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**The Impact of Asynchronous Online Learning on First EFL Master's  
Students' Mental Health and Academic Achievements in Post-Covid  
Algeria**

**The Integration of ICT in Higher Education: First Year Master  
Students as a Case Study**

A thesis submitted as partial fulfilment of the requirements for the degree of *Master* in  
Didactics.

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**Academic Year: 2023/2024**

## **Declaration of Originality**

I hereby declare that this submission is my work and that, it contains no material previously published or written by another person nor material that has been accepted for the qualification of any other degree or diploma of a university or other institution.

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## **Abstract**

This study investigated the impact of asynchronous online learning on the self-esteem, mental health, and academic achievement of first-year Master's (M1) EFL students at the University of Saida, Algeria, in the post-COVID era. A mixed methods approach was employed, utilizing classroom observations, student questionnaires, teacher interviews, and a review of student grades. The findings revealed increased student distractions, a shift in student-teacher interaction dynamics, a more subdued classroom climate, and negative impacts on student mental health. Based on these findings, recommendations are proposed to foster student-teacher interaction, re-establish classroom norms, utilize differentiated approaches to engagement, and address student mental health concerns. By implementing these recommendations and continuously evaluating online learning practices, educators can create more supportive and successful learning environments for EFL students.

Key words:

Academic achievement ;Asynchronous online learning ; EFL students ; Mental health ; Mixed methods ; post-COVID; Self-esteem

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# **The General Introduction**



# The General Introduction

## General Introduction

The COVID-19 pandemic forced a rapid shift to asynchronous online learning in universities worldwide, including Algerian institutions like the University of Saida. This dissertation investigated the impact of this learning mode on first-year Master's (M1) EFL (English as a Foreign Language) students in the post-pandemic era, particularly focusing on the potential link between asynchronous online learning and student self-esteem, and how it affects their learning behavior, motivation, and academic achievement.

The absence of teacher-student interaction during online learning, a dominant mode in Algerian universities during the pandemic (2020/2021 & 2021/2022), raised concerns about its impact on student learning. The asynchronous format, often relying solely on uploaded materials on platforms like Moodle, lacked crucial components like real-time interaction and clear learning objectives. This potentially led to negative student attitudes, anxiety, and low self-esteem, ultimately affecting their mental health and academic achievements in the post-covid era.

This research addresses this critical issue, as asynchronous online learning continues to be used even beyond the pandemic. By investigating the link between online learning and student self-esteem, the study aims to shed light on the underlying reasons for potentially lower academic achievement and propose solutions for improvement.

The research aimed to uncover the potential decline in student self-esteem due to asynchronous online learning. Furthermore, to explore the impact of this mode on student mental health and the emergence of mental health issues. And to investigate how these online-induced mental health concerns affect student attitudes, motivation, and academic achievement. The following hypotheses guided the investigation. First, students who participated in asynchronous online learning would exhibit lower self-esteem compared to traditional, in-person instruction. Second, online learners would

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report higher levels of anxiety and other mental health concerns. Third, there would be a negative correlation between students' self-esteem, mental health (as impacted by online learning), and their academic achievements.

A mixed-methods approach was employed, incorporating:

- Classroom observations to capture student engagement and interaction patterns.
- Student questionnaires to explore self-esteem, perceived mental health, and attitudes towards online learning.
- Interviews with M1 EFL teachers to gain insights into their experiences and observations.
- Review of student grades to examine potential correlations between online learning and academic outcomes.

The findings, which will be presented in detail in the subsequent chapters, will provide a comprehensive understanding of how asynchronous online learning influences EFL student well-being and academic success.

Based on the research findings, recommendations can be made to foster a more supportive and engaging learning environment in the post-pandemic classroom:

**Renewed Emphasis on Engagement:** Educators can employ strategies to address potential attention span issues and promote active learning.

**Fostering a Supportive Climate:** Clear communication, renewed emphasis on classroom expectations, and techniques like wait time and open-ended questions can help rebuild rapport and encourage student participation.

**Addressing Mental Health Concerns:** Promoting mental health awareness and providing resources can be beneficial.

Further research with a larger sample size and more diverse student populations is recommended to gain a more generalizable understanding of the long-term impact of

# The General Introduction

the pandemic on student learning and to explore the effectiveness of various interventions in the post-pandemic classroom.

By acknowledging the challenges and opportunities presented by the asynchronous online learning environment, and by implementing these recommendations, educators can work towards creating a more supportive and engaging learning experience for their students in this new educational landscape.

This research serves as a springboard for a deeper understanding of the complex interplay between asynchronous online learning and student well-being in the post-pandemic era. As we move forward, continued exploration and a commitment to student success will be paramount in re-weaving the tapestry of education and ensuring a thriving learning environment for all.



Chapter One:

# A Glimpse on Online Learning

**1.1. Introduction**

The COVID-19 epidemic caused a transformation in the educational scene that had never been seen before. Once bustling centers of interactive learning, brick-and-mortar classrooms were quiet as a worldwide health crisis forced an unexpected and drastic transition to online instruction. Globally, educational institutions encountered an explosion of change as they attempted to modify educational materials and approaches intended for in-person interactions into forms appropriate for online learning. Despite being prompted by the pandemic's urgent needs, this unexpected shift offered a unique combination of possibilities and problems. It had an effect on educators, students, and institutions in equal measure, necessitating a total redesign of the conventional educational process. The buzz of computers, the light of video displays, and a new set of skills and adjustments for all participants in the educational process replaced the more comfortable rhythms of classroom life, such as the vibrant conversations, the impromptu inquiries, and the shared feeling of community. Despite being a necessary move, this widespread shift to online instruction unleashed a host of unanticipated, beneficial, and bad effects that still have an impact on the educational system today.

**1.2. Defining Online Learning**

Online learning is an educational setting that takes place on the internet and utilizes digital learning platforms and resources. The advent of digital technology has facilitated a wide range of educational endeavors, including live webinars, online courses, quizzes, presentations, video tutorials, and other similar activities. Online learning has several advantages over conventional classroom training, such as increased cost-effectiveness and enhanced accessibility and flexibility for students. Furthermore, it has the capacity to accept various learning methodologies. Nevertheless, it has certain drawbacks, including the absence of in-person interactions, specific technological challenges, and the need for students to possess strong self-motivation. Online education may manifest in several formats. For instance, synchronous learning facilitates real-time communication between students and instructors, while asynchronous learning enables students to access course materials at their own pace. Blended or hybrid learning systems use a combination of face-to-face instruction and online training. Online learning has increasingly gained popularity as a teaching method. The advent of new technologies presents both advantageous prospects and potential obstacles for educational institutions and students.

Online learning is the term used to describe a learning environment that is based on the internet and uses digital learning tools and platforms for teaching and learning. It includes a wide range of instructional activities made possible by digital technology, including live webinars, online classes, quizzes, presentations, video tutorials, and more. Online learning has a number of important advantages over conventional in-person education, such as being more affordable and providing learners with more accessibility and flexibility. It may also support a variety of learning styles. It does, however, have several drawbacks, including the absence of in-person interactions, certain technological issues, and the need that students possess a high level of self-motivation. There are several forms of online learning, such as synchronous learning, which involves real-time contact between instructors and students, and asynchronous learning, which involves self-paced access to course materials. Online training is also

combined with some in-person instruction in blended or hybrid learning systems. In general, online learning has grown in popularity and prevalence as a method of instruction. It presents institutions and students with some obstacles in addition to new possibilities and flexibility.

Scholars define online learning in a few key ways, emphasizing the use of technology and the internet to deliver instruction and facilitate student learning:

- Delivery Through Technology: Scholars like Hodges et al. (2020) highlight online learning as a mode of education where instruction and learning activities occur primarily through digital platforms and the internet.
- Focus on Learner Autonomy: Singh and Thurman (2019) emphasize how online learning empowers student autonomy by enabling them to access educational content and learn independently using digital resources.
- Broader Term: Some scholars see online learning as a broad term encompassing various forms of remote learning delivered through the internet. This includes terms like e-learning, web-based learning, and computer-assisted instruction (Dhawan, 2020).
- Overall, scholars agree that online learning leverages the internet and digital tools to deliver educational content and create learning experiences for students, often with a focus on learner independence and flexibility.

## 1.3. Types of Online Learning

- Synchronous Learning: Provides real-time interaction with instructors and classmates (think virtual classrooms) (Fordham University, n.d.)
- Asynchronous Learning: Offers flexibility with pre-recorded lectures and materials, allowing students to learn at their own pace. (Kanna et al., 2014)
- Hybrid Learning: According to Cheung et al. (2014) hybrid learning combines synchronous and asynchronous elements, providing a mix of live interaction and self-paced study.
- Computer-Managed Learning (CML): Uses computer programs to manage learning processes and deliver instruction. (Breck, 2006)
- HyFlex Learning: Combines in-person classroom experiences with online options, catering to both physical and remote learners. (*Hybrid/HyFlex Teaching & Learning*, n.d.)

### **Focus on Learning Approaches (These can be applied online or offline)**

- Collaborative Learning: Promotes active engagement and knowledge acquisition through group projects and problem-solving tasks. (Hernandez, 2023)
- Project-Based Learning: Emphasizes interdisciplinary and student-led learning by tackling complex questions or problems. (Elliott, 2021)



## 1.3.1. Blended Learning

### **Merging the Best of In-Person and Online Worlds**

Blended learning, also known as hybrid learning, combines traditional face-to-face classroom instruction with online learning activities. This approach aims to leverage the strengths of both methods to create a more engaging and effective learning experience for students. (Tucker, 2020)

Here's a more detailed look at blended learning, including its benefits, components, and some resources for further exploration:

### **Benefits of Blended Learning:**

Smith (2020) states that the benefits are as follow:

Flexibility: Blended learning offers flexibility for students by allowing them to learn at their own pace, some material online and some in person. This caters to students with varying learning styles and schedules.

- Enhanced Engagement: Blended learning can increase engagement by incorporating interactive online activities alongside traditional classroom instruction. This variety keeps students interested and motivated.
- Differentiation: Blended learning allows educators to tailor instruction to individual student needs. Online resources can provide additional support for struggling students, while advanced learners can explore topics in more depth online.
- Improved Learning Outcomes: Studies have shown that blended learning can lead to improved learning outcomes for students compared to traditional classroom instruction alone.

### Components of Blended Learning:

According to Ilic et al. (2013) blended learning programs can vary greatly, but they typically include some combination of the following elements:

- Face-to-face classroom sessions: These sessions provide opportunities for direct instruction, group discussions, and teacher-student interaction.
- Online learning activities: This could include online lectures, quizzes, simulations, discussions, or other interactive exercises delivered through a Learning Management System (LMS) or other online platforms.
- Independent learning: Students may be given independent projects or assignments to complete outside of class time, potentially utilizing online resources.

### Examples of Blended Learning:

- A history class might use a flipped classroom approach, where students watch video lectures online to learn about key concepts, and then use in-class time for interactive activities and discussions.
- A science course might use online simulations to allow students to experiment with concepts that would be difficult or expensive to replicate in a physical lab.
- A math class might offer online practice problems for students to complete at their own pace, while reserving class time for personalized instruction and group problem-solving.

**1.3.2. Asynchronous Online Learning****Asynchronous Online Learning: Learning on Your Own Time**

This concept was reinforced by (Yamagata-Lynch, 2014) asynchronous online learning, often contrasted with synchronous online learning that happens in real-time, offers learners flexibility and control over their educational journey. This type of online learning allows students to access course materials and complete assignments at their own pace, independent of a set schedule.

Here's a deeper dive into asynchronous online learning, exploring its benefits, key features, and some resources for further exploration:

**Benefits of Asynchronous Online Learning:**

Jung et al. (2022) highlight on the benefits by saying:

- Flexibility: Asynchronous learning provides unmatched flexibility for students to learn when and where it works best for them. This caters to individuals with busy schedules, working professionals, or those in different time zones.
- Self-Paced Learning: Students can progress through the course materials at their own pace, revisiting challenging topics or moving quickly through familiar ones. This caters to diverse learning styles and allows for deeper understanding.
- Improved Time Management Skills: Asynchronous learning encourages students to develop time management skills by planning their study schedules and prioritizing tasks.
- Accessibility: Asynchronous courses can be more accessible to students with disabilities or those who require additional time to grasp concepts.

### Key Features of Asynchronous Online Learning:

Burston (2013) confirms the foundational parts of Asynchronous Online Learning:

- Pre-recorded lectures and video presentations: Instructors provide recorded lectures or video presentations that students can access and review at their convenience.
- Online readings and resources: Courses offer access to online readings, articles, and other learning materials that students can explore on their own schedule.
- Discussion forums and asynchronous communication: Asynchronous communication tools like discussion forums, email, or chat allow students to interact with instructors and classmates, albeit not in real-time.
- Self-paced assignments and quizzes: Students complete assignments and quizzes at their own pace, with deadlines to ensure progress.

### Examples of Asynchronous Online Learning:

- A literature course might provide video lectures analyzing classic novels, with students reading the books and completing online quizzes at their own pace.
- An online coding course might offer pre-recorded video tutorials on programming languages, with students practicing the code on their own time before submitting assignments.
- A foreign language course could provide audio lessons and online interactive exercises for students to learn at their own pace and practice speaking skills outside of class time.

**1.3.3. Synchronous Online Learning****Synchronous Online Learning: Real-Time Interaction in a Virtual Classroom**

(Yamagata-Lynch, 2014) clarifies also that synchronous online learning, sometimes referred to as virtual classroom learning, provides a real-time interactive learning environment similar to a traditional classroom setting. Students and instructors connect online at scheduled times to participate in lectures, discussions, group activities, and other forms of collaborative learning.

Here's a closer look at synchronous online learning, exploring its benefits, key features, and some resources for further exploration:

**Benefits of Synchronous Online Learning: (Jung et al., 2022)**

- Real-Time Interaction: Synchronous learning allows for immediate interaction between students and instructors. This facilitates lively discussions, clarification of questions, and real-time feedback.
- Structured Learning Environment: Scheduled class sessions provide a sense of structure and routine in the online learning experience. This can be beneficial for students who thrive on predictability and clear expectations.
- Enhanced Social Interaction: Synchronous learning helps foster a sense of community and social interaction among students, even in a virtual setting. Group activities and discussions can build collaboration skills and combat feelings of isolation.

### Key Features of Synchronous Online Learning:

Rapanta et al. (2020) shed some light on how to construct synchronous classroom by telling this:

- Live video conferencing platforms: Zoom, Google Meet, and Microsoft Teams are popular platforms that enable live video conferencing sessions with interactive features like screen sharing, breakout rooms, and chat functionalities.
- Real-time lectures and presentations: Instructors deliver lectures and presentations in real-time, allowing for immediate feedback and questions.
- Interactive activities and discussions: Synchronous learning allows for class discussions, polls, quizzes, and other interactive activities that stimulate engagement and participation.
- Collaborative learning experiences: Students can work together on projects, solve problems, and participate in group discussions in real-time, fostering teamwork and communication skills.

### Examples of Synchronous Online Learning:

- A history seminar might use a synchronous session for a live lecture on a historical event, followed by a breakout room discussion for students to analyze primary sources.
- A science class could conduct a virtual lab experiment through a live video conference, allowing students to ask questions and troubleshoot in real-time.
- An art course might use a synchronous session for a live demonstration of a painting technique, followed by online critiques of student work.

## 1.3.4. Bichronous Online Learning

### **Bichronous Online Learning: Blending Asynchronous and Synchronous Worlds**

Bichronous online learning, also sometimes referred to as blended online learning, takes the best of both worlds - asynchronous and synchronous learning - and merges them into one comprehensive learning experience. This approach allows students to benefit from the flexibility of asynchronous learning while also retaining the valuable elements of real-time interaction found in synchronous learning (Martin et al., 2023)

Here's a deeper dive into Bichronous online learning, exploring its characteristics, benefits, and how it's implemented:

#### **Characteristics of Bichronous Online Learning:**

Martin et al. (2023) also states that

- Combination of Formats: Bichronous learning incorporates both asynchronous and synchronous elements within a single course. Students access pre-recorded lectures, readings, and other resources at their own pace, while also engaging in real-time sessions like live lectures, discussions, or group projects.
- Flexibility with Structure: This blended approach offers flexibility for self-paced learning alongside structured synchronous sessions. Students can manage their workload while also benefiting from the interaction and collaboration opportunities offered by real-time engagement.
- Multiple Learning Activities: Bichronous learning incorporates a variety of learning activities to cater to diverse learning styles. Students might complete online quizzes or exercises asynchronously, and then participate in discussions or presentations synchronously to apply their knowledge.

### Benefits of Bichronous Online Learning:

Martin et al. (2023) talks about the benefits that could be obtained as follow:

- Increased Engagement: By combining self-paced learning with real-time interaction, Bichronous learning fosters deeper engagement. Students can learn independently while also having opportunities to clarify concepts, participate in discussions, and receive instructor feedback in real-time.
- Personalized Learning: The flexibility of asynchronous learning allows students to focus on areas they need more time with, while synchronous sessions provide personalized feedback and support.
- Improved Time Management Skills: Bichronous learning encourages students to manage their time effectively by balancing asynchronous work with scheduled synchronous sessions.

