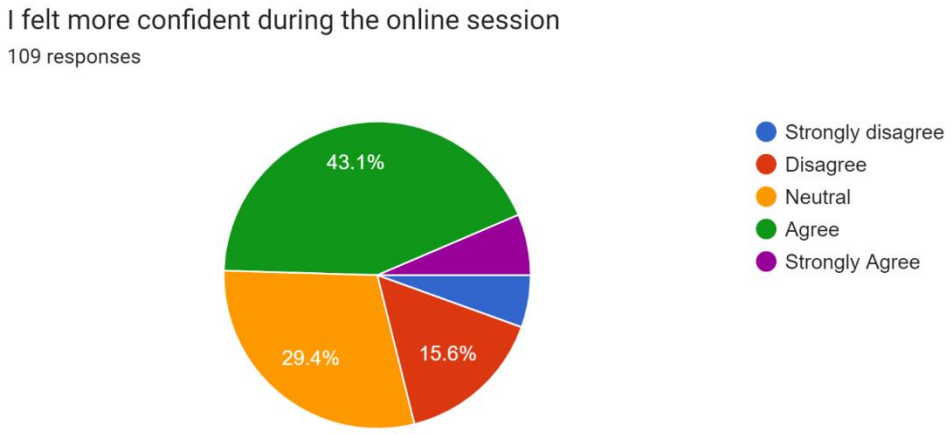


Note. Strongly Disagree= 6.4%, Disagree= 11.9%, Neutral= 51.4%, Agree= 24.8%, Strongly Agree= 5.5%

Data on whether students felt that they were supported intellectually, emotionally, and technically throughout the session indicate that 51.4% responded as neutral, 24.8% agree, 11.9% disagree, 5.5% strongly agree, and 6.4% strongly disagree. This distribution means that although some students have felt supported, it shows a great number remained either neutral or unsupported.

Figure 3.3.5

Question N°5

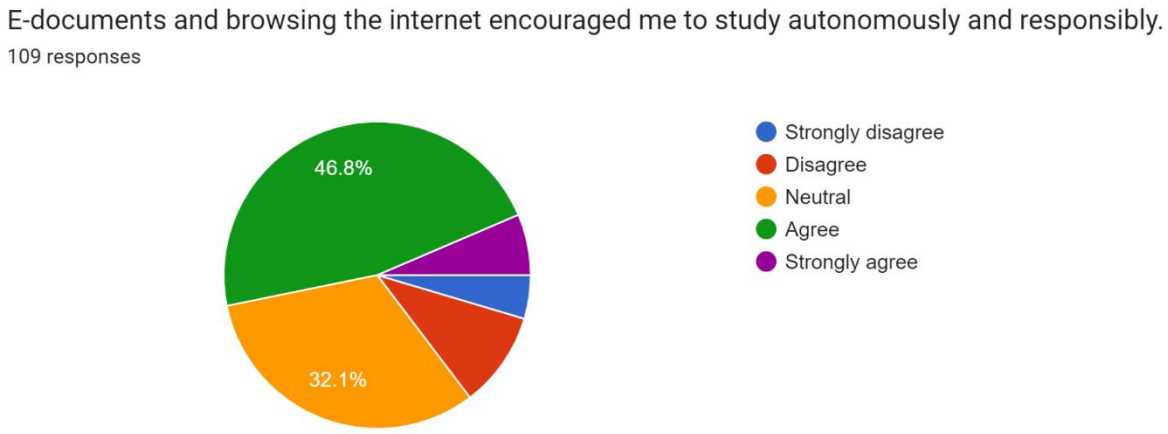


Note. Strongly Disagree= 5.5%, Disagree= 15.6%, Neutral= 29.4%, Agree= 43.1%, Strongly Agree= 6.4%

Responses to students' confidence level data for the online session as either 'agree' is 43.1%, 'strongly agree' is 15.6%, 'neutral' is 29.4%, 'disagree' is 8.3%, and 'strongly disagree' is 3.7%. Indicating more agonist is the majority of the students were confidents, although there a quite significant percentage of students who were either indifferent or less among confidence.

Figure 3.3.6

Question N°6

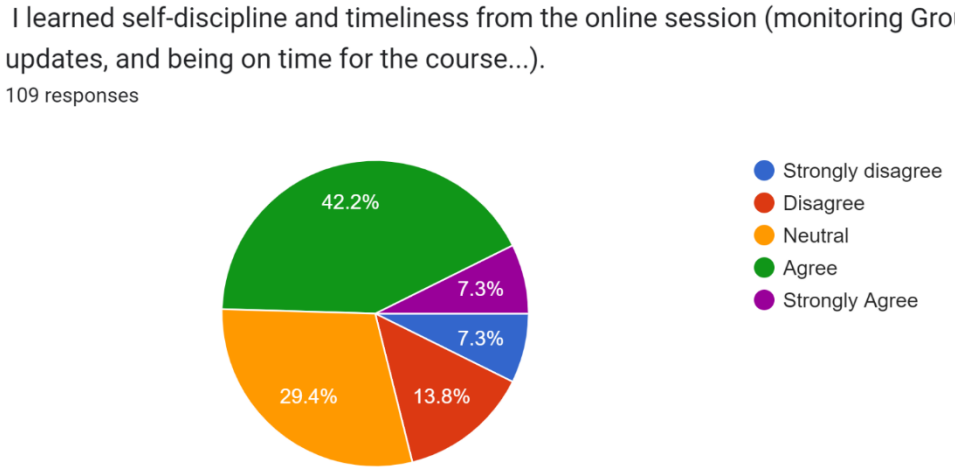


Note. Strongly Disagree= 4.6%, Disagree= 10.1%, Neutral= 32.1%, Agree= 46.8%, Strongly Agree= 6.4%

The data on whether e-documents and browsing the internet encouraged students to study in a more autonomous and responsible way show 46.8% of the respondents agree, 6.4% strongly agree, while 32.1% are neutral, 10.1% disagree, and 4.6% strongly disagree. This, therefore, means that nearly half of the students think these resources have a positive effect on studying independently, although a fair proportion remained either non-committal or disagreed.

Figure 3.3.7

Question N°7

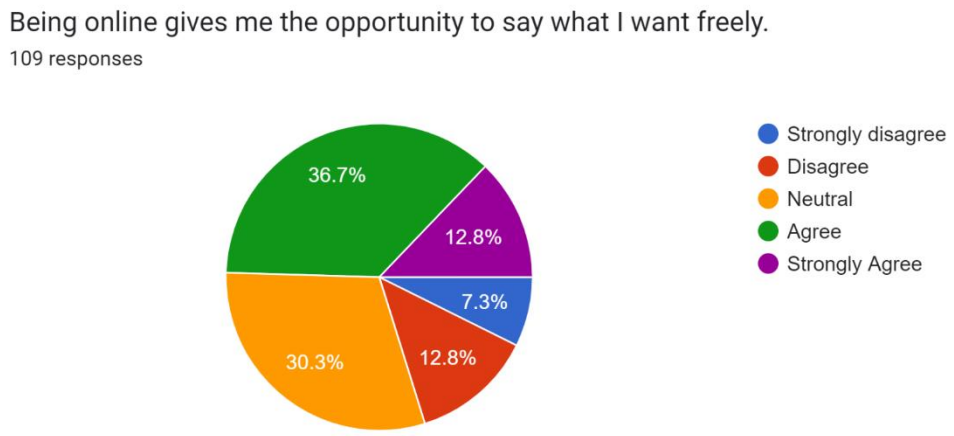


Note. Strongly Disagree= 7.3%, Disagree= 13.8%, Neutral= 29.4%, Agree= 42.2%, Strongly Agree= 7.3%

The data on whether students have learnt self-discipline and timeliness from the online session portray mixed reactions. 42.2% agree, while 7.3% strongly agree; 29.4% remain neutral, 13.8% disagree, and 7.3% strongly disagree. This may be interpreted to mean that although most of the students feel that the online sessions helped in acquiring these skills, a fair share either remains neutral or simply disapproves.

Figure 3.3.8

Question N°8



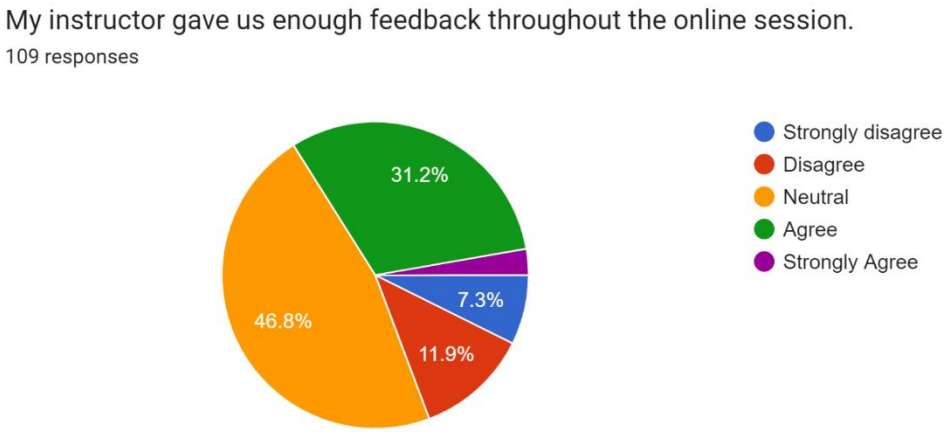
Note. Strongly Disagree= 7.3%, Disagree= 12.8%, Neutral= 30.3%, Agree= 36.7%, Strongly Agree= 12.8%

The chart for the data on whether being online gives students the opportunity for saying what they want freely shows 36.7% in agreement, 12.8% strongly in agreement, 30.3% remaining neutral, 12.8% who disagree, and 7.3% strongly disagreeing. This clearly shows that while a lot of students feel they have the freedom to express themselves over the internet, a fair number either remain neutral or disagree.

3.2.4 Section 04: Students' Attitudes Towards Teaching Practices

Figure 3.4.1

Question N°1

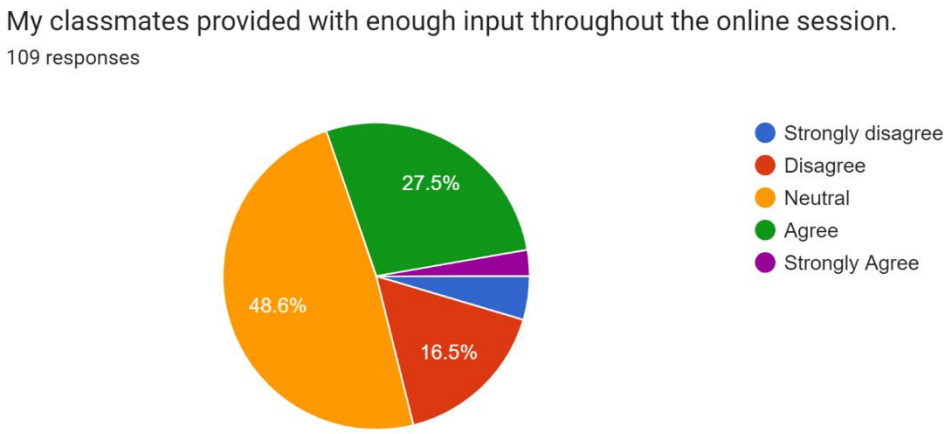


Note. Strongly Disagree= 7.3%, Disagree= 11.9%, Neutral= 46.8%, Agree= 31.2%, Strongly Agree= 31.2%

The data on whether students felt they received enough feedback from their instructor during the online session vary. 31.2% agree, while 7.3% strongly agree. That means that nearly 40% feel they have gotten enough feedback from the instructor during the session. However, 46.8% are neutral, 11.9% disagree, and 2.8% strongly feel otherwise. That also means out of the total respondents in this case, nearly two-thirds either feel that they did not get enough feedback or are non-committal on the issue.

Figure 3.4.2

Question N°2

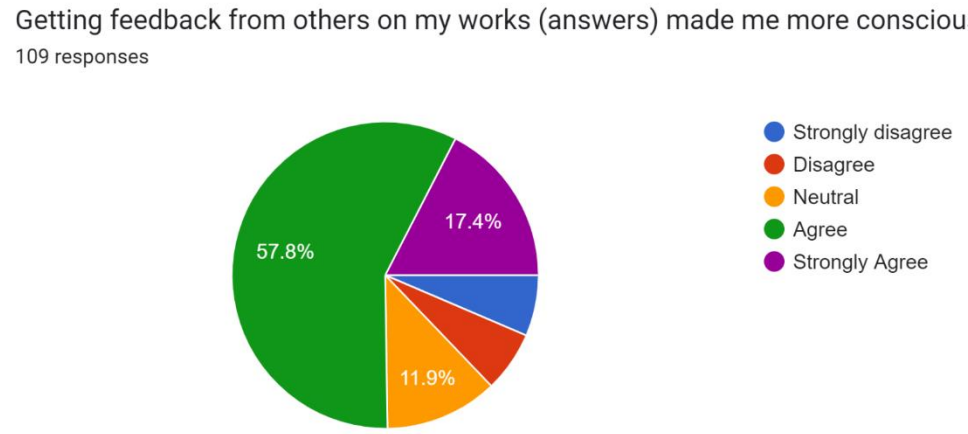


Note. Strongly Disagree= 7.3%, Disagree= 11.9%, Neutral= 46.8%, Agree= 31.2%, Strongly Agree= 31.2%

Data on being asked whether getting others' feedback on their works made the students more conscious of their errors indicate 57.8% of the answerers agree, 17.4% strongly agree, 11.9% are neutral, 7.3% disagree, and 5.5% strongly disagree. This distribution suggests a very significant majority feels that students getting others' feedback makes them more aware of their mistakes.

Figure 3.4.3

Question N°3

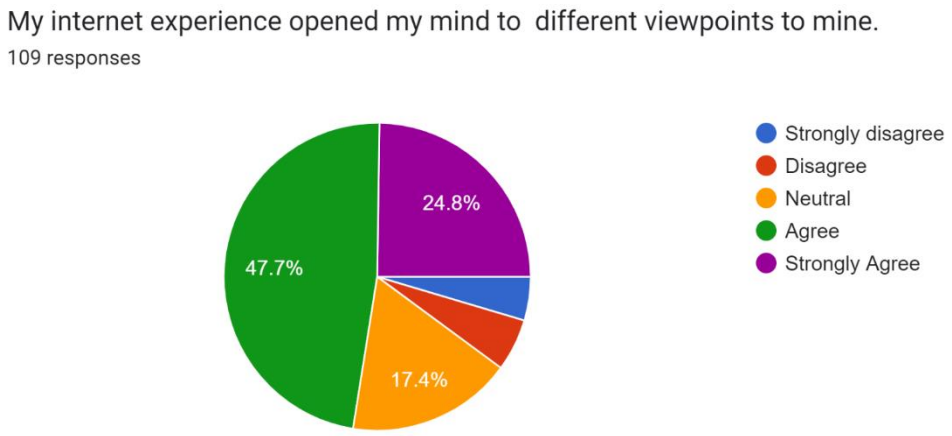


Note. Strongly Disagree= 6.4%, Disagree= 6.4%, Neutral= 11.9%, Agree= 57.8%, Strongly Agree= 57.8%

The data regarding whether students' internet experiences opened their minds to different viewpoints shows that 47.7% of the subjects agree, 24.8% strongly agree, 17.4% are neutral, 6.4% disagree, and 6.4% strongly disagree. This distribution suggests that a very significant majority felt their experiences over the internet broadened perspectives.

Figure 3.4.4

Question N°4

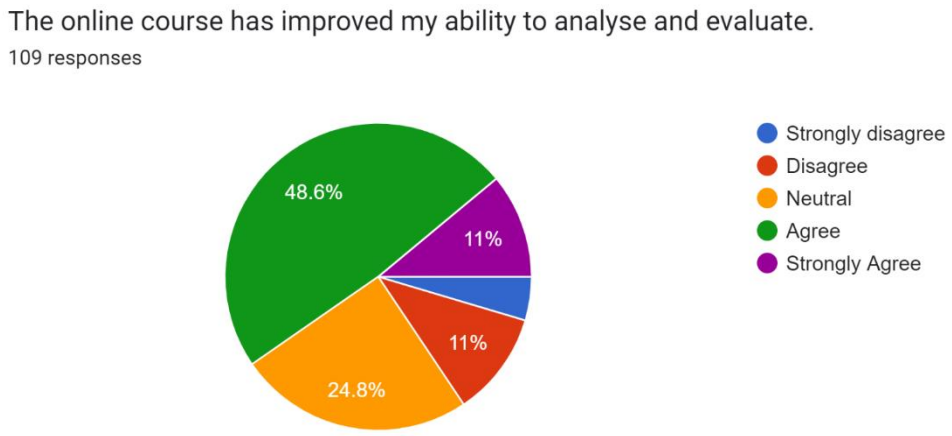


Note. Strongly Disagree= 4.6%, Disagree= 5.5%, Neutral= 17.4%, Agree= 47.7%, Strongly Agree= 24.8%

The data on whether students' Internet experiences opened their minds to different viewpoints show 47.7% agree, 24.8% strongly agree, 17.4% are neutral, 5.5% disagree, and 4.6% strongly disagree. This shows that a huge majority of the students feel that their experiences on the Internet have broadened their perspectives.

Figure 3.4.5

Question N°5

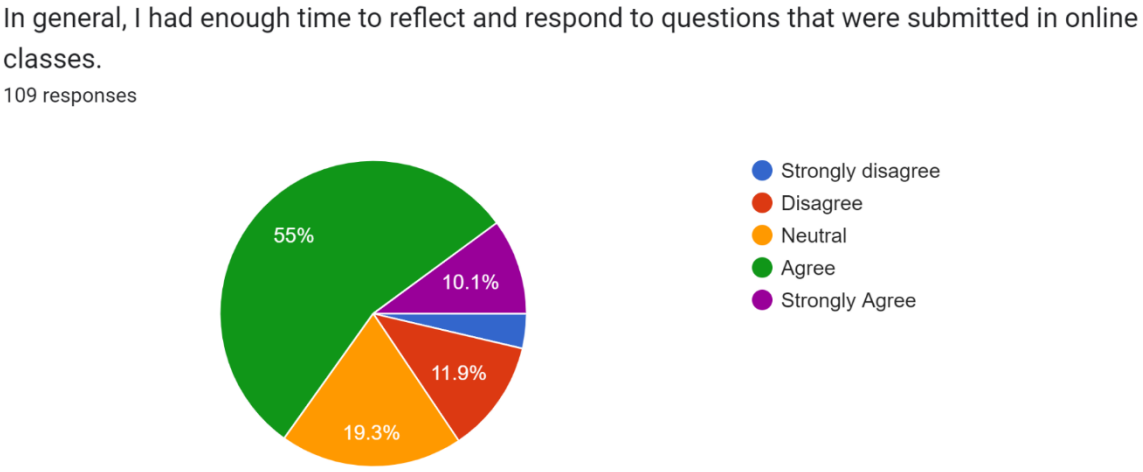


Note. Strongly Disagree= 4.6%, Disagree= 11%, Neutral= 24.8%, Agree= 48.6%, Strongly Agree= 11%

The data concerning the online course having improved students' abilities to analyse and evaluate show 48.6% in agreement, 11% strongly in agreement, 24.8% neutral, 11% in disagreement, and 4.6% strongly in disagreement. This means that whereas the majority of the students feel the online course has helped in improving their analytical and evaluative skills, there is still a big proportion of students who are either neutral or disagree with this statement.

Figure 3.4.6

Question N°6

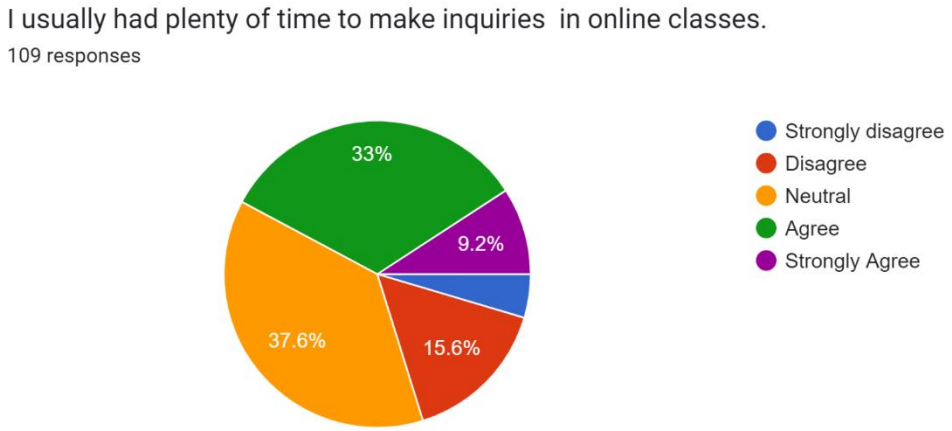


Note. Strongly Disagree= 3.7%, Disagree= 11.9%, Neutral= 19.3%, Agree= 55%, Strongly Agree= 10.1%

The data on whether students had enough time to reflect and respond to questions submitted in online classes reveals that 55% of respondents agree, 10.1% strongly agree, 19.3% are neutral, 11.9% disagree, and 3.7% strongly disagree. This suggests that a majority of students feel they had adequate time to reflect and respond, although a notable portion remains neutral or disagrees.

Figure 3.4.7

Question N°7

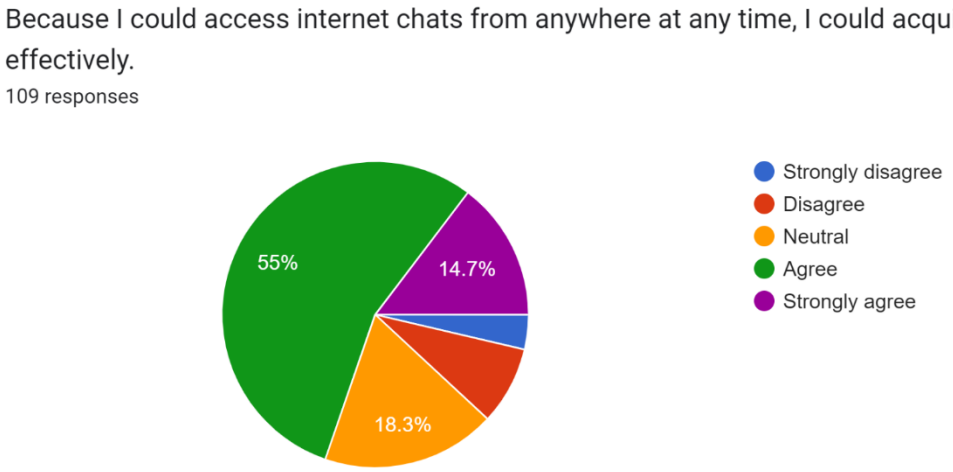


Note. Strongly Disagree= 4.6%, Disagree= 15.6%, Neutral= 37.6%, Agree= 33%, Strongly Agree= 9.2%

The data on the issue of whether students generally had enough time to ask questions in online classes is shown: 33% agreed, 9.2% strongly agreed, 37.6% were neutral, 15.6% disagreed, and 4.6% strongly disagreed. This was a distribution that, even while showing that a fair number of students felt they had adequate time for asking questions, there remained a sizeable section either neutral or in discord.

Figure 3.4.8

Question N°8

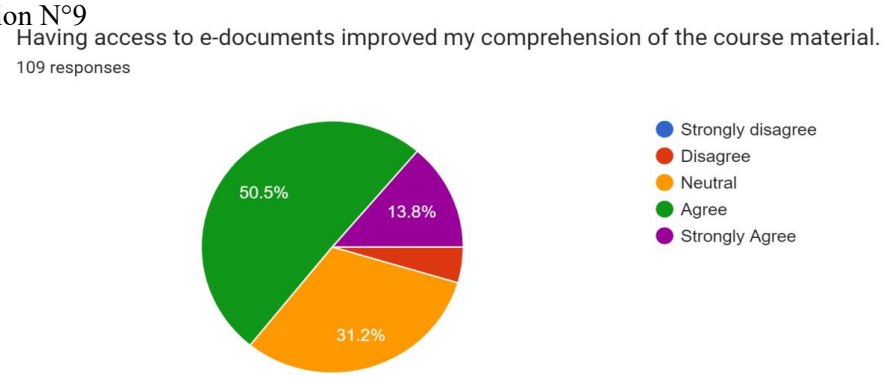


Note. Strongly Disagree= 3.7%, Disagree= 8.3%, Neutral= 18.3%, Agree= 55%, Strongly Agree= 14.7%

The data on whether the ability to access internet chats from anywhere at any time helped students acquire things more effectively shows that 55% agree, 14.7% strongly agree, 18.3% are neutral, 7.3% disagree, and 4.6% strongly disagree. That is, a huge majority of students are of the view that flexibility in internet chatting has positively affected their capacity to learn things more effectively.

Figure 3.4.9

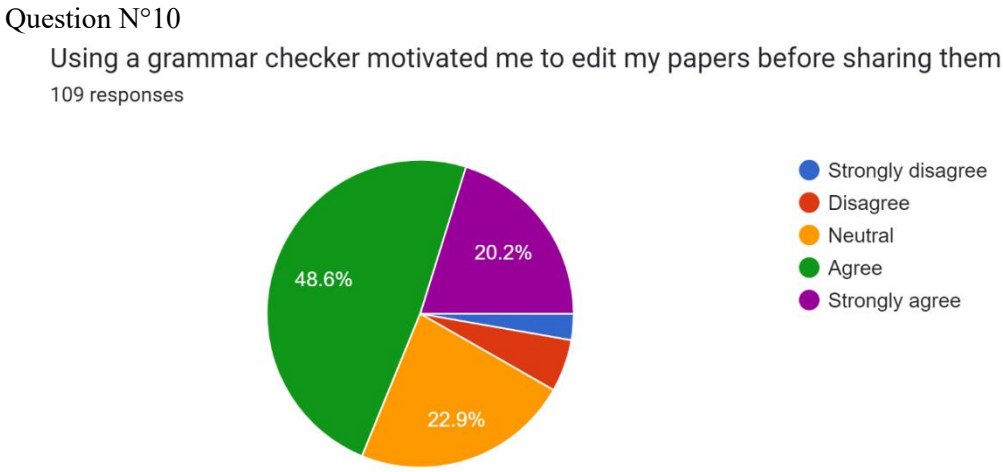
Question N°9



Note. Strongly Disagree= 0%, Disagree= 4.6%, Neutral= 31.2%, Agree= 50.5%, Strongly Agree= 13.8%

The data on whether availability of the e-documents improved the understanding of course material indicate 50.5% agree, 31.2% strongly agree, 13.8% are neutral, and 4.6% disagree, while none of them strongly disagree. This proves that a far greater proportion of the students felt access to the e-documents had improved their understanding of the course material.