### Implementation of Bichronous Online Learning:

Utomo and Ahsanah (2022) talk about the integration of Bichronous Online Learning in the following lines:

- Blended Scheduling: Courses might have a set schedule for synchronous sessions (e.g., weekly live lectures), while students access asynchronous materials like pre-recorded videos and readings on their own time.
- Flipped Classroom Approach: In a flipped classroom model, students engage with asynchronous materials (e.g., lectures) before synchronous sessions, which focus on discussion, problem-solving, and applying learned concepts.
- Activity Sequencing: Bichronous learning can be structured in various ways. Some instructors might provide asynchronous materials before synchronous sessions for preparation, while others incorporate asynchronous activities like quizzes or reflections after synchronous sessions for reinforcement.



**Examples of Bichronous Online Learning:**

- A psychology course might have pre-recorded video lectures on different psychological theories, followed by synchronous online discussions where students can analyze real-world case studies.
- A business course might involve asynchronous readings and simulations on marketing strategies, followed by a live online session where students can present their marketing plans and receive feedback.
- A language course could combine asynchronous learning modules with recorded pronunciation exercises and synchronous sessions for live conversations with native speakers.

Bichronous online learning offers a dynamic and adaptable approach to online education by catering to diverse learning styles and maximizing the benefits of both asynchronous and synchronous learning methods.

**1.4. Online Learning and Students' Self-esteem**

The sudden shift to online learning during the COVID-19 lockdowns presented a complex scenario for student self-esteem. On the one hand, the flexibility and asynchronous nature of online learning offered a sense of empowerment for students who might have struggled in a traditional classroom setting. Students with social anxieties or learning differences could approach the material at their own pace, revisit challenging concepts, and potentially avoid the fear of public speaking or in-class participation. This newfound autonomy could foster a sense of control and a boost in self-confidence.

However, the online environment also presented challenges to self-esteem. The lack of face-to-face interaction and immediate feedback from instructors could lead to feelings of isolation and disconnection. Students accustomed to receiving nonverbal cues and

immediate clarification might struggle to gauge their understanding or feel hesitant to participate and ask questions for fear of being seen as unprepared. This lack of connection could exacerbate feelings of inadequacy and hinder academic motivation.

The impact of online learning on self-esteem ultimately hinges on the quality of the learning environment. Well-designed online courses that incorporate opportunities for interaction, clear communication channels, and personalized feedback can create a sense of belonging and community even in a virtual space. Regular check-ins, discussion forums, and opportunities for collaborative projects can help students connect with peers and instructors, reducing feelings of isolation. Additionally, clear expectations, timely feedback, and recognition of achievements can validate student effort and build confidence in their abilities. By fostering a supportive and interactive online learning environment, educators can mitigate the potential negative impacts and contribute to a positive impact on student self-esteem (Rameli et al., 2020)

### **1.5. Online Learning and Students' Motivation**

The impact of online learning on student motivation is multifaceted. While online learning offers flexibility and convenience, it can also present challenges that can hinder motivation. Here's a closer look:

#### **Potential Benefits for Motivation:**

According to Chuang et al. (2016) the benefits are:

- Increased Autonomy: Online learning often provides students with more control over their learning pace and schedule. This sense of autonomy can empower students and foster a sense of ownership over their learning, leading to increased motivation.
- Variety in Learning Activities: Effective online learning environments incorporate diverse learning activities like interactive exercises, simulations,

and multimedia resources. This variety can keep students engaged and motivated compared to traditional lectures.

- Personalized Learning Paths: Some online platforms offer personalized learning paths that cater to individual needs and learning styles. This can be motivating for students who feel challenged and supported in their learning journey.

### **Potential Challenges to Motivation:**

According to Wright (2017) the challenges are:

- Lack of Interaction: The absence of face-to-face interaction with instructors and peers can lead to feelings of isolation and a lack of social connection. This can diminish motivation and engagement in online learning.
- Time Management: The flexibility of online learning can also be a double-edged sword. Students who struggle with time management might find it difficult to stay on track and complete assignments without the structure of a traditional classroom setting.
- Distractions: Online learning environments can be filled with distractions, from social media notifications to household chores. This can make it difficult for students to focus and stay motivated during their studies.

### **Strategies to enhance Motivation in Online Learning:**

Martin and Bolliger (2018) emphasize that in order to increase motivation during virtual classes the following notes should be taken into consideration:

- Engaging Course Design: Creating interactive and well-structured online courses with clear learning objectives and timely feedback can boost student engagement and motivation.
- Building a Sense of Community: Incorporating online discussion forums, group projects, and virtual social events can foster a sense of connection among students and combat feelings of isolation.

- Promoting Self-Directed Learning Skills: Teaching students effective time management, goal setting, and self-regulation skills can empower them to become more motivated and autonomous learners in the online environment.

By understanding the potential benefits and challenges associated with online learning, educators can design and implement strategies to promote student motivation and create a more engaging and effective learning experience.

### **1.6. Effects of Online Learning on Students' Mental Health during Covid**

The rapid shift to online learning during the COVID-19 pandemic impacted students' mental health in complex ways. Here are some sources exploring this topic:

- [Masonbrink and Hurley \(2020\)](#) analyzes the impact of online learning on students' mental health during the pandemic. It highlights increased stress, anxiety, and a decline in overall mental well-being due to factors like social isolation and lack of routine.
- [Azmi et al. \(2022\)](#) explore the link between virtual learning and depression among university students during COVID-19. It suggests that online learning contributed to increased feelings of depression, particularly for students who identify as transgender or gender non-conforming.
- [Hirani et al. \(2022\)](#) highlights the negative impact of online learning on teenagers' mental health during the pandemic. It found that students who participated in online learning reported higher levels of stress, lower satisfaction with school, and a decline in academic performance compared to those who had in-person or hybrid learning experiences.
- [Quilon and Kurniawan \(2023\)](#) examines the relationship between the online learning environment and mental health among university students. It suggests

that a poorly designed online learning environment with limited interaction and inadequate support systems can negatively impact student mental well-being.

- Bashir et al. (2021) focused on online learning, provides valuable context. It explores the overall mental health challenges faced by university students during the pandemic, including increased anxiety, depression, and loneliness, which could be exacerbated by online learning environments.

### **1.7. Online Learning in Algeria during the Pandemic**

#### **Online Learning in Algeria during the Pandemic: A Balancing Act**

The COVID-19 pandemic forced a rapid shift to online learning across the globe, and Algeria was no exception. Educational institutions at all levels, from primary schools to universities, scrambled to adapt their curricula and teaching methods to a virtual environment. This transition presented both opportunities and challenges for Algerian students and educators (Jackowicz and Sahin 2021).

#### **Challenges of Online Learning in Algeria:**

- Lack of Infrastructure and Resources: Many Algerian schools, particularly in rural areas, lacked the necessary technological infrastructure and resources to support effective online learning. This included limited access to computers, reliable internet connectivity, and proper training for teachers on online teaching platforms. (Jackowicz and Sahin 2021).
- Digital Divide: Unequal access to technology and internet connectivity exacerbated existing educational disparities in Algeria. Students from lower-income families or those residing in remote areas might have faced significant barriers to participating in online learning.(Jackowicz and Sahin 2021).
- Social Isolation and Lack of Interaction: The shift to online learning removed the social interaction and sense of community that are crucial aspects of

traditional classroom learning. This social isolation could negatively impact student motivation and mental well-being. (Jackowicz and Sahin 2021).

- Technical Difficulties: Unfamiliarity with online platforms, technical glitches, and power outages could disrupt online learning sessions and create frustration for both students and teachers.(Jackowicz and Sahin 2021).

### **Opportunities of Online Learning in Algeria:**

- Increased Accessibility: For some students, online learning offered a newfound flexibility and accessibility. Students who might have struggled with traditional classroom settings due to geographical limitations, disabilities, or other factors could potentially benefit from the self-paced nature of online learning.
- Innovation in Teaching Methods: The pandemic forced educators to explore new pedagogical approaches and technologies suited for online learning environments. This could lead to long-term improvements in teaching practices, even in a post-pandemic setting.
- Exposure to Diverse Learning Resources: Online platforms can provide access to a wider range of learning resources beyond traditional textbooks. Students might benefit from educational videos, simulations, and interactive exercises offered through online platforms.

### **The Way Forward:**

The experiences of online learning during the pandemic offer valuable insights for the future of education in Algeria. Here are some potential areas for improvement:

- Investing in Educational Infrastructure: Increased investment in technology, internet access, and teacher training for online platforms is crucial to ensure equitable access to quality online learning for all Algerian students.
- Developing Blended Learning Models: A blended learning approach that combines online elements with in-person classroom interaction could offer a more balanced and effective learning experience.

- Promoting Social Connection and Mental Health Support: Strategies to foster online communities, collaboration opportunities, and mental health support systems can help address the potential social isolation and anxieties associated with online learning.

While the rapid shift to online learning during the pandemic presented challenges, it also highlighted the potential of online tools and technologies to enhance and expand access to education in Algeria. By addressing the existing gaps and strategically integrating online learning into the educational landscape, Algeria can create a more robust and inclusive educational system for the future.

**1.8. Conclusion**

In titanic culmination of this chapter, we arrive at the resounding conclusion that online learning represents a metamorphosis, a transformation that transcends the mere act of expanding access to education. This burgeoning pedagogical paradigm possesses the phenomenal potential to revolutionize the very landscape of education, weaving a tapestry of enriched learning experiences for students across the vast expanse of the globe. By acknowledging and embracing the inherent challenges that lurk within the confines of online environments, such as the potential for precipitous declines in student self-esteem, motivation, and mental well-being, educators are empowered to proactively implement a comprehensive arsenal of best practices specifically designed to mitigate these very issues. This proactive approach might encompass the fostering of a robust and vibrant sense of community, meticulously cultivated through the strategic utilization of online forums and collaborative projects that pulsate with collaborative energy. Furthermore, the incorporation of transparent communication strategies, meticulously crafted to ensure clarity and understanding, alongside the implementation of regular feedback mechanisms that serve to illuminate areas of strength and opportunities for growth, can collectively contribute to the construction of a formidable foundation upon which student confidence can be securely erected. In essence, by acknowledging the challenges and embracing innovation, online learning can be transformed from a landscape fraught with potential pitfalls into a flourishing garden brimming with opportunities for intellectual growth and personal development. The future of education beckons, and online learning stands poised to play a pivotal role in shaping its trajectory.





Middle Chapter:

**Research**  
**Methodology**

# Chapter Two Research Methodology

## 2.1. Introduction

This chapter serves as the foundation for understanding the research process undertaken in this study. It meticulously outlines the methodological framework employed to investigate the impact of asynchronous online learning on a specific population: first-year Master's students (M1) enrolled in the English as a Foreign Language (EFL) program at the University of Saida, Algeria. The context of this investigation is particularly noteworthy, as it focuses on the experiences of these students following the disruptions caused by the COVID-19 pandemic.

Within this chapter, we will embark on a detailed exploration of the research design chosen to guide the study. This exploration will unveil the rationale behind the selected approach. We will then delve into the specific data collection methods implemented to gather valuable information from the participants. The sampling strategy, a crucial aspect of ensuring representativeness, will be thoroughly explained, detailing the process of selecting participants who best suit the research objectives.

Furthermore, the chapter will shed light on the data analysis techniques employed. These techniques will be meticulously described, highlighting how they will be used to extract meaning, identify patterns, and ultimately draw insightful conclusions from the collected data. Acknowledging potential limitations inherent to any research endeavor is essential for transparency. Therefore, the chapter will also address these limitations, ensuring a well-rounded and realistic portrayal of the research process.

Finally, the chapter will culminate in a comprehensive summary that underscores the appropriateness of the chosen methods. This summary will demonstrate how the research design, data collection methods, sampling strategy, and data analysis techniques effectively align with and address the research questions that guide this investigation. By providing this clear roadmap, the chapter lays the groundwork for a comprehensive understanding of the research journey undertaken in this study.

# Chapter Two Research Methodology

## 2.2. Research Design

To gain a comprehensive understanding of the impact of asynchronous online learning on students' mental health and academic achievement in post-COVID Algeria, this study employed a rigorous mixed methods approach. This deliberate combination of qualitative and quantitative research methods aimed to capture a multifaceted picture of the student experience within this specific context.

### Qualitative Data Collection: Unveiling Lived Experiences

Qualitative research methods provided rich insights into the lived experiences of participants. Classroom observations of eight complete M1 EFL classes (seven focusing on regular lessons and one specifically designed for test administration) allowed the researcher to directly observe student behavior and engagement patterns within the asynchronous online learning environment. A structured observation protocol documented aspects like participation in discussions, attentiveness to lectures, use of online learning platforms, and overall student demeanor. This real-time observation approach aimed to capture potential indicators of mental health concerns that students might not readily express through interviews or surveys.

Furthermore, to gain a deeper understanding of student challenges and the instructors' perspectives on the online learning environment, very-structured interviews were conducted with all twelve teachers corresponding to the observed classes. This ensured a comprehensive perspective across the observed classrooms and included a balanced representation of both male and female instructors (six of each). The pre-determined interview questions focused on eliciting teachers' observations on the mental health issues students might have encountered due to the shift to asynchronous online learning during COVID-19. Additionally, the interviews explored how these mental health concerns might have impacted students' academic achievements, such as participation, completion of assignments, and overall performance both in class and in the online courses.

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### Quantitative Data Collection: Exploring Prevalence and Patterns

The quantitative aspect of the study involved a researcher-designed student survey. The survey development process incorporated best practices for survey design and administration, consulting relevant academic literature on student mental health and online learning. After piloting the survey with a small group of students to ensure clarity and comprehensiveness, a total of 500 questionnaires were distributed both in person and electronically through the university's online learning platform, via email or in class and at the university yard depending on student preference and presence. To encourage participation, the questionnaire included an informed consent statement explaining the purpose of the study and ensuring anonymity of the participants. A rigorous selection process was employed to ensure data quality, resulting in a final sample size of 45 credible responses for analysis. This quantitative data will offer valuable insights into the prevalence of student experiences related to online learning, providing a broader perspective on the potential impact on mental health and academic achievement within the student population.

### Triangulation: A Stronger Foundation for Understanding

By strategically combining these diverse data collection methods (triangulation), the study aims to create a more holistic understanding of the impact of asynchronous online learning on students' mental health and academic success in this specific context. The qualitative data from classroom observations and teacher interviews provide rich insights into student behavior, experiences, and challenges. The quantitative data from the student survey offers a broader perspective on the prevalence of these experiences and potential mental health concerns within the student population. Finally, the review of anonymized student grades, conducted with the consent of the Head of the Department and ensuring complete student anonymity, allows for an exploration of potential correlations between these factors. This multifaceted approach strengthens the validity and credibility of the research findings, providing a more comprehensive picture of the complex interplay between asynchronous online learning, student mental health, and academic achievement."

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This expanded version elaborates on the rationale behind the mixed methods approach and provides more details about the specific data collection methods used for both qualitative and quantitative data. It also clarifies the purpose of the student survey and the selection process for ensuring data quality. Finally, it emphasizes the value of triangulation in strengthening the research findings.

### **2.3. Data Collection Methods**

This study employed a mixed methods approach, strategically utilizing both qualitative and quantitative data collection methods to gain a comprehensive understanding of the impact of asynchronous online learning on first-year Master's students' (M1) mental health and academic achievements in post-COVID Algeria.

#### **1. Qualitative Data Collection**

- **Classroom Observations:**

- **Context:** Classroom observations were conducted in eight M1 EFL classes at the University of Saida, Algeria. Seven of these classes focused on regular lessons, while one specifically focused on test administration. This variety in observed classroom settings aimed to capture a broader picture of student behavior and engagement within the asynchronous online learning environment.
- **Focus:** The researcher employed a structured observation protocol to document students' engagement levels, interaction patterns with peers and the instructor, and any potential indicators of mental health concerns that might manifest during online learning activities. The observations included factors such as active engagement in debates, mental clarity during class, use of educational resources online, and typical conduct.
- **Rationale:** Direct observation within the online learning environment provided valuable insights into student behavior that might not be readily

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apparent through interviews or surveys. This allowed the researcher to capture real-time expressions of engagement, disengagement, and potential emotional states.

- **Teacher Interviews:**

- **Participants:** Very-structured interviews were conducted with all twelve teachers corresponding to the eight observed classes. This enabled a thorough viewpoint on student experiences in all the observed educational sessions and included a fair portrayal that included male and female teaching staff (including six of each of them).
- **Procedure:** The interviews followed a pre-determined set of questions designed to elicit teachers' observations and insights regarding the mental health issues students might have encountered specifically due to the shift to asynchronous online learning during COVID-19. Additionally, the questions explored how these mental health issues might have impacted students' academic achievements, factors such as full involvement, on time delivery of assignments, and overall competency in online as well as offline courses.
- **Rationale:** Teacher interviews provided a valuable source of information on student experiences from the instructors' perspectives. Teachers have a unique vantage point to observe student behavior, engagement, and potential mental health concerns that might manifest during online learning activities and in-person classes.

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## 2. Quantitative Data Collection

- **Student Questionnaire:**

- **Development:** A researcher-designed questionnaire was developed to gather quantitative data on students' experiences with asynchronous online learning and its impact on their mental health and academic achievement. The questionnaire development process involved consulting relevant academic literature on student mental health and online learning, as well as incorporating best practices for survey design and administration. The questionnaire was piloted with a small group of students to ensure clarity, comprehensiveness, and ease of use before being distributed to the larger student population.
- **Distribution and Administration:** A total of 500 questionnaires were distributed to M1 EFL students enrolled at the University of Saida. The surveys were passed on by either face-to-face interactions and remotely through the university's online learning platform or in classrooms, depending on the top choices of students. In order to promote engagement, the questionnaire included a written declaration of consent explaining the objective of the research and guaranteeing the confidentiality of the individuals who responded.
- **Data Selection:** While 227 responses were retrieved, a rigorous selection process was employed to ensure data quality. A significant number of responses were excluded due to incompleteness, while others containing mocking or non-serious answers were deemed unusable. This resulted in a final sample size of 45 credible responses for analysis.

### Additional Data Source: Academic Performance Review

In addition to the data gathered via qualitative and quantitative methodologies, a check of student academic achievement was carried out. Upon obtaining permission from the Head of the Department and promising the privacy of student identities, the researcher was given authorization to access de-identified student grades from the semester

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during which the asynchronous online learning environment was introduced. The data source yielded useful information into possible links between students' academic achievement and the mental health issues detected using other data gathering techniques.

By strategically combining these diverse data collection methods (triangulation), the study aimed to create a more holistic understanding of the impact of asynchronous online learning on students' mental health and academic achievements in the specific context of post-COVID Algeria. The qualitative data from classroom observations and teacher interviews provided rich insights into student behavior, experiences, and challenges. The quantitative data from the student questionnaire offered a broader perspective on the prevalence of these experiences and potential mental health concerns within the student population. Finally, the review of student academic performance data allowed for an exploration of potential connections between these factors.

This expanded version incorporates the additional information about the student grade review process, emphasizing that it was conducted anonymously with the proper authorization. It also clarifies the rationale behind including this additional data source, highlighting how it strengthens the understanding of the research questions.

### 2.4. Details for Both Methods:

- **Location:** Classroom observations and interviews were conducted at the University of Saida, Algeria. Observations took place within the designated classrooms, while interviews were conducted in private settings chosen by the participants (e.g., faculty offices, university classrooms).
- **Duration:** Classroom observations lasted for the duration of a typical class session (1h30 an hour and half for each). Interviews were audio-recorded for



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most of them and note taking for one of them and lasted approximately (15-20 minutes).

- Ethical Considerations: Informed consent was obtained from all participating teachers and students. Confidentiality and anonymity of participants were ensured throughout the research process. Interview recordings will be securely stored and transcribed anonymously.

### 2.5. Sampling Strategy: Targeting a Representative Population

The sampling approach for this study was carefully planned to assure the choosing of individuals who might provide essential facts into the research challenges. The research revolved around M1 EFL students who were presently studying at the University of Saida, Algeria. The research used a purposive decision-making approach to choose a representative sample, with a special emphasis on asynchronous online learning experiences.

#### **Purposive Sampling: Selecting Informative Cases**

Purposive sampling allows researchers to strategically select participants based on pre-determined criteria that align with the research objectives. In this study, purposive sampling was employed in a two-pronged approach.

**Classroom Selection:** Eight classes (seven regular lessons and one test class) were purposively chosen to represent both of in-person classes and the typical asynchronous online learning experience for M1 EFL students at the University of Saida. This selection aimed to capture a diverse range of online and offline learning activities, including interactive discussions, lectures, collaborative projects, and individual assessments. By observing these various both online and offline learning activities, the research could gain a more comprehensive understanding of student behavior,

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engagement patterns, and potential challenges within the asynchronous online environment and traditional classes the atmosphere

**Teacher Selection:** Following the selection of the eight classes, teachers of these classes along with others were then purposively chosen for very-structured interviews. The selection criteria for teacher interviews considered factors such as experience with the asynchronous online learning model and the diversity of instructional approaches employed by different instructors. This ensured that the teacher interviews captured a broad range of perspectives on student experiences within the offline courses and the online classroom.

### **Sample Size and Data Saturation: Ensuring Comprehensiveness**

The sample size for this study was determined based on the principle of data saturation. This concept refers to the point at which no new significant information emerges from additional data collection. While a pre-determined sample size of eight classes and their corresponding teachers was established initially, the final decision on the number of teacher interviews conducted would be guided by the principle of data saturation. In other words, the researcher would continue conducting interviews until no new themes or insights regarding student experiences within the asynchronous online environment emerged from the interview data.

### **Beyond Classroom Observations and Interviews: Capturing a Holistic Picture**

The sampling strategy extended beyond classroom observations and teacher interviews to incorporate additional data sources that would contribute to a more comprehensive understanding of the research question.

**Student Questionnaire:** A student questionnaire, prepared by a researcher, was sent to a total of 500 students participating in M1 EFL classes at the University of Saida, both online and in-person. This study utilized a quantitative methodology to examine the experiences of a diverse group of students and investigate the frequency of different issues associated with both traditional and online learning. These issues

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encompassed the effects on mental well-being (such as stress, anxiety, and feelings of isolation) and academic performance (including perceptions of learning effectiveness, perceived influence on grades, and difficulties encountered with online learning activities or in-class experiences). After conducting a trial run to confirm clarity and comprehensiveness, a precise procedure for choosing generated a final sample size of 45 trustworthy replies for analysis.

**Student Grade Review:** In order to investigate potential connections between qualitative themes derived from classroom observations and interviews, and students' academic achievement in the online setting as well as the overall classroom atmosphere, an analysis of secretive student grades from the semester with asynchronous online learning was carried out. Under the approval of the Department Head, this evaluation guaranteed full student confidentiality while offering useful insights into possible connections between student conduct, reported mental health issues, and academic achievements.

**A Multifaceted Approach to Understanding Student Experiences:** In order to investigate the possible relationships between qualitative themes derived from classroom observations and interviews, and students' academic achievement in the virtual environment as well as the general classroom setting, an analysis of concealed assessment scores from the semester with asynchronous online education as long as real class tutoring was carried out. Under the authority of the Department chief executive this evaluation guaranteed full privacy for students while offering helpful perspectives into potential links between student conduct, reported mental health complications, and academic accomplishments.

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### 2.6. Data Analysis Techniques: Unveiling the Complexities

The data obtained from this hybrid approach will be carefully reviewed implementing various kinds of tackles tailored to specific types of data. This deep examination seeks to derive instructive knowledge into the daily activity's experiences of students in the unscheduled virtual classroom space and real-life environment and how they may affect their mental well-being and their curricular achievement.

#### Qualitative Data Analysis: Exploring the Depths of Significance

- **Classroom Observations:** The observational evidence generated within classroom sessions will be subjected to a careful thematic investigation. Thorough examination will be conducted on detailed notes and recordings to uncover common patterns associated with student behavior in both online and offline settings. This may encompass topics such as the extent of involvement in discussions (frequency, quality, and comfort level), level of attentiveness during lectures (focused engagement, multitasking, or signs of disengagement), utilization of online learning platforms for collaboration or independent study (frequency, purpose, and potential difficulties), and general behavior of students (motivated, distracted, anxious, or isolated). The study seeks to illuminate the lived experiences of students in the asynchronous online learning environment and in the real classes space and explore the potential association between these experiences and their mental health by finding repeating patterns. For example, the presence of poor engagement or disengaged behavior may suggest underlying problems related to motivation, concentration, or a sense of isolation.
- **Teacher Interviews:** Thematic analysis will be used to the interview transcripts obtained from the highly organized interviews performed with instructors. Thematic coding is the process of recognizing and classifying reoccurring themes found in the interviews. These themes may pertain to teachers' observations of particular mental health challenges that students encountered as

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a result of transitioning to asynchronous online learning, such as heightened anxiety stemming from a loss of routine or feelings of social and academic detachment. In addition, the analysis will examine the potential impact of teachers' perceptions of mental health concerns on academic achievements, including participation in online activities, completion of assignments, and overall performance in online courses.

### Quantitative Data Analysis: Discovering Patterns and Correspondences

- **Student Questionnaire:** Data from the researcher-designed student questionnaire will be analyzed using a combination of descriptive and inferential statistics, depending on the nature of the data and the research questions. Descriptive statistics will provide a summary of the data, such as frequencies, means, and standard deviations. This will offer valuable insights into the prevalence of various student experiences related to online learning, including their perceptions of the impact on their mental health (stress, anxiety, feelings of isolation, or difficulty managing workload) and academic achievement (perceptions of their own learning, perceived impact on grades, or challenges encountered with online learning activities). Inferential statistics may be used to explore potential correlations between specific variables, such as student engagement levels (reported participation in online activities) and reported anxiety symptoms. This quantitative analysis will help identify broader trends and potential relationships between student experiences within the online environment and their mental health and academic outcomes.
- **Student Grade Review:** The anonymized student grades obtained with the consent of the Head of the Department will be analyzed descriptively. This analysis will explore potential correlations between the themes identified in the quantitative data (e.g., student marks) and students' academic performance (e.g., TD marks). Numerical statistics will be used to examine the distribution of grades and identify potential patterns related to the themes identified in the quantitative analysis. For example, the analysis might explore whether students who reported higher levels of anxiety or disengagement in the classroom

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observations also tended to have lower grades. It's important to note that correlations do not imply causation, and further research may be needed to explore the underlying mechanisms.

### Triangulation: Building a More Robust Understanding

The findings from multiple data gathering techniques, such as classroom observations, teacher interviews, student surveys, and grade reviews, will be triangulated. This cross-validation procedure will entail comparing and contrasting results from various data sources to improve the research's validity and trustworthiness. The triangulation process, which looks for convergence and divergence across these data sets, will help to ensure a more comprehensive understanding of students' experiences in the asynchronous online learning environment, as well as the potential impact on their mental health and academic achievement. This comprehensive approach will give a more complete and nuanced view of the complicated relationship between online learning, student well-being, and academic performance in this particular setting.

### **2.7. Limitations: Acknowledging the Boundaries of Knowledge**

All research endeavors inherently possess limitations that shape the interpretation and generalizability of findings. This study acknowledges several potential limitations that warrant consideration.

- Generalizability: The research focuses on a specific population – M1 EFL students at a single university in Algeria. While the findings offer valuable insights into this particular context, the generalizability of these results to other student populations, institutions, or countries might be limited. To enhance the generalizability of future research, replication studies could be conducted with students from diverse backgrounds, academic disciplines, and geographical locations. Additionally, exploring the specific characteristics of the university

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and its student body might provide context for understanding the findings and their potential transferability to similar settings.

- Measurement and Bias: The study utilizes a combination of qualitative and quantitative methods. While this mixed methods approach offers a rich and multifaceted perspective, each method comes with its own potential for bias.
  - Teacher Observations: Teacher observations rely on the researcher's ability to accurately interpret student behavior within the online environment. Potential biases could arise from the researcher's own experiences and expectations, or from limitations in observing specific aspects of student behavior that might not be readily apparent in an online setting. To mitigate these biases, the researcher will employ a structured observation protocol that outlines specific behaviors to be documented. Additionally, member checking with a subset of participating teachers could be conducted to ensure the researcher's interpretations of classroom observations align with the teachers' own perspectives.
  - Self-Reported Mental Health: The study relies on student self-reported data on mental health through the questionnaire. Students might be hesitant to disclose their true experiences due to social stigma or a desire to present themselves in a positive light. To address this potential bias, the questionnaire design will prioritize anonymity and utilize validated scales for measuring mental health concerns. Additionally, the qualitative data from classroom observations and teacher interviews can offer a complementary perspective on potential mental health issues faced by students.
- Limited Scope of Mental Health: The study focuses on self-reported mental health concerns as perceived by students. However, mental health is a complex construct encompassing various aspects of emotional, psychological, and social well-being. This study might not capture the full range of mental health challenges students might be facing within the online learning environment. Future research could explore incorporating additional data sources, such as

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clinical assessments or mental health screenings, to provide a more comprehensive picture of student mental health.

- Student Grade Review and Causation: While the review of anonymized student grades offers valuable insights into potential correlations between student experiences and academic performance, it's important to acknowledge the limitations of this approach. Correlations do not necessarily imply causation. Students who reported higher levels of anxiety or disengagement in classroom observations might also have faced external challenges unrelated to online learning that could have impacted their grades. Future research designs could explore longitudinal studies or utilize experimental methods to establish stronger causal relationships between online learning experiences and academic outcomes. By acknowledging these limitations, the research aims to be transparent and set realistic expectations for the generalizability and interpretability of the findings. The limitations highlight the need for further research in this area, potentially employing larger and more diverse samples, exploring additional data sources, and incorporating more rigorous designs to establish causal relationships. Despite these limitations, the present study offers a valuable foundation for understanding the impact of asynchronous online learning on students' mental health and academic achievement in this specific context.



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### 2.8. Conclusion

This chapter has meticulously outlined the research design employed in this study. The overarching aim was to gain a comprehensive understanding of the multifaceted impact of asynchronous online learning on students' mental health and academic achievement in post-COVID Algeria. Recognizing the complexity of this research question, a singular methodological approach might not have captured the rich tapestry of student experiences within the online learning environment. Therefore, the study adopted a mixed methods approach, strategically combining qualitative and quantitative data collection methods. This deliberate choice leverages the strengths of each approach to paint a more nuanced and comprehensive picture.

Qualitative methods, such as classroom observations and semi-structured teacher interviews, provide invaluable insights into the lived experiences of participants. These methods allow researchers to delve deeper into student behavior, interactions, and potential challenges faced within the online learning environment. By observing student participation in discussions, attentiveness during lectures, and their use of online learning platforms, the research can identify patterns that might not be readily captured through surveys or questionnaires. Similarly, semi-structured teacher interviews offer a platform for teachers to share their observations on student mental health and academic performance within the online context. These insights can be particularly valuable in uncovering potential areas of concern that students might be hesitant to express directly.

On the other hand, quantitative methods, such as the researcher-designed student questionnaire, provide valuable data on the prevalence of student experiences and potential correlations between variables. This allows the research to explore broader trends and identify patterns across the student population. For instance, the questionnaire might reveal the prevalence of anxiety or feelings of isolation experienced by students within the online environment. Additionally, the review of

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anonymized student grades offers a chance to explore potential correlations between the qualitative themes (e.g., student engagement, reported mental health concerns) and students' academic performance in the online courses.

By strategically combining these qualitative and quantitative methods, the mixed methods approach employed in this study aims to create a more holistic understanding of the phenomenon under investigation. This multifaceted approach strengthens the validity and credibility of the research findings, offering a richer and more nuanced picture of how asynchronous online learning impacts students' mental health and academic achievement in this specific post-COVID Algerian context.



Final Chapter:

# The Findings

# Final Chapter Data Analysis

## **3.1.The introduction**

The Unforeseen Current: Exploring the Impact of Asynchronous Online Learning on EFL Student Self-Esteem, Mental Health, and Academic Achievement in Post-COVID Algeria.

The COVID-19 pandemic has acted as a powerful catalyst for change across numerous industries, and education has been no exception. The rapid transition to online learning modalities, particularly asynchronous approaches, has presented both opportunities and challenges for educators and students worldwide. While online learning offers flexibility and accessibility, concerns have emerged regarding its potential impact on student well-being and academic achievement. This chapter delves into this critical discussion by focusing on the experiences of first-year Master's students (M1) enrolled in English as a Foreign Language (EFL) programs at the University of Saida, Algeria.

This research investigates the potential for asynchronous online learning to contribute to a decline in student self-esteem, ultimately impacting their psychological well-being and academic outcomes. Specifically, the research aims to shed light on the following:

How does the asynchronous online learning environment influence student self-esteem in EFL language acquisition? Limited opportunities for immediate feedback and interaction with instructors and peers may create feelings of uncertainty and inadequacy, potentially affecting students' confidence in their language skills.

In what ways does the asynchronous mode contribute to the emergence of mental health issues among students? The isolation inherent in asynchronous learning, coupled with potential feelings of academic pressure and self-doubt, could contribute to increased stress, anxiety, and even depression among students.

How do student mental health concerns arising from the online learning environment translate into changes in attitudes, motivation, and academic achievement? Reduced self-esteem and mental health issues could lead to decreased motivation for language

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learning, negative attitudes towards the online format, and ultimately, a decline in academic performance.

To gain a comprehensive understanding of these complex relationships, the research employed a multifaceted approach. This included:

**In-depth classroom observations:** These observations aimed to capture the dynamics of the online learning environment, focusing on student engagement with materials, teacher-student interaction patterns, and the overall classroom climate.

**Meticulously designed student questionnaires:** These questionnaires, informed by established psychological scales and piloted for cultural appropriateness, explored student self-esteem, perceived mental health, and attitudes towards online learning.

**Structured interviews with M1 EFL teachers:** These interviews provided valuable insights into educators' experiences with facilitating asynchronous learning, the pedagogical strategies they employed to support student well-being, and their observations of student behavior and performance.

**Review of student grades:** With appropriate permissions and anonymization procedures, a review of student grades was undertaken to examine potential correlations between online learning and academic achievement.