Figure 3.4.10



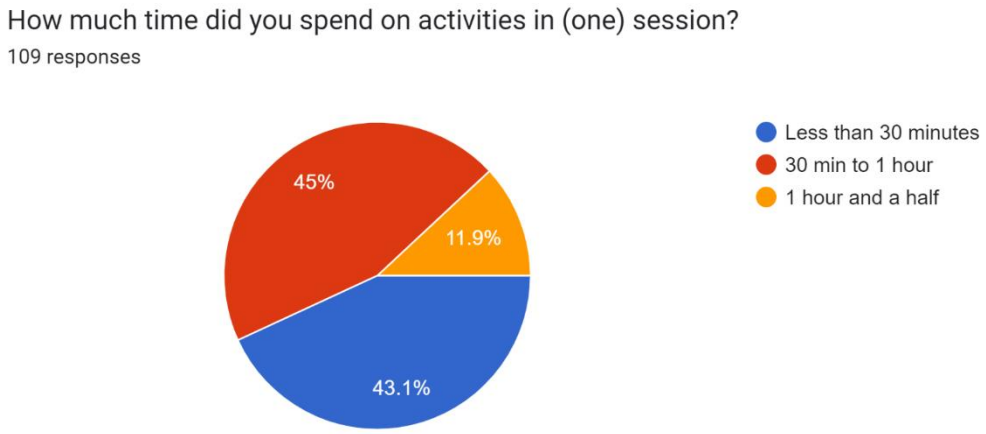
Note. Strongly Disagree= 2.8%, Disagree= 5.5%, Neutral= 22.9%, Agree= 48.6%, Strongly Agree= 20.2%

The results of the data on using the grammar checker as a motivation to help students edit their papers before sharing them are presented below: 48.6 percent agreed, 20.2 percent strongly agreed, 22.9 percent were neutral, 5.5 percent disagreed, and 2.8 percent strongly disagreed. This means that a huge proportion of students feel that the use of a grammar checker has motivated them to review and improve their work.

3.2.5 Section 05: Classroom Experience and Feedback Assessment

Figure 3.5.1

Question N°1

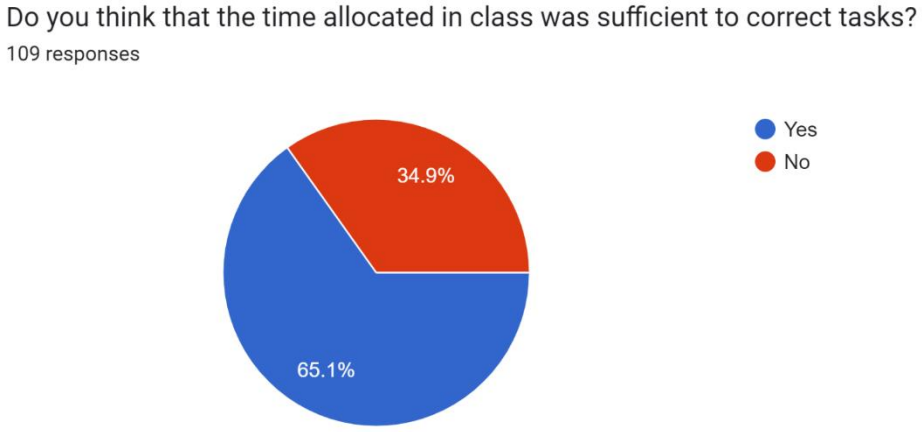


Note. Less than 30 minutes= 43.1%, 30 min to 1 hour= 45%, 1 hour and a half= 11.9%

The data on the duration students spent in an activity in one session show that 45% of respondents spend 30 minutes to 1 hour, while 43.1% said less than half an hour, and 11.9% reported 1 hour and a half. In the above distribution, most of the students spent up to an hour doing various activities in a single session.

Figure 3.5.2

Question N°2

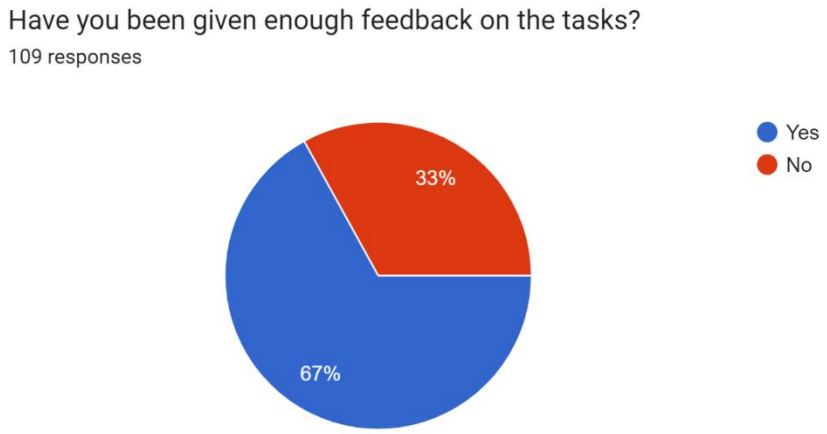


Note. Yes= 65.1%, No= 34.9%

The data on whether the time allocated to tasks in the classroom was enough to correct them show that 65.1% of the respondents believe it is sufficient, while 34.9% do not believe so. This distribution suggests that while a majority of the students feel that the allocated time was adequate, a near-majority still feels that more time was needed.

Figure 3.5.3

Question N°3

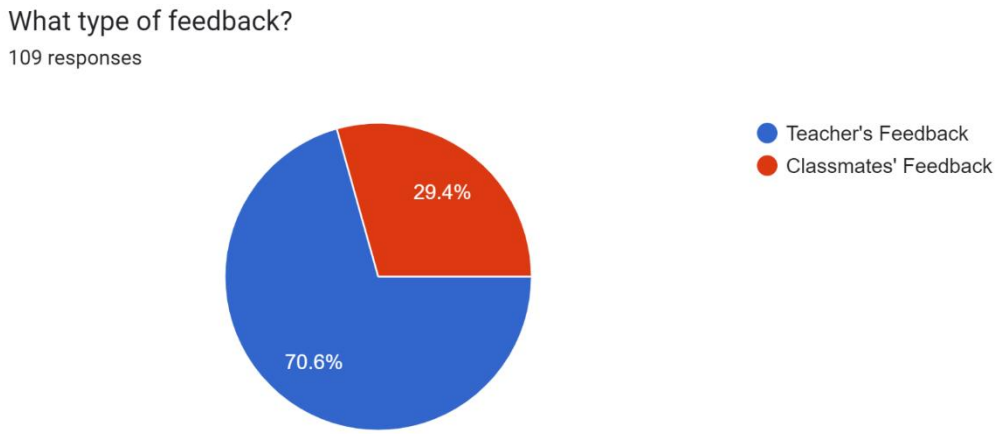


Note. Yes= 67%, No= 33%

The data distribution of whether students are given enough feedback on tasks shows that 67% of respondents feel they were given enough feedback, while 33% do not. This certainly proves that while the majority of the students are satisfied with the feedback given to them, a huge proportion of them do feel otherwise.

Figure 3.5.4

Question N°4

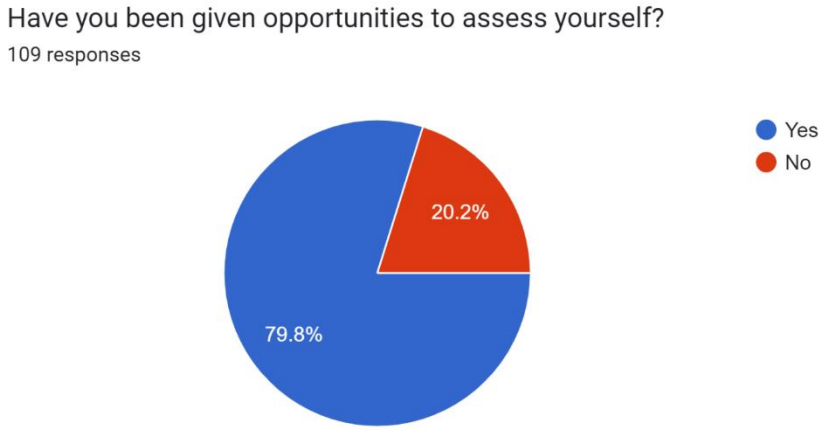


Note. Teacher's feedback= 70.6%, Classmates' feedback= 29.4%

According to the data on the type of feedback preferred, 70.6% of respondents prefer teacher feedback, while 29.4% prefer classmates' feedback. The result shows, therefore, a strong preference for instructors' feedback over peer feedback.

Figure 3.5.5

Question N°5



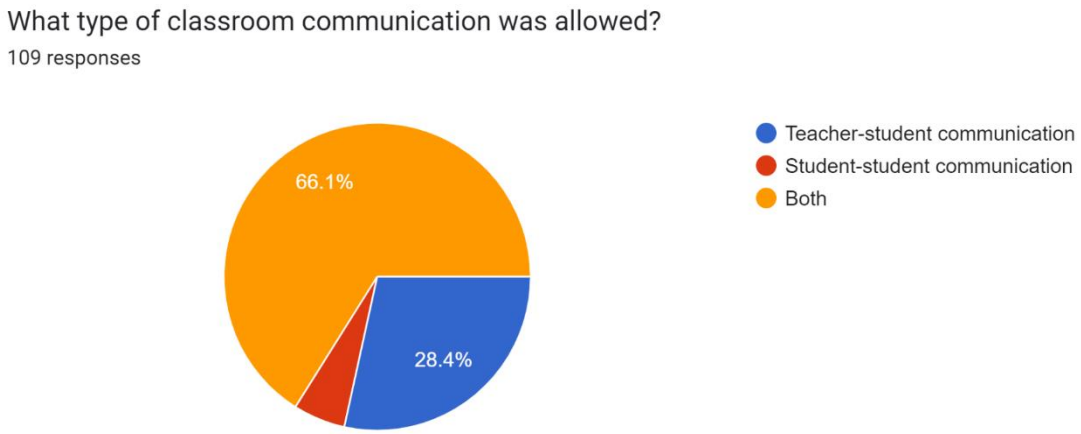
Note. Yes= 79.8%, No= 20.2%

The data on whether students have been given opportunities to assess themselves show

79.8% of the respondents to have had opportunities to do so, while 20.2% had not. This shows a strong majority of students having engaged in self-assessment. This is an important part of reflective learning.

Figure 3.5.6

Question N°6

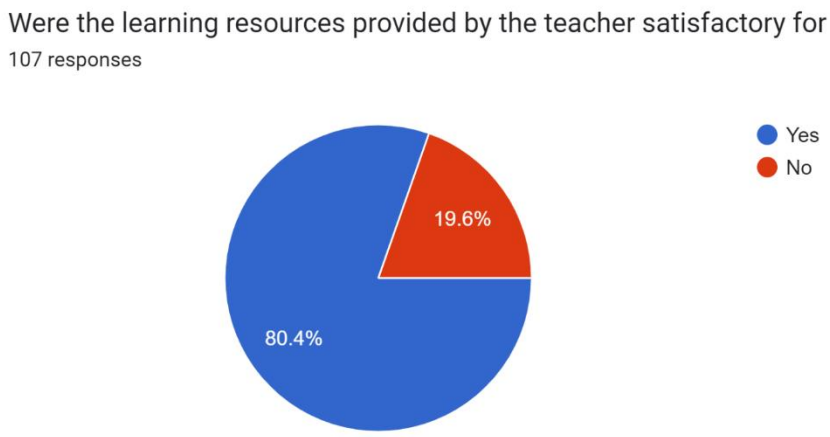


Note. Teacher-student communication= 66.1%, Student-student communication= 28.4%. Both= 5.5%

The distribution of data on the type of classroom communication allowed indicated that 66.1% of the respondents indicated both teacher-student and student-student, 28.4% only teacher-student, and 5.5% only student-student. This would therefore imply that most classrooms provide a comprehensive communication environment that encompasses both teacher-student and peer interactions.

Figure 3.5.7

Question N°7

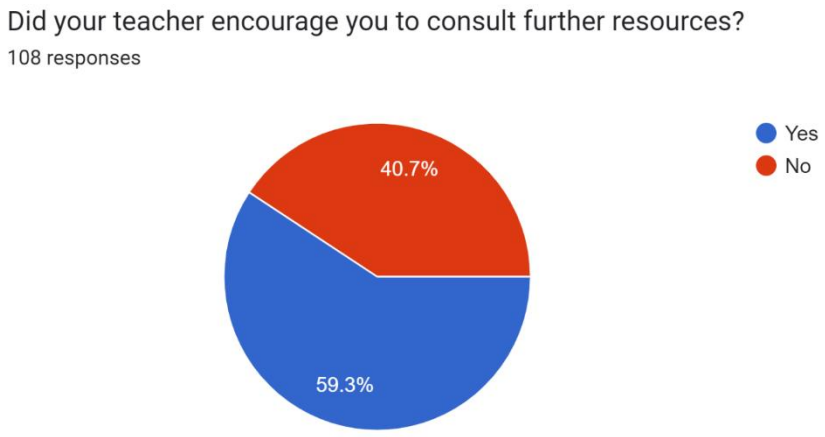


Note. Yes= 80.4%, No= 19.6%

It shows that responses to the satisfaction with the learning resources provided by the teacher are distributed such that 80.4% find the resources to be satisfactory, and 19.6% do not. This would mean that though the high majority were satisfied with the learning resources provided, nearly one-fifth of them feel the resources could still be better.

Figure 3.5.8

Question N°8

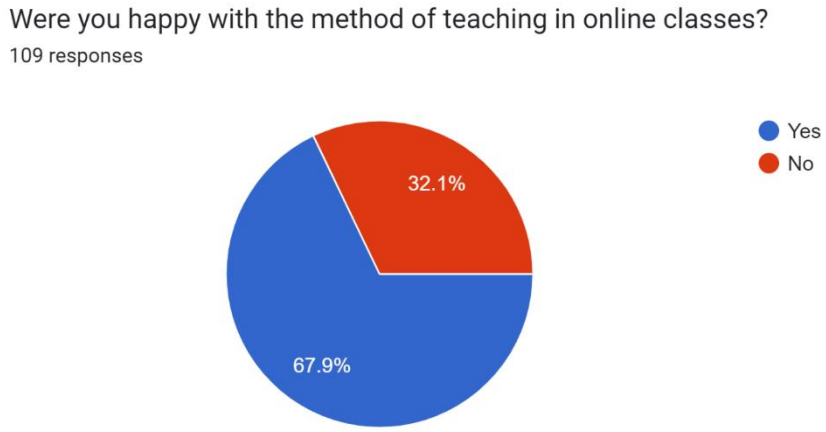


Note. Yes= 59.3%, No= 40.7%

The data regarding whether teachers encouraged students to consult further resources is: 59.3% of the respondents received encouragement, while 40.7% did not. That means most were encouraged to look up other resources, and a minority was not. The majority was encouraged to look up other resources like books, platforms, or social networks.

Figure 3.5.9

Question N°9



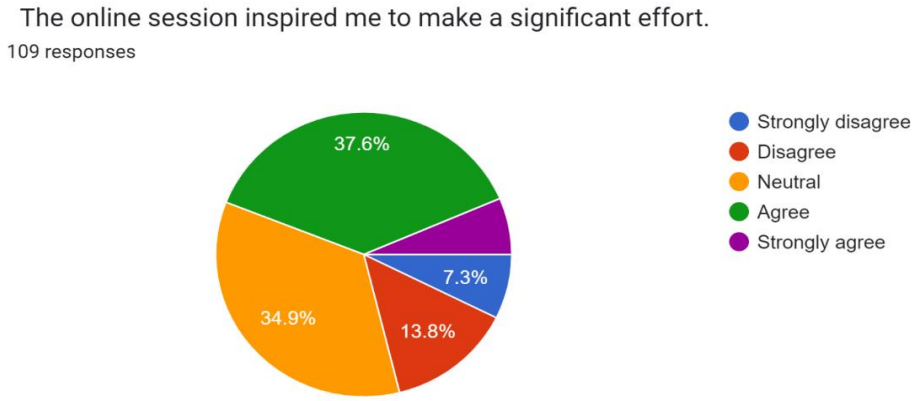
Note. Yes= 67.9%, No= 32.1%

Results on satisfaction regarding methods of teaching in online classes indicate that 67.9% of respondents were satisfied, and 32.1% were not. It shows that while a majority of the students are content with the methods used to teach in online classes, there is still a near one-third that is dissatisfied.

3.2.6 Section 06: Assessing CMC in Learning

Figure 3.6.1

Question N°1

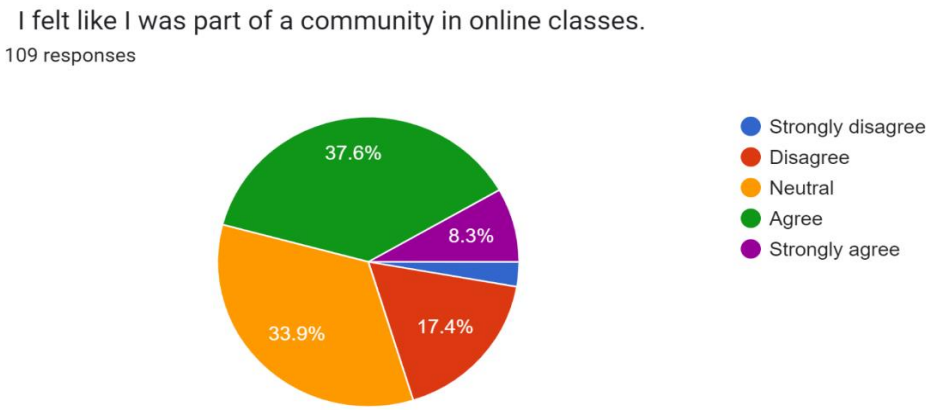


Note. Strongly Disagree= 7.3%, Disagree= 13.8%, Neutral= 34.9%, Agree= 37.6%, Strongly Agree= 6.4%

Data on whether the online session inspired students to make an effort of a significant magnitude show that 37.6% agree, 13.8% strongly agree, 34.9% remain neutral, 7.3% disagree, and 6.4% strongly disagree. This demonstrates that while the number of students who were inspired to make a significant effort is appreciable, the number of students who remained neutral or didn't feel motivated is still quite large.

Figure 3.6.2

Question N°2

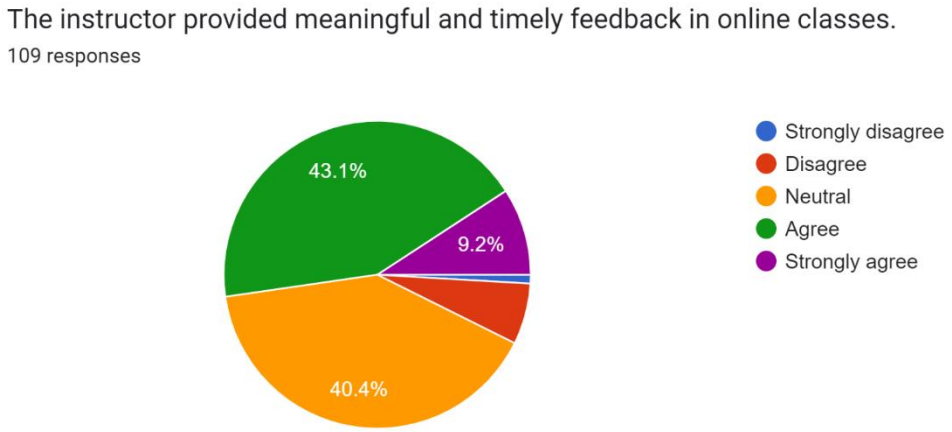


Note. Strongly Disagree= 2.8%, Disagree= 17.4%, Neutral= 33.9%, Agree= 37.6%, Strongly Agree= 8.3%

The data obtained from the question as to whether the students felt part of a community in online classes show 37.6% agreeing, 8.3% strongly agreeing, 33.9% are neutral, 17.4% disagree, and 2.8% strongly disagree. This means that although a large minority of students may have felt a sense of community, an almost equal number did not.

Figure 3.6.3

Question N°3

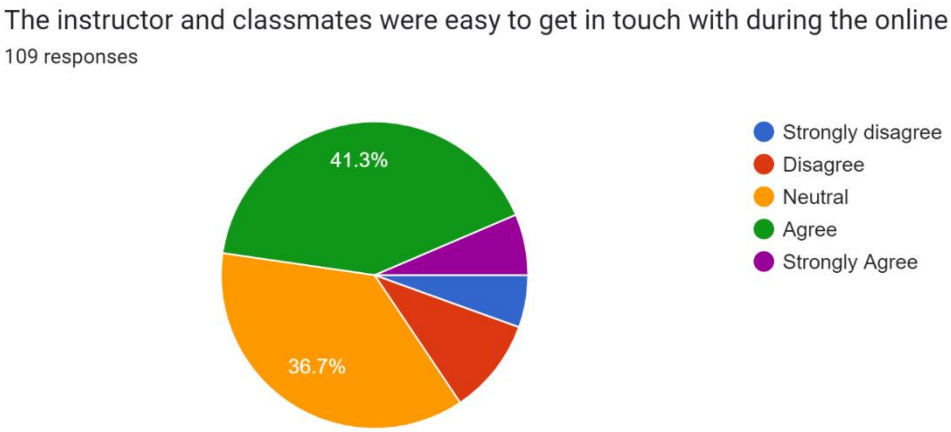


Note. Strongly Disagree= 0.9%, Disagree= 6.4%, Neutral= 40.4%, Agree= 43.1%, Strongly Agree= 9.2%

The distribution of the responses concerning whether the instructor provided meaningful and timely feedback in online classes is: 43.1% agree, 9.2% strongly agree, 40.4% neutral, 6.4% disagree, and 0.9% strongly disagree. This means that while a fair number of students did find that the feedback was meaningful and timely, there were also quite a number who either were neutral or disagreed.

Figure 3.6.4

Question N°4

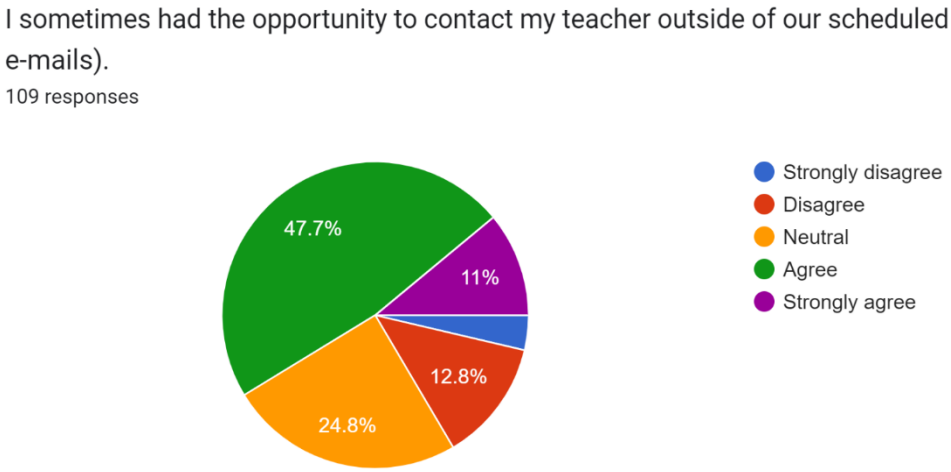


Note. Strongly Disagree= 5.5%, Disagree= 10.1%, Neutral= 36.7%, Agree= 41.3%, Strongly Agree= 6.4%

The data on whether the facilitator and classmates were easy to get in touch with during the online session indicates that 41.3% of those responding agreed, whereas 8.3% strongly agreed, 36.7% were neutral, 10.1% disagreed, and 3.7% strongly disagreed. This means that while the huge proportion of students who found it easy to communicate with the facilitator and classmates was valid, there was still a good number who found it either neutral or hard to do so.

Figure 3.6.5

Question N°5

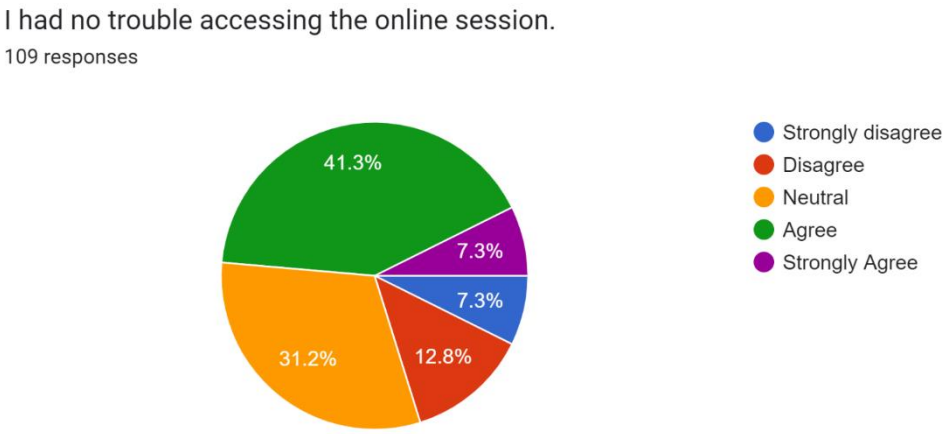


Note. Strongly Disagree= 3.7%, Disagree= 12.8%, Neutral= 24.8%, Agree= 47.7%, Strongly Agree= 11%

The data regarding the opportunity for students to contact their teacher outside of scheduled meetings show 47.7% of respondents agree, 11% strongly agree, 24.8% are neutral, 12.8% disagree, and 3.7% strongly disagree. This goes on to prove that while a large proportion of the students felt they had a chance to contact their teacher, there is also a considerable number that responded either neutrally or in disagreement.

Figure 3.6.6

Question N°6

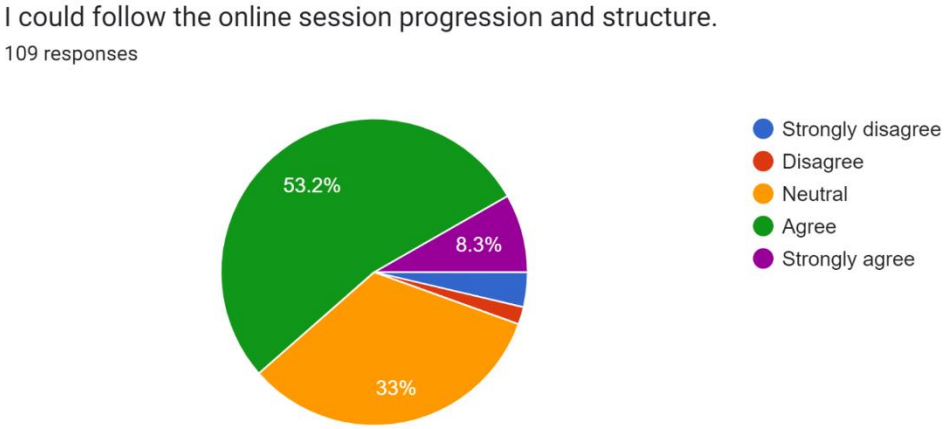


Note. Strongly Disagree= 7.3%, Disagree= 12.8%, Neutral= 31.2%, Agree= 41.3%, Strongly Agree= 7.3%

The chart on whether students had problems accessing the online session indicates that 41.3% of the respondents agreed, 7.3% strongly agreed, 31.2% were neutral, 12.8% disagreed, and 7.3% strongly disagreed. This goes to show that while an appreciable number of students did not have problems accessing the online sessions, there is still a reasonable number who were either neutral or met with trouble.