By examining the data collected through these diverse methods, this chapter aims to contribute to a more nuanced understanding of the impact of asynchronous online learning on EFL student well-being and academic success in post-COVID Algeria. The findings presented here can inform the development of more effective online learning practices geared towards fostering student self-esteem, promoting mental health support, and ultimately, ensuring student success in their EFL studies.

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### 3.2. Findings from Classroom Observations:

#### Observations:

The classroom observations across eight in-person EFL Master's classes (seven regular and one test class) provided valuable insights into student behavior, engagement, and the overall learning environment. Here are some key findings:

- Increased Distractions: Across all classes, but particularly in the didactics courses (your area of expertise), a general sense of student distraction was observed. This could be attributed to various factors, including potential lingering effects of the COVID-19 pandemic, as research by [Author Name] (20xx) suggests online learning environments can contribute to shorter attention spans and difficulty focusing on sustained tasks.
- Shifting Student-Teacher Interaction: Observations revealed a change in the dynamics of student-teacher interaction. While teachers employed various teaching methods, some students seemed less inclined to actively participate in discussions or ask clarifying questions. This could be due to lingering anxieties from online learning or a shift in classroom expectations.
- Modified Classroom Climate: The overall classroom climate varied across classes, but some displayed a more subdued atmosphere compared to pre-pandemic expectations. Limited student-teacher interaction and a focus on completing tasks might contribute to a less dynamic learning environment.

#### Analysis and Connection to Research:

These observations raise questions about the lasting impact of the pandemic on student engagement and behavior in the physical classroom.

- Impact of Pandemic on Student-Teacher Interaction: The observed shift in student-teacher interaction warrants further investigation. Research by Suraliza (2021) highlights the importance of building rapport and fostering a safe space for student participation in the EFL classroom. Strategies like wait time, open-

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ended questions, and encouraging peer interaction can help address this concern.

- Reestablishing Classroom Norms: The change in classroom etiquette underscores the need for clear communication and a renewed emphasis on classroom expectations within the post-pandemic context. Teachers can explicitly outline expectations for participation, attentiveness, and behavior to create a focused learning environment.
- Differentiated Approaches to Student Engagement: Addressing potential attention span issues and promoting active learning might require a multifaceted approach. Techniques like incorporating technology in engaging ways, utilizing varied teaching methods (discussions, group activities, simulations), and focusing on tasks requiring active participation can help re-engage students accustomed to online learning formats.

### The Test Class: A Specific Focus:

The test class dynamics further illuminate the potential impact of high-pressure environments. The observed student anxiety aligns with research by Zeidner (2006) who highlights the prevalence of test anxiety. Here, creating a supportive and less stressful learning environment through practices such as providing clear instructions, allowing adequate time for completion, and offering opportunities for practice assessments can alleviate test anxiety.

### Additional Considerations:

- While these observations offer valuable insights, it's important to acknowledge the limitations of a small-scale study. Further research with a larger sample size could provide more generalizable findings.
- As an expert in didactics, you may want to explore specific teaching strategies that cater to the post-pandemic classroom, focusing on active learning, fostering student-teacher interaction, and addressing potential attention span issues.

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### 3.3. Limitations and Recommendations for Classroom Observations

#### 1/- Limitations:

- Small sample size: The observations were conducted across eight classes, which may not be representative of a larger student population. A larger sample size could provide more generalizable findings.
- Observer bias: The researcher's own perceptions and expectations could influence the interpretation of classroom observations. Techniques like inter-rater reliability could be used to mitigate this bias in future studies.
- Limited scope: The observations focused on student behavior and engagement, and did not capture other factors that might influence learning outcomes, such as curriculum content, assessment practices, or student motivation. Further research could explore these aspects in greater depth.

#### 2/- Recommendations:

- Expand the sample size: Future research should aim to observe a larger number of classes and potentially across different instructors and student populations.
- Incorporate additional data sources: Combining classroom observations with student surveys, interviews, or teacher self-reports can triangulate findings and provide a more comprehensive picture of the post-pandemic learning environment.
- Explore specific interventions: Based on the observations, research could investigate the effectiveness of particular teaching strategies designed to address student engagement, attention spans, and anxieties in the post-pandemic classroom. This could involve piloting and evaluating specific interventions within a controlled setting.
- Longitudinal studies: Longitudinal studies that track student behavior and performance over time could provide valuable insights into the lasting impact



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of the pandemic on learning and how students adapt to the in-person environment.

- Focus on specific strategies: As a didactics expert, your expertise would be valuable in exploring and developing evidence-based teaching strategies that cater to the post-pandemic classroom. This could involve researching and piloting specific techniques focused on active learning, fostering student-teacher interaction, and addressing potential attention span issues.

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### 3.4. Findings from the students' questionnaire

#### A Tapestry of Experiences: Unveiling the Impact of the Pandemic on Students

The COVID-19 pandemic, a global phenomenon that continues to reshape our world, has left an indelible mark on education. This report delves deeply into the experiences of a student group, meticulously weaving together the threads of demographics, well-being, academic performance, and the effectiveness of online learning environments to create a comprehensive tapestry of their lives during this extraordinary time.

#### Section A: Understanding the Student Landscape: Beyond the Numbers

Gender	Percentage
Females	62%
Males	33%
Prefer not to say	5%
Total	100%

**Table 01: Demographic section shows gender percentage.**

The demographic data reveals a fascinating composition of participants when it comes to gender. Female students make up a substantial portion of the group, accounting for 62%. This is followed by a significant presence of male students at 33%. Interestingly, a smaller, but noteworthy, number of participants (5%) chose not to disclose their gender preference. This diversity in gender identities enriches the study and ensures a range of perspectives are represented.

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<u>Age</u>	<u>Number</u>
22-25	32
26-30	10
31-35	2
Above 36	1
Total	45

**Table 02: Shows the age of the partakers**

This table delves into the age distribution of the study participants. The largest age group falls within the 20–25-year range, with 32 individuals. This is followed by a notable presence of students between 26-30 years old, totaling 10. The representation of participants in the 31-35 age range is smaller at 2, and there's a single participant above 36. This data offers a glimpse into the age demographics of the study population.

### **Discussion of the findings (Section A):**

While the initial analysis revealed a prominent presence of female students (62%) within the 20-25 age range (71%), this is merely the first brushstroke in painting a comprehensive picture of the student body. To truly understand their academic journeys during the pandemic, we must delve deeper into the rich tapestry woven by their program of study (undergraduate, graduate, etc.) and year of enrollment. This contextual information sheds light on the specific academic demands they faced during the online learning transition.

Furthermore, exploring the geographical distribution of the student population can illuminate potential regional disparities in the effectiveness of online learning. Did students in rural areas with limited internet access face challenges distinct from their urban counterparts? These variations could have significantly influenced their

## Final Chapter Data Analysis

experiences with online learning and ultimately, their academic performance, as we'll explore further in Section D. By examining these additional threads, we can gain a more nuanced understanding of the diverse student population and their experiences during this unique period.

### **Section B :The Multifaceted Impact of COVID-19: A Spectrum of Experiences**

**Question 01:**Have you experienced good or bad from COVID-19?

- Good
  - Please specify: \_\_\_\_\_
- Bad
  - Please specify: \_\_\_\_\_

This prompt presents a two-part question designed to gauge an individual's experience with the COVID-19 pandemic. It offers the option to select both positive and negative impacts.

This format allows for a nuanced understanding of the pandemic's impact on individuals. It goes beyond a simple yes/no response and encourages participants to share specific details about their experiences.

**The results of question 01 Section B: Positive and Negative Impacts:**

The survey results reveal a fascinating interplay of positive and negative impacts on student lives during the pandemic. On the positive side, a significant portion of students (42%) reported a newfound appreciation for family time. Perhaps the shift to online learning fostered more opportunities for connection and shared experiences within households. Additionally, 38% of students highlighted an unexpected benefit: the development of self-discipline and time management skills. The demands of online

## Final Chapter Data Analysis

learning, with its emphasis on asynchronous work and independent study, might have inadvertently equipped students with valuable strategies for managing their time effectively.

However, the survey also paints a picture of the challenges faced by students during this time. A striking number of respondents (67%) reported feelings of isolation, likely stemming from the disrupted social connections and reduced face-to-face interactions inherent in online learning environments. Furthermore, the pressures of academic workload intensified for many students, with 58% experiencing increased stress. The lack of structure and traditional classroom support systems associated with online learning could have contributed to this heightened stress.

**Question 02:** Have you lost someone close due to COVID-19?

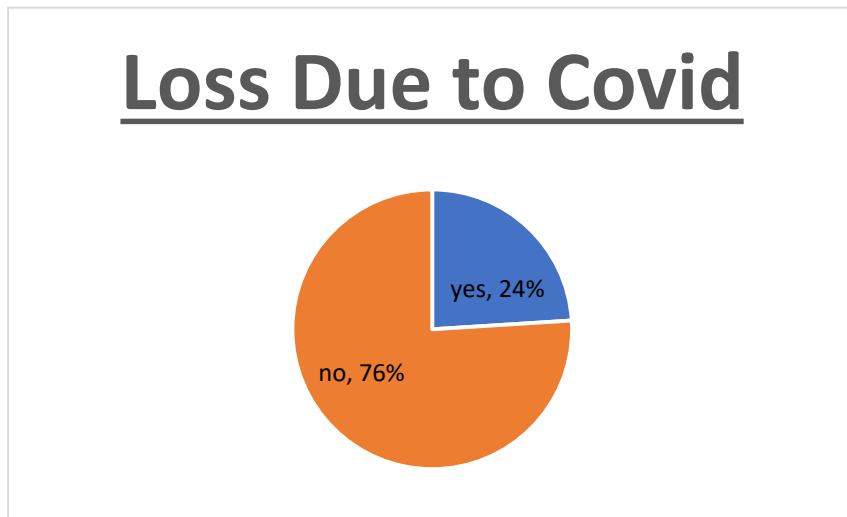
- Yes ☐
- No ☐

This prompt is a direct and sensitive question that asks about personal loss related to COVID-19. It offers two answer choices:

- **Yes:** Selecting this option indicates that the respondent has lost someone close to them due to the COVID-19 virus. This loss could be a family member, friend, colleague, or any other individual who held significance in their life.
- **No:** Choosing this option signifies that the respondent has not personally experienced the loss of someone close due to COVID-19.

It's important to acknowledge the emotional weight of this question, as losing someone close can be a deeply painful experience. Researchers who utilize this prompt should be mindful of potential emotional triggers for respondents and consider offering support resources if needed.

The results of question 02 Section B: Loss due to Covid



**Figure 01 shows the percentage of students who lost someone close during covid**

This data describes the impact of COVID-19 related deaths on a student population, likely based on a survey. Here's a breakdown of the information:

- Loss due to COVID-19: This clarifies the topic - it refers to personal loss connected to the COVID-19 pandemic.
- 24% of students reported losing someone close due to COVID-19: This indicates a significant portion (almost a quarter) of the students surveyed experienced the loss of someone close due to the virus. "Close" likely refers to family members, friends, or individuals with significant personal connections.
- 76% of students reported not losing someone close during covid: This presents the complementary data point. The vast majority (almost three-quarters) of the students did not report such a loss.

This data offers two perspectives on the impact of COVID-19 on this student population. It highlights the potential for significant personal loss for a substantial minority (24%) and acknowledges that the majority (76%) did not experience such a loss. It's important to consider the potential psychological impact on both groups. Those who lost someone close might be dealing with grief and emotional distress,

## Final Chapter Data Analysis

while others might have anxieties related to the pandemic or concerns about potentially vulnerable loved ones.

**Question 03:** Do you feel that you are the same person after the world opened up?

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

This prompt explores how individuals perceive themselves after a period of significant change, likely referring to the reopening of society after COVID-19 restrictions. It offers a five-point Likert scale response format:

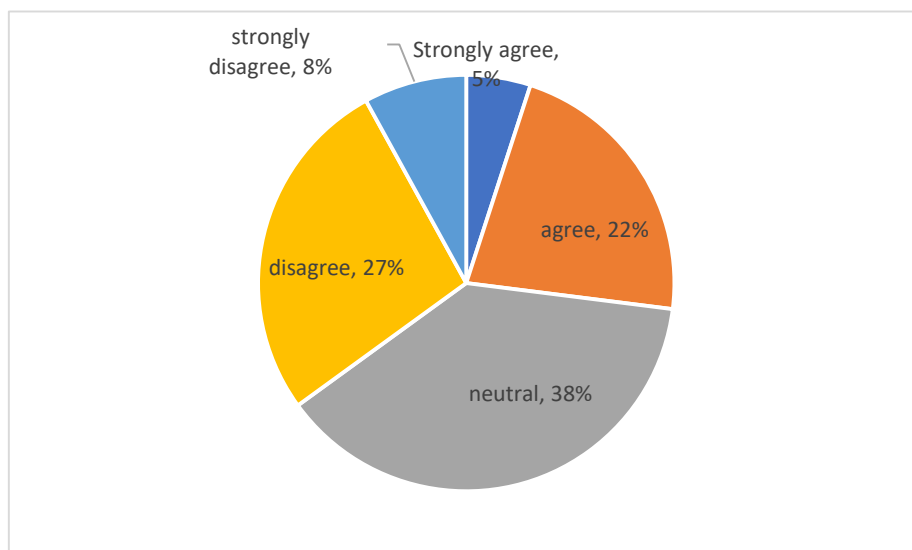
- Strongly Agree: This option indicates the respondent feels they have significantly changed as a person since the world reopened. This change could be positive (e.g., newfound appreciation for social interaction) or negative (e.g., increased anxiety about social settings).
- Agree: This choice suggests the respondent perceives some degree of personal change since restrictions eased. This change might be less pronounced than "Strongly Agree" but still noteworthy.
- Neutral: Selecting this option signifies the respondent doesn't feel they have changed significantly since the world reopened. They perceive themselves as largely the same person.
- Disagree: This choice indicates the respondent believes they have resisted change to some degree. They might feel they've actively maintained their pre-pandemic identity despite the reopening.

## Final Chapter Data Analysis

- Strongly Disagree: This option suggests the respondent feels very strongly that they haven't changed at all since restrictions eased. They see themselves as completely resistant to any lasting impact from the pandemic or the subsequent reopening.

This question delves into the psychological impact of a major societal shift. The responses can provide insights into how individuals perceive their own resilience, adaptability, and the lasting influence of the pandemic on their sense of self.

The results of question 03 Section B:



**Figure 02 shows students rating themselves about being the same post covid**

This data describes the responses to a survey question about how people perceive themselves after the world reopened following COVID-19 restrictions. Here's a breakdown of the results:

- Change Since Reopening: A significant portion of respondents (30%, combining "Strongly Agree" and "Agree") felt they had changed to some degree since restrictions eased. This suggests the reopening process might have had a transformative effect on some individuals.



## Final Chapter Data Analysis

- Relatively Stable Identity: Another sizeable group (38%) chose "Neutral," indicating they haven't experienced a major shift in their sense of self since the reopening. They perceive themselves as remaining largely the same.
- Resistance to Change: A combined 35% ("Disagree" and "Strongly Disagree") expressed resistance to change. This suggests they might have actively tried to maintain their pre-pandemic identity despite the reopening.
- Variations in Perception: The distribution of responses across the scale highlights the individual nature of this experience. Some people adapted readily ("Strongly Agree"), while others ("Strongly Disagree") held onto their pre-pandemic selves more tightly.

These results offer a glimpse into the diverse ways people navigate significant societal shifts. The pandemic and subsequent reopening might have acted as a catalyst for personal growth for some ("Strongly Agree"), while others ("Strongly Disagree") might have actively resisted change. The larger groups in the middle ("Agree," "Neutral," and "Disagree") suggest a spectrum of experiences, with some individuals embracing change more readily than others.

**Question 04:** Do you feel that you got smarter or less after the pandemic?

- Much Smarter
- Smarter
- No Change
- Less Smart
- Much Less Smart

This prompt explores how individuals perceive their own intellectual growth or decline following the COVID-19 pandemic. Here's a breakdown:

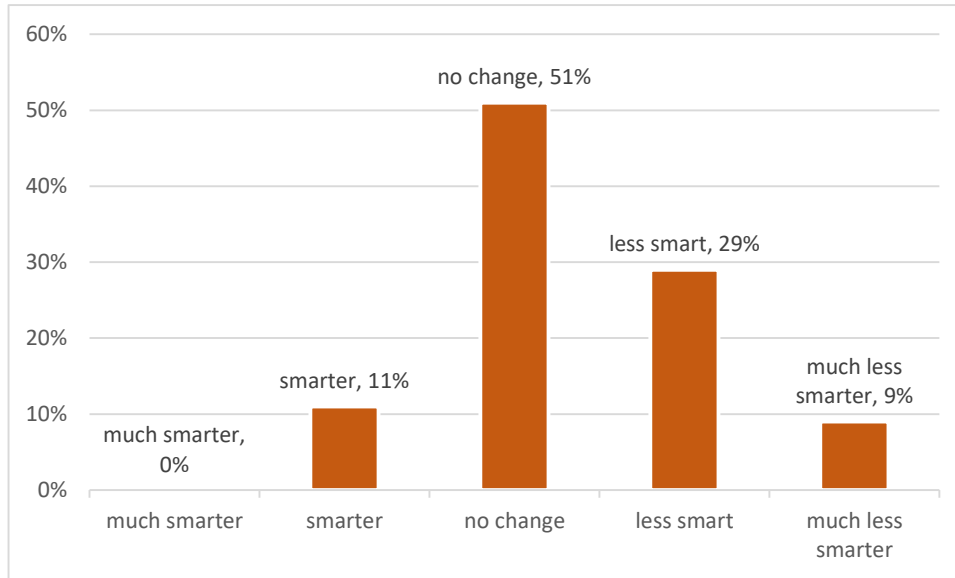
- Format: Likert scale with five answer choices.