Figure 3.6.7

Question N°7

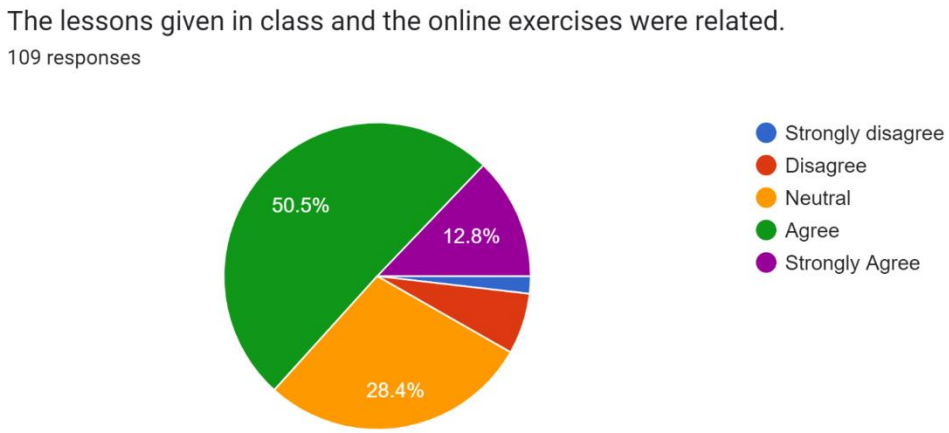


Note. Strongly Disagree= 3.7%, Disagree= 1.8%, Neutral= 33%, Agree= 53.2%, Strongly Agree= 8.3%

The data on whether students could follow the online session progression and structure show 53.2% of the respondents agreeing, 8.3% strongly agreeing, 33% remaining neutral, 3.7% disagreeing, and 1.8% strongly disagreeing. This goes on to prove that even though a significant proportion of the students found the structure of the sessions clear and easy to follow, some fair numbers were either neutral or found it difficult.

Figure 3.6.8

Question N°8

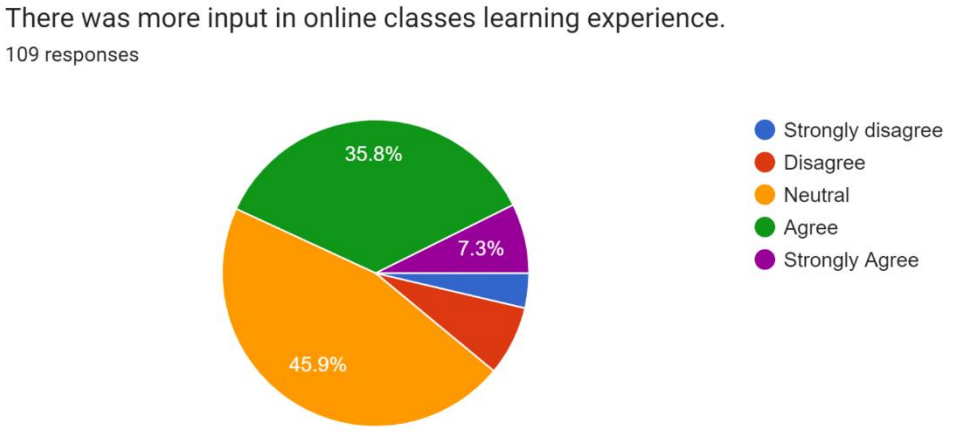


Note. Strongly Disagree= 1.8%, Disagree= 6.4%, Neutral= 28.4%, Agree= 50.5%, Strongly Agree= 12.8%

The data regarding whether the lessons given in class and online exercises are related show that 50.5% of the respondents agree, while 12.8% strongly agree; 28.4% are neutral; 6.4% disagree; and lastly, 1.8% strongly disagree. This means that although there is a majority of students who found the relation between lessons and online exercises, there is still a substantial number of those who were either neutral or found a disconnection.

Figure 3.6.9

Question N°9

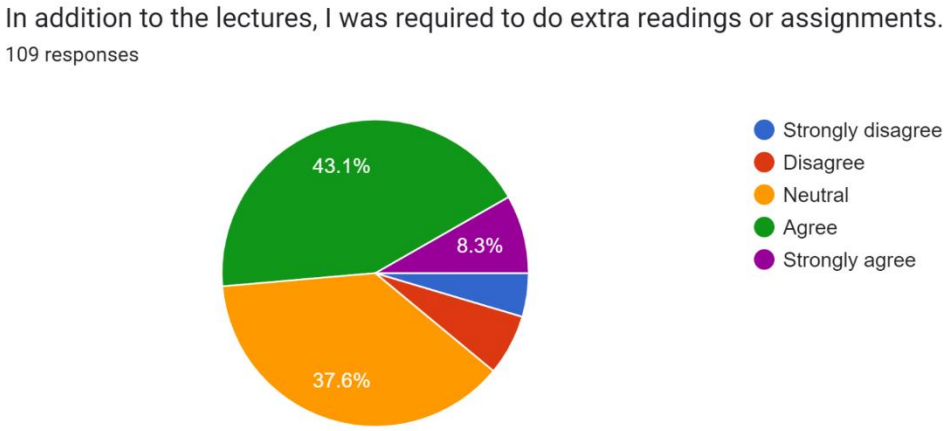


Note. Strongly Disagree= 3.7%, Disagree= 7.3%, Neutral= 45.9%, Agree= 35.8%, Strongly Agree= 7.3%

The data on whether there was more input in online classes learning experience show that 45.9 percent of the response is neutral, 35.8 percent agree, 7.3 percent strongly agree, 8.3 percent disagree, and 2.8 percent strongly disagree. This illustrates that while almost half of the students were neutral, a significant proportion still found the online classes to have more input, and a minority who actually disagreed.

Figure 3.6.10

Question N°10

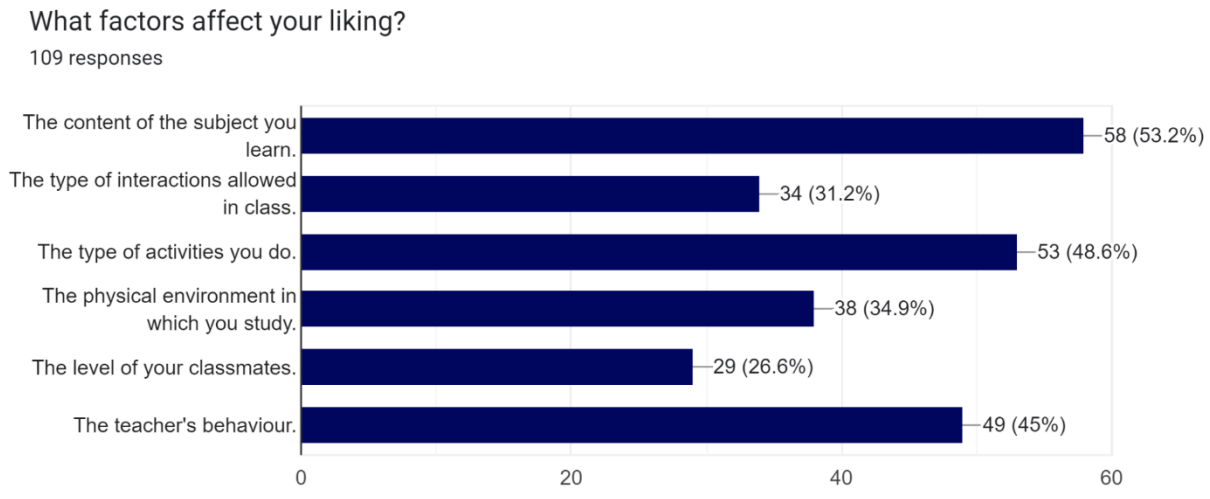


Note. Strongly Disagree= 4.6%, Disagree= 6.4%, Neutral= 37.6%, Agree= 43.1%, Strongly Agree= 8.3%

The results on being required to do extra readings or assignments in addition to the lectures show 43.1% agree, 8.3% strongly agree, 37.6% are neutral, 7.3% disagree, and 3.7% strongly disagree. This goes to prove that whereas there was a high percentage of students who did find extra readings and assignments required, the number of those who either remained neutral or strongly disagreed was quite high.

Figure 3.6.11

Question N°11

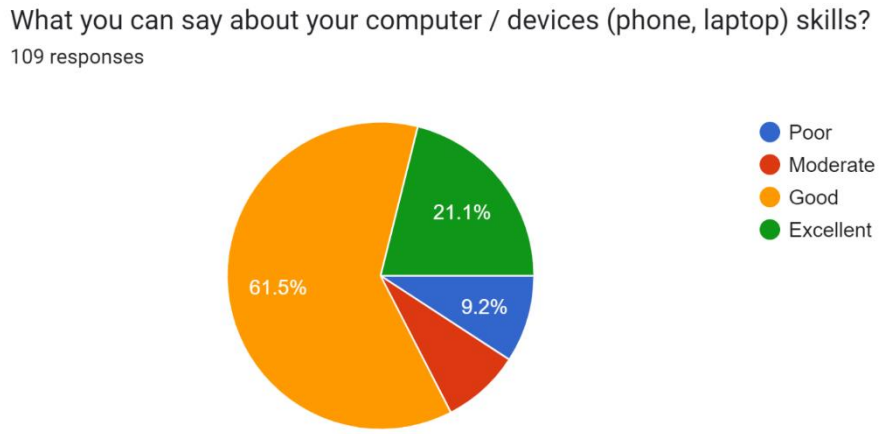


The responses to factors that affect students' liking in an online class range from content of the subject, most important to 53.2% of the respondents, to the type of activities the students do, affecting 48.6% of the students. Next is teacher behaviour, affecting 45% of the students, and then the physical environment with 34.9%. The type of interactions allowed in class impacts 31.2%, and the level of classmates is a factor for 26.6%.

3.2.7. Section 07: Students' Readiness for the Use of CMC in the Learning Experience

Figure 3.7.1

Question N°1

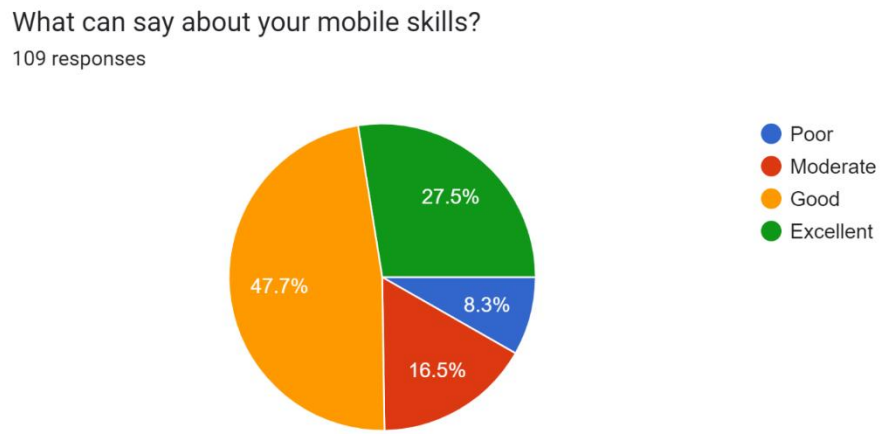


Note. Poor= 9.2%, Moderate= 8.3%, Good= 61.5%, Excellent= 21.1%

On the other hand, Fig. 13.3 reports the data about the students' self-assessed level of computer and device skills: the level is assessed as good by 61.5% of the respondents and as excellent by 21.1% of them. As many as 8.3% of the students feel their skills are currently at a moderate level, while 9.2% state that they are poor. It thus could be seen that the majority of students feel rather confident about working with digital devices, which also constitutes an essential component of dealing with CMC and reflecting it onto the learning experience.

Figure 3.7.2

Question N°2

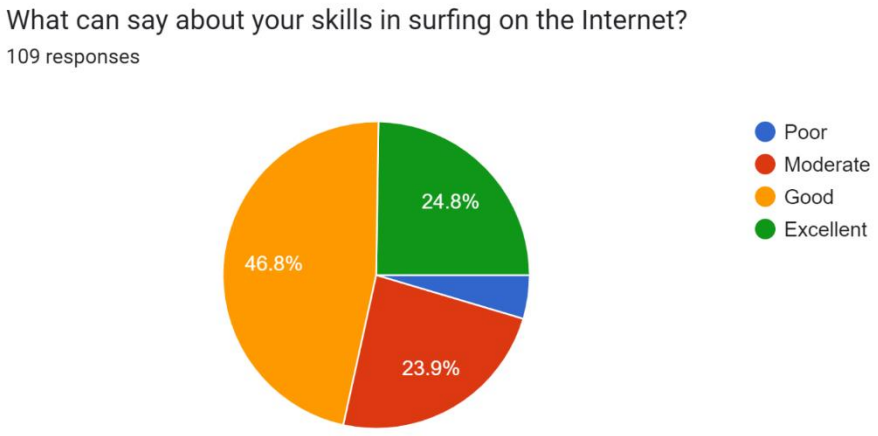


Note. Poor= 8.3%, Moderate= 16.5%, Good= 47.7%, Excellent= 27.5%

The distribution of data on students' self-assessed mobile skills by means of the most data shown is satisfaction - 47.7%, excellent - 27.5%, moderate - 16.5%, and bad - 8.3%. That is, generally, students have a high level of confidence in their skills to compulsorily sustain mobile-mediated learning activities.

Figure 3.7.3

Question N°3

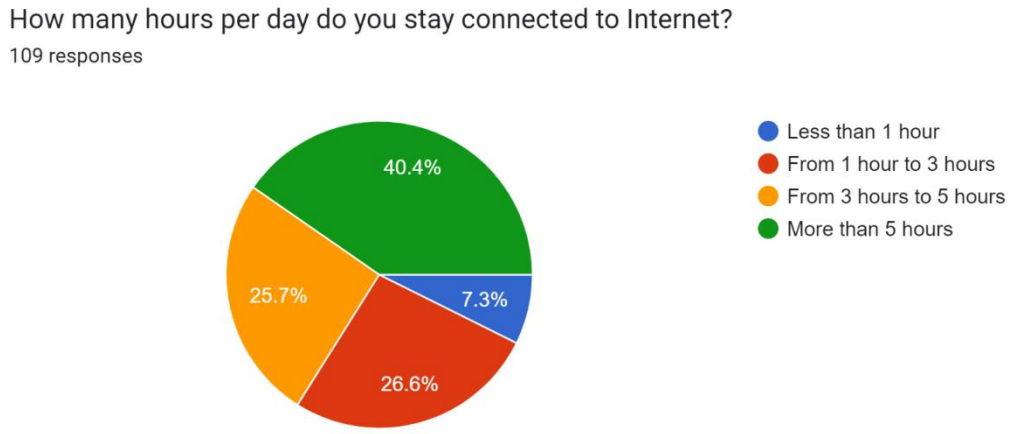


Note. Poor= 4.6%, Moderate= 23.9%, Good= 46.8%, Excellent= 24.8%

In support of these claims is data from self-reported student assessments of their ability to surf the Internet. Accordingly, 46.8% rate their ability as good, 24.8% as excellent, 23.9% as moderate, and 4.6% as poor. This speaks to a relatively high degree of confidence students have in the use of the internet in navigating the internet, hence engaging with online learning resources and activities.

Figure 3.7.4

Question N°4

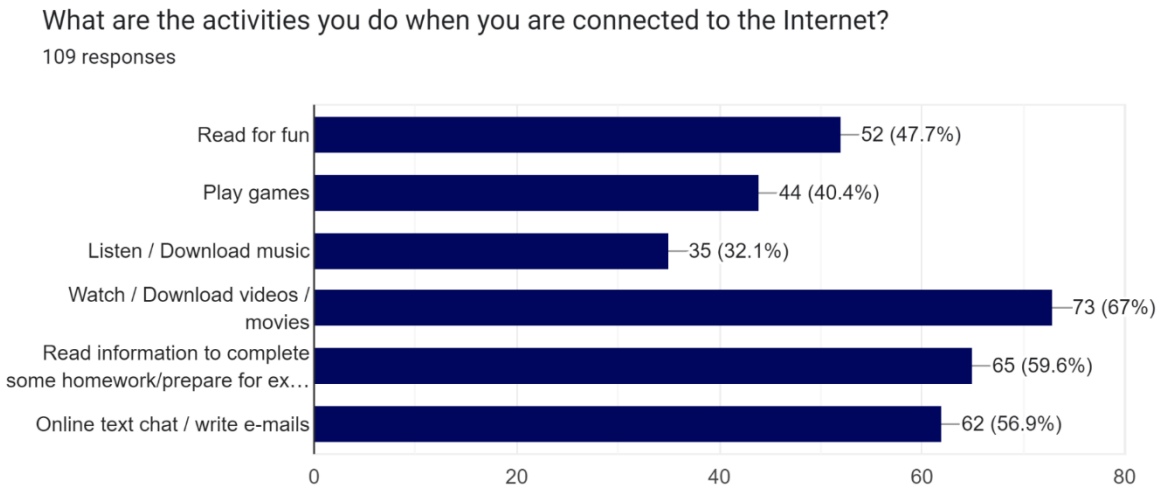


Note. Less than 1 hour= 7.3%, From 1 hour to 3 hours= 26.6%, From 3 hours to 5 hours= 25.7%, More than 5 hours= 40.4%

The students' exposure to the Internet in a day indicates that 40.4% stay for over 5 hours, 26.6% for 1-3 hours, 25.7% for 3-5 hours, with 7.3% under 1 hour. This means that a good percentage of the students take a keen interest and, therefore, are active on the Internet daily.

Figure 3.7.5

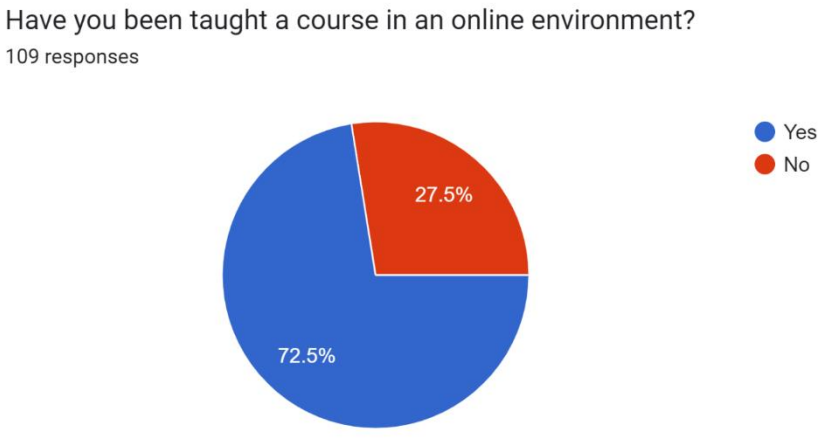
Question N°5



The statistics concerning students' online activities prove to be a rather heterogeneous set of online activities. More specifically, 67% of students watch or download videos/movies, 59.6% read for information to do homework or prepare for exams, 56.9% do online text chat or write e-mails, 47.7% read for fun, 40.4% play games, and 32.1% listen to or download music. This shows that although entertainment and socializing are dominant uses of the Internet, academic-type uses of the Internet are very relevant to students as well.

Figure 3.7.6

Question N°6

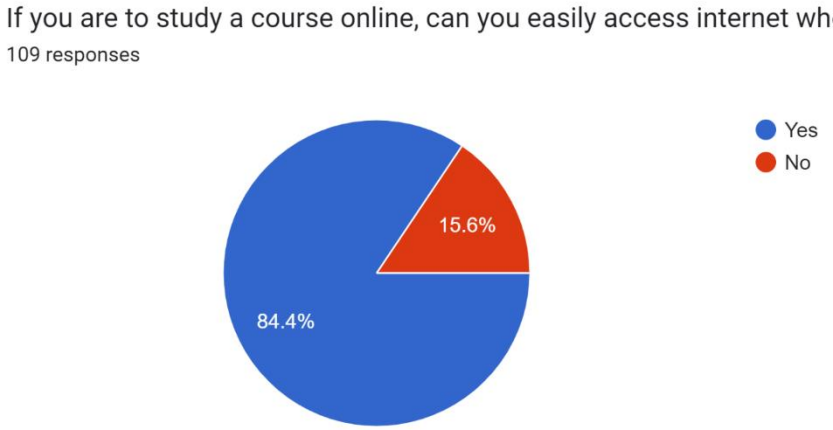


Note. "yes" = 72.5%, "no" =27.5%

It could be seen from the table that participants, 72.5%, have been taught a course in an online setting, while 27.5% of them have not. Mostly, this means that the students have obtained the experience of online learning in the first person, which might incline their readiness with respect to greater adaptability toward further online educational opportunities.

Figure 3.7.7

Question N°7

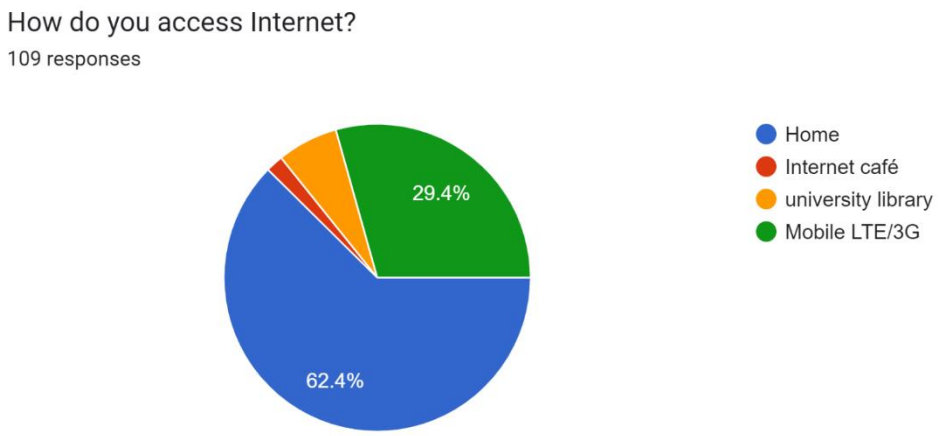


Note. "yes" = 84.4%, "no" =15.6%

For example, as shown, out of the total responding, 84.4% of the students found it easy to access the internet whenever the students needed to do their course online, whereas 15.6% had to undergo difficulties in the access process. Evidently, the percentage for accessing the internet among the students is very high, which is a very vital prerequisite for the success of online learning programs.

Figure 3.7.8

Question N°8



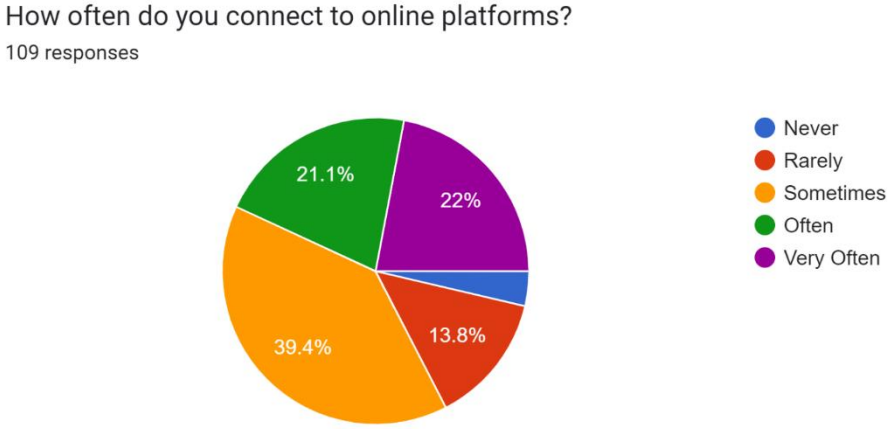
Note. Home= 62.4%, Internet café= 1.8%, University library= 6.4%, Mobile LTE/3G= 29.4%

From the statistics, 62.4% access the internet from home, 29.4% from LTE/3G on mobile, 6.4% from the university library, and 1.8% from internet cafés. This distribution, therefore, reflects a predominating reliance on home and mobile internet for online learning among students.

3.2.8. Section 08: Students' Readiness to Use Social Platforms as a Pedagogical Tool

Figure 3.8.1

Question N°1

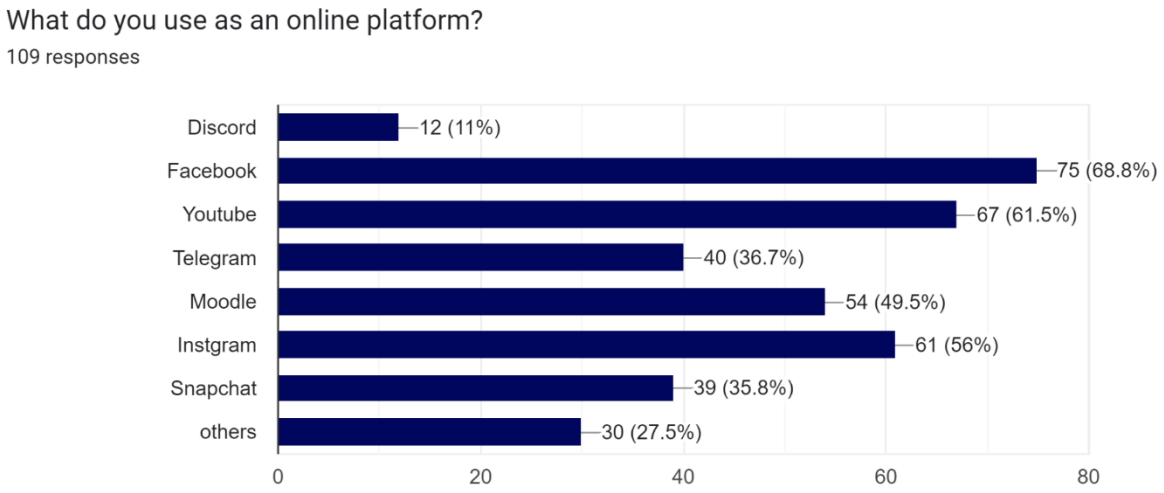


Note. Never= 3.7%, Rarely= 13.8%, Sometimes= 39.4%, Often= 21.1%, Very often= 22%

The data show different degrees of participation on the online platforms; 39.4 percent of the participants responded Very often to how many times they connect to the internet, therefore 21.1 percent replied with often, as for a variety of 22 percent answered with Sometimes, and the rest of 13.8 percent answered with rarely which leaves the 3.7 percent that answered with never, and this was to assess students' readiness to use social platforms as pedagogical tools.