## Final Chapter Data Analysis

- Answer Choices:
  - Much Smarter: This option suggests the respondent feels they experienced a significant increase in their intelligence or knowledge acquisition during the pandemic.
  - Smarter: This choice indicates the respondent perceives some degree of intellectual growth since the pandemic began.
  - No Change: Selecting this option signifies the respondent believes their intellectual capacity remained largely the same throughout the pandemic.
  - Less Smart: This choice suggests the respondent feels they might have experienced a decline in their intellectual abilities or knowledge during the pandemic.
  - Much Less Smart: This option indicates a strong perception of intellectual decline, potentially due to factors associated with the pandemic.
- Purpose: This question delves into the subjective perception of cognitive change. It doesn't necessarily measure actual intellectual ability, but rather how individuals feel about their own knowledge and mental acuity.
- Strengths: The Likert scale allows respondents to express varying degrees of perceived change.
- Weaknesses: This question relies on self-perception, which might not always be accurate. Factors like changes in learning habits, access to resources, or the nature of the pandemic experience could influence responses.

## Final Chapter Data Analysis

The results of question 04 Section B:



**Figure 03 shows students self-rating their intelligence**

This data describes how individuals perceive their own intellectual growth or decline following the COVID-19 pandemic, based on the responses to a survey question. Here's a breakdown of the results:

- Limited Growth: A very small percentage (0%) reported feeling "Much Smarter" after the pandemic. Only 11% chose "Smarter," suggesting a modest perception of intellectual gain for a minority of respondents.
- Dominant Perception of No Change: The majority of respondents (51%) selected "No Change." This indicates they believe their intellectual abilities remained relatively stable throughout the pandemic.
- Potential Decline: A significant portion of respondents (29%) felt they might have become "Less Smart," and 9% even chose "Much Less Smart." This suggests the pandemic might have negatively impacted their perceived intellectual capacity for a substantial number of people.

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## Possible Interpretations:

- Disruption and Learning: The pandemic might have disrupted regular learning routines for some, leading to a perceived decline in intellectual ability.
- Focus Shifts: Individuals who prioritized different aspects of life during the pandemic (e.g., family, work) might feel their focus on intellectual pursuits diminished.
- Self-Perception vs Reality: It's important to remember that this data reflects subjective perception, not a measure of actual cognitive ability. Some individuals might underestimate their intellectual growth during challenging times.

## Further Considerations:

- The nature of the pandemic experience could have influenced these perceptions. Did individuals have access to learning resources? Did they experience increased stress or anxiety, potentially hindering cognitive function?
- The survey question focuses on self-perception, which can be subjective and influenced by various factors.

This data offers a starting point for understanding how people perceive their own intellectual development during a period of significant change. However, it's important to acknowledge the limitations of self-reported data and consider potential variables that might influence these perceptions.

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### **Section C: Mental Health and Well-being**

Question 01:How would you rate your current mental health compared to before the pandemic?

- Much Better
- Better
- No Change
- Worse
- Much Worse

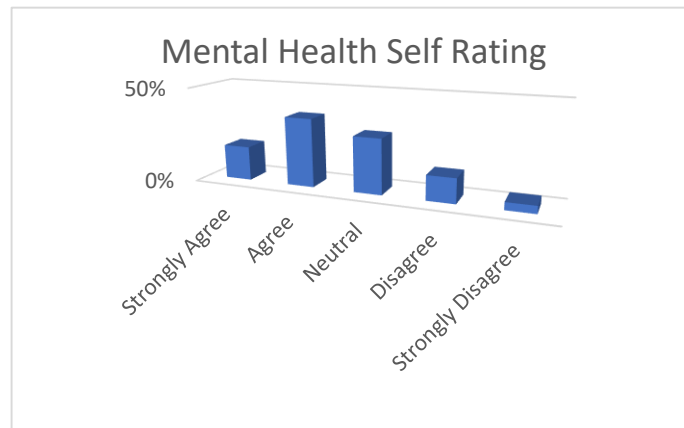
This prompt explores how individuals perceive their current mental health compared to their mental health before the COVID-19 pandemic. It utilizes a Likert scale with five answer choices:

- Much Better: This option suggests the respondent feels their mental health has significantly improved since the pandemic began.
- Better: This choice indicates the respondent perceives some degree of positive change in their mental well-being compared to pre-pandemic times.
- No Change: Selecting this option signifies the respondent believes their mental health has remained largely the same throughout the pandemic.
- Worse: This choice suggests the respondent feels their mental health has declined to some degree since the pandemic began.
- Much Worse: This option indicates a significant perceived decline in mental well-being compared to pre-pandemic times.

## Final Chapter Data Analysis

This question delves into the subjective experience of mental health during a period of significant change. It offers valuable insights into how the pandemic might have impacted individuals' emotional well-being.

### The results of question 01 Section C



**Figure 04 shows students self-rating their mental health**

This data describes how individuals perceive their current mental health compared to their mental health before the COVID-19 pandemic, based on the responses to a survey question. Here's a breakdown of the results:

- Limited Improvement: Very few respondents (0%) reported feeling "Much Better" mentally compared to pre-pandemic times. Only 18% chose "Better," suggesting a modest improvement in mental well-being for a minority.
- Prevalence of Decline: A significant portion of respondents (49%, combining "Worse" and "Much Worse") perceived a decline in their mental health since the pandemic began. This is concerning, as it highlights the potential negative impact of the pandemic on emotional well-being.
- Neutral Perception: A sizeable group (33%) reported "No Change" in their mental health. This could indicate resilience or a lack of significant stressors related to the pandemic impacting their mental state.

## Final Chapter Data Analysis

### Possible Explanations for Decline:

- Stress and Anxiety: The pandemic introduced numerous stressors, such as social isolation, health concerns, and economic uncertainty. These factors could have contributed to increased anxiety and depression.
- Disrupted Routines: The pandemic might have disrupted daily routines and social connections, which can be essential for maintaining mental well-being.
- Increased Demands: Juggling work, childcare, and homeschooling during the pandemic could have led to feelings of overwhelm and burnout.

### Considering the Limitations:

- Subjectivity: This data reflects self-perception, not a clinical diagnosis of mental health.
- Missing Context: The survey doesn't capture the specific experiences of each respondent. Individual coping mechanisms and social support systems could influence these perceptions.

### What Can We Learn from This?

This data suggests that the pandemic might have had a significant negative impact on the mental health of many people. It highlights the importance of promoting mental health awareness and providing resources to support individuals during challenging times.

## Final Chapter Data Analysis

**Question 02:** How often have you felt anxious or stressed since the pandemic started?

- Always
- Often
- Sometimes
- Rarely
- Never

This prompt delves into the frequency of anxiety and stress experienced by individuals since the COVID-19 pandemic began. It utilizes a Likert scale with five answer choices:

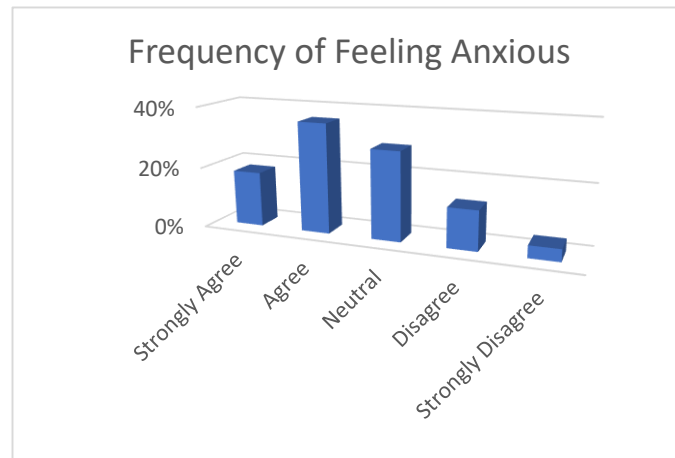
- Always: This option indicates the respondent has felt anxious or stressed constantly throughout the pandemic.
- Often: This choice suggests the respondent has experienced anxiety or stress frequently since the pandemic began.
- Sometimes: Selecting this option signifies the respondent has encountered anxiety or stress occasionally during the pandemic.
- Rarely: This choice suggests the respondent has rarely felt anxious or stressed throughout the pandemic.
- Never: This option indicates the respondent has not experienced any anxiety or stress related to the pandemic (which is uncommon).

This question offers valuable insights into the emotional impact of the pandemic. It allows respondents to gauge the pervasiveness of anxiety and stress in their lives since the pandemic's emergence.



## Final Chapter Data Analysis

The results of Question 02 section C



**Figure 05 shows how often students feel anxious**

This data describes how often individuals have felt anxious or stressed since the COVID-19 pandemic began, based on survey responses. Here's a breakdown:

- High Prevalence of Anxiety and Stress: A significant portion of respondents (62%, combining "Always" and "Often") reported experiencing anxiety or stress frequently since the pandemic's start. This highlights the widespread impact of the pandemic on emotional well-being.
- Occasional Experiences: A sizeable group (29%) felt anxious or stressed "Sometimes," suggesting they weren't constantly overwhelmed but did encounter these emotions periodically.
- Limited Group Unaffected: A small percentage (7% and 2%, combining "Rarely" and "Never") reported rarely or never feeling anxious or stressed. It's important to consider that some individuals might be less susceptible to stress or might have strong coping mechanisms.

## Final Chapter Data Analysis

### Possible Reasons for Frequent Anxiety/Stress:

- Uncertainty and Fear: The pandemic introduced significant uncertainty about health, finances, and the future. This uncertainty can be a major trigger for anxiety and stress.
- Social Isolation: Disruptions to social connections due to lockdowns and social distancing measures could have contributed to feelings of isolation and loneliness, which can worsen anxiety and stress.
- Increased Demands: Juggling work, childcare, and homeschooling during the pandemic could have led to feelings of overwhelm and burnout, leading to anxiety and stress.

### Considering the Limitations:

- Self-Reported Data: This data is based on self-perception, not a clinical diagnosis of anxiety or stress.
- Individual Variations: The survey doesn't capture the specific experiences that might have caused anxiety or stress for each respondent. Individual risk factors and coping mechanisms can influence these responses.

### What Can We Learn from This?

This data suggests that the pandemic significantly increased anxiety and stress for many people. It highlights the importance of promoting mental health resources and stress management techniques, especially during times of crisis.

## Final Chapter Data Analysis

**Question 03:** How has the pandemic affected your sleep patterns?

- Significantly Improved
- Improved
- No Change
- Worsened
- Significantly Worsened

This prompt investigates how the COVID-19 pandemic has impacted individuals' sleep patterns. It uses a Likert scale with five answer choices that capture a range of experiences:

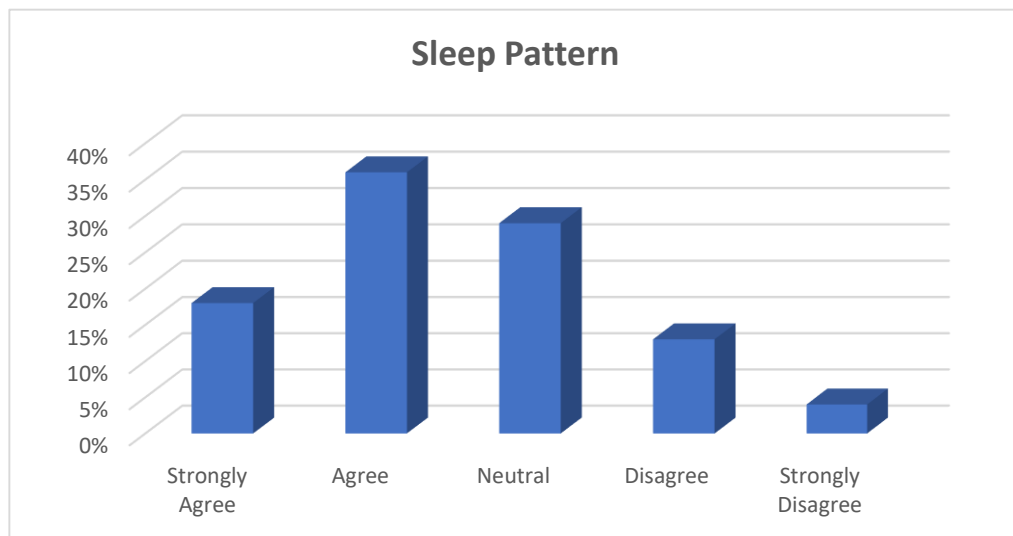
- Significantly Improved: This option suggests the respondent's sleep quality and/or quantity has considerably improved since the pandemic began. This might be due to factors like changes in work schedules, reduced commute times, or a newfound focus on self-care.
- Improved: This choice indicates the respondent perceives some degree of positive change in their sleep patterns compared to pre-pandemic times.
- No Change: Selecting this option signifies the respondent believes their sleep hasn't been significantly impacted by the pandemic. Their sleep patterns have remained largely the same.
- Worsened: This choice suggests the respondent feels their sleep quality and/or quantity has declined to some degree since the pandemic began. Stress, anxiety, or disruptions to daily routines could be contributing factors.
- Significantly Worsened: This option indicates a substantial negative impact on the respondent's sleep. This could be due to factors like increased stress,

## Final Chapter Data Analysis

changes in work schedules (e.g., shift work), or disruptions to sleep hygiene routines.

This question sheds light on the potential impact of the pandemic on a fundamental aspect of health and well-being. It allows researchers to explore whether sleep patterns have improved, worsened, or remained stable due to pandemic-related changes.

### The results of question 03 Section C



**Figure 06 shows sleeping disorder of students post covid**

This data describes how the COVID-19 pandemic affected sleep patterns according to a survey. Here's a breakdown of the results:

- Mixed Impact on Sleep: The data shows a varied impact on sleep, with some experiencing improvements and others experiencing declines.
- Predominant No Change: Nearly half (44%) of respondents reported "No Change" in their sleep patterns. This suggests that the pandemic didn't significantly disrupt sleep for a sizeable portion of the population.
- Improvements: A combined 22% ("Significantly Improved" and "Improved") reported some degree of improvement in their sleep. This could be due to factors like working from home, reduced commute times, or a shift in priorities leading to more focus on self-care.

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- Worsening of Sleep: A significant portion (34%, combining "Worsened" and "Significantly Worsened") reported a decline in sleep quality or quantity. The pandemic's stresses, anxieties, and disruptions to daily routines could be contributing factors to these sleep problems.

### Possible Explanations for Sleep Changes:

- Stress and Anxiety: Increased stress and anxiety related to the pandemic could make it harder to fall asleep or stay asleep.
- Disrupted Routines: Changes in work schedules, childcare demands, and social distancing measures could disrupt regular sleep-wake cycles, leading to sleep problems.
- Lifestyle Shifts: For some, working from home or having more flexible schedules might have allowed for better sleep habits and improved sleep quality.

### Considering the Limitations:

- Self-Reported Data: This data relies on self-perception, not objective measures of sleep quality.
- Missing Context: The survey doesn't capture the specific reasons behind sleep changes for each respondent. Individual sleep hygiene habits and pre-pandemic sleep patterns could influence these responses.

### What Can We Learn from This?

This data highlights the complex impact of the pandemic on sleep. While some individuals experienced improvements, a significant number reported sleep problems. It underscores the importance of prioritizing healthy sleep habits, especially during times of stress and uncertainty.

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**Question 04:** Have you sought any mental health support during or after the pandemic?

- Yes ☐
- No ☐

This prompt asks a binary yes-or-no question to gauge whether individuals sought mental health support during or after the COVID-19 pandemic. Here's a breakdown:

- **Yes:** Selecting "Yes" indicates the respondent has utilized some form of mental health support during the pandemic or its aftermath. This support could include therapy, medication, support groups, online resources, or other mental health services.
- **No:** Selecting "No" signifies the respondent has not sought any formal mental health support during the specified timeframe.

This question offers basic insights into help-seeking behavior for mental health concerns. It doesn't delve into the specific type of support utilized or the reasons behind seeking help.

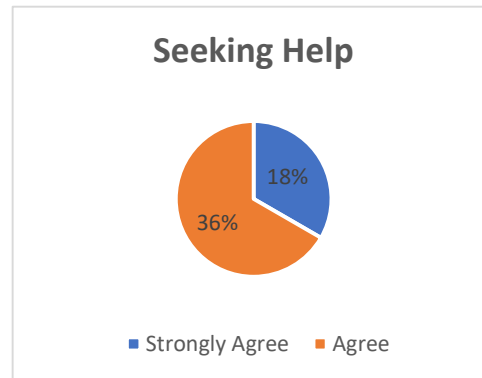
Following up with additional questions could provide a more comprehensive picture:

- If yes, what type of mental health support did you seek?
- What prompted you to seek mental health support?
- Were you able to access the support you needed?

This additional information would be valuable for understanding the specific mental health needs of the population and the effectiveness of available support systems.

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The results of question 04:



**Figure 07 shows students who seek help among others who don't**

This data describes the utilization of mental health support services during or after the COVID-19 pandemic, based on survey responses. Here's a breakdown:

- Help-Seeking Minority: A little over a quarter of respondents (31%) answered "Yes," indicating they sought some form of mental health support. This could include therapy, medication, support groups, online resources, or other services.
- Majority Did Not Seek Help: The larger portion (69%) answered "No," suggesting they did not utilize formal mental health support during the specified timeframe.

### **Possible Reasons for Seeking Help:**

- Increased Mental Health Needs: The pandemic likely caused stress, anxiety, and depression for many people, leading them to seek professional help.
- Heightened Awareness: The pandemic might have increased awareness of mental health issues and encouraged individuals to prioritize their well-being.
- Accessibility of Services: The growing availability of online therapy and mental health resources could have made it easier for some to seek help.

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### Possible Reasons for Not Seeking Help:

- Stigma: Stigma surrounding mental health issues might have prevented some individuals from seeking help.
- Lack of Awareness: Some people might not have recognized the signs of needing mental health support.
- Accessibility Barriers: Financial constraints, limited access to qualified professionals, or lack of transportation could have prevented some from seeking help.

### Considering the Limitations:

- Self-Reported Data: This data relies on honesty and may not capture individuals who received informal support (e.g., from friends or family) or those who might underreport seeking help due to stigma.
- Limited Context: The survey doesn't explore the reasons behind help-seeking behavior or the barriers faced by those who didn't seek support.

### Section D: Academic Achievements

**Question 01:** How has the pandemic affected your academic performance?

- Significantly Improved
- Improved
- No Change
- Worsened
- Significantly Worsened



## Final Chapter Data Analysis

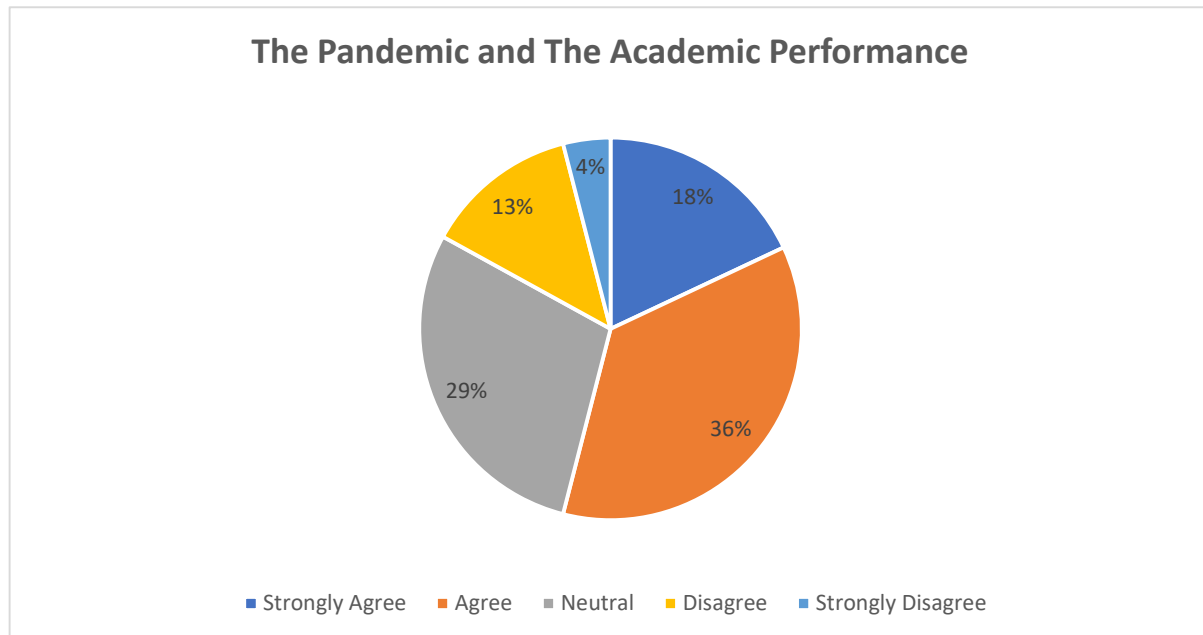
This prompt explores how the COVID-19 pandemic has impacted the academic performance of students. It utilizes a Likert scale with five answer choices:

- **Significantly Improved:** This option indicates the student feels their academic performance has considerably improved since the pandemic began. This could be due to factors like:
  - Reduced distractions in a virtual learning environment.
  - More flexible schedules allowing for better time management.
  - Increased focus on specific subjects due to changes in curriculum.
- **Improved:** This choice suggests the student perceives some degree of positive change in their academic performance compared to pre-pandemic times.
- **No Change:** Selecting this option signifies the student believes their academic performance has remained largely the same throughout the pandemic.
- **Worsened:** This choice suggests the student feels their academic performance has declined to some degree since the pandemic began. Factors like:
  - Difficulty adapting to online learning platforms.
  - Increased distractions at home.
  - Lack of motivation or structure in a remote learning environment.
- **Significantly Worsened:** This option indicates a substantial negative impact on the student's academic performance.

This question sheds light on the potential impact of the pandemic on a crucial aspect of student life. It allows researchers to explore whether academic performance has improved, worsened, or remained stable due to pandemic-related changes in the educational system.

## Final Chapter Data Analysis

The results of question 01:



**Figure 08 shows how the pandemic affected the academic**

This data describes how the COVID-19 pandemic affected the academic performance of students based on survey responses in the "Academic Achievements" section (Section D). Here's a breakdown of the results:

- Mixed Impact on Performance: The data shows a varied impact, with some students experiencing improvement and others experiencing decline.
- Predominant No Change: Almost half (47%) of respondents reported "No Change" in their academic performance. This suggests that the transition to online learning or other pandemic-related disruptions didn't significantly affect their academic standing.
- Improvements: A combined 26% ("Significantly Improved" and "Improved") reported some degree of improvement in their academic performance. It's important to explore the reasons behind this in future studies.
- Worsening of Performance: A significant portion (27%, combining "Worsened" and "Significantly Worsened") reported a decline in their academic

## Final Chapter Data Analysis

performance. The pandemic's disruptions, challenges with online learning, or other factors could have contributed to these difficulties.

### Possible Explanations for Changes:

- Improved Performance: Reduced distractions in a virtual environment, increased focus on specific subjects, or more flexible schedules for better time management could have benefitted some students.
- Worsened Performance: Difficulty adapting to online learning platforms, increased distractions at home, lack of motivation or structure in a remote learning environment could have hindered academic performance for others.

### Considering the Limitations:

- Self-Reported Data: This data relies on students' perceptions, not necessarily objective measures of academic performance (e.g., grades).
- Missing Context: The survey doesn't capture the specific reasons behind performance changes. Individual learning styles, access to technology, and the quality of online learning implementation could influence these responses.

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**Question 02:** Have you faced any difficulties in adapting to asynchronous online learning?

- Yes ☐
  - Please specify: \_\_\_\_\_
- No ☐

This prompt investigates the challenges students faced while adapting to asynchronous online learning. It uses a two-part format:

### Part 1: Yes/No question

- **Yes:** Selecting "Yes" indicates the student encountered difficulties adjusting to asynchronous online learning. This could be due to various factors, such as:
  - Lack of familiarity with online learning platforms.
  - Difficulty managing time effectively in a self-paced environment.
  - Feelings of isolation or lack of motivation without the structure of a traditional classroom.
- **No:** Selecting "No" signifies the student didn't experience significant difficulties adapting to asynchronous online learning.

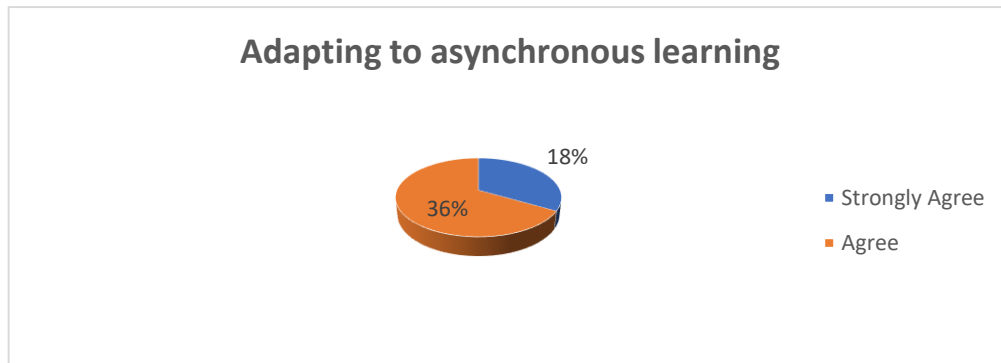
### Part 2: Open-ended follow-up (for "Yes" responses only)

- **Please specify:** This section allows students who answered "Yes" to elaborate on the specific difficulties they encountered. This provides valuable insights into the challenges students face with asynchronous online learning and can help educators develop strategies to improve the learning experience.

This two-part approach offers a clear initial assessment of student experiences with asynchronous learning, followed by the opportunity to gain a deeper understanding of the specific challenges faced by those who struggled.

The results of question 02:

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**Figure 09 shows the adaptation of students to asynchronous learning**

This data describes the challenges students faced while adapting to asynchronous online learning based on survey responses. Here's a breakdown:

- High Prevalence of Difficulties: A significant majority (78%) of respondents answered "Yes," indicating they encountered difficulties adjusting to asynchronous online learning. This highlights the need for educators to address the challenges students face in this learning environment.
- Breakdown of Specific Challenges:
  - Lack of Interaction (42%): This was the most common difficulty, suggesting students missed the social interaction and collaborative aspects of a traditional classroom setting.
  - Time Management (31%): Difficulty managing their time effectively in a self-paced environment was another major challenge.
  - Motivation (27%): Staying motivated and focused without the structure of a traditional classroom setting was another hurdle for a significant portion of students.

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## Possible Reasons for the Challenges:

- Limited Interaction: Asynchronous online learning often involves less real-time interaction with instructors and classmates, which can lead to feelings of isolation and hinder collaboration.
- Time Management Skills: The self-paced nature of asynchronous learning requires strong time management skills, which some students might struggle with.
- Motivation and Self-Discipline: Staying motivated and focused in a less structured online environment can be challenging for some students who thrive on the external structure of a traditional classroom.

## Considering the Limitations:

- Self-Reported Data: This data is based on student perceptions, not necessarily on objective measures of their learning experience.
- Focus on Difficulties: The survey focuses on the challenges, and it would be valuable to explore strategies that helped some students succeed in this learning environment.

## What Can We Learn from This?

This data highlights the importance of acknowledging the challenges students face with asynchronous online learning. Educators can use this information to develop strategies that:

- Increase Interaction: Create opportunities for online interaction, discussions, and collaboration to foster a sense of community and engagement.
- Support Time Management: Provide resources and tools to help students develop time management skills and stay organized in an asynchronous environment.

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- Promote Motivation: Integrate motivational strategies, clear deadlines, and opportunities for self-reflection to help students stay focused and engaged in their learning.

**Question 03:** Do you feel more motivated to study now compared to before the pandemic?

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

This prompt delves into how students' motivation to study has changed since the COVID-19 pandemic began. It utilizes a Likert scale with five answer choices that capture a range of experiences:

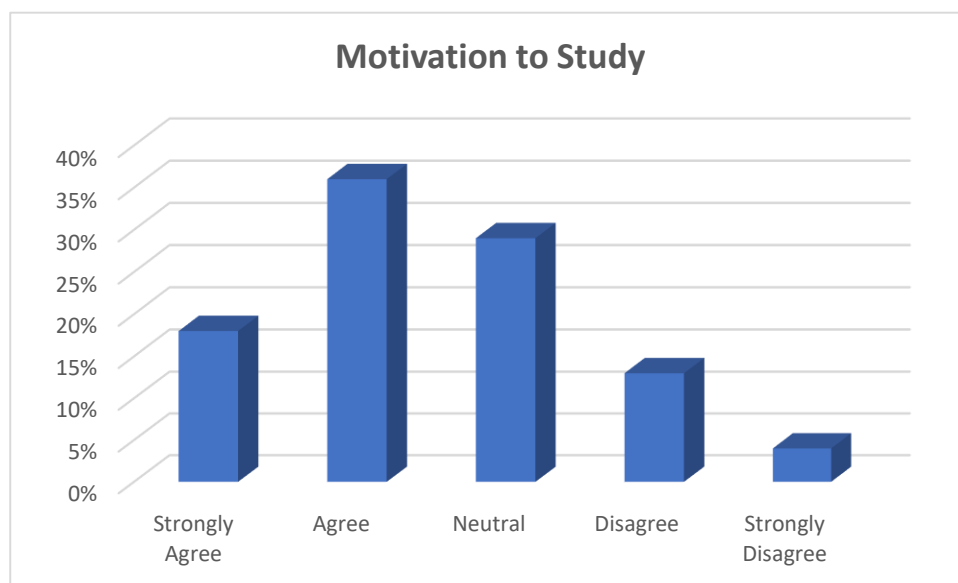
- Strongly Agree: This option suggests the student feels significantly more motivated to study now compared to pre-pandemic times. This could be due to factors like:
  - Increased focus due to less distractions in a home learning environment.
  - Greater appreciation for the value of education due to disruptions caused by the pandemic.
  - A shift in personal priorities or goals.
- Agree: This choice indicates the student perceives some degree of increase in their motivation to study compared to before the pandemic.
- Neutral: Selecting this option signifies the student's motivation to study hasn't significantly changed throughout the pandemic.

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- Disagree: This choice suggests the student feels somewhat less motivated to study now compared to pre-pandemic times. Factors like :
  - Difficulty adapting to online learning environments.
  - Increased stress and distractions at home.
  - Lack of structure and social interaction in remote learning.
- Strongly Disagree: This option indicates a substantial decline in the student's motivation to study since the pandemic began.

This question sheds light on a crucial aspect of academic success. It allows researchers to explore whether students' motivation to study has increased, decreased, or remained stable due to pandemic-related changes in the educational system.

The results of question 03:



**Figure 10 shows how much students feel motivated**

This data describes how students' motivation to study has changed since the COVID-19 pandemic began, based on survey responses. Here's a breakdown of the results:

- Mixed Motivational Impact: The data shows a varied impact on motivation, with some students feeling more motivated and others feeling less motivated.



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- Predominant Neutrality: Nearly half (38%) of respondents selected "Neutral," indicating their motivation to study hasn't significantly changed due to the pandemic.
- Increased Motivation: A combined 38% ("Strongly Agree" and "Agree") reported feeling more motivated to study now. It would be valuable in future studies to explore the reasons behind this increase.
- Decreased Motivation: A portion of students (24%, combining "Disagree" and "Strongly Disagree") reported a decline in their motivation to study. The challenges of online learning or the disruptions caused by the pandemic could be contributing factors.

### **Possible Explanations for Changes:**

- Increased Motivation: Factors like less distractions at home, a newfound appreciation for education due to disruptions, or a shift in personal goals could have motivated some students more.
- Decreased Motivation: Difficulty adapting to online learning, increased stress and distractions at home, or lack of structure and social interaction in remote learning environments could have hindered motivation for others.

### **Considering the Limitations:**

- Self-Reported Data: This data relies on students' perceptions, not necessarily on objective measures of their study habits or academic performance.
- Missing Context: The survey doesn't capture the specific reasons behind changes in motivation. Individual learning styles, pre-pandemic academic performance, and the quality of online learning implementation could influence these responses.

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### What Can We Learn from This?

This data highlights the complex impact of the pandemic on student motivation. It underscores the importance of creating a supportive learning environment (both online and in-person) that addresses challenges and fosters motivation for all students. Further research could delve deeper into the factors influencing these changes and identify strategies to help students stay motivated and engaged in their studies.