Figure 3.8.2

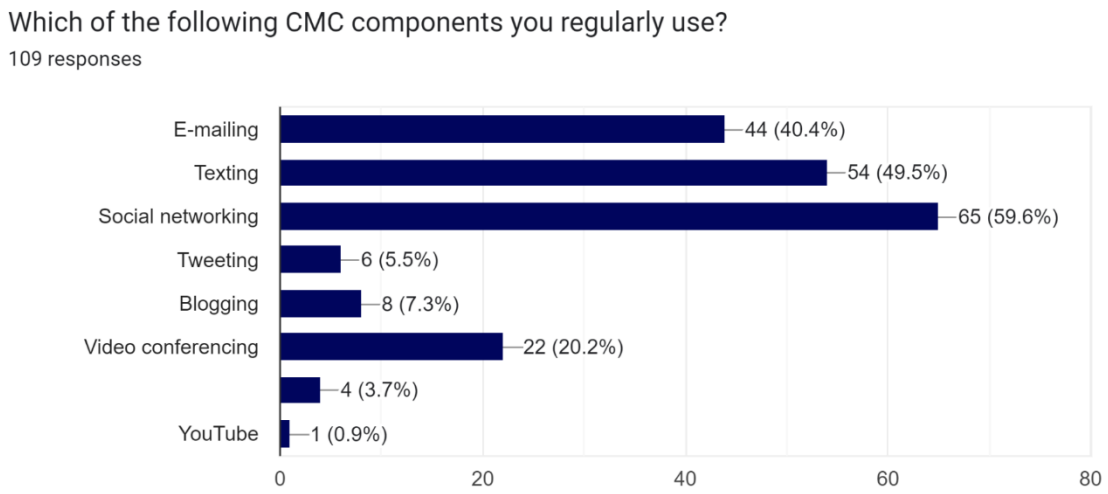
Question N°2



The results show that the great majority of students use multiple platforms. In particular, the main platforms are Facebook, YouTube, Instagram, and Moodle. Now, in terms of percentage usage, this comes out to: Discord 11%, Facebook 68.8%, YouTube 61.5%, Telegram 36.7%, Moodle 49.5%, Instagram 56%, Snapchat 35.8%, Others 27.5%.

Figure 3.8.3

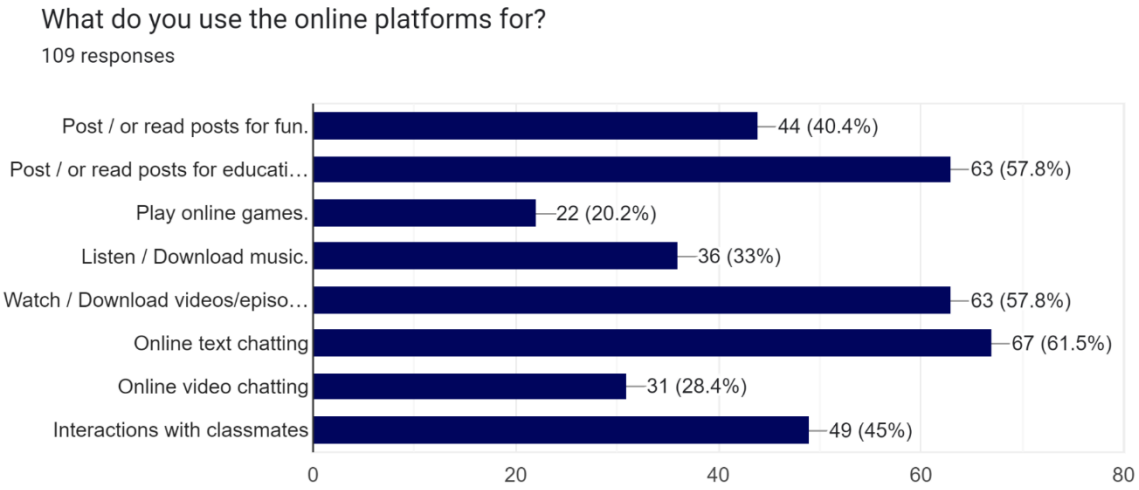
Question N°3



The bar chart labelled "Which of the following CMC components you regularly use?" reflects the following usage figures among the surveyed students: Social networking is the most utilized one by 65 respondents, 59.6 per cent, followed by 54 responders for texting, 49.5 per cent, and 44 responders for emailing, 40.4 per cent. The use of video conferencing tools was mentioned by 22 respondents, 20.2 per cent, blogging by 8, 7.3 per cent, and tweeting by 6, 5.5 per cent of the respondents respectively. The least used component is YouTube, where only 1 respondent answered that they used it regularly (0.9%). These figures underline the prominence of social networking, texting, and e-mailing in everyday communication activities.

Figure 3.8.4

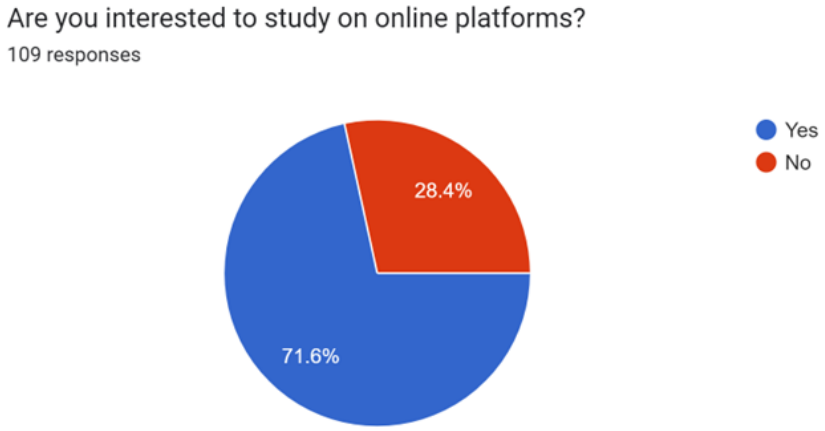
Question N°4



The bar chart "What do you use the online platforms for?" portrays the statistics of the usage among the surveyed respondents as follows: Online text chatting tops the list at 67, 61.5 percent, followed by watching/downloading videos/episodes and posting/reading posts for educational purposes with each being mentioned by 63, 57.8 percent. Next come interactions with classmates at 49, followed by posting/reading posts for fun at 44, both representing 45 percent and 40.4 percent, respectively. Downloading music or listening to it and online video chat are done respectively by 36 respondents (33%) and 31 respondents (28.4%). Very few play online games, the least of all, with 22 respondents to account for 20.2%. These figures correspond to a high level of text chatting and educational activities, and video consuming on online platforms.

Figure 3.8.5

Question N°5

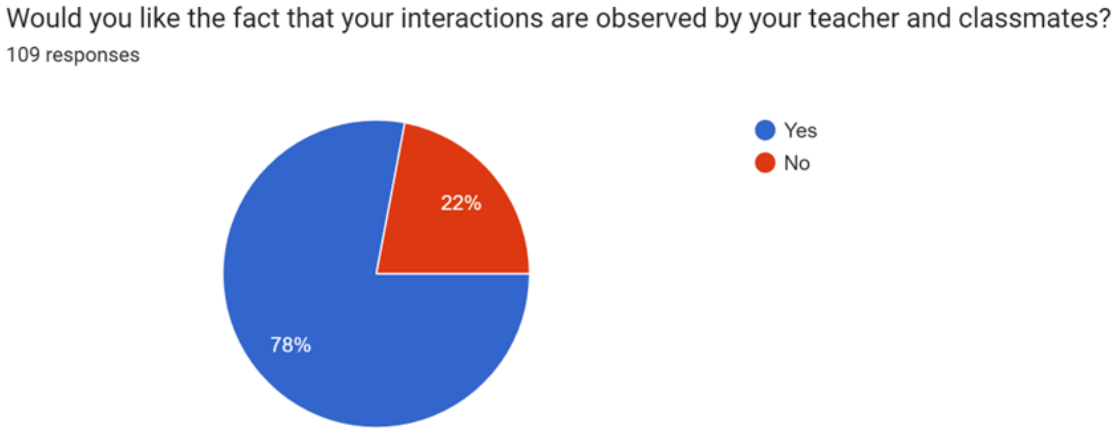


Note. "yes" = 71.6%, "no" =28.4%

The pie chart indicates that 71.6% are interested and 28.4% are not interested in studying on the online platform. Therefore, this shows or proves a high disposition towards online learning among the subjects under study.

Figure 3.8.6

Question N°6

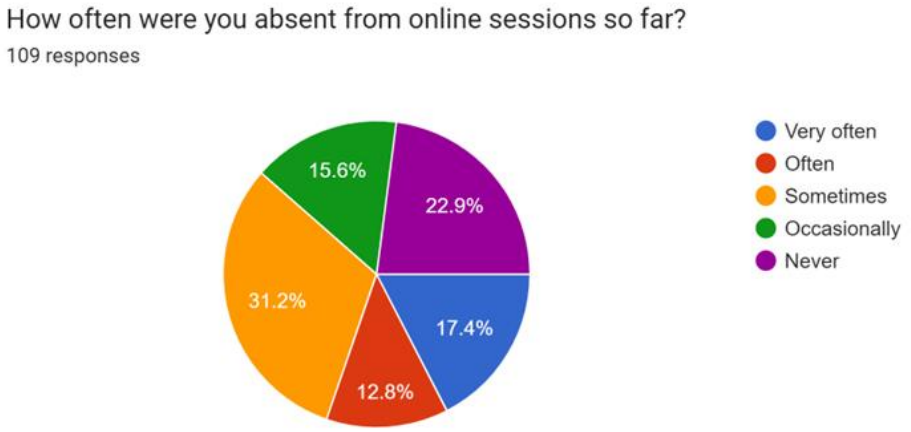


Note. "yes" = 78%, "no" =22%

This pie chart finds out that 78 percent of the respondents would be comfortable knowing that their interactions are being watched by teachers and classmates; whereas 22 percent, no. That explained that most of the people to take part in this course are open to transparency about their online interactions within an academic setting.

Figure 3.8.7

Question N°7

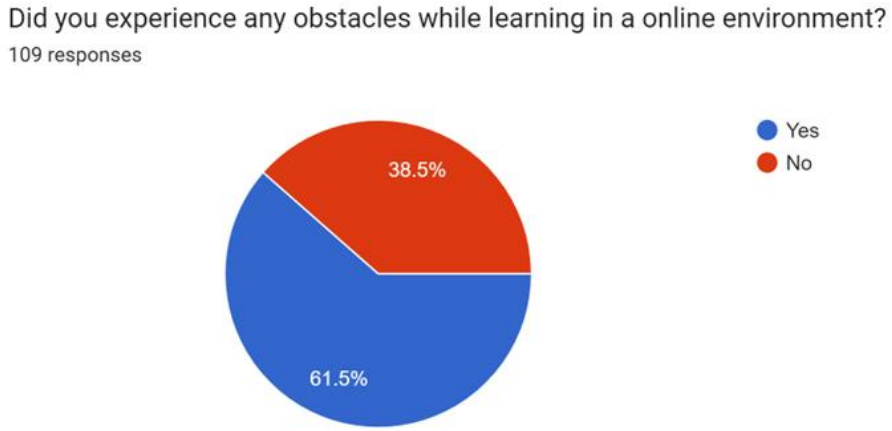


Note. Very often= 17.4%, Often=12.8%, Sometimes= 31.2%, Occasionally= 15.6%, Never= 22.9%

This was clarified by a frequency distribution as follows: never absent, 22.9 percent; occasionally absent, 15.6 percent; sometimes, 31.2 percent; often, 12.8 percent; and very often, 17.4 percent. This distribution does show that nearly as many respondents, 34.7%, report often or very often absences, while 38.5% of subjects reported occasional or no absence.

Figure 3.8.8

Question N°8



Note. "yes" = 78%, "no" =22%

This pie chart shows that 61.5% of the students answered in the affirmative and 38.5% did not have any obstacles to learning in an online environment. It means that most of the students have to face problems with the online learning environment, thus proving further that there is a dire need to bridge the gap for delivering the best online learning experience.

Question N°9

What are the *benefits* of communicating with your *teacher* / *classmates* via the Internet?

Most of the students pointed out numerous advantages of Internet communication with teachers and classmates. The most important advantages are the ease of communication, the ability to contact a person at any time, and the elimination of distance. Moreover, students find it convenient to send emails for justification, tasks, homework, and lessons, which is easier to do through email. Sharing ideas is also very much appreciated by students. One feels the flexibility, approachability, and effectiveness of online communication in the academic environment throughout these replies.

Question N°10

What are the *challenges* of communicating with your teacher / classmates via the Internet?

Other students mentioned different problems concerning communication with teachers and classmates through the Internet: there are a lot of distractions, and it is harder to manage time and be motivated. Some students said there were no significant problems, although sometimes there are cases when it is hard to explain clearly what one has in mind. Many students reported that voice and picture quality during online communication is very poor, and learning is much harder when mainly relying on internet communication. Other major challenges include the absence of non-verbal cues-facial expressions and body expressions. Others like communicating online and wish to do it more. Also, the internet connection is not stable at times, which creates a problem in communicating effectively.

Question N°11

What do you do to make communication with your teacher / classmates via the Internet *beneficial*?

A number of students provided several ways on how online communication with teachers and classmates would be beneficial. They pointed out providing and receiving feedback, taking online communication seriously, and only discussing important and academic topics. Clear communication, respect, and support, and adapting methods are also specified. Sharing ideas and giving constructive feedback are the keys to mutual learning and improvement. Some students find it easy to do; some others do not know. Such responses indicate a mix of proactive strategies with a wish for further guidelines about effective online communication

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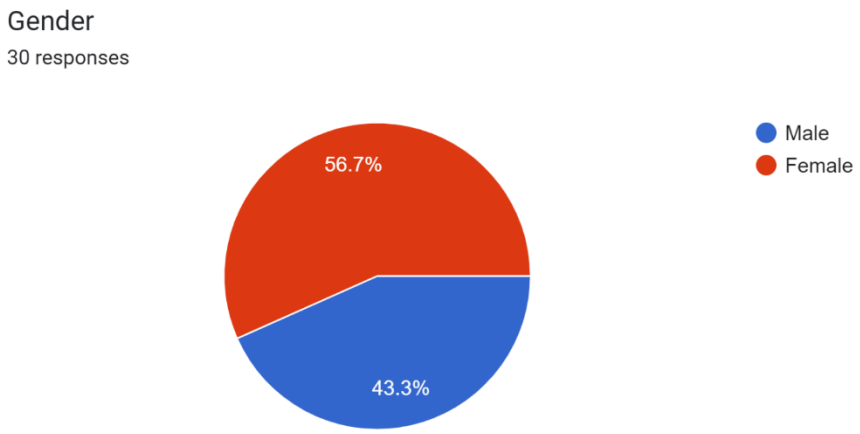
3.3 Analysis of Teachers' Questionnaire

3.3.1 Section 01: Background details of the participants

Figure 3.9.1

Question N°1

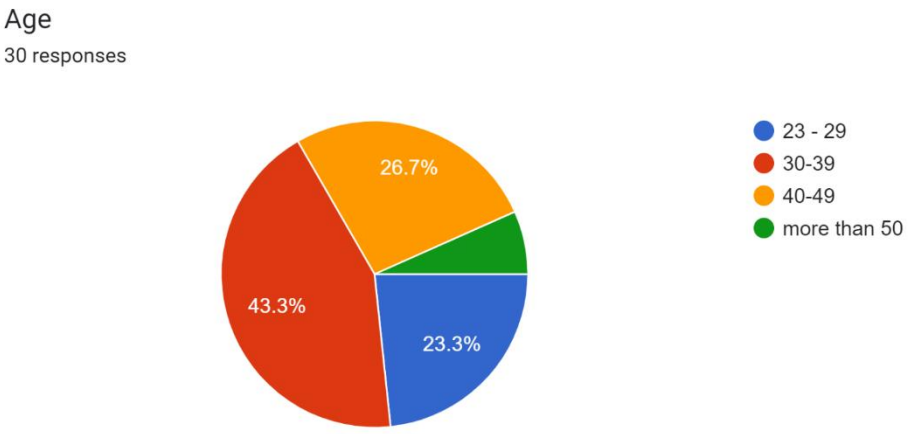


Note. Male= 43.3%, Female= 56.7%

The first chart describes the gender distribution of the teachers who answered the questionnaire. Out of 30 responses, this came out to be 56.7% females to 43.3% males, thereby indicating that the margin of participation by female teachers was higher in the survey.

Figure 3.9.2

Question N°2

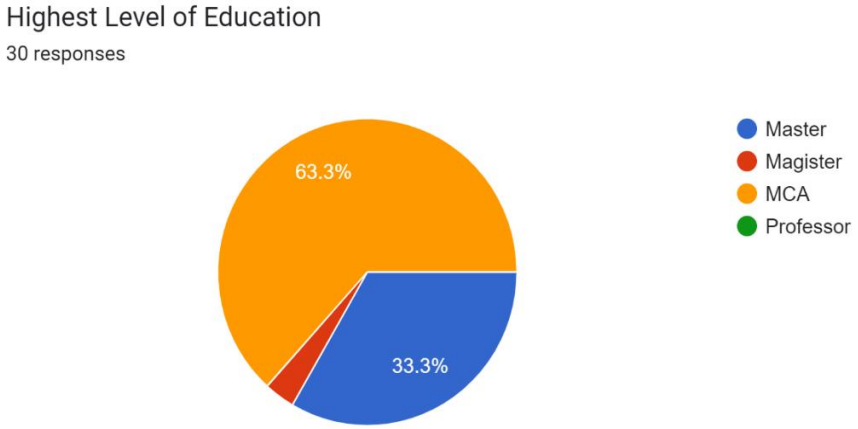


Note. 23-29= 23.3%, 30-39= 43.3%, 40-49= 26.7%, more than 50= 6.7%

The second chart shows the distribution of the age structure of the respondents. The result that comes out is that the 30-39 years age bracket forms the largest proportion of the sample at 43.3%. This is followed by the 40-49 years age bracket, accounting for 26.7%; ages 23-29, which is at 23.3%; and over 50 years, it emerges that they form 6.7%. It therefore implies that the greatest number of the respondents comes in due to an early to middle stage of career.

Figure 3.9.3

Question N°3



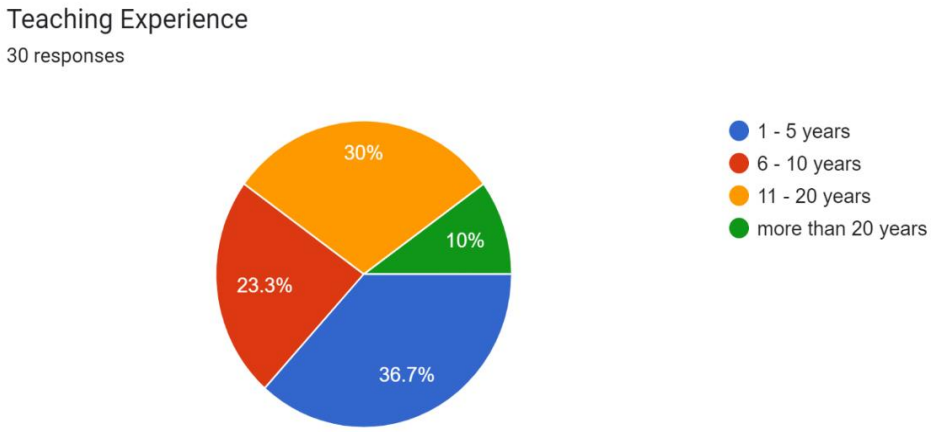
Note. Master= 33.3%, Magister= 3.3%, MCA= 63.3%, Professor= 0%

The third graph is on the maximum qualification of respondents, whereby most

portrayed having an MCA degree at 63.3%. Then there was 33.3% holding a master's qualification, and then some having a Magister qualification at 3.3%. This was a quite high level of education background held by the respondents relevant to teaching in an academic environment.

Figure 3.9.4

Question N°4

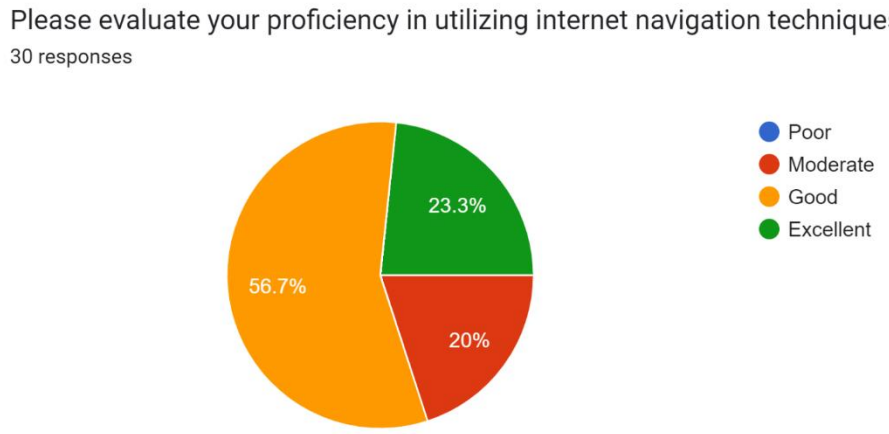


Note. 1-5 Years= 36.7%, 6-10 Years= 23.3%, 11-20 Years= 30%, more than 20 years= 10%

The greatest number of teachers has 6-10 years, which is 36.7%, while over 20 years are at 30%, and 11-20 years and 1-5 years at 23.3% and 10%, respectively. This is a very heterogeneous distribution it contains highly experienced teachers and less experienced teachers. Thus, possibly, within this group are to be included very different ways of teaching or experiences.

Figure 3.9.5

Question N°5

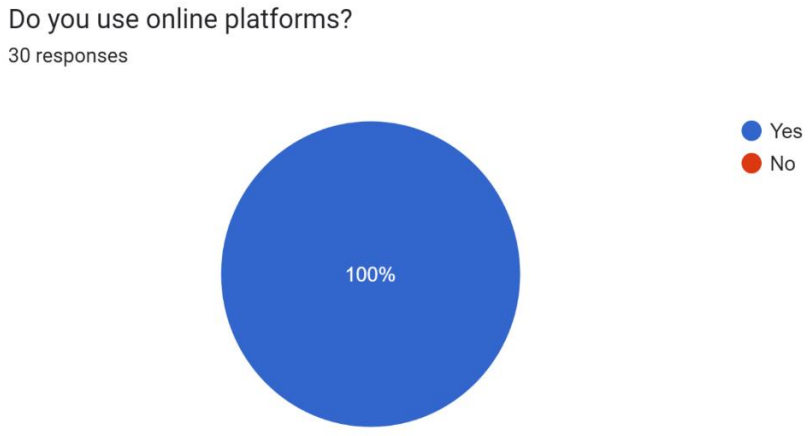


Note. Poor= 0%, Moderate= 20%, Good= 56.7%, Excellent= 23.3%

A majority of these, being 56.7%, rated their Internet navigation techniques as good skills, whereas a large minority found their skills only at a moderate level, which was 20%, and an excellent skill level, which was 23.3%. Many teachers rated their skill as good in using the Internet to support learning by effective search techniques, while some had moderate skill, 20%, and excellent skills, 23.3%.

Figure 3.9.6

Question N°6

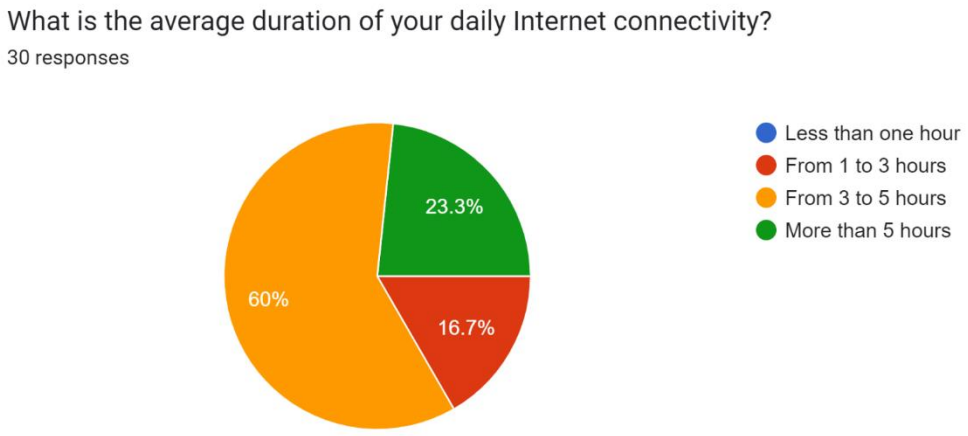


Note. Yes= 100%, No = 0%

All the respondents agreed that they do make use of the online platforms, hence indicating a complete integration of digital tools in the teaching environment. This indeed reflects very diffused adoption, with rising dependence on technology for any purpose related to education. This unanimous use perhaps proves the effectiveness of the tool and hence the need for students and teachers to adapt themselves to these digital learning environments.

Figure 3.9.7

Question N°7



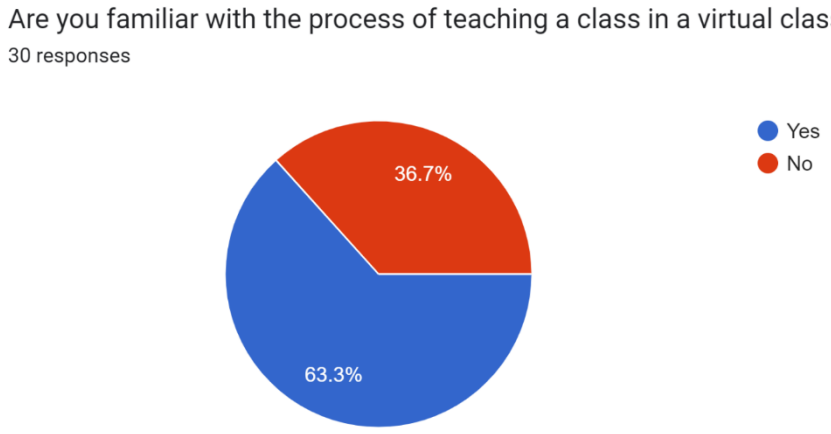
Note. Less than one hour= 0%, From 1 to 3 hours= 16.7%, From 3 to 5 hours= 60%, More than 5 hours= 23.3%

A large proportion of teachers spend 3-5 hours on the Internet every day, which is about 60%. This is followed by those that spend more than 5 hours, 23.3%, and 1-3 hours, 16.7%. In sum, this amount of time spent online demonstrates a strong level of digital inclusion and thus supports the very basis of effective online teaching delivery.

3.3.2 Section 02: Perceptions of Educators Regarding the Use of Computers in Classroom and Non-Classroom Communication

Figure 3.10.1

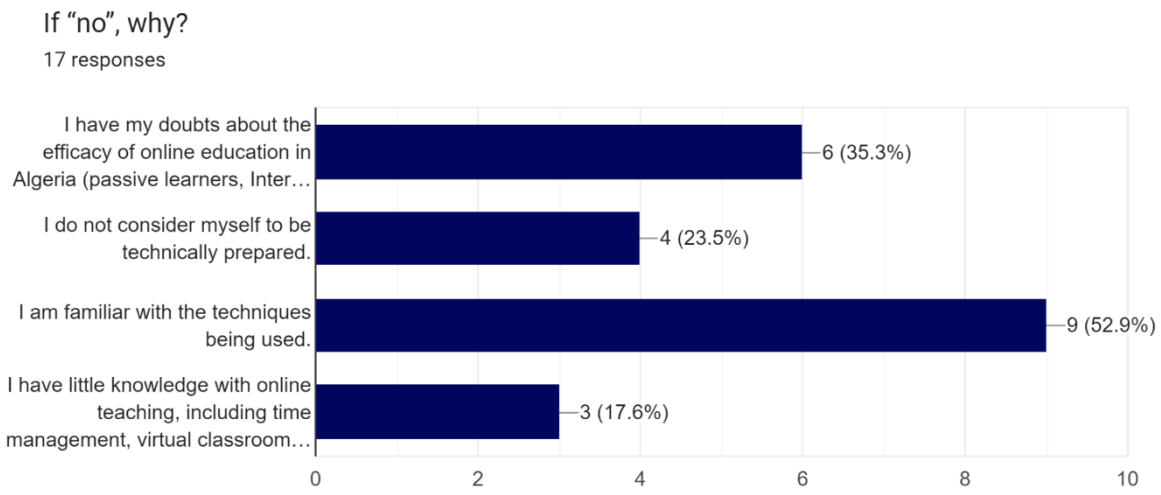
Question N°1



Note. Yes= 63.3%, No = 36.7%

The majority of teachers, 63.3%, are sure that they know how to teach inside a virtual classroom, and 36.7% are not. Most reasons for negative responses are attributed to doubts about the effectiveness of education in virtual reality, unpreparedness for technical issues, and not knowing many techniques for teaching online. This testifies that in-service training should be done more often for professional development in online teaching skills and the building of confidence.

Question N°1.1



Among these, these reasons include doubt towards the effectiveness of online teaching, 35.3 %; lack of technical preparation, 23.5 %; ignorance of the techniques being applied, 52.9%; and little knowledge about online teaching, 17.6%. These concerns imply that there is a need for professional training that is designed to overcome particular knowledge and skill shortages. Training and support can help prepare teachers to overcome barriers in the integration of suitable online teaching practices.

Question N°1.2

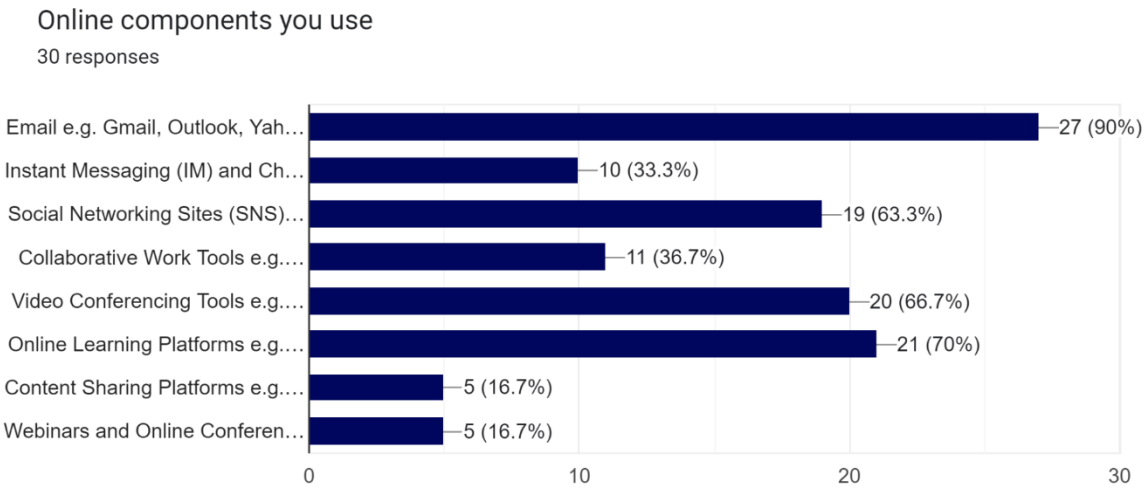
If yes, what was the objective of the course (subject: lecture, quiz, exam… etc.)?

All in all, twenty-one (21) educators (oh yeah) gave different objectives for their online courses that include delivery of lectures and the conducting of examinations and quizzes, all culminating in lecture discussions with key points, summaries made by students, and seminars. Interactive components used to facilitate learning included discussions, assignments, and multimedia resources. Besides, targeted courses to skill up learners, assesses the progress, feedback, and make up exams, or activities meant to fill in for lost learning during absenteeism. On the overall, the objectives cut across the acquisition of knowledge, skills, learning,

assessment, and feedback.

Figure 3.10.2

Question N°2



Individually, the objectives were.

Online Components Teachers Used

The bar chart shows the different types of online components that teachers used.

a) Email, such as Gmail, Outlook, and Yahoo.

- 90% (27 of 30)

The high use of email indicates its central role in the teachers' primary tool for communication. Email provides a reliable and asynchronous communication channel that can allow information transfer along with feedback and teaching resources. Since the high usage shows dependence, it means the teachers are consistent in keeping communication lines with their students and colleagues open, which minimizes transactional distance, making the communication continuous and apparent.

b) Instant Messaging (IM) and Chat (e.g., WhatsApp, WeChat):

- 33.3% (10 of 30)

The medium usage of IM and chat platforms indicates that these platforms are heavily used but based on the universal adoption for the specific purpose. IM and chat platforms offer live interactivity that may enhance engagement and immediacy in teacher-student interactivity. However, the relatively lower uptake rate suggests that teachers might stick to more regular methods of communication or not yet be fully comfortable with it.

c) Social Networking Sites (SNS) (e.g. Facebook, Twitter)

- 63.3% (19 of 30)

High usage of Social Networking Sites means more than half of the teachers are indulging in professional networking, sharing resources as well as visiting educational communities through Social Networking Sites. The integration of SNS may foster an environment of collaboration between teachers and students outside the formal classroom, which will eventually lessen the social and psychological distance in the online environment.

d) Collaborative Work Tools (e.g. Google Drive, Dropbox)

- 36.7% (11 out of 30)

The use of the collaboration work tools between over a third of the teachers shows cooperation around group projects and material distribution. These afford many users working in a document or project, enhancing cooperation and teamwork. Deploying these tools to engage a number of users may be helpful in attempting to support a more interactive and attractive learning environment. It serves the transactional distance theory standards that describe dialogue and interaction.

e) Video Conferencing Tools include such applications as Zoom, Microsoft Teams.

- 66.7% (20/30)

Most of this usage is indicative of the indispensable nature of video conferencing tools in the delivery of synchronous online classes. In this manner, learners will have this real-time interaction which might be closely patterned to the traditional classroom setting and a feeling of presence will be imparted upon the students. Video conferencing may also be an effective tool to reduce the transactional distance between the learner and the instructor since there is this instant feedback, both visual and voice cues, as well as live interaction during the conduct of discussions.

f) Online Learning Platforms include such applications as Moodle and Blackboard.

- 70% (21 out of 30)

"Given the heavy reliance on the online learning systems. This is indicative of the very design that embodies the heart of being a principal vehicle for content delivery for the course. The pre-existing space wherein the online environments are executed means placing the educators in a space where the lesson, assessment, and interaction can be created in ways never before realised. It also supports the embedding of a variety of multimedia and interactive objects that enhances the learners' experience and actually reduces the distance, since distance is simply temporal if the learners have defined and clear roadmaps for learning."

g) Shared Content Sites (i.e., YouTube, SlideShare)

- 16.7% (5 out of 30)

The decreased usage of content sharing mediums means that where a small percentage of the teachers leverage the tools to share educational videos and presentations, the rest of them do not. The platforms serve as valuable tools for supplementary learning, and the student

engagement with varied forms of content might surge by using such models.

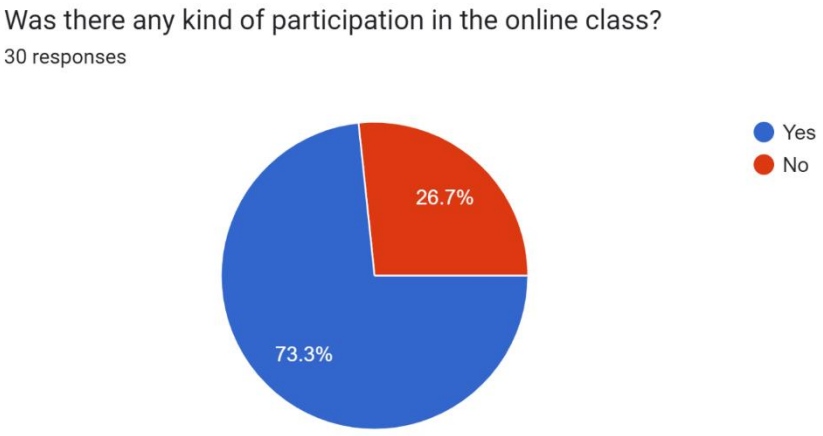
h) Webinars and Online Conferences:

- 16.7% (5 out of 30)

Examples are the usage of webinars and online web conferences; these resemble educational content sharing, and the use of these tools is low, but it can help teachers access a development opportunity in their professional career and obtain expert knowledge. This allows utilization of webinars and online conferences that can help the teacher stay current in knowledge of an education trend.

Figure 3.10.3

Question N°3



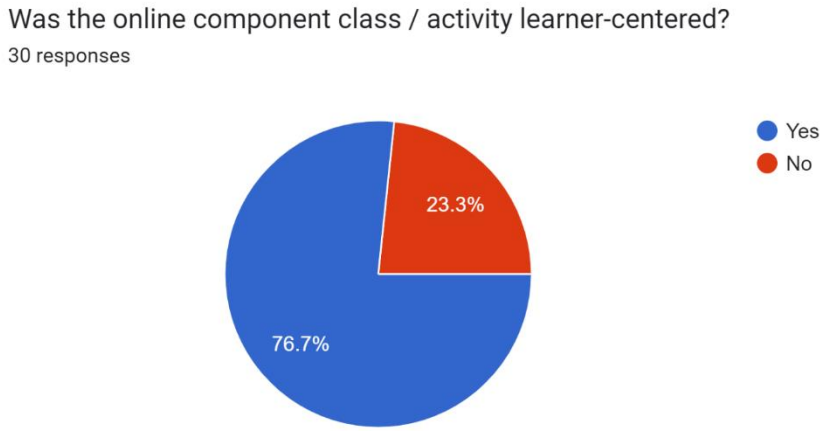
Note. Yes= 73.3%, No = 26.7%

The chart states that 73.3% of the teachers, involving 22 out of 30, reported that students had participated in online classes with good engagement and effective interactive learning environments. Active participation reduces transactional distance by letting the collaboration thrive through tools such as discussions, quizzes, and group work. In contrast, another 26.7% of the teachers (8 out of 30) stated that not much participation occurred at all due to technical problems, student lack of interest, not very interactive content, and/or teacher strategies not

being enough. This is an indication that there is a need for more training for many teachers in enhancing student participation while having online classes.

Figure 3.10.4

Question N°4

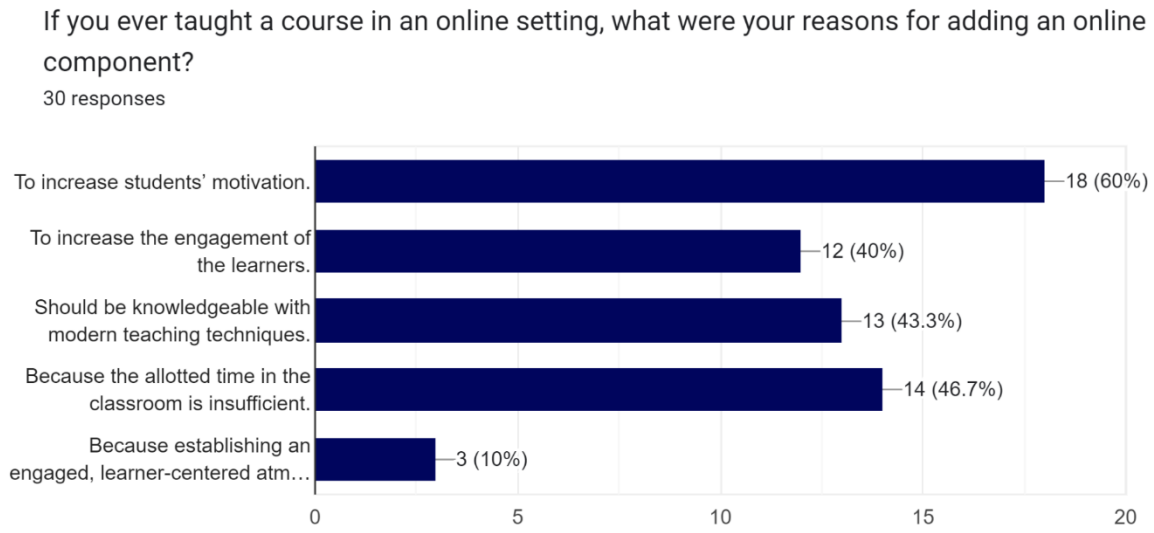


Note. Yes= 76.7%, No = 23.3%

Learner-tendency of the online classes; the chart above shows that 76.7% responded that their online classes were learner-centred, hence an indication of wide application of teaching techniques that result in active learning, individualized learning, and student involvement. This is pedagogy compliant to TDT and minimizes transactional distance as the student will be more self-reliant on learning and involvement; Against that 23.3% of the teachers; that is 7 out of 30 teachers who responded their online classes were not learner-centred. The practice of these teachers probably reflected the teacher-centred transactional distance because learner autonomy and interactivity were low. Professional education in learner-centred pedagogies and technology integration for active learning would be highly beneficial to them.

Figure 3.10.5

Question N°5

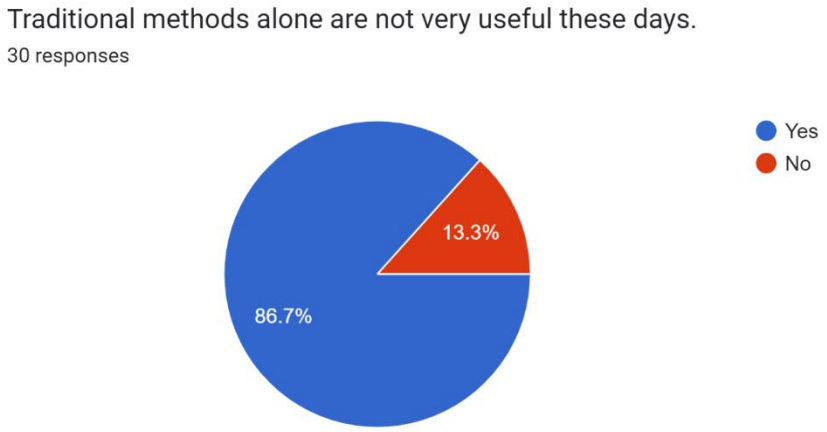


The reasons teachers cited for supplementing an on-line component to their classes. It is pointed out that some 60% of the teachers were looking forward to increasing the motivation level of the students by getting them engaged through interactive and attractive digital tools. This is in line with TDT, enhancing motivation through better dialogue and interaction. Thereafter, around 40% meant to foster student engagement by setting interactive activities on e-activities. In this context, the reasons reflect a need for reducing psychological distance and communication distance. A 43.3% wanted to keep updated with the modern trend of teaching methodology and realized the need to change with it in the technology of education to decrease transactional distance. 46.7% said that classroom time was not enough to add components online and hence took help from flexibility in online education to increase availability of time to learn. Finally, 10% have mentioned that online environments allow for an engaged learner-centred environment using tools to promote personalized learning and active participation to allow learner autonomy and reduce transactional distance.

3.3.3 Section 03: Adopting CMC in the Algerian Context Using Online Platforms

Figure 3.11.1

Question N°1

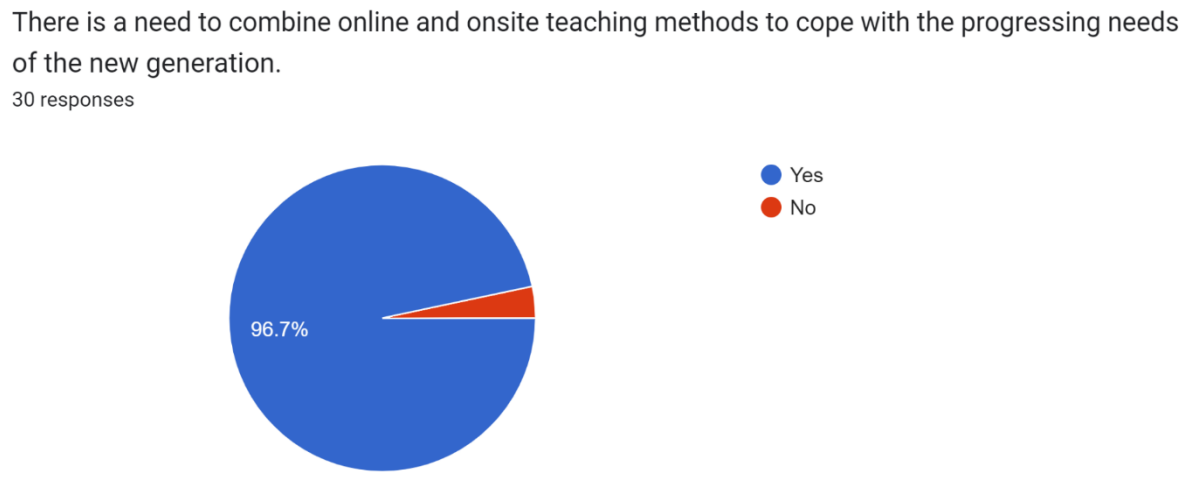


Note. Yes= 86.7%, No = 13.3%

As can be seen from this graph, 86.7% of teachers consider that it is not very useful these days to use mainly traditional teaching; hence, the circumstances have significantly improved because most teachers consider it necessary to use dynamic, interactive, and technology-based methods. This view is in line with TDT, which postulates that traditional methods increase transactional gap as they are non-interactive and characterized by a single-channel dialogue. Since the addition of technology in teaching, thus room for interaction, flexibility, and learner autonomy, learning outcomes are expected to have improved. On the other hand, 13.3% of the teachers still found the traditional methods to be effective; perhaps the nature of the content to be taught, institution-related and personal issues may be the contributors therein. TDT would suggest that while the traditional method may work provided there is some interaction and autonomy can be expected, but without modern tools, relying purely on the traditional method is very likely to result in less effective learning.

Figure 3.11.2

Question N°2

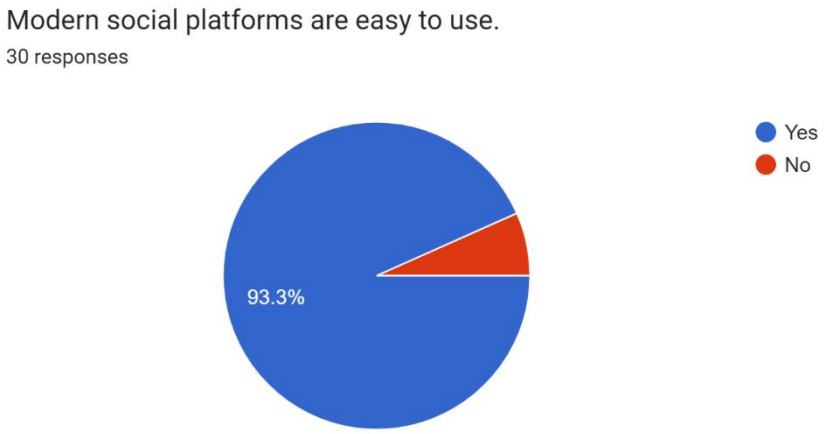


Note. Yes= 96.7%, No = 3.3%

The chart shows that 96.7% of the teachers hold the view that a combination of online teaching and on-site teaching is the way forward in terms of catering to the needs of new generations about education. This unanimous agreement represents the pure fact of the many advantages of blended learning, perceived to be offered: strengths of traditional, face-to-face classroom teaching with utilities provided by digital technologies all within the fold of flexibility, accessibility, and personalization of learning. Moreover, blending these methods reduces transactional distance by fostering dialogue and well-balanced course structures, motivating learner autonomy via Transactional Distance Theory. This helps to establish efficient and motivating learning environments. Opposed to this need to combine methods stands only a very small proportion of 3.3%, probably because they were not familiar with the online tools or satisfied by the traditional approach and/or strongly influenced by contextual constraints. Although TDT recognizes the role played by context, what can be said is that the general direction usually indicates that blended learning can be one of the solutions to reducing transactional distance and enhancing learning.

Figure 3.11.3

Question N°3

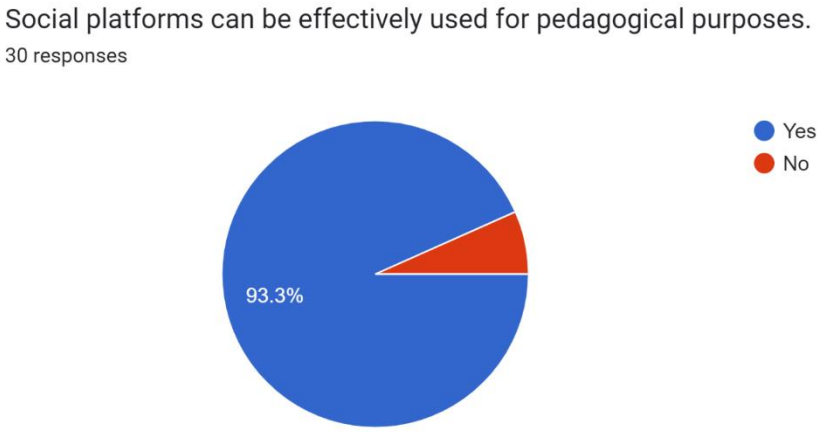


Note. Yes= 93.3%, No = 6.7%

The graph below shows that 93.3% of teachers say it is easy to work with current social platforms. If teachers have an easier time using these platforms, integrating it should be a breeze. This makes it convenient for teachers to communicate, cooperate, and engage their students in effective learning. According to the Transactional Distance Theory (TDT), ease of use, therefore, directly impacts the reduction of transactional distance because it bets dialogue and interaction, hence lowering psychological and communication gaps. On the other hand, 6.7% of teachers reported, who found the integration of these platforms difficult at their end, might be due to several reasons, either being not so regular-savvy or have had. These teachers, for whom increased transactional distance is inevitable, provide further evidence for need-based training and support, the goal of which would be to ensure that all teachers are brought to a level where they can leverage social platforms effectively and reduce transactional distance.

Figure 3.11.4

Question N°4

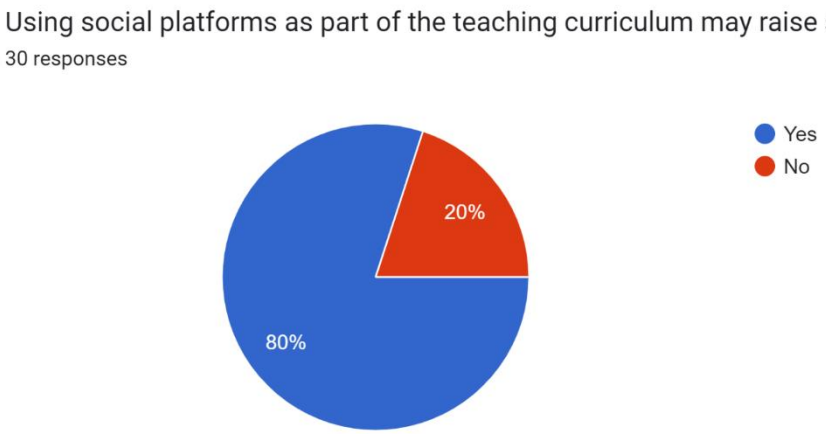


Note. Yes= 93.3%, No = 6.7%

The chart indicates that 93.3 % of the teachers are of the view that social platforms can be effectively used for pedagogical purposes, hence consensus on potential for teaching and learning enhancement exists w.r.t. improved engagement, communication, and collaboration. According to TDT, these platforms reduce transactional distance by increasing dialogue, providing flexible structures, and promoting learner autonomy through tools like online discussion forums, video lectures, and group projects. Hence, only 6.7 % of the teachers are a little sceptical, which is understandable to an extent, most likely because of the degree of distraction, data protection, or appropriateness of such platforms for formal education. Best practice examples may help dissolve reservations even better by pointing out these issues and giving targeted training for further integration of social platforms into pedagogical strategies.

Figure 3.11.5

Question N°5

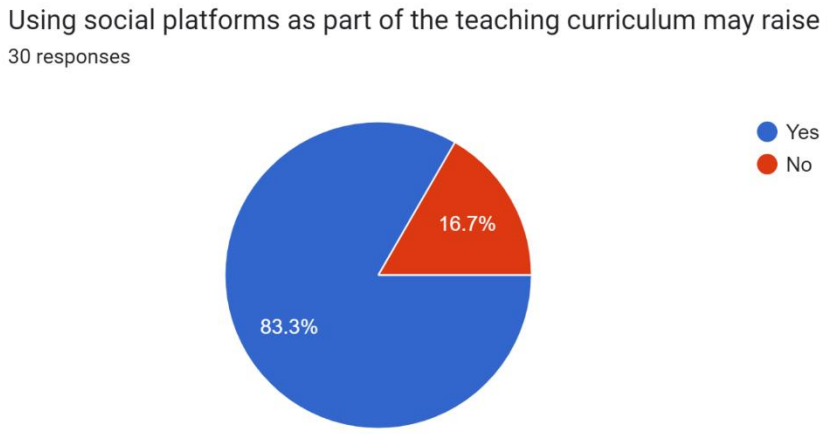


Note. Yes= 80%, No = 20%

This graph shows 80% of teachers think that using social platforms in the teaching curriculum improves comfort. This majority realizes that if students are well conversant with social platforms, this can create a more relaxed and interactive learning environment that allows for better communication and participation. According to TDT, this integration can reduce transactional distance by way of improving dialogue, flexible learning structures, and learner autonomy. In the case that students are using familiar tools, they will engage more and work together in doing so lessening psychological and communicative distance. On the other hand, 20% of those teaching remain in doubt because of possible distractions or misuse of the platforms or because they prefer traditional methods of teaching. Guidelines, training, and effective use cases could handle the concerns and reservations that would be helpful in proving the effectiveness of social platforms in education.

Figure 3.11.6

Question N°6

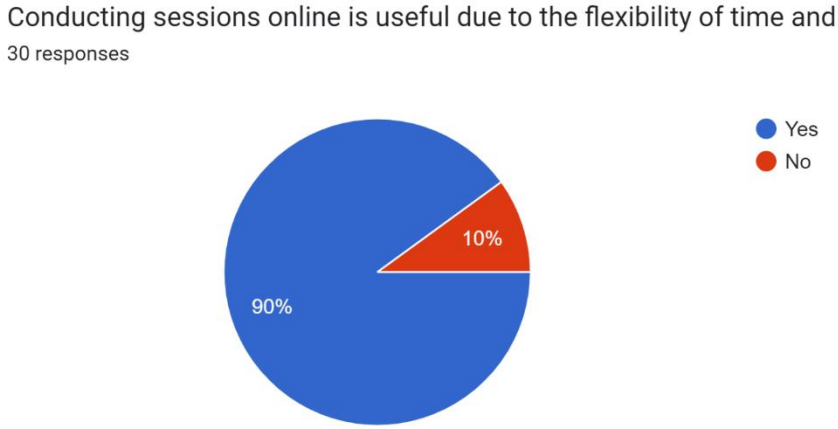


Note. Yes= 83.3%, No = 16.7%

The pie chart indicates that 83.3% of the total surveyed population believes that integration of social platforms in the syllabi can increase student interest, while 16.7% believes that it cannot. That simply brings out a trend among the majority of intending to integrate social platforms with the intent to make students more interested and interactive with the learning material.