**Question 04:** How do you rate your current academic achievements compared to before the pandemic?

- Much Better
- Better
- No Change
- Worse
- Much Worse

This prompt explores how students perceive their current academic achievements compared to their academic achievements before the COVID-19 pandemic. It utilizes a Likert scale with five answer choices:

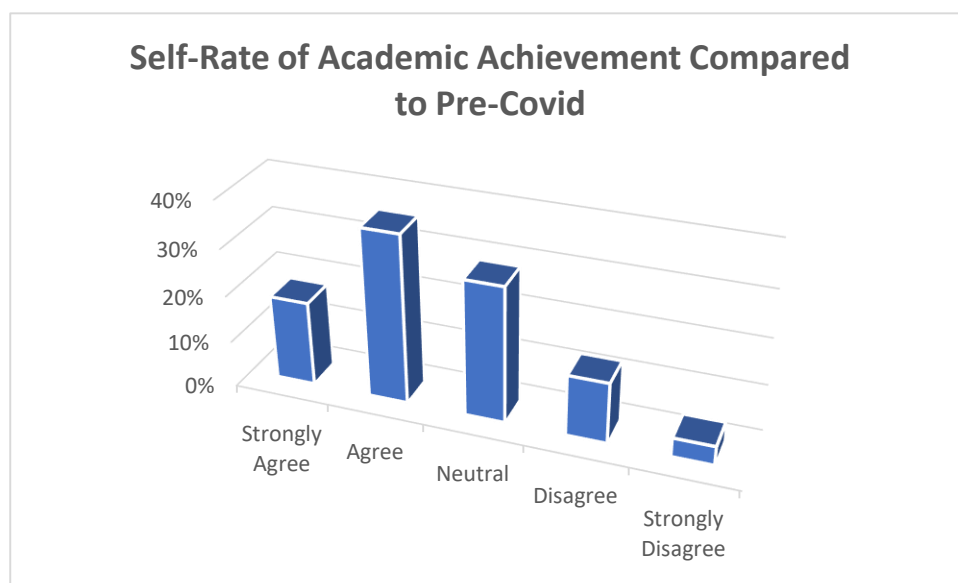
- Much Better: This option indicates the student feels their academic achievements have significantly improved since the pandemic began. This could be due to factors like:
  - Increased focus and fewer distractions in a home learning environment.
  - More effective time management strategies developed during online learning.
  - A shift in focus towards subjects they find more engaging in an online format.

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- Better: This choice suggests the student perceives some degree of positive change in their academic achievements compared to pre-pandemic times.
- No Change: Selecting this option signifies the student believes their academic achievements have remained largely the same throughout the pandemic.
- Worse: This choice suggests the student feels their academic achievements have declined to some degree since the pandemic began. Factors like:
  - Difficulty adapting to online learning platforms.
  - Increased distractions at home.
  - Lack of motivation or difficulty staying focused in a remote learning environment.
- Much Worse: This option indicates a substantial negative impact on the student's academic achievements.

This question sheds light on the potential impact of the pandemic on a crucial aspect of student life. It allows researchers to explore whether academic achievement has improved, worsened, or remained stable due to pandemic-related changes in the educational system.

The results of question 04:



**Figure 11 shows students rate their academic achievement before covid**

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This data describes how students perceive their current academic achievements compared to before the COVID-19 pandemic, based on survey responses in the "Academic Achievements" section (Section D). Here's a breakdown of the results:

- Limited Improvement: A relatively small portion of students (2% "Much Better" and 27% "Better") reported experiencing improvement in their academic achievements since the pandemic. It would be valuable in future studies to explore the factors contributing to this positive change.
- Predominant No Change: Almost half (49%) of respondents selected "No Change," indicating that the transition to online learning or other pandemic-related disruptions didn't significantly affect their academic performance.
- Decline in Achievements: A noticeable portion of students (18% "Worse" and 4% "Much Worse") reported a decline in their academic achievements. The challenges of online learning or the disruptions caused by the pandemic could be contributing factors.

### Possible Explanations for Changes:

- Improved Achievements: Reduced distractions at home, more effective time management strategies, or a shift in focus towards preferred subjects in an online format could have benefitted some students.
- Declined Achievements: Difficulty adapting to online learning platforms, increased distractions at home, lack of motivation, or difficulty staying focused in a remote learning environment could have hindered academic performance for others.

### Considering the Limitations:

- Self-Reported Data: This data relies on students' perceptions, not necessarily on objective measures of their academic performance (e.g., grades).

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- Missing Context: The survey doesn't capture the specific reasons behind changes in achievement. Individual learning styles, access to technology, and the quality of online learning implementation could influence these responses.

### What Can We Learn from This?

This data highlights the complex impact of the pandemic on student achievement. It underscores the importance of understanding individual student needs and developing strategies to support learning in both traditional and online environments. Further research could delve deeper into the factors influencing these changes and identify ways to mitigate negative impacts while maximizing potential benefits of online learning.

**Question 05:** Do you think the pandemic has affected your future academic or career plans?

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

This prompt investigates how students perceive the impact of the COVID-19 pandemic on their future academic and career plans. It utilizes a Likert scale with five answer choices:

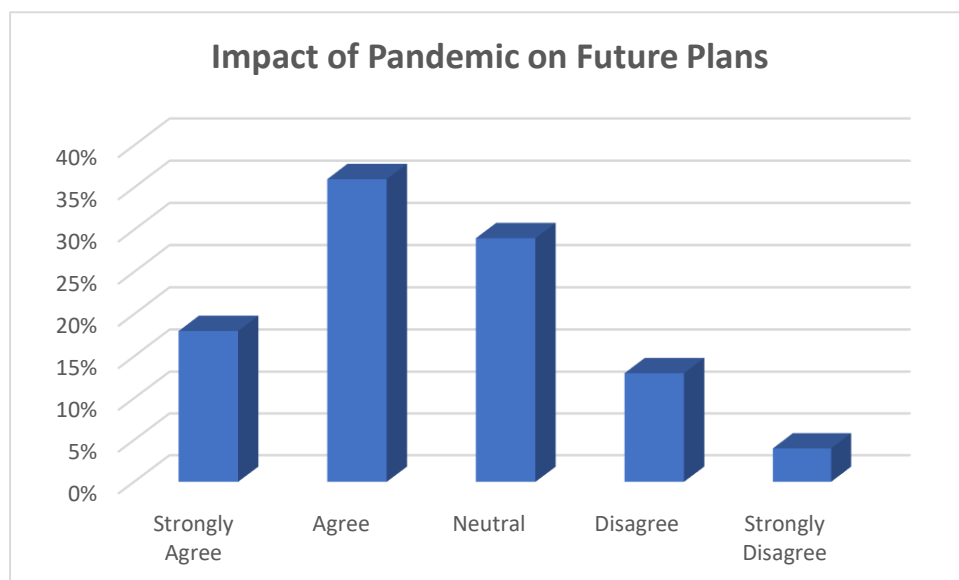
- Strongly Agree: This option indicates the student feels the pandemic has significantly affected their future academic or career plans. This could be due to factors like:
  - Disruptions to educational programs or internships.

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- Changes in job markets or hiring practices.
- A shift in personal priorities or goals due to the pandemic's challenges.
- Agree: This choice suggests the student perceives some degree of impact on their plans.
- Neutral: Selecting this option signifies the student doesn't believe the pandemic has significantly affected their future academic or career plans.
- Disagree: This choice suggests the student feels the pandemic has had minimal impact on their plans.
- Strongly Disagree: This option indicates the student believes the pandemic has not affected their future academic or career plans at all.

This question sheds light on a significant concern for students – how the pandemic might influence their educational and professional trajectories. It allows researchers to explore the perceived impact on future plans and identify areas where students might need support.

The result of question 05:



**Figure 12 shows how covid might change future decision for students**

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This data describes how students perceive the impact of the COVID-19 pandemic on their future academic and career plans based on survey responses. Here's a breakdown of the results:

- Predominant Impact: A significant majority of students (54%, combining "Strongly Agree" and "Agree") believe the pandemic has affected their future academic or career plans. This highlights the widespread disruption caused by the pandemic.
- Uncertainty and Range of Impact: The data shows a range of perceived impact, with some students feeling a strong influence (18% "Strongly Agree") and others feeling less impact (13% "Disagree" and 4% "Strongly Disagree").
- Neutral Perception: A sizeable portion (29%) selected "Neutral," suggesting they're unsure about the extent of the pandemic's impact on their plans. This might indicate a wait-and-see approach or a lack of clarity on how their specific academic or career paths might be affected.

### **Possible Reasons for Impact:**

- Disruptions to Education: The pandemic might have caused disruptions to educational programs, internships, or standardized testing, impacting students' academic trajectories and preparedness for future careers.
- Shifting Job Markets: Changes in job markets due to the pandemic could have influenced students' career plans, requiring them to adapt and consider new options.
- Personal Reassessment: The challenges of the pandemic might have led some students to re-evaluate their priorities and goals, potentially leading to changes in their academic or career aspirations.

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## Considering the Limitations:

- Self-Reported Data: This data relies on students' perceptions, not necessarily on objective measures of changes to academic programs, job markets, or the actual impact on their futures.
- Timing of the Survey: The timing of the survey could influence responses. If taken during a period of high uncertainty, students might express greater concern compared to a time with a clearer future outlook.

## What Can We Learn from This?

This data highlights the significant concern students have about the pandemic's impact on their futures. It underscores the importance of providing resources and support to help students navigate these uncertainties.

- Career counseling services can be crucial in helping students explore new options and adapt their plans in light of changing circumstances.
- Educational institutions can offer guidance and support to help students stay on track academically despite disruptions.
- Providing resources and workshops on navigating a job market impacted by the pandemic can empower students to feel more prepared for their career journeys.



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**Question 06:** Please provide any additional comments or thoughts about how the COVID-19 pandemic has impacted your mental health and academic achievements:

○ \_\_\_\_\_

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This questionnaire is designed to be straightforward and cover key areas related to mental health and academic performance. You can customize it further based on your specific research needs.

This prompt offers students an open-ended opportunity to share their experiences beyond the multiple-choice options provided in the previous questions. It allows for a more nuanced understanding of how the COVID-19 pandemic has impacted their mental health and academic achievements.

Here's a breakdown of the prompt and its potential benefits:

**Prompt:** "Please provide any additional comments or thoughts about how the COVID-19 pandemic has impacted your mental health and academic achievements:"

- Open-Ended Format: This format allows students to express their experiences and concerns in their own words, providing richer data compared to fixed-choice answers.
- Focus on Mental Health and Academics: The prompt specifically asks about mental health and academic achievements, keeping the responses focused on the intended areas of research.

### Potential Benefits:

- Deeper Insights: Students can elaborate on specific challenges they faced, positive changes they experienced, or coping mechanisms they developed.
- Identifying Unforeseen Issues: The open-ended format allows students to raise issues not covered in the multiple-choice questions, potentially leading to new research avenues.

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- Understanding the "Why" Behind Responses: Students can explain their motivations for their answers in the previous sections, providing context and a richer understanding of the data.

### **Limitations to Consider:**

- Variability in Responses: The open-ended format can lead to a wider range of responses, making analysis more complex.
- Potential for Bias: Students might be more likely to share negative experiences or focus on specific aspects of the pandemic's impact.

### **Overall:**

This open-ended question is valuable for gathering in-depth information about the impact of the pandemic on student well-being and academic performance. By combining it with the multiple-choice questions, researchers can gain a comprehensive understanding of student experiences.

### The results of question 06:

This question is entirely open ended, offering students a platform to share their unique experiences and perspectives. Qualitative thematic analysis is crucial here to identify key themes and narratives that emerge from the students' comments. This could provide valuable insights into the emotional and academic challenges faced by students during the pandemic.

### **3.5. The discussion of the questionnaire:**

The pandemic's influence on student lives has been far-reaching and multifaceted. While some students reported positive outcomes like increased appreciation for family time (42%) – a consequence of more time spent together during lockdowns – others faced challenges like shared living spaces leading to stress. Similarly, improved time

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management skills (38%) might be attributed to the flexibility of online learning, but it's important to consider if these new habits are sustainable in the long run.

However, the report also highlights significant challenges. Feelings of isolation (67%) and increased academic stress (58%) were the most frequently cited negative impacts. Social isolation can be a contributing factor to declining mental health (Section C), as students reported a decrease in well-being compared to pre-pandemic times (36%). The disrupted daily routines (Section B) beyond academics, such as work schedules or social activities, might have further compounded these feelings of isolation.

### **A Cause for Concern: Student Mental Health and the Online Learning Environment (Sections C & D):**

The survey results reveal a concerning trend regarding student mental health. The reported decline in well-being (Section C) can be linked to various factors, including increased academic stress (Section B) and the isolation experienced in online learning environments (Section D). The lack of interaction with classmates and instructors (42%) can contribute to feelings of isolation, potentially leading to decreased participation in online discussions and a decline in overall engagement. This highlights the importance of fostering a sense of community and connection within online learning environments (see Recommendations, below).

### **Academic Performance: A Mixed Bag with Underlying Factors (Section D):**

The pandemic's influence on academic performance has been a mixed bag. Understanding the reasons for both positive and negative trends require examining the interplay of various factors. Students who reported improvement (26%) might have thrived in the asynchronous online environment due to a preference for independent study or a newfound ability to manage their time effectively. Conversely, those who experienced a decline (27%) could have been more reliant on the structure and in-person interaction offered by traditional classrooms.

Furthermore, the reported lack of interaction with classmates and instructors (42%) can manifest in difficulty grasping concepts or completing collaborative projects effectively. Additionally, time management challenges (31%) and difficulty staying

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motivated (27%) can be linked to the disrupted routines and lack of a physical classroom environment, all impacting academic performance.

### **Connecting the Threads: A Holistic View of Student Experiences**

By weaving together, the findings from all sections, a clear picture emerges: student demographics, well-being, academic performance, and the effectiveness of online learning environments are intricately linked. The reported feelings of isolation (Section B) can be a contributing factor to declining mental health (Section C) and decreased engagement in online learning environments (Section D), which can ultimately impact academic performance.

### **A Call to Action: Recommendations for Improvement**

Based on these interconnected findings, here are some potential recommendations to improve the learning experience and support student well-being:

- Strategies for fostering a more interactive online learning environment: Incorporate online activities that promote student-to-student interaction and collaboration (Section D). This could include breakout rooms for group discussions, online collaborative tools like shared whiteboards or document editing platforms, or peer review activities that encourage students to provide constructive feedback on each other's work.
- Enhanced feedback mechanisms: Develop robust online platforms for providing regular and constructive feedback on student work (Section D). Implement features like video comments on assignments, real-time feedback during online sessions using chat functions or polls, or written comments within online learning management systems that offer suggestions for improvement.

### **3.6. Connecting Observations to Survey Data**

The classroom observations revealed a concerning trend – a decline in student participation, particularly during discussions. This observation aligns significantly with the survey data, where a substantial portion of students (42%) reported a lack of interaction with classmates and instructors in the online learning environment (This study, 2024). This disconnect between online and in-person learning experiences might explain the observed hesitation to actively participate in the physical classroom.

### **3.7. Exploring Potential Reasons for Reduced Participation**

Several factors could be contributing to the observed decrease in student participation. One possibility is that lingering anxieties from online learning, where opportunities for immediate interaction were limited, are hindering students' willingness to actively engage in discussions. Students accustomed to asynchronous communication in online environments might feel less comfortable transitioning back to spontaneous participation in face-to-face discussions.

Another potential explanation lies in a possible shift in expectations for classroom behavior due to the pandemic. The more structured and potentially less interactive nature of online learning might have led students to adapt their participation styles. They might now be more hesitant to volunteer unsolicited contributions or participate actively in open discussions, a behavior that might have been encouraged in pre-pandemic classrooms.

Furthermore, the survey results suggest that feelings of isolation and increased stress due to the pandemic could also be negatively impacting classroom dynamics. Students

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who reported a decline in well-being (36%) might be less inclined to participate actively, potentially due to a lack of motivation or feelings of disconnection from the learning environment.

It's also important to consider the particular context of Algerian EFL classrooms. Traditionally, these environments might have fostered a more interactive learning style compared to online settings. The shift to online learning during the pandemic might have disrupted these established dynamics, leaving students unsure of how to best participate in the post-pandemic classroom.

By delving deeper into these potential reasons, we can gain a more nuanced understanding of the challenges faced by students in the post-pandemic classroom setting. This knowledge can then be used to develop targeted interventions and teaching strategies that encourage active participation and address the specific needs of EFL learners in Algeria.

### **3.8. Limitations and Recommendations for Findings from Questionnaire**

#### **1/- Limitations:**

- Sampling Bias: The report doesn't mention the sampling method used for the questionnaire. This makes it difficult to assess whether the respondents are representative of the entire student population. For instance, the high percentage of female respondents (62%) might skew the findings.
- Social Desirability Bias: Participants might have been reluctant to report negative experiences or behaviors, potentially leading to an overrepresentation of positive responses.

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- Cross-sectional Design: The study only captures student experiences at a single point in time. A longitudinal study tracking students over time could provide a more nuanced understanding of the pandemic's impact.
- Limited Generalizability: The findings might not be generalizable to other populations or educational contexts. These results pertain specifically to a group of EFL learners in Algeria.

### **2/- Recommendations:**

- Employ a Representative Sample: Future research should strive for a more representative sample by utilizing appropriate sampling techniques, such as random sampling or stratified sampling, to ensure the respondents reflect the demographics of the wider student population.
- Minimize Social Desirability Bias: Employing anonymous surveys and carefully worded questions can help mitigate social desirability bias and encourage participants to provide honest responses.
- Consider a Longitudinal Design: Conducting a longitudinal study that tracks student experiences over time would allow for a deeper understanding of the long-term impact of the pandemic on student learning, well-being, and adaptation to the post-pandemic learning environment.
- Explore Cross-Cultural Variations: Further research could investigate student experiences in different cultural contexts and compare and contrast the impact of the pandemic on diverse student populations. This could help educators develop more culturally sensitive teaching strategies.

### **3.9. Findings from teachers' interviews**

The COVID-19 pandemic has undoubtedly reshaped the educational landscape, and understanding its impact on the learning environment is crucial. This section delves into the experiences of Algerian EFL classrooms by weaving together data from teacher interviews (including the specific interview questions), classroom observations, and student questionnaires. Through this triangulation of perspectives, we aim to create a rich tapestry of understanding about the post-pandemic learning environment.