Figure 3.11.7

Question N°7

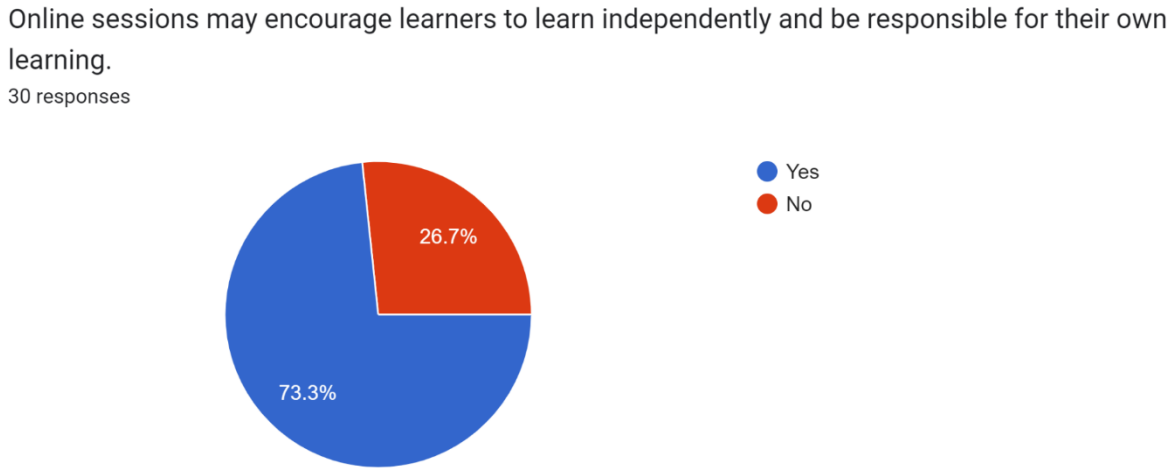


Note. Yes= 90%, No = 10%

The chart indicates that 90% of the teachers find sessions online useful because of the flexibility of time and space. This overwhelmingly large proportion appreciates convenience in the scheduling of classes, tapping of resources from any location, and flexibility in accommodating variable student schedules. This flexibility is very critical in today's digital learning environment, providing effective time management and work-life balance. In line with this, Transactional Distance Theory postulates that such flexibility diminishes psychological and communication distances through applying modifiable structures to individual needs, making the approach learner-centred and autonomous learning-promising. On the negative side, 10% did not find online sessions to be helpful. Maybe on the part of teachers, there are concerns regarding either class discipline or the maintenance of student engagement, or there are technical problems. Indeed, the transactional distance felt by those teachers in using online platforms could be easily minimized through professional development and strong technical support to help them work out more ease and effectiveness of digital tools.

Figure 3.11.8

Question N°8

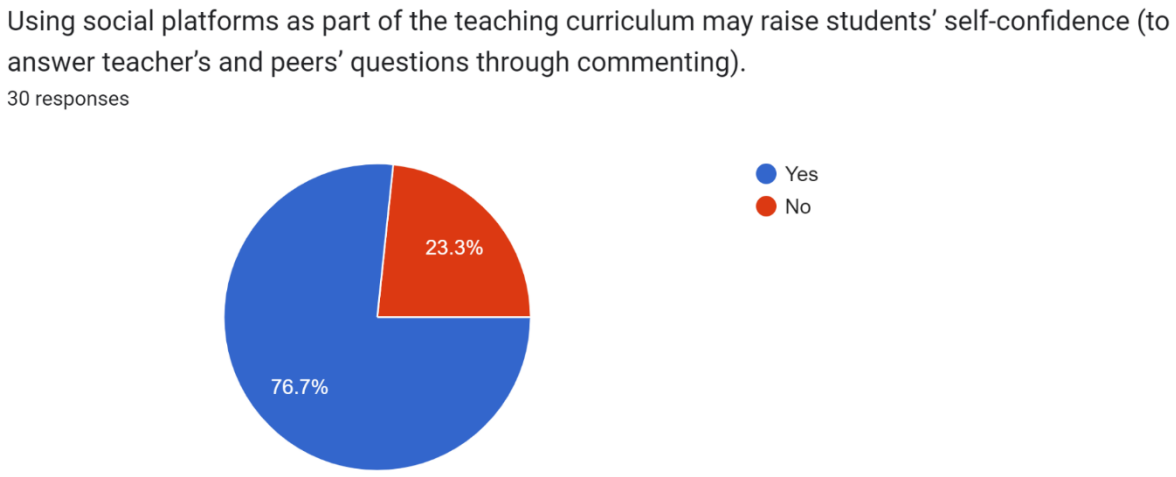


Note. Yes= 73.3%, No = 26.7%

The chart shows that 73.3% of the teachers were of the view that online sessions encourage learners to study independently and take responsibility for their learning. This majority vote thus shows that online learning is associated with a number of benefits, such as self-paced study, huge diversity of resources, and time management skill building. It is understood by the teachers that autonomy over the management of learning schedules may encourage students to take responsibility for their learning process, which would enhance skills related to critical thinking and problem-solving. According to TDT, this autonomy would decrease psychological distance while increasing engagement and motivation. However, 26.7% of teachers have a different belief that there might be less supervision and face-to-face interaction, hence leading to procrastination, less motivation, and inadequate engagement. For such a category of teachers, structured activities in online sessions, regular check-ins, and scaffolded learning tasks may provide the necessary aids to develop autonomy with regard to student engagement and responsibility.

Figure 3.11.9

Question N°9



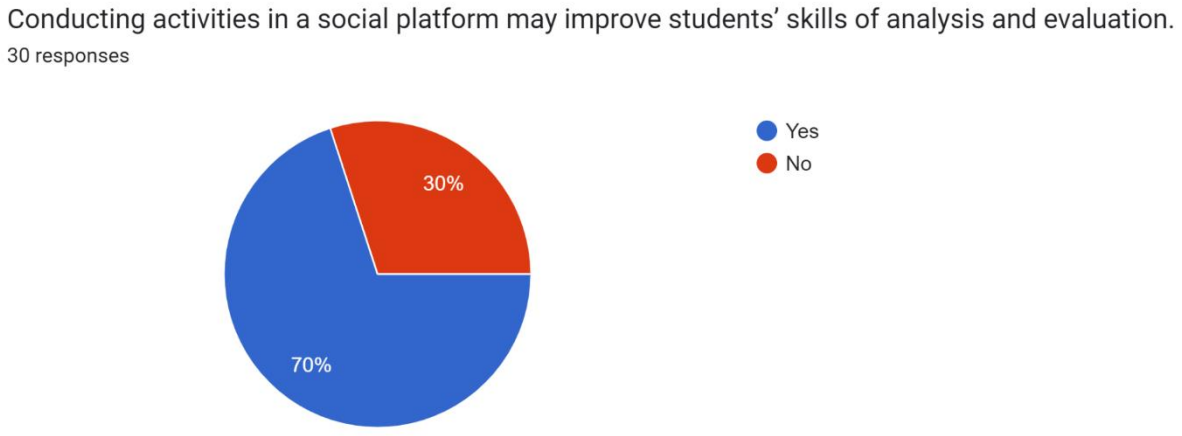
Note. Yes= 76.7%, No = 23.3%

According to this pie chart, 76.7% of the instructors believe that including social media platforms into the curriculum improves the self-esteem of their pupils in response to the

questions posed by their classmates and teachers. More so for the timid or introverted, broader viewpoints are such that social platforms foster a far more engaged, inclusive atmosphere with students expressing their opinions without any fear. From the theoretical standpoint, TDT argues that social platform usage lowers transactional distance as it facilitates widespread communication and engagement for the students to feel close and supported. Still in question, however, 23.3% bring various questions about kids' digital competence, distractions, and quality of online interactions and exchanges. This may be accomplished with tenacity, if appropriate training to that purpose and guided activities are then given while resources are also made accessible that enable the efficient use of social platforms for pertinent and helpful interactions.

Figure 3.11.10

Question N°10

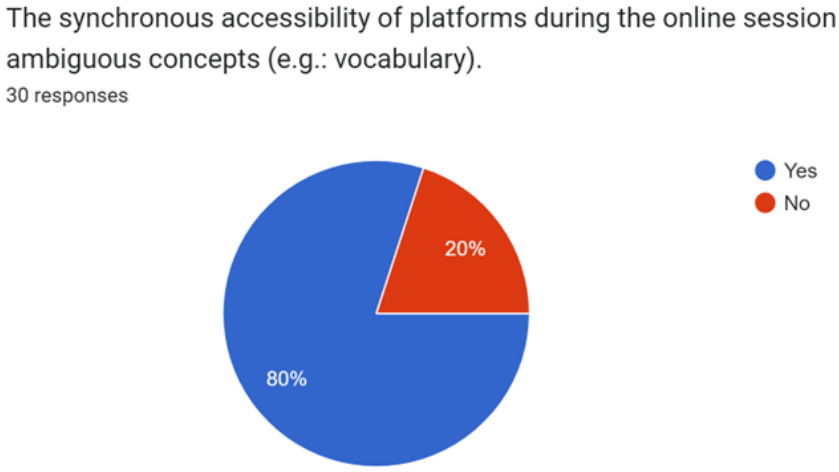


Note. Yes= 70%, No = 30%

This pie chart shows that 70% of the respondents believe that using social platforms will improve students' analytical and evaluation abilities, while 30% do not have any belief in it. This forms a very large majority of people who find some potential benefits of social platforms instilling critical thinking and evaluation skills into students.

Figure 3.11.11

Question N°11

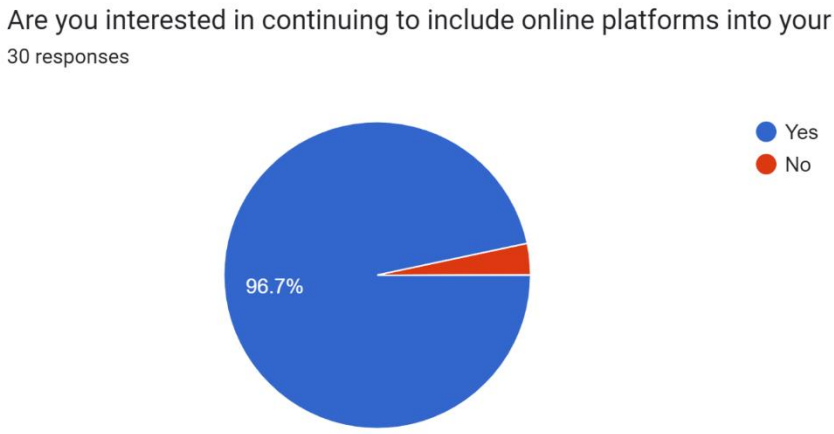


Note. Yes= 80%, No = 20%

According to the graph, 80% of the educators responded that synchronous access to platforms during online sessions helps to make light on unclear ideas like vocabulary, hence laying much emphasis on the benefits associated with real-time engagement and instant feedback. The technique reduces psychological and communication gaps; hence, it abides by TDT, avoids misunderstanding, and preserves the involvement of students. On the other hand, 20% of the tutors prefer asynchronous methods due to issues with scheduling or limited access to the Internet; for them, synchronous access is of no value at all. The well-organized asynchronous resources and the supporting community help to decrease the transactional distance and ensure effective learning.

Figure 3.11.12

Question N°12



Note. Yes= 96.7%, No = 3.3%

In this sense, the chart shows the fact that 96.7% of teachers would prefer to use online means more than they currently do while teaching, and this is the manifestation of the great willingness to tap on the flexibility, accessibility, and other elements related with the increase in student involvement. It is clear because strong interest results from successful outcomes resulting from the integration of online technologies and instructors being driven to explore their possibilities more closely. Conversely, minor percentages 3.3% of them, precisely show no interest, which might be out of their perceptions or fear of technical problems in the style of online teaching or a sentimental type of commitment to the old ways of teaching. Such instructors could only be able to alter by means of further sensitisation during training.

Question 12: We would very appreciate it if you could provide us with any further recommendations you may have.

A great variety of recommendations from teachers concerned online communication and teaching methodology. They stressed that flexible answers should be prepared, which allows more than a simple choice of 'yes/no', and that platforms should be chosen according to

the students' needs and motivations. Many of them suggested a balanced approach should be made by combining online and f2f teaching; some put forward 50/50 for effective learning. Training and good equipment were considered very important for success. The teachers further elaborated that classroom and online work should go hand in hand, adding that there is a potential for online makeup sessions. Other raised issues were the role of parents, the need for facilities, and teaching the students how to use different platforms. Some teachers wanted to stick to their traditional ways of teaching, while others understood the necessity and benefits of online learning, especially after COVID-19. They further stressed the use of smart technology, dispensation of responsible usage of social platforms, assimilation of online practices within the curriculum. In the final analysis, they canvassed for the training of teachers on how to make good use of social media for instructional purposes and the importance of hyperlinks in online teaching.

Question 13: What are the *benefits* of communicating with your students via the Internet?

Instructors counted several advantages of communicating with their students online. Since they include the teachers and the students without travel, crucial time-saving and improved accessibility save considerable time. This form of interaction allows the kids the freedom and comfort, which helps in reducing tension and anxiety. They look free and more expressive. The Internet improves learning processes by such means as real-time engagement and sharing multimedia resources. Apart from that, the teachers say that online communication promotes pupil involvement and participation, which in turn encourages self-confidence and reduces the fear of making mistakes. Through listening to native speakers, for example, tailored feedback and advice can be offered, hence improving general language skills through autonomous learning. Indeed, the Internet offers a suitable setting and less formality for the introverted pupils, which might be frightening and hence encourages alternative approaches and needs in learning. The internet-based communication, considering the factors highlighted

above, created a dynamic and inclusive learning environment that fostered growth in student analytical and evaluative skills, motivation, teamwork, and active engagement.

Question 14: What are the *challenges* of communicating with your students via the Internet?

The teachers listed a number of problems in communicating with students over the Internet. Readiness and proficiency in using e-learning platforms top the list. This is followed by connectivity issues, poor access to the Internet, and areas where signals are weak, as in Algeria. No nonverbal cues and no face-to-face possibly lead to misunderstandings and diversions. Technical problems that hamper online communication include unstable connections and hardware that is not good enough. Moreover, it is hard to keep the students interested and focused on the learning process when some of them do not take online training seriously and are easily seduced by popular social platforms. Information security and loss of data were also placed in the foreground. As all the teachers pointed out, only better preparation and support will enable them to overcome these barriers successfully and have effective online communication.

Question 15: What do you do to make communication with your students via the Internet beneficial?

The teachers also shared several strategies on how to make their online communication with students beneficial. They would, therefore, insist that all course materials and all communication platforms be made accessible to all the students. The teachers would also respond to the queries or needs of the students and suggest that they know in person the personality, behaviour, and background of each student to engage them effectively. There are peer discussions, interaction, or written responses for those who are shy. Videos and polls are quite common even though their use needs to be more interactive. Tech support and feedback on a regular basis with personalization are other notes. Making sure the connectivity is good

and STT rather than TTT is mentioned. It was also mentioned by some keeping it interactive with practical sessions, discussion-based activities, and authentic materials. Awareness, learner-centred sessions, good communication, and repetitions should all be prime areas for consideration. Teachers will be open to the feedback from the students toward the improvement of methods of communication, flexibility in the same, and continued engaging with them proactively.

Question 16: What were the obstacles?

The teachers highlighted several challenges experienced while communicating with students online. More importantly, these involved technical issues such as poor internet connectivity, weak signal receptions in some areas, and lack of requisite equipment. Other serious barriers pertained to the motivation of students; some students were poorly motivated and unresponsive, or showed a poor attitude towards online learning and learning processes in general. The other concerns were those that bordered on privacy and the maintenance of professionalism. It was noted that there were time management and extra loads on the teacher, that keeping students engaged was a challenge and, indeed, checking that students were present. The lack of face-to-face created misunderstanding because non-verbal cues were missing. There were also issues of digital literacy and the distractions of the web environment. In some cases, teachers did not experience themselves in too much difficulty, so the experiences varied.

3.4 Conclusion

This chapter has analysed the questionnaire data from teachers and students in the TEFL programme at Hassiba Benbouali University of Chlef. The findings show that computer-mediated communication tools are used in teaching and learning: their effects on teaching practices and student engagement in distance education are obvious. Overall, participants view CMC tools positively, recording advantages in flexibility, access, and interaction. At the same

time, issues like technical problems, uneven digital skills, and less face-to-face contact were highlighted.

These results offer a clear picture of the realities of using digital tools in this context and provide a strong basis for the next chapter, where the findings will be discussed in relation to theory and used to suggest practical improvements for distance TEFL.

Chapter Four:

Interpretation, Pedagogical Implications, and Recommendations

4.1. Introduction

This chapter analyses and interprets the findings of the research study, describing the complex ways in which CMC influences language learning from both cognitive-affect and pedagogical perspectives, alongside each participants' personal construct. This chapter draws from the triangulated dataset: quasi-experimental quantitative surveys and qualitative thematic analysis that builds on the established literature in the field of second language acquisition. This chapter weaves the emergent experiences of the learners, pedagogical practices of the teachers, institutional factors to form a more holistic narrative relating to the influence of CMC for language education in the present tense.

In line with Braun and Clarke's (2006) position that qualitative thematic analysis must not only describe but also interpret, this chapter moves beyond surface findings to identify latent patterns, contradictions, and insights. Quantitative patterns are given further depth through qualitative narratives, and vice versa, allowing the triangulation process to operate on the principles of convergence, divergence, and expansion (Creswell & Plano Clark, 2018).

This chapter is organized into five sections. In Section 4.2, the triangulated findings are discussed in themes, beginning by addressing methodological triangulation, then addressing key learner- and teacher-oriented themes. Section 4.3 discusses the theoretical implications and the findings concerning socio-cultural, literacy, and identity perspectives of SLA. Section 4.4 translates the findings into practical pedagogical implications. Section 4.5 discusses what the findings suggest with regards to the appropriate stakeholders. Section 4.6 provides a critical reflection on the positionality of the researcher and finally, Section 4.7 concludes the chapter.

4.2. Interpreting the Findings:

This section provides an interpretation and discussion of the findings, contextualizing

their significance within the broader objectives of the research.

Methodological Integration: Merging Quantitative and Qualitative Evidence

The integration of findings in this study was conducted using a convergent parallel design, where both quantitative and qualitative data were collected and analysed independently, then merged for comparative interpretation. The value of this design lies in its capacity to cross-validate findings, offer interpretive depth, and ensure that one data type compensates for the limitations of the other (Creswell & Plano Clark, 2018).

Quantitative survey data provided descriptive trends and correlational insights, revealing that over 70% of participants viewed CMC as either "beneficial" or "highly beneficial" to their language learning. The qualitative data analysed thematically from dissertations and academic texts provided contextual grounding and depth to these perceptions. For example, the term "benefit" from the survey responses was unpacked in the qualitative findings to examine psychological safety, motivation, linguistic experimentation, and social presence.

When the two datasets aligned, for example, on student motivation and the perceived effectiveness of CMC for writing development, triangulation confirmed the strength of the findings. When the two datasets diverged for example, participants were unaware of errors in terms of genre transference in their writing triangulation illuminated potential blind spots in student self-perception. Finally, expansion occurred in areas that were identified in one data set and not the other including teacher workload and institutional acknowledgement, which were strongly identified in the qualitative strand and not addressed in the survey.

This methodological integration supports the notion of what Greene, Caracelli, and Graham (1989) refer to as "complementarity"- where data from different types reveal different

aspects of a complex phenomenon, in this case, the integration of CMC in language education.

4.3. Learner Attitudes and Affective Dimensions

One of the most salient findings across both data sources was the positive affective response learners displayed towards CMC environments. Survey data showed that most learners were "more confident", "more comfortable expressing themselves" using CMC tools in comparison to face-to-face classroom environments. These affective aspects were elaborated upon in the qualitative literature.

In her study of mobile CMC applications for oral practice, Erofeeva (2018) observed that learners consistently cited reduced anxiety and increased fluency as core benefits: "The opportunity to record, listen to, and revise oral responses before submitting them provided a sense of control and mastery that face-to-face speaking activities rarely offered" (p. 47). This illustrates how recorded oral tasks can enhance learners' confidence and sense of mastery by allowing thoughtful preparation—something often lacking in real-time speaking situations.

This finding is consistent with Self-Determination Theory (Deci & Ryan, 2000) which claims that learners are motivated more and engaged more fully in environments that support their control or autonomy, competence (mastery), and relatedness or social connection. In asynchronous CMC contexts such as online discussion boards, wikis, or emails (letter writing), learners reported a sense of psychological safety, especially because the extended time for turn-taking reduced performance pressures and enabled additional planning and reflection.

Moreover, the emotional and affective gains reported by learners were not superficial. They were linked to behavioural engagement, including increased participation in optional activities, more frequent peer feedback, and greater attention to grammar and vocabulary. As one participant in Kadri's (2018) blended learning study noted: "I felt more confident in trying

new sentence structures when I knew I could edit later or get feedback first" (p. 139). This shows that the ability to revise and receive feedback fosters learner confidence and encourages experimentation with more complex language use.

These affective responses are important to long-term language development. It helps with risk taking, linguistic experimentation, and willingness to communicate all are essential predictors of SLA success (MacIntyre et al., 1998). In this respect, CMC platforms do not only help provide language input and output, but they also mediate the emotional conditions under which language learning becomes sustainable and meaningful to the individual.

4.4. Autonomy and Peer Interaction in CMC

A closely related theme was the promotion of learner autonomy and the reconfiguration of peer interaction dynamics. In contrast to traditional classroom models that often rely on teacher-led instruction and summative assessment, CMC environments enabled learners to take control of their learning trajectories, engage in self-monitoring, and participate in mutual knowledge construction.

Benson (2007) defines autonomy as "the capacity to take control of one's learning," and argues that digital environments, particularly those that support asynchronous interaction, are uniquely suited to fostering this capacity. The present study's findings support this claim: learners who engaged with CMC tools reported spending more time on self-revision, engaging voluntarily with supplementary materials, and initiating discussions with peers.

These behaviours were substantiated by qualitative data. In the analysis of collaborative document platforms (e.g., Google Docs), Kadri (2018) found that students frequently used comment features not only to provide peer feedback but to pose questions, cite external resources, and offer encouragement—activities that were rarely observed in in-class peer editing.

This type of interaction is referred to by Vygotsky (1978) as "socially mediated learning," in which knowledge is ultimately co-constructed through dialogue. In CMC, although the nature of interaction remains dialogic, it is augmented through time for reflection, revision, and revisiting discourse. This realm includes not only language development but also critical thinking, metacognition, and digital citizenship.

This section has thus demonstrated that CMC environments can shift a mode of communication in one way and transform the socio-cognitive structure of learning itself. Learners are learners no longer; they become agents, collaborators, and digital rhetoricians as they work in the multiple modes, genres, and audiences of online participation and production.

4.5. Writing Development and Genre Awareness

A large percentage of the triangulated findings focused on the impacts of CMC on learners' writing development, particularly outcomes in fluency, range of vocabulary, grammatical accuracy, and critical engagement. The asynchronous nature of many CMC tools - emails, discussion boards, collaborative writing platforms allowed learners to engage in reflection, editing, and revision which are all essential to develop more sophisticated academic writing.

The quantitative data showed that more than 65% of learners believed their writing had improved "noticeably" due to their regular engagement in digital forms of writing; 72% stated they revised their writing more often in CMC contexts than for in-class assignments. These trends were explained in a qualitative source.

For instance, in her analysis of writing processes in blended learning contexts, Kadri (2018) noted: "The asynchronous structure of online tasks allowed learners to revisit their writing with a sense of emotional distance, enabling more objective self-evaluation and

iterative improvement" (p. 141). This suggests that asynchronous tasks support more effective self-revision by giving learners the emotional space and time needed for critical reflection and continuous improvement.

Additionally, the concept of audience awareness was more pronounced in CMC situations. Students tended to pay more attention to coherence, tone, and style when they knew their peers would read and respond to their writing. This was supported by Ghaskil's (2019) research made for a PhD study stating that students "demonstrated some increased clarity and contextualisation when writing using collaborative documents as compared to timed classroom compositions" (p. 72). This indicates that collaborative digital writing environments can lead to clearer, more contextually grounded writing than traditional timed classroom tasks.

However, the research also found a strain between informal conventions of digital discourse and formal academic writing. Participants often transposed elements of chat language, either abbreviations or contractions, emoji, and even shorthand into the academic assignments. This phenomenon, as Ghaskil (2019) points out, suggests a "blurring of genre boundaries" (Kern, 2006) in digital discourse. This phenomenon, as Ghaskil (2019) notes, reflects what Kern (2006) describes as a "blurring of genre boundaries," where digital discourse challenges traditional distinctions between formal and informal writing styles.

"The informality that learners adopt in CMC spaces sometimes migrates unintentionally into academic discourse, leading to hybridized texts that challenge traditional notions of correctness and appropriateness" (Kern, 2006, p. 192). This highlights how the informal tone common in CMC can unintentionally shape academic writing, resulting in blended styles that push against conventional academic standards. This has teaching implications: students need direct instruction in awareness of genre, appropriateness of register, and rhetorical conventions. Educators should facilitate students in learning code-switching and

genre flexibility and not view digital discourse as inferior or a cause for concern. This process encourages students to acknowledge CMC as a place of linguistic experimentation and practice, while upholding rigorous intrinsic academic standards of a formal writing context.

4.6. Instructor Roles and Pedagogical Restructuring

A strong theme which also emerged was the role of teachers in CMC-rich environments. In traditional classrooms, teachers tend to be the sole provider of knowledge, feedback, and evaluation about a student's work. CMC environments, conversely, view teachers as facilitators, curators, collaborators, and, sometimes, participants in conversation instead of the only voice of authority.

Shifts in digital pedagogy have prompted changes in how educators perceive their roles within the learning environment. Kadri (2018) documented this shift in her blended learning research: “Teachers in the experimental group began to see themselves less as content deliverers and more as coordinators of student inquiry, discussion, and collaborative authorship” (p. 150). This evolution reflects a move toward more learner-centered teaching, where educators facilitate exploration and co-construction of knowledge rather than simply transmitting content.

This shifting role is indicative of constructivist pedagogical principles, and specifically social constructivism, which emphasizes learning as socially mediated, active and participatory. While CMC classroom settings still rely on controlled instruction, teachers have the responsibility to create affordances, rather than the instructor decides the opportunities. Teachers need to be sourcing meaningful tasks, creating affordances for the digital literacies, managing the discussion minutes or weeks after the fact, but they also need to provide formative feedback on new forms of interface.

Bodomo (2010) described this new role as that of a "discourse architect" who must manage the flow, tone, and structure of dialogue in multimodal digital spaces. The complexity of this role was also noted in practical challenges: increased preparation time, higher expectations for response immediacy, and the need to be digitally competent.

An important consideration emerged from teachers reporting emotional labour associated with moderating online communication and ensuring clarity of intentional written feedback from a distance, as well as upholding a positive rapport without visual face-to-face cues (e.g., tone, impact). Kadri (2018) describes this as teachers experiencing "pedagogical fatigue" when they engage in blended learning models for the first time. For teachers undergoing fatigue, this was often lost on their institutions and cute sooner rather than later.

This finding is significant in that a call is made for systemic engagement on teacher performance and evaluation from a digital teaching construct. If institutions do not recognize that pedagogical facets and character become more extensive because of the digital format/process of integration, then a situation of burnout, non-usage or non-connectivity will always or can, occur as ideas for innovation unfold.

4.7. Institutional Constraints and Digital Inequality

Although CMC offers considerable pedagogical promise, its implementation is frequently constrained by institutional, infrastructural, and equity-related factors. This theme emerged strongly in the qualitative data but was largely absent from the quantitative strand, which focused more on learner-centred outcomes.

The rise of blended learning has introduced new demands on educators, particularly in adapting to digital instructional methods. Many instructors cited lack of training, support, and recognition as major barriers to effective integration. Kadri (2018) reported that:"Despite

enthusiasm for blended learning, instructors received little to no formal preparation for digital pedagogy and were expected to maintain traditional teaching loads alongside CMC innovations" (p. 153). This reveals a disconnect between institutional expectations and support, placing undue pressure on instructors to innovate without adequate training or workload adjustments.

Discussions around digital equity often overlook the deeper dimensions of access and participation. This disconnects between innovation and support highlights a deep-seated disconnect in the system. As Warschauer (2003) argues, "Digital inclusion is not simply access to technology; it is access to meaningful, sustained, and supported participation" (p. 38). As Warschauer (2003) emphasizes, true digital inclusion goes beyond mere access to devices, it requires ongoing, supported engagement that empowers learners to fully participate in digital spaces.

In addition to structural barriers, the learners also experienced digital inequalities (differential access to devices, differences in internet stability, and differences in private learning space). If these challenges seem secondary in higher-resource contexts, they are central in much of the Global South and among underprivileged learners globally.

While CMC offers flexibility, it also assumes a level of access and stability that not all learners possess. Ghaskil (2019) elaborated on this in his doctoral study on Algerian university students: "Many learners reported difficulty accessing course materials outside campus due to unstable internet, lack of personal devices, or shared family responsibilities, all of which hindered their ability to engage meaningfully with CMC tasks" (p. 77). These barriers highlight the digital divide, showing how socio-economic and infrastructural factors can severely limit meaningful participation in online learning environments.

These findings demand a critical pedagogical lens when promoting CMC: educators

and institutions must account not only for the pedagogical affordances of technology but also for the structural and material realities that shape learners' capacity to participate.

Addressing digital inequality requires interdisciplinary solutions that combine educational planning, policy reform, technical infrastructure, and social justice advocacy.

4.8. Theoretical Implications

The findings of this study not only provide empirical insights into the use of CMC in language learning but also reinforce and extend established theoretical models in second language acquisition (SLA), sociolinguistics, and literacy studies. Specifically, the results resonate with theories that conceptualize language learning as a socially mediated, identity-oriented, and multimodal process. This section explores the theoretical implications in relation to three interrelated frameworks.

4.9. Sociocultural Theory and CMC

Sociocultural theory, as theorized by Vygotsky (1978) and developed in terms of SLA by Lantolf and Thorne (2006), supports the view that language learning is inherently social and mediated. Sociocultural theory includes several key concepts, including mediated action, the Zone of Proximal Development (ZPD), and the recognized role of scaffolding in enabling learners to perform outside of their independent capabilities.

CMC environments replicated and expanded upon these concepts. The results of the previous chapter demonstrated that learners were not passive beneficiaries of digital tools, but were active participants in the dialogic possibilities made available to them through the affordances afforded by discussion forums, collaborative documents, and messaging applications. Each of these types of affordances were cultural artifacts that mediated learner interaction, problem-solving and co-construction of knowledge.

Lantolf and Thorne (2006) describe mediation as "the introduction of tools whether psychological or technological into the human activity system, changing not only how a task is performed but the very nature of the task itself" (p. 6). In this view, writing an essay in a collaborative Google Doc is not merely a digital analogue to paper-based writing. It is an entirely new form of activity shaped by affordances like real-time editing, multimodal annotation, and peer commentary.

Moreover, the asynchronous format of many CMC tools allows for delayed but deep scaffolding, as peers and instructors can offer targeted feedback at the learner's ZPD. As one learner in Kadri's (2018) study explained: "When I read the teacher's comment the next day, I was able to fix it better than if they had said it in class. I had time to think and check examples before answering" (p. 148). This demonstrates how temporal flexibility and CMC encourage learner reflection and subsequent uptake of training burdens associated with Vygotskiean learning. Therefore, CMC is more than a neutral medium for SLA; it is a transformative learning environment influencing how mediation, interaction, and development occur.

4.10. Multiliteracies and Digital Discourses

The rise of CMC as a primary educational communication tool also connects with the multiliteracies framework, which was articulated by the New London Group (1996) and later expanded by Cope and Kalantzis (2000). Multiliteracies acknowledges that literacy now extends beyond linear print-based texts. Literacy can be defined as how successfully a student can traverse a web of modes, genres, and sociocultural circumstances.

The findings from this study, similarly, confirm that students are not only interacting with text, but also with images, hyperlinks, emojis, and multimedia. This engagement requires new semiotic skills, as the students revise and edit their writing while negotiating an audience, tone, design, and interactivity at the same time. Kern (2006) observed that "digital writing

requires new competencies with textual production and interpretation that are grounded in multimodality, interactivity, and cross-cultural pragmatics" (p. 189). This is significant for students learning in multilingual and multicultural contexts. As students navigate their choice of language, they also must navigate the cultural expectations their communication styles, level of politeness, and the nature of their argumentation.

The informal vs. academic discourse tension observed in the data also reflects the "shifting genres" of digital communication. As learners switch between WhatsApp conversations, discussion forums, and formal essays, they must engage in genre switching a skill that requires both rhetorical awareness and meta-linguistic reflection. The multiliteracies perspective thus reframes the role of language educators as not only teaching linguistic accuracy but also cultivating designers of meaning, capable of navigating and producing texts across multiple digital landscapes.

4.11. Identity Construction in Virtual Learning Environments

A third important theoretical implication has to do with language learner identity, an increasingly important focus in SLA research. Language learning is not just about learning grammar, it is also about developing, negotiating, and performing identities in and through the target language (Norton, 2013).

CMC environments are particularly well-suited for this type of identity work. In an asynchronous or synchronous digital space, learners can "choose" how to represent themselves, when to interact, and the register or persona to adopt. Choices that are made reflect an identity that is emerging in terms of using the L2, but that also includes social, cultural, and emotional elements. Norton (2013) states that the digital tool(s) "provide learners more control over the 'how' and 'when' of their participation in language practices, which can favour the more agentive construction of learner identities." The data presented in this study supports this idea;

learners who engaged with CMC tasks expressed increased confidence, willingness to participate, and increased feelings of legitimacy when using English.

For students from marginalized backgrounds (e.g., students who are unable to use the classroom for their own purposes because the classroom is a powerful institution that is often not inclusive of marginalized groups) in particular, this is important. CMC tools allow students to democratize who they are in the interaction processes of language learning - to negotiate voice, agency, legitimacy, and belonging in interaction that is often ceded in classroom settings dominated by powerful hierarchies.

Moreover, the performative aspects of identity in digital environments are amplified by audience awareness and persistent textuality. Unlike oral classroom speech, which disappears after it is spoken, digital texts remain visible, editable, and shareable. This creates both opportunities and anxieties for learners managing their self-presentation.

Digital communication extends beyond linguistic exchange, offering a space for personal and social expression. As Thorne (2008) emphasizes: “Online communication is not just about language use; it is a medium for projecting and experimenting with identity, particularly in L2 contexts where students are actively constructing new versions of themselves” (p. 536). Thorne (2008) asserts that platforms serve as powerful tools for identity exploration, especially in second language contexts where learners shape and redefine their sense of self.

In sum, the theoretical implications of this study position CMC as not just a pedagogical tool, but a transformative social practice that reconfigures the way learners interact, perform, and become language users in the world.

4.12. Pedagogical Implications: Designing Instructional Practice in CMC

The findings of this study suggest a need to revisit how we think about, design, and implement language instruction in a digital interaction context (which is now largely unavoidable and, in many contexts, may be considered a primary mode of communicative practice). The following section describes four broad pedagogical areas that will all be addressed by our integration of CMC:

- Feedback and Assessment
- Task Design for Collaboration and Reflection
- Genre Awareness and Digital Literacy
- Professional Development and Teacher Identity

Each of these subsections will provide ideas for how teachers and curriculum designers can engage with the affordances and challenges associated with pedagogies in CMC environments in foreign and second language learning contexts.

CMC repositions feedback in time, modality, and interpersonal relation. Feedback can be provided in a dynamic process rather than solely the end of a learning cycle (like in most traditional, linear classrooms where feedback is given orally and typically in real time). Digital media can offer feedback asynchronously, lead in time, and use multiple modalities (written, audio, video, annotated).

The findings from this study indicated that students liked potential to receive asynchronous feedback that afforded them more time to think and revise their work. The format in which feedback is delivered can significantly influence how learners process and act on it.

In Kadri's (2018) study one learner remarked: "When feedback was shown in comments on my document, I was able to think more, do research, and fix things better than if it were just verbal in class." (p. 145). This reflects how written, document-based feedback encourages deeper reflection, independent research, and more effective revision compared to fleeting in-class verbal comments. Moreover, it aligns with Carless and Boud's (2018) claim that feedback should be sustainable and contribute to the learner's capacity for self-regulation over the long-term. CMC supports this with revision cycles, peer review, and instructor comments that are both reflective and dynamic, meaning they do not disappear when the student submits their final document.

Implications for teachers include:

• Consciously focusing on feedforward approaches to assist students in acting on feedback in the future.

• Preparing students for feedback literacy, or to be aware of how to make sense of, and act on written comments.

• Using comments embedded within the student's work (track changes, comment threads, voice comments) which offer a clear, situated and guided response.

From an evaluative standpoint, CMC essentially promotes a process-oriented evaluation. Instructors can assess drafts, engagement in peer reviews, and self-reflective commentary, and not just the outcome (or product), and thus evaluative standards show agreement with many of the constructivist principles.

4.13. Designing Collaborative and Reflective CMC Tasks

CMC provides unique opportunities for collaborative knowledge-building. Unlike limited in-class tasks, asynchronous CMC environments allow learners time to reflect on and contribute to conversations asynchronously, while integrating prior comments, ideas or documents, thus allowing for higher order thinking and a longer engagement with content.

Overall, learners' CMC tasks showed they were doing collaborative writing, commenting, and peer review with more autonomy and motivation than other projects or tasks. Bodomo (2010) says that the asynchronous nature of CMC creates what he calls, "distributed cognition", where learners who had varying spatial and temporal task involvement shared the cognitive work collectively.

Some ideas of effective task design in CMC contexts include:

- Using roles within group collaborative tasks that are structured (i.e., summarizer, questioner, language checker, etc.).
- Promote metacognitive reflection including having the learners considering posting a process log or learning journal entries after various aspects of a writing task.
- Encourage co-authoring and extending dialogs embracing forums, blogs, wikis and shared documents.

Most importantly, collaboration shouldn't be an afterthought when designing activities, it should be an intrinsic and embedded principle of your design. You should have enough flexibility with the design for there to be opportunities for dialogue, but directed enough that it does not misalign with curricular outcomes.

4.14. Scaffolding Genre Awareness and Digital Literacies

Learning through CMC occurs within many different discourse situations, from informal messaging to academic discussion threads. Across these situated acts of negotiating meaning, students may face genre confusion since they are unaware of their transfer of informal message language features to formal register as shown in Ghaskil (2019).

For our students to overcome genre confusion, it is critical for us to incorporate genre-based scaffolding into our instruction. Instead of reinforcing clear dichotomies between informal and formal registers, it is more productive to frame informal and formal messaging as genre options, every facet of language represents choices, where we require strategic awareness of contextual-based needs or requirements.

Some of our instructional practices may include:

- Engaging in genre-based investigation of representative sample texts from varied contexts (e.g., shed light on a WhatsApp message vs. a forum post or an academic essay).

- Teaching our students to code-switch how to transition their tone, vocabulary, or structure depending on their audience and intent.

- Designing multimodal composition assignment options (e.g., infographics, annotated blogs, video diaries) to develop flexible communicative competence.

The pedagogical orientation we adopt here supports what Cope and Kalantzis (2000) refer to as "design pedagogy", whereby the learners become the designers of meaning within semiotic landscapes.

4.15. Professional Development and Change in Teacher Identity

The incorporation of CMC alters the learning of students as well as the identity and work of teachers. Teachers in the study moved from transmitting knowledge, small adjustments made to structural levels of being facilitators, designers, and mentors, while leaving some responsibility to the students for the learning that transpired. In other words, the results of this diversity-focused study irrefutably transformed the documented identity of teacher to teacher-learner, encompassing pedagogical assumptions as well as personal emotional safety and security.

That said, participants hesitated to reconcile disadvantages, despite describing advantages to CMC. Following Kadri (2018), teachers were meant to methodically be departed from traditional thinking and behaviours that put them into danger of being found out or assumed only as the univocal knowledge voice (p. 153) without any formal responsibility for the professionally adaptive rank of the CMC work.

For effective and ethical CMC implementation universities must permit:

- Ongoing professional development contextualized with the practice of using digital tools with pedagogy, rather than merely technical training.

- Acknowledge and reward the digital innovations in the teaching evaluation and promotion process.

- Leverage collaborative communities of practice where educators share views, collectivize issues with the boundary of diversity-focused friendship, and reflexively enact on the constructs of being educator as learner.

  Moreover, teachers should be supported in developing a critical digital pedagogy

(Selwyn, 2016) one that engages with issues of power, access, equity, and learner voice in online environments.

In this context, professional development is not a one-time workshop but a continuous, reflexive process of adaptation, co-learning, and pedagogical imagination.

4.16. Strategic Recommendations by Stakeholders

Language education will not happen through individual teacher action alone with CMC use; it should be framed as an organized effort involving educators, institutions, and researchers. This section outlines strategic recommendations for what together will involve some degree of researching the research-informed sections presented through interviews and literature, create action systems to allow longitudinal follow-up and potential future research. These recommendations are framed from the triangulated findings and as a theoretical consideration. Each stakeholder group has its own set of research-based recommendations:

- Language Teachers
- Institutional Leaders and Policymakers
- Academic Researchers and Teacher-Educators

These recommendations will be research-based, contextualized through the literature, and aimed at making systemic, sustainable change happen.

4.17. Use of CMC Purposefully and Pedagogically

Teachers should be thoughtful and deliberate about the use of CMC. The selection of a tool should reflect the intended learning outcomes, task type, and learner needs. For example, asynchronous tools (forums and blogs) are better suited to facilitate reflection, and synchronous

tools (chat and video conferencing) offer opportunities for fluency and spontaneous interaction.

Teachers recommended to consider some questions about the tool before using it:

• What communicative skill does the tool promote?

• What degree of learner autonomy is needed with using the tool?

• How does the tool create scaffolding for interaction or revision?

Scaffold Genre Awareness and Digital Register Control. Teachers recognize that there is a danger for informal discourse to adversely influence students' academic writing. Therefore, teachers should incorporate explicit instructional practices that allow students to understand the conventions that define digital genres and language use appropriate to a given context. Instead of discouraging informal communication altogether, students can be taught how to code-switch by using their informal communication to examine rhetorical flexibility.

- Teachers can consider a variety of practices including:
- Tasks that encourage comparing genres (e.g. comparing a chat message to an argumentative essay).
- Providing feedback that considers tone, audience and purpose.
- Engaging students in task-based activities in which they maintain one of the communicative purposes while shifting registers for variable audiences.

4.18. Leverage Collaborative Writing and Peer Review

Teachers should design tasks that involve co-authoring, peer feedback, and multi-draft writing. Shared platforms like Google Docs or wikis allow students to contribute

asynchronously while learning from each other's linguistic and rhetorical choices. In educational settings, collaboration is often misunderstood as merely task-sharing. "Collaboration is not just about dividing labour; it is about co-constructing meaning and identity" (Thorne, 2008, p. 538). Thorne (2008) highlights true collaboration involves jointly shaping ideas and identities, making it a transformative process rather than a logistical one.

4.19. Recommendations for Institutional Leaders and Policymakers

4.19.1 Invest in Pedagogically Oriented Digital Training

Professional development should be continuous, contextualized, and tied to professional identity and teaching practice, not only tech demonstrations. Teachers need time, space, and mentorship to learn how CMC is not simply a new delivery mode, but changes pedagogy altogether. Some recommendations include:

- Proper training in task design, digital feedback methods, and CMC-mediated assessment.
- Inserting explicit recognition of digital teaching when developing promotion and evaluation frameworks
- Providing support for teacher-led action research and digital innovation grants
- Prioritize Digital Equity and Infrastructure

Technology integration can only support equity to the degree that it provides access. Students with unreliable devices, intermittent Internet connectivity, or an equally challenging range of domestic responsibilities, are at risk of inequitable learning experiences overall. Digital learning environments demand a more expansive understanding of what true access entails. Warschauer (2003) argues: "Equity in digital learning is about far more than having a

computer; it is about having access to content, to community, and to the capacity to create and share" (p. 44). This quote underscores that equity in digital education involves not just hardware, but meaningful access to knowledge, collaboration, and creative participation.

4.19.2 Institutional priorities must include:

- Lending programs for devices
- On-campus access points with extended hours
- Universal design policies for accessibility
- Align Curriculum and Assessment with CMC Practices

Digital pedagogy requires assessment structures that reward process, collaboration, multimodality, and self-reflection. Institutions should encourage curricular models that value formative, iterative tasks as much as summative tests.

This includes:

- Allowing digital portfolios and peer-reviewed projects
- Assessing feedback literacy and participation, not just final submissions
- Supporting interdisciplinary integration of digital literacies across the curriculum.

4.19.3 Recommendations for Researchers and Teacher-Educators

4.19.3.1. Expand CMC Research to Diverse and Underrepresented Contexts

Current CMC literature is heavily weighted toward higher education in well-resourced contexts. Researchers should prioritize studies in:

- K-12 Schools (U.S.) Equivalent in Algerian Context:
    - **Kindergarten (K)** → Pré-scolaire (ages 5–6)
    - **Grades 1–5** → École Primaire (ages 6–11)
    - **Grades 6–9** → Collège/CEM (ages 11–15)
    - **Grades 10–12** → Lycée (ages 15–18), culminating in Baccalauréat exam
- Rural or under-resourced settings
- Multilingual and multicultural classrooms[٣]
- Special education and accessibility-focused designs

This aligns with calls for ecologically valid research studies that reflect the complexity of actual teaching and learning environments (van Lier, 2004).

4.19.3.2. Explore Emerging CMC Tools and AI-Enhanced Learning

As AI-based writing assistants, chatbots, and learning analytics proliferate, it is essential for researchers to consider not just how these tools transform practice but how the affordances and operations of these tools change our understanding of learner autonomy, ethics, writing identity, and the roles of teachers/researchers.

For example, research could ask:

- How do students view the feedback generated by AI?
- What does authorship mean for writers in AI mediated texts?
- How do educators assess AI mediated student work?

Apply Longitudinal and Multimodal Methodologies

Finally, CMC is best understood not as static, but as dynamic, or a process over time. Researchers should benefit from exploring how their learners change over time and across different platforms. Mixed method, multimodal, and longitudinal case studies will track how learner identities, competencies, and preferences shift in digital learning spaces.

Ultimately, it is hoped that these recommendations will draw connections between theory and practice, empirical observations, and strategic action. They are meant to position all relevant educational actors as not just actors using technology, but as agents of digital change, who can gently, creatively, and critically shape language education for the future.

4.20. Researcher Positionality and Reflexivity

Qualitative inquiry is a situation where the researcher is not a neutral observer but an active participant in the research process. The researcher determines how questions are asked, how they analyse data, and how meaning is constructed. Thus, it is important to reflect on the researcher's positionality the researcher's values, experiences, and epistemological commitments that influenced the direction this study took.

The decision to focus on Computer-Mediated Communication (CMC) arose not only from scholarly curiosity but also from professional experiences in language education, where digital platforms were increasingly used to mediate instruction, especially in post-pandemic settings. The researcher observed firsthand both the empowering and limiting effects of CMC tools in language classrooms: how they gave voice to shy learners, encouraged multilingual experimentation, but also introduced tensions around access, assessment, and identity.

As a result of this professional background the study was informed in a few ways:

- The research questions were framed in terms of learners' experiences. The learner experience was emphasized in the literature review and in the focus of the thematic

analysis, all too aware of capturing the affective and identity components that accompany digital learning in my role as educator.

- The literature and themes selected were grounded in the philosophy of critical pedagogy. I recognized that CMC does not happen in a vacuum, and I tried to think critically and interrogate the institutional, cultural, and technological systems around the concepts involved.

- Clare (2012) cautions about researcher confirmation bias interpreting findings similarly to current teaching practice, and so I was cognizant of this possibility and thought it was important to be open to interpreting the findings in new ways.

In this case, the value of interrogation of position, was not to disentangle oneself from one's subjectivity but rather allow it to be visible so the readers could understand how the researchers situatedness defined the inquiry. This is consistent with the principle of researcher transparency which is required for trustworthiness in qualitative and mixed-methods scholarship (Tracy, 2010; Berger, 2015).

4.21. Conclusion

This chapter has offered a detailed, nuanced interpretation of these findings, offering bold theoretical possibilities and practical conceptualizations to the field of digital age language education. The chapter has interrogated how CMC can impact student attitudes to language learning, language development, teacher roles and institutional praxis, based on a triangulated data set as well as contextualized by academic literature in the discipline.

In conjunction with a sociocultural theory of mind, multiliteracies theory, and research of identity, this study has reframed CMC from merely a technological tool to a distinct communicative environment - one in which learners co-construct their own meanings,

negotiate identities, and engage in a plethora of semiotic practices.

In terms of pedagogies, the chapter suggested that task development and design can foster learner autonomy, constructive feedback and genre awareness; in terms of institutions, it suggests that sustainable investments are needed to support development of infrastructures, training, and digital and pedagogical equity. Strategic recommendations for teachers, policy makers, and researchers were offered to bridge theory and practice as well as develop sustainability and innovation.

Lastly, reflexively recognizing my positionality as a researcher, the chapter indicated that academic research is always situated, and that reflexivity enhances, not detracts from, academic credibility. In conclusion, this chapter not only extends the dissertation in terms of contribution by offering interpretation but offers a vision: a model of language education pedagogy and practice that is digitally literate, grounded in pedagogy, and critically engaged with the realities and possibilities of CMC.

General Conclusion

General Conclusion

The present research set out to examine the role of Computer-Mediated Communication (CMC) in enhancing self-perception, autonomy, and engagement among Algerian undergraduate EFL learners, with a focus on the first-year cohort at a public university. This inquiry was motivated by the recognition that, despite the global shift toward digitally mediated learning environments—accelerated by the Covid-19 pandemic—there remained a paucity of empirical research exploring how CMC functions within the socio-cultural and infrastructural realities of Algerian higher education. While CMC has been widely studied in other educational contexts, its pedagogical potential in Algerian TEFL classrooms, particularly in relation to transactional distance, autonomy, and learner identity, had not been comprehensively addressed.

Framed by Transactional Distance Theory (TDT) and enriched by perspectives from Communicative Language Teaching (CLT), Self-Efficacy Theory, and Constructivist approaches, the study adopted a mixed-methods research design. Quantitative data were collected via structured questionnaires administered to both students and teachers, while qualitative data emerged from open-ended survey items and thematic analysis of narrative responses. This methodological triangulation ensured that the findings were not only statistically supported but also contextually and interpretively rich, capturing the nuances of participant experiences.

The findings of the study reveal several critical insights. First, CMC, when integrated with purposeful pedagogical design, was shown to significantly enhance learner engagement, facilitate authentic communication opportunities, and foster positive self-perception among students. Learners reported increased confidence in expressing themselves in English and a

greater sense of agency in managing their own learning. Second, the data confirmed that effective use of CMC can reduce both psychological and structural dimensions of transactional distance, aligning with core tenets of TDT. When learners experienced sustained, interactive, and feedback-rich communication with instructors, they reported stronger connections to course content and higher satisfaction with the learning process.

However, the findings also highlighted persistent barriers that must be acknowledged. Infrastructural challenges—such as inconsistent internet connectivity, limited access to devices, and the absence of institutional support systems—continue to hinder the full pedagogical potential of CMC. Digital literacy gaps among both students and teachers were also evident, underscoring the need for targeted professional development initiatives. Moreover, while CMC was generally perceived positively, residual preferences for teacher-centred, face-to-face instruction suggest that cultural and pedagogical mindsets play a role in shaping technology adoption.

From a theoretical perspective, this research contributes to the refinement of Transactional Distance Theory by demonstrating that, in resource-constrained environments, structural and psychological distances are influenced not only by instructional design but also by socio-economic and infrastructural conditions. The findings extend the application of TDT to a new geographical and cultural context, while also illustrating the interplay between learner autonomy, self-efficacy, and digital engagement.

In terms of contribution to practice, this dissertation offers evidence-based recommendations for integrating CMC more effectively into Algerian EFL classrooms. These include:

1. Designing CMC tasks that align closely with communicative competence goals, ensuring they are interactive, collaborative, and contextually relevant.
2. Providing sustained professional development for teachers to build both digital literacy and pedagogical strategies for online engagement.
3. Establishing institutional policies that guarantee equitable access to digital resources and reliable internet connectivity.
4. Encouraging blended learning models that combine the strengths of both face-to-face and online modalities.

The limitations of this study must also be acknowledged. The research was conducted within a single university and over a limited timeframe, which may affect the generalisability of the findings. The reliance on self-reported data also means that responses were subject to participant perceptions and potential bias. Nevertheless, the methodological triangulation employed here strengthens the reliability and validity of the conclusions drawn.

Future research should address these limitations by undertaking longitudinal studies across multiple institutions and by exploring CMC integration in other disciplines beyond EFL. Comparative studies examining rural versus urban contexts, as well as the role of emerging technologies such as AI-based language learning tools, would further enrich the understanding of CMC's pedagogical potential in Algeria and similar contexts.