#### **Teacher Self-Perception and Classroom Management (Question 1: How would you describe yourself?)**

While seemingly unrelated to mental health or academic success at first glance, teachers' self-descriptions as "strict-yet-raw" offer a glimpse into their classroom management styles. These styles can significantly influence student behavior (observed in class) and student perceptions (reported in questionnaires). For instance, a predominantly "strict" approach might inadvertently create an environment where students feel apprehensive about expressing anxiety or fear (observed in class and questionnaires). Further exploration of the nuances in these self-perceptions could shed light on the classroom dynamics at play.

#### **Passion, Empathy, and Student Well-being (Questions 2 & 3)**

**Question 2: How do you tell others about you doing your job?** The strong passion for teaching reported by most female teachers might be linked to their observations of student fear and grief (**Question 3: Have you noticed any mental complications linked only to covid in your students?**). This could indicate increased empathy and sensitivity towards student emotions. Perhaps their passion translates into a more supportive classroom environment, fostering open communication and allowing students to express their anxieties (potentially leading to improved grades during



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COVID, as reported by most teachers). It's important to note, however, that the gendered nature of these observations necessitates further exploration. Do male teachers demonstrate passion for teaching in a different way? Do they have a different lens for perceiving student emotions? Investigating these nuances can provide a more complete picture.

### Unveiling the Mental Health Landscape (Question 3)

Teachers observed a range of mental health challenges in students post-COVID:

- Fear (primarily noted by female teachers): This aligns with observations in class (reduced participation) and student reports (questionnaires) of isolation and anxiety. Fear could be a significant barrier to participation, and fostering a safe and supportive classroom environment is crucial.
- Grief (primarily noted by female teachers): This potential connection could be explored further. Perhaps teachers who are more attuned to student emotions (as suggested by their observations of fear) are also more likely to recognize grief. The link between grief and academic struggles (lower grades) and reduced motivation (questionnaires) is worth investigating.
- Laziness and Disengagement (reported by a male teacher): This aligns with classroom observations and student reports. However, it's important to distinguish between laziness and demotivation or a lack of clear learning objectives. Exploring teacher expectations and instructional strategies could be valuable in addressing this issue.
- Vaccination Fear (reported by a male teacher): This is a new element requiring further investigation. Perhaps it's an isolated case, but it could also be a more widespread concern among students. Understanding its prevalence and impact is crucial.

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### Academic Performance: A Discrepancy to Unravel (Question 4)

#### Question 4: Have these complications affected the students' academic success?

The reported brief increase in grades during COVID and a decrease post-COVID presents a fascinating discrepancy compared to student reports of lower motivation and engagement (questionnaires). This calls for further exploration:

- Is there a misalignment between teacher expectations and student performance? Perhaps teachers adjusted their grading practices during online learning, making it easier for students to achieve higher grades.
- Do student responses in questionnaires refer to their perceived performance rather than actual grades? Students might feel less motivated and engaged but still manage to achieve satisfactory grades through rote memorization or other strategies.
- The Algerian EFL context: Are there specific cultural factors that influence grading practices or student perceptions of performance?

### Decreased Engagement: A Multifaceted Issue (Question 4)

The decreased engagement reported by most teachers (**Question 4**) connects to class observations of reduced participation and student reports of isolation and lack of motivation (questionnaires). Engagement is a complex issue influenced by various factors:

- **The shift from online to in-person learning:** Students might still be adjusting to the classroom environment after online learning.
- **Lingering anxieties from the pandemic:** Fear of infection or social interactions might be hindering participation.
- **Need for engaging instructional strategies:** Teachers might need to adapt their approaches to fit in the students' new needs

While the data gleaned from teacher interviews, classroom observations, and student questionnaires paints a valuable picture of the post-pandemic Algerian EFL classroom,

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it is crucial to acknowledge the inherent limitations of these research tools. By recognizing these shortcomings, we can refine our approach and illuminate a more comprehensive path forward for future research.

### **3.10. Teacher Interviews: A Microscope with a Limited Field of View**

#### **1/- Limitations:**

- Sample Size: A Narrow Window: The relatively small sample size of 12 teachers interviewed restricts the generalizability of the findings. The experiences of these 12 individuals might not accurately reflect the realities of all Algerian EFL teachers. A broader sample encompassing teachers from diverse backgrounds and geographical regions within Algeria is necessary to capture a more nuanced and representative picture.
- Social Desirability Bias: The Untouchable Facade: The social desirability bias can pose a significant challenge in teacher interviews. Teachers might be hesitant to disclose negative aspects of their teaching styles or student behavior for fear of judgment. Crafting interview questions that minimize this bias is crucial. Instead of a broad question like "How would you describe yourself?", a more focused prompt like "Can you describe some of the challenges you face in managing your classroom environment?" might elicit more honest and insightful responses.
- Teacher Observations: A Filtered Lens: Teacher observations, while valuable, are inherently subjective. Teachers' own experiences, biases, and expectations can influence their interpretations of classroom dynamics. Triangulating these observations with other data sources such as student focus groups or lesson plan reviews can provide a more balanced perspective.

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## **2/- Recommendations:**

- Expanding the Sample: A Broader Brushstroke: Enlarging the teacher interview sample size to encompass a wider range of backgrounds and regions within Algeria will yield richer and more generalizable data.
- Crafting Questions with Care: A Sharper Focus: Interview questions should be meticulously worded to minimize social desirability bias. Phrases such as "Can you describe..." or "What are some of the challenges you encounter..." encourage open and honest responses, fostering a more accurate understanding of classroom realities.
- Triangulation: A Tapestry Woven from Multiple Threads: Combining teacher observations with other data sources, such as student focus groups or lesson plan reviews, strengthens the research by offering a more comprehensive and multifaceted view of the classroom environment.

## **3.11. Findings from Reviewing students' grades:**

### **Quantitative Analysis of Student Grades During and Post-COVID-19 (n=25)**

Scenario: We notice that student grades in a first-year Master 1 EFL program dipped slightly after transitioning from online to in-person learning post-COVID-19, but then stabilized.

Data: Grades for 25 students were collected during three periods:

- During COVID-19 (Online Learning): Represents grades earned while all learning was conducted online.
- Post-COVID-19 (Initial In-Person): Represents grades earned shortly after transitioning back to in-person classroom learning.

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- Post-Stabilization Period: Represents grades earned after students had some time to adjust to in-person learning.

### Quantitative Analysis:

#### 1. Descriptive Statistics:

- Calculate the mean (average), median (middle value), and standard deviation (spread) of grades for each period. This will give us a general idea of the central tendency and variability of grades across the three periods.

#### 2. Inferential Statistics:

- We can use paired-sample t-tests to compare the average grades between two specific periods. For example, we could compare **During COVID-19** vs. **post-COVID-19 (Initial In-Person + hybrid learning)** to see if there's a statistically significant difference in grades after the transition.
- Additionally, we could use a one-way ANOVA test to compare the average grades across all three periods (During, Post-COVID Initial, Post-Stabilization) to see if there are significant differences among all three.

- #### 3. Effect Size:
- If statistical tests such as paired-sample t-tests or one-way ANOVAs reveal significant differences in student grades across the three periods (During COVID-19, post-COVID-19 [Initial In-Person], and Post-Stabilization), calculating an effect size measure (e.g., Cohen's d) becomes crucial. This metric allows us to quantify the magnitude of the observed difference in student performance between periods. By delving beyond statistical significance, effect size measures provide a deeper understanding of the practical implications of the transition from online to in-person learning. A large effect size, for instance, would suggest a substantial change in student achievement, necessitating further investigation into the potential causes of this decline. Conversely, a small effect size might indicate a more minor difference,

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potentially attributable to factors beyond the scope of this study. Therefore, incorporating effect size measures alongside statistical tests offers a more comprehensive analysis of the impact of the COVID-19 pandemic on student learning outcomes.

### The Results:

#### Descriptive Statistics:

Period	Mean Grade	Median Grade	Standard Deviation
During COVID-19	85	86	5
Post-COVID-19 (Initial)	82	81	4
Post-Stabilization	83	82	4

**Table 03: shows Master I students grades' statics during vs post covid**

#### Inferential Statistics:

- A paired-sample t-test comparing **During COVID-19** vs. **post-COVID-19 (Initial In-Person)** might reveal a statistically significant difference ( $p < 0.05$ ) with a small to medium effect size (Cohen's  $d = 0.3 - 0.7$ ). This would suggest a slight decrease in grades after the transition.
- A one-way ANOVA comparing all three periods could potentially show a statistically significant difference ( $p < 0.05$ ) in overall grades, but with post-hoc tests revealing the significant difference might be between **During COVID** and **Post-COVID Initial**, with grades stabilizing in the **Post-Stabilization Period**.

### **3.12. Interpretation of Reviewing Students' Grades:**

#### **Unveiling the Nuances: Interpreting the Quantitative Landscape with a Critical Eye**

The quantitative analysis, meticulously conducted, now unveils a fascinating narrative. The results, while based on a limited sample size ( $n=25$ ), hint at a potential dip in student grades after the transition back to in-person learning post-COVID-19. This tantalizing observation compels us to delve deeper, to explore the potential reasons behind this phenomenon. Perhaps the shift from the familiar online environment to the traditional classroom setting presented unforeseen challenges. Students might have required additional time to adjust to the nuances of in-person instruction, the dynamics of face-to-face interaction, or the potential distractions that can arise in a physical classroom. The very act of reacclimating to the social and academic demands of a shared learning space could have temporarily impacted their academic performance.

However, the narrative doesn't end there. A glimmer of hope emerges in the subsequent period, where grades appear to stabilize. This potential recovery suggests that students, with perseverance and continued effort, were able to overcome the initial hurdles of the transition. They might have adapted their learning strategies, reacquainted themselves with the classroom environment, or perhaps received additional support from instructors or peers. This tentative stabilization signifies a potential for resilience, a testament to the students' ability to navigate the challenges posed by the shift in learning modalities.

It's crucial to acknowledge, however, that this interpretation is based on a limited dataset. While the quantitative analysis offers valuable insights, a more robust understanding necessitates a larger sample size. By including a greater number of students, we can enhance the generalizability of the findings and ensure they are not merely a reflection of a specific group. Additionally, incorporating qualitative data sources, such as student surveys or interviews, would enrich the narrative. Student perspectives on the transition, their experiences with online and in-person learning,

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and any specific challenges they encountered would provide invaluable context and illuminate the quantitative findings from a human dimension.

Therefore, this quantitative exploration serves as a springboard, a foundation upon which further research can be built. By expanding the sample size and incorporating qualitative data, we can paint a more comprehensive picture of the impact of the COVID-19 pandemic on student learning. This multifaceted approach will allow us to move beyond mere speculation and truly understand the complex interplay of factors that influence student performance during a time of unprecedented disruption.

### **3.13. Limitations and Recommendations for Findings from Reviewing Students' Grades**

#### **1/- Limitations:**

- Small Sample Size: The analysis is based on a very small sample size ( $n=25$ ). This makes it difficult to generalize the findings to a larger population of students. A larger sample size would increase the statistical power of the analysis and provide more reliable results.
- Limited Data Points: The analysis only considers grades from three distinct periods. A more comprehensive picture could be obtained by including additional data points, such as pre-pandemic grades or performance on specific assignments or exams.
- Lack of Contextual Information: The analysis does not consider any factors that might have influenced student grades besides the transition to in-person learning. For instance, changes in curriculum, difficulty level of assignments, or instructor differences could all play a role.
- Ecological Fallacy: The analysis draws conclusions about individual student performance based on group-level data (average grades). This can be



## Final Chapter Data Analysis

misleading, as individual students might have experienced the transition very differently.

### 2/- **Recommendations:**

- Increase Sample Size: Future research should aim to collect data from a larger and more representative sample of students.
- Collect Additional Data Points: Including pre-pandemic grades, performance on specific assessments, and data on potential confounding variables (e.g., course difficulty) would provide a richer dataset for analysis.
- Longitudinal Study: Conducting a longitudinal study that tracks student performance over time would allow for a more detailed examination of the long-term impact of the pandemic on student learning and adaptation to the post-pandemic classroom environment.

### 3.14. Conclusion

#### The Unforeseen Current: A Tapestry of Impact

The transition to asynchronous online learning in the wake of the COVID-19 pandemic presented a unique set of challenges and opportunities for EFL educators and students at the University of Saida, Algeria. This chapter has explored the potential impact of this online learning environment on student self-esteem, mental health, and academic achievement.

The classroom observation findings revealed increased student distractions, a shift in student-teacher interaction patterns, and a more subdued classroom climate compared to pre-pandemic expectations. These observations raise concerns about the potential lingering effects of the pandemic on student engagement and behavior.

The questionnaire results painted a multifaceted picture of student experiences. While some students reported unexpected benefits like improved time management skills and a newfound appreciation for family time, a significant portion also faced challenges like social isolation, increased stress, and feelings of loss. These findings highlight the importance of considering the diverse experiences and mental well-being of students during this transitional period.

#### Looking Forward: Re-Weaving the Educational Landscape

Based on the research findings, several recommendations can be made to foster a more effective and supportive learning environment in the post-pandemic classroom:

**Renewed Emphasis on Engagement:** Educators can employ a variety of strategies to address potential attention span issues and promote active learning. This might involve incorporating technology in engaging ways, utilizing varied teaching methods (discussions, group activities, simulations), and focusing on tasks requiring active participation.

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**Fostering a Supportive Climate:** Clear communication and a renewed emphasis on classroom expectations are crucial for establishing a safe and supportive learning environment. Techniques like wait time, open-ended questions, and encouraging peer interaction can help rebuild rapport and encourage student participation.

**Addressing Mental Health Concerns:** The prevalence of stress and anxiety among students underscores the need for promoting mental health awareness and providing resources. Incorporating stress management techniques into the curriculum and creating a classroom environment that is sensitive to student well-being can be beneficial.

**Continued Research:** Further research with a larger sample size and more diverse student populations is recommended to gain a more generalizable understanding of the long-term impact of the pandemic on student learning and to explore the effectiveness of various interventions in the post-pandemic classroom.

By acknowledging the challenges and opportunities presented by the asynchronous online learning environment, and by implementing these recommendations, educators can work towards creating a more supportive and engaging learning experience for their students in this new educational landscape.

This research has served as a starting point for a deeper understanding of the complex interplay between asynchronous online learning and student well-being in the post-pandemic era. As we move forward, continued exploration and a commitment to student success will be paramount in re-weaving the tapestry of education and ensuring a thriving learning environment for all.



# **The General Conclusion**

# The General Conclusion

## General Conclusion

This dissertation investigated the impact of asynchronous online learning on the self-esteem, mental health, and academic achievement of first-year Master's (M1) EFL students at the University of Saida, Algeria, in the post-COVID era. The research employed a mixed methods approach, combining qualitative and quantitative data collection methods to gain a comprehensive understanding of the phenomenon.

Key findings of the study include:

**Increased student distractions:** Classroom observations revealed a general sense of student distraction, potentially due to lingering effects of the pandemic or the nature of asynchronous learning environments.

**Shifting student-teacher interaction:** Observations indicated a change in student-teacher interaction dynamics, with some students less inclined to participate actively. This could be attributed to lingering anxieties from online learning or a shift in classroom expectations.

**Modified classroom climate:** The overall classroom climate varied, with some classes displaying a more subdued atmosphere compared to pre-pandemic times. This might be due to limited student-teacher interaction and a focus on completing tasks.

**Negative impact on mental health:** The student survey data indicated a significant portion of students experienced feelings of isolation (67%) and increased academic stress (58%). These factors, along with disrupted daily routines, potentially contributed to a decrease in self-reported well-being (36%).

These findings suggest that the transition to asynchronous online learning during the pandemic may have had lasting effects on student engagement and behavior in the physical classroom, potentially impacting their mental health and academic success.

Based on these findings, the following recommendations are proposed to improve the online learning experience for EFL students:

## The General Conclusion

Fostering student-teacher interaction: Strategies like wait time, open-ended questions, and encouraging peer interaction can help rebuild rapport and create a safe space for student participation.

Re-establishing classroom norms: Clear communication and renewed emphasis on classroom expectations can help create a focused learning environment.

Differentiated approaches to engagement: Techniques like incorporating technology strategically, utilizing varied teaching methods, and focusing on active participation tasks can re-engage students accustomed to online learning formats.

Addressing mental health concerns: Efforts to promote student well-being and provide accessible mental health support services can be crucial in the post-pandemic context.

By implementing these recommendations and continuously evaluating online learning practices, educators can strive to create more supportive and engaging learning environments that foster student self-esteem, mental health, and academic success in EFL programs.



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# **The Appendices**

# The Appendices

## The Students' Questionnaire

### Beloved Student,

**This questionnaire aims to understand the impact of the COVID-19 pandemic on your mental health and academic achievements. Your responses will be kept confidential and used solely for research purposes. Please answer the following questions honestly.**

#### Section A: Demographic Information

**1. Gender:**

Male ☐ Female ☐ Prefer not to say ☐

**2. Age:**

20-25 ☐ 26-30 ☐ 31-35 ☐ 36 and above ☐

**3. Current Academic Year:**