In closing, this dissertation affirms that CMC is not merely a technological add-on to traditional teaching but a transformative pedagogical approach that, when implemented thoughtfully, can bridge distances—both physical and psychological—between teachers and learners. In the Algerian TEFL context, where educational reform and global integration are pressing priorities, the strategic and equitable adoption of CMC offers a viable pathway toward more learner-centred, autonomous, and globally connected language education. The challenge

ahead lies in ensuring that technological innovation is matched by infrastructural investment, teacher empowerment, and a sustained commitment to pedagogical excellence.

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Appendices

List of Appendices

Appendix A: Sample of Students Questionnaire

CMC as a Medium of TEFL (Student Questionnaire)

Dear Student,

You are invited to contribute to a doctoral **research** through this questionnaire, which seeks to understand your views on first-year teaching methods, and your readiness for using Computer-Mediated Communication (CMC) in learning.

This survey is anonymous and ensures confidentiality.

The term "**Social Media Platform**" refers to websites like TikTok, Facebook, Instagram, and others that allow for sharing and creating content.

Thank you for your important contribution to this study.

* Indicates required question

Background Information

1. University of affiliation *

2. **Gender** *

Mark only one oval.

- ◯ Male
- ◯ Female

3. **Age** *

Mark only one oval.

- ◯ 17 - 21
- ◯ 22 - 27
- ◯ More than 27

4. **Do you have a full time or part-time job while you study?** Dropdown

Mark only one oval.

- ◯ Yes
- ◯ No

Familiarity with Digital Communication

5. Do you use a digital device that allows you to communicate via Internet**? (Phone,** * **tablet, laptop…)**

Mark only one oval.

- ◯ Yes
- ◯ No

6. **For how long have you been using your digital device?** *

Mark only one oval.

- ◯ Less than 5 years
- ◯ More than 5 years

7. **Do you frequently use your smart device to send text messages?** *

Mark only one oval.

- ◯ Yes
- ◯ No

8. **When writing messages, SMS, email, posts..., how do you choose your words?** * Dropdown

Mark only one oval.

- ◯ Writing out complete words
- ◯ Paying attention to grammar rules
- ◯ Using informal words or phrases
- ◯ Using internet slang like "LOL" or "BRB"

9. **How often do you use academic English in your text messages?** *

Mark only one oval.

- ◯ Always
- ◯ Often
- ◯ Sometimes
- ◯ Rarely
- ◯ Never

10. **Which internet language features do you use?** *

Check all that apply.

- [ ] Abbreviations (Univ, Eng, Fr ...)
- [ ] Clipping (cause, phone, sec, copter, …)
- [ ] Acronyms (ASAP, LOL, BTW, FYI, …)
- [ ] Compounding (CYBER STALKER, HOTMAIL, README, …)
- [ ] Derivation (CYBERspace, Reboot, HYPERlink, …)
- [ ] Symbols (:-D, :-0, :-), :-(, …)
- [ ] Emoticons (😀 🤣 , ….)
- [ ] Combination of letters and numbers (F2F, B4, 2B, 4EVER…)

11. **Is your academic English affected by the time you spend on the net?** *

Mark only one oval.

- ◯ Yes
- ◯ No
- ◯ Other: _____

12. How? *

_____

13. **You use computer-mediated communications to send messages:** *

Check all that apply.

- [ ] When I don't have enough phone / internet credit
- [ ] When I don't want to disturb someone with a phone call
- [ ] For the fun of using computer-mediated communications
- [ ] When I'm angry and I don't want to talk
- [ ] When I'm unable to express myself
- [ ] When I'm in public places
- [ ] Because everybody uses computer-mediated communications

14. **Which of the following tools do you use most?** *

Mark only one oval.

- ◯ Instant messaging (Messenger, Viber, Skype, …)
- ◯ Social networks (Facebook, Instagram, Twitter, …)
- ◯ Texting (using your cell phone and the public networks …)

15. **Do you consider yourself addicted to computer-mediated communications?** *

Mark only one oval.

- ◯ Yes
- ◯ No

16. **Do you think that the internet language affects your academic English?** *

Mark only one oval.

- ◯ Yes
- ◯ No

17. **If you know that internet language is affecting negatively your academic English, will you continue using it?** *

Mark only one oval.

- ◯ Yes
- ◯ No

18. **Do you think that you can stop CMC** (Instant messaging, Facebook, telegram, Instagram, twitter (X), sms…)? *

Mark only one oval.

- ◯ Yes
- ◯ No

19. **How can you improve your academic English with frequent use of CMC?** *

Check all that apply.

- ☐ Active involvement in scholarly discourse.
- ☐ Seeking comments on written work.
- ☐ Participate in language exchange programmes.
- ☐ Using grammar and spell-checking tools.
- ☐ Attending written and spoken communication seminars or courses.
- ☐ Using academic terminology in regular conversations.

Students' Level of Motivation and Learning competencies

According to your experience with online course during the previous weeks, show your agreements or disagreement with the following statements.

20. **I felt comfortable when using social Platforms as a teaching tool throughout the online session.** *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly agree

21. **I felt more comfortable during the online session since I could talk to the instructor privately at any moment of my issues.** *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly agree

22. **Social platforms are helpful for learning** *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly agree

23. How? *

24. **I felt intellectually, emotionally, and technically supported throughout the online session** *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

25. **I felt more confident during the online session** *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

26. **E-documents and browsing the internet encouraged me to study autonomously and responsibly.** *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly agree

27. **I learned self-discipline and timeliness from the online session (monitoring Group updates, e-mail updates, and being on time for the course...).** *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

28. **Being online gives me the opportunity to say what I want freely.** *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

Students' Attitudes Towards Teaching Practices

29. **My instructor gave us enough feedback throughout the online session.** *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

30. **My classmates provided with enough input throughout the online session.** *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

31. **Getting feedback from others on my works (answers) made me more conscious of my errors.** *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

32. **My internet experience opened my mind to different viewpoints to mine.** *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

33. **The online course has improved my ability to analyse and evaluate.** *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

34. **In general, I had enough time to reflect and respond to questions that were submitted in online classes.** *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

35. **I usually had plenty of time to make inquiries in** online classes. *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

36. **Because I could access internet chats from anywhere at any time, I could acquire things more effectively.** *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly agree

37. **Having access to e-documents improved my comprehension of the course material.** *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

38. **Using a grammar checker motivated me to edit my papers before sharing them.** *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly agree

Classroom Experience and Feedback Assessment

39. **How much time did you spend on activities in (one) session?** *

Mark only one oval.

- ◯ Less than 30 minutes
- ◯ 30 min to 1 hour
- ◯ 1 hour and a half

40. **Do you think that the time allocated in class was sufficient to correct tasks?** *

Mark only one oval.

- ◯ Yes
- ◯ No

41. **Have you been given enough feedback on the tasks?** *

Mark only one oval.

- ◯ Yes
- ◯ No

42. **What type of feedback?** *

Mark only one oval.

- ◯ Teacher's Feedback
- ◯ Classmates' Feedback

43. **Have you been given opportunities to assess yourself?** *

Mark only one oval.

- ◯ Yes
- ◯ No

44. **What type of classroom communication was allowed?** *

Mark only one oval.

- ◯ Teacher-student communication
- ◯ Student-student communication
- ◯ Both

45. **Were the learning resources provided by the teacher satisfactory for you?**

Mark only one oval.

- ◯ Yes
- ◯ No

46. **Did your teacher encourage you to consult further resources?**

Mark only one oval.

- ◯ Yes
- ◯ No

47. **If "yes", give an example (of resources)**

48. **Were you happy with the method of teaching** in online classes? *

Mark only one oval.

- Yes
- No

Assessing CMC in Learning

49. **The online session inspired me to make a significant effort.** *

Mark only one oval.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

50. **I felt like I was part of a community in online classes.** *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly agree

51. **The instructor provided meaningful and timely feedback in online classes.** *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly agree

52. **The instructor and classmates were easy to get in touch with during the online session.** *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

53. **I sometimes had the opportunity to contact my teacher outside of our scheduled meetings (through e-mails).** *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly agree

54. **I had no trouble accessing the online session.** *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

55. **I could follow the online session progression and structure.** *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly agree

56. **The lessons given in class and the online exercises were related.** *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

57. **There was more input in online classes learning experience.** *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly Agree

58. **In addition to the lectures, I was required to do extra readings or assignments.** *

Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Neutral
- ◯ Agree
- ◯ Strongly agree

59. **What factors affect your liking?** *

Check all that apply.

- [ ] The content of the subject you learn.
- [ ] The type of interactions allowed in class.
- [ ] The type of activities you do.
- [ ] The physical environment in which you study.
- [ ] The level of your classmates.
- [ ] The teacher's behaviour.

Students' Readiness for the Use of CMC in the Learning Experience

60. **What you can say about your computer / devices** (phone, laptop) **skills?** *

Mark only one oval.

- ◯ Poor
- ◯ Moderate
- ◯ Good
- ◯ Excellent

61. **What can say about your mobile skills?** *

Mark only one oval.

- ◯ Poor
- ◯ Moderate
- ◯ Good
- ◯ Excellent

62. **What can say about your skills in surfing on the Internet?** *

Mark only one oval.

- ◯ Poor
- ◯ Moderate
- ◯ Good
- ◯ Excellent

63. **How many hours per day do you stay connected to Internet?** *

Mark only one oval.

- ◯ Less than 1 hour
- ◯ From 1 hour to 3 hours
- ◯ From 3 hours to 5 hours
- ◯ More than 5 hours

64. **What are the activities you do when you are connected to the Internet?** *

Check all that apply.

- ☐ Read for fun
- ☐ Play games
- ☐ Listen / Download music
- ☐ Watch / Download videos / movies
- ☐ Read information to complete some homework/prepare for exams.
- ☐ Online text chat / write e-mails

65. **Have you been taught a course in an online environment?** *

Mark only one oval.

- ◯ Yes
- ◯ No

66. **If you are to study a course online, can you easily access internet when it is needed?** *

Mark only one oval.

- ◯ Yes
- ◯ No

67. **How do you access Internet?** *

Mark only one oval.

- ◯ Home
- ◯ Internet café
- ◯ university library
- ◯ Mobile LTE/3G

Students' Readiness to Use Social Platforms as a Pedagogical Tool

68. **How often do you connect to online platforms?** *

Mark only one oval.

- ◯ Never
- ◯ Rarely
- ◯ Sometimes
- ◯ Often
- ◯ Very Often

69. **What do you use as an online platform?** *

Check all that apply.

- [ ] Discord
- [ ] Facebook
- [ ] Youtube
- [ ] Telegram
- [ ] Moodle
- [ ] Instgram
- [ ] Snapchat
- [ ] others

70. **Which of the following CMC components you regularly use?** *

Check all that apply.

- [ ] E-mailing
- [ ] Texting
- [ ] Social networking
- [ ] Tweeting
- [ ] Blogging
- [ ] Video conferencing
- [ ] Other: _____

71. **What do you use the online platforms for?** *

Check all that apply.

- [ ] Post / or read posts for fun.
- [ ] Post / or read posts for educational purposes
- [ ] Play online games.
- [ ] Listen / Download music.
- [ ] Watch / Download videos/episodes.
- [ ] Online text chatting
- [ ] Online video chatting
- [ ] Interactions with classmates

72. **Are you interested to study on online platforms?** *

Mark only one oval.

- ◯ Yes
- ◯ No

73. **Would you like the fact that your interactions are observed by your teacher and classmates?** *

Mark only one oval.

- ◯ Yes
- ◯ No

74. **How often were you absent from online sessions so far?** *

Mark only one oval.

- ◯ Very often
- ◯ Often
- ◯ Sometimes
- ◯ Occasionally
- ◯ Never

75. **Did you experience any obstacles while learning in a online environment?** *

Mark only one oval.

- ◯ Yes
- ◯ No

76. **What are the *benefits* of communicating with your *teacher / classmates* via the Internet?** *

77. **What are the *challenges* of communicating with your *teacher / classmates* via the Internet?** *

78. **What do you do to make communication with your *teacher / classmates* via the Internet *beneficial*?** *

79. **What were the obstacles?**

Appendix B: Sample of teachers Questionnaire

CMC as a Medium of TEFL (Teacher Questionnaire)

Dear Teacher,

This questionnaire is part of ongoing **doctoral research** aimed at e**xploring perceptions, attitudes, and experiences** regarding the integration of **Computer-Mediated Communication (CMC)** in **TEFL within the Algerian context**. Your responses to this questionnaire hold significant value for advancing this study.

Rest assured, this questionnaire guarantees **anonymity**, and all responses will be handled with utmost confidentiality and will be used for research purposes only.

The term "**Social Media Platform**" encompasses a diverse array of web-based platforms facilitating user-generated content creation, sharing, and aggregation. Examples of such platforms include TikTok, Facebook, Instagram, LinkedIn, Twitter, Discord, and Telegram.

Y**our valuable contribution to this research endeavor is deeply appreciated.**

* Indicates required question

Background Information

1. **University of Affiliation** *

2. **Gender** *

Mark only one oval.

- ◯ Male
- ◯ Female

3. **Age** *

Mark only one oval.

- 23 - 29
- 30-39
- 40-49
- more than 50

4. **Highest Level of Education** *

Dropdown

Mark only one oval.

- Master
- Magister
- MCA
- Professor

5. **Teaching Experience** *

Mark only one oval.

- 1 - 5 years
- 6 - 10 years
- 11 - 20 years
- more than 20 years

6. **Please evaluate your proficiency in utilizing internet navigation techniques** *

Mark only one oval.

- ◯ Poor
- ◯ Moderate
- ◯ Good
- ◯ Excellent

7. **Do you use online platforms?** *

Mark only one oval.

- ◯ Yes
- ◯ No

8. **What is the average duration of your daily Internet connectivity?** * Dropdown

Mark only one oval.

- ◯ Less than one hour
- ◯ From 1 to 3 hours
- ◯ From 3 to 5 hours
- ◯ More than 5 hours

Perceptions of Educators Regarding the Utilisation of Computers in Classroom and Non-Classroom Communication

Teachers' Experience with CMC

9. **Are you familiar with the process of teaching a class in a virtual classroom (online)?** *

Mark only one oval.

- ◯ Yes
- ◯ No

10. **If "no", why?**

Check all that apply.

- ☐ I have my doubts about the efficacy of online education in Algeria (passive learners, Internet connection).
- ☐ I do not consider myself to be technically prepared.
- ☐ I am familiar with the techniques being used.
- ☐ I have little knowledge with online teaching, including time management, virtual classroom management, and fostering an engaging learning environment.

11. **If yes, what was the objective of the course (subject: lecture, quiz, exam… etc.)?**

12. **Online components you use** *

Check all that apply.

- [ ] Email e.g. Gmail, Outlook, Yahoo Mail
- [ ] Instant Messaging (IM) and Chat Rooms e.g. WhatsApp, Telegram, Discord
- [ ] Social Networking Sites (SNS) e.g. Facebook, Instagram, LinkedIn
- [ ] Collaborative Work Tools e.g. Google Docs, Microsoft Teams, Slack
- [ ] Video Conferencing Tools e.g. Zoom, Skype, Google Meet
- [ ] Online Learning Platforms e.g. Coursera, Udemy, Khan Academy, and Moodle
- [ ] Content Sharing Platforms e.g. YouTube, Vimeo, Flickr, and Padlet
- [ ] Webinars and Online Conferences e.g. GoToWebinar, WebEx, Adobe Connect

13. **Was there any kind of participation in the online class?** *

Mark only one oval.

- ◯ Yes
- ◯ No

14. **Was the online component class / activity learner-centered?** *

Mark only one oval.

- ◯ Yes
- ◯ No

15. **If you ever taught a course in an online setting, what were your reasons for adding an online component?** *

Check all that apply.

- [ ] To increase students' motivation.
- [ ] To increase the engagement of the learners.
- [ ] Should be knowledgeable with modern teaching techniques.
- [ ] Because the allotted time in the classroom is insufficient.
- [ ] Because establishing an engaged, learner-centered atmosphere in a face-to-face classroom is not always evident

Adopting CMC in the Algerian Context Using *Online Platforms*

Show your opinion about the following statements by saying "yes" or "no":

16. **Traditional methods alone are not very useful these days.** *

Mark only one oval.

- ◯ Yes
- ◯ No

17. **There is a need to combine online and onsite teaching methods to cope with the progressing needs of the new generation.** *

Mark only one oval.

- ◯ Yes
- ◯ No

18. **Modern social platforms are easy to use.** *

Mark only one oval.

- ◯ Yes
- ◯ No

19. **Social platforms can be effectively used for pedagogical purposes.** *

Mark only one oval.

- ◯ Yes
- ◯ No

20. **Using social platforms as part of the teaching curriculum may raise students' comfort.** *

Mark only one oval.

- ◯ Yes
- ◯ No

21. **Using social platforms as part of the teaching curriculum may raise students' interests.** *

Mark only one oval.

- ◯ Yes
- ◯ No

22. **Conducting sessions online is useful due to the flexibility of time and space they offer.** *

Mark only one oval.

- ◯ Yes
- ◯ No

23. **Online sessions may encourage learners to learn independently and be responsible for their own learning.** *

Mark only one oval.

- ◯ Yes
- ◯ No

24. **Using social platforms as part of the teaching curriculum may raise students' self-confidence (to answer teacher's and peers' questions through commenting).** *

Mark only one oval.

- ◯ Yes
- ◯ No

25. **Conducting activities in a social platform may improve students' skills of analysis and evaluation.** *

Mark only one oval.

- ◯ Yes
- ◯ No

26. **The synchronous accessibility of platforms during the online session may help students clarify ambiguous concepts (e.g.: vocabulary).** *

Mark only one oval.

- ◯ Yes
- ◯ No

27. **Are you interested in continuing to include online platforms into your teaching?** *

Mark only one oval.

- ◯ Yes
- ◯ No

28. **We would very appreciate it if you could provide us with any further recommendations you may have.** *

29. **What are the *benefits* of communicating with your students via the Internet?** *

30. **What are the *challenges* of communicating with your students via the Internet?** *

31. **What do you do to make communication with your students via the Internet** * ***beneficial*?**

32. **What were the obstacles?** *

Smart Phone Applications and computer software

- Google Calendar, Yahoo! Agenda, 30 boxes (online diaries and personal organisers)
- Cambly <Website and smart phone application= (learning English from native speakers through online chat)
- Google Forms (for creating online surveys)
- Google Documents, Zoho (creating, modifying and sharing documents online)
- WikiPedia, LitCharts, Khan Academy, Simple Mind, Wolfram Alpha, WikiPanion EBSCO Host (homework help and research)
- Facebook, LinkedIn, Myspace, Twitter (e-portfolio software and apps)
- Chegg, Amazon Kindle, OverDrive, Free Books, Guttenberg Books, Campusbook (Textbooks)

- Duolingo, Coursea, iTunes U, Anglais Facile, Hello Talk, Hello Pal, memorise (online language learning)
- InstaPaper, Ted Talks, Pocket, EasyBib (bookmark and citation)
- MyStudy Life, Scanner Mini, Documents 6, Group Board, Exam Countdown (Study tools)
- Microsoft Office, Google Docs (word editors), Microsoft Apps: Word, Excel, PowerPoint
- InterPals <Website and smart phone application= (learning English by online chatting)
- Cam Scanner (scan and convert photos to PDF)
- AdobeScan, Scannable (by Evernote), PhotoScan (for scanning images, printed text, handwriting and convert them into a digital image or text)
- Audacity (for audio recording)
- Trello, WunderList, Fabulous, MyHomework, iStudiez, ToDoist, Any. Do (organisation tools)
- OneNote, Google Keep, Zoho Notebook, Notability, Evernote, MyScript Nebo, Penultimate, Super Notes, Pages, Office Lens, Google Notebook (Note taking)
- Oxford, Merriam Webster, Dictionary.com, Magoosh Vocab Builder, Advanced Saurus, BabyLon Translator (dictionary, vocabulary and translation)
- StudyBlue, Quiziet, TinyCards, FlashCards+, Anki, BrainsCape (flashcards)
- English Novel Books Offline, 1000 English Stories (reading apps)
- Le Traducteur (for translation)
- Pronunciation Checker App Free (to check pronunciation)
- Forest (a smart phone application, which helps focusing on studying)
- FocalFilter and Cold Turkey (applications that block distracting websites)

Glossary

Glossary

Asynchronous Communication

Communication that does not occur in real time, allowing learners to engage with content, peers, or instructors at their own pace (e.g., emails, forums, blogs).

Blended Learning

An educational approach that combines traditional face-to-face instruction with online, computer-mediated learning activities.

CALL (Computer-Assisted Language Learning)

The use of computers and software applications to facilitate language learning and teaching.

CC (Communicative Competence)

The ability to use a language correctly and appropriately across various contexts, encompassing grammatical, sociolinguistic, discourse, and strategic competencies (Canale & Swain, 1980).

CLT (Communicative Language Teaching)

A language teaching approach that prioritizes interaction and real-life communication over rote memorization and isolated grammar drills, aiming to develop communicative competence.

CMC (Computer-Mediated Communication)

Human communication that takes place using digital tools such as email, forums, social media, and chat platforms.

CNEPD

An important partner in vocational training, providing education at a distance in various fields, including tourism, administration, and computing.

Digital Literacy

The ability to effectively find, evaluate, use, and create information using digital technologies critically for participating in CMC environments.

Discussion Board

An asynchronous online platform used in learning management systems (LMS) where students and instructors post and respond to messages as part of a learning activity.

EduDz

An e-learning platform for students of Algeria

EFL (English as a Foreign Language)

The learning of English by non-native speakers in a context where English is not the primary language of communication.

Feedback Loop

A cycle in which learners receive input on their performance (from peers or instructors), reflect on it, and revise their work accordingly.

Heutagogy

A student-centred learning approach emphasizing self-determined learning, autonomy, and capability development beyond traditional pedagogy.

Hybridized Genre

A written or spoken text that blends features of multiple discourse types (e.g., academic and conversational tones), often occurring in digital learning contexts.

Interactionist Theory

A theory of language acquisition that emphasizes the role of social interaction in the development of linguistic competence.

LMS (Learning Management System)

A digital platform used to deliver, track, and manage educational content (e.g., Moodle, Blackboard, Google Classroom).

Multimodal Text

A text that combines two or more modes of communication, such as visual, textual, and audio elements, common in digital environments.

Pedagogy

The method and practice of teaching, typically centred around teacher-led instruction.

Peer Feedback

Constructive comments provided by fellow learners, often used to support writing development in collaborative or asynchronous settings.

Synchronous Communication

Real-time interaction between learners and/or instructors through tools such as video calls, live chats, or webinars.

TBLT (Task-Based Language Teaching)

An instructional approach that focuses on the completion of meaningful tasks rather than explicit grammar instruction.

TDT (Transformational Distance Theory)

A concept developed by Michael G. Moore that emphasizes the importance of designing distance education to transform the learner's understanding through structured interaction, autonomy, and dialogue. It focuses on pedagogical intentionality in creating meaningful, learner-centred distance experiences that go beyond simple content delivery.

TEFL (Teaching English as a Foreign Language)

The practice of teaching English to non-native speakers in countries where English is not the dominant language.

Telecollaboration

The use of online communication tools to facilitate intercultural and language exchanges between geographically distant learners.

VIPKID: VIPKid, also known as VIPKID

An online teaching and education company.

Voice Threading

A digital activity that allows users to record spoken responses and comments on shared multimedia content, often used in language speaking practice.

الملخص

تستكشف هذه الدراسة دمج التواصل عبر الوسائط الإلكترونية (**CMC**) في تدريس اللغة الإنجليزية كلغة أجنبية لطلبة المرحلة الجامعية، بهدف تقييم تأثيره على تفاعل المتعلمين واستقلاليتهم وكفاءتهم التواصلية. وترتكز الدراسة على نظرية المسافة التداولية لمور، حيث تسعى إلى تحليل كيفية مساهمة أدوات التواصل الإلكتروني مثل المنتديات، ومنصات الدردشة، والمساحات الرقمية التعاونية في تقليص المسافة النفسية والتواصلية بين المتعلمين والمدرسين ضمن بيئات التعلم الافتراضي أو المدمج. ومن خلال اعتماد تصميم البحث المختلط حسب تصور كريسويل، جمعت الدراسة بيانات كمية ونوعية لتقديم فهم شامل لفعالية **CMC** البيداغوجية. وقد تم الحصول على البيانات الكمية عبر استبيانات موجهة للأساتذة والطلبة الجامعيين، لقياس دافعية المتعلمين ومشاركتهم وأدائهم اللغوي، في حين استُمدت المعطيات النوعية من ملاحظات المنصات الرقمية وتأملات الأساتذة. كشفت النتائج أن التواصل عبر الوسائط الإلكترونية يساهم بشكل كبير في تقليص المسافة التداولية من خلال خلق تجارب تعليمية تفاعلية تتمحور حول المتعلم، مما يعزز اكتساب اللغة ويقوي مهارات التعلم الذاتي. كما تسلط الدراسة الضوء على استراتيجيات بيداغوجية فعالة لتعزيز استخدام **CMC** في سياقات تعليم اللغة الإنجليزية كلغة أجنبية، من بينها تدرّج المهام التواصلية، وتحقيق التوازن بين الأدوات المتزامنة وغير المتزامنة، والحفاظ على الحضور المعرفي. تؤكد النتائج على أهمية تطبيق نموذج مور النظري في تعليم اللغات الأجنبية، وتبرز القيمة العلمية للمنهج المختلط في الكشف عن تعقيدات البيداغوجيا الرقمية. وتقدم هذه الدراسة دلالات تطبيقية في تصميم المناهج وتكوين المدرّسين، داعية إلى إدماج واعٍ وفعّال للتكنولوجيا لدعم تعليم لغوي هادف ومتفاعل مع السياق.

الكلمات المفتاحية: التواصل عبر الوسائط الإلكترونية (**CMC**), التعلم الرقمي, متعلمو اللغة الإنجليزية كلغة أجنبية, تدريس اللغة الإنجليزية كلغة أجنبية (**TEFL**) ,التفاعل المتزامن / غير المتزامن, نظرية المسافة التداولية (**TDT**)

Summary

This study examines the impact of integrating computer-mediated communication (CMC) tools such as forums, chat platforms, and digital collaboration spaces on the teaching of English as a Foreign Language (EFL) to undergraduate students in virtual and hybrid classrooms. Using Moore's Transactional Distance Theory and a mixed-methods approach (questionnaires, observations, and teacher reflections), the research examines the impact of CMC on learner engagement, autonomy, and communicative competence. Findings indicate that CMC reduces the psychological distance between students and teachers, resulting in more interactive, learner-centered experiences that enhance language learning and self-regulation. The study also highlights effective teaching strategies for using CMC and offers recommendations for curriculum design and teacher training in tech-enhanced EFL education.

Keyterms: Autonomy, Computer-Mediated Communication (CMC), EFL, Learner Engagement, Transactional Distance Theory (TDT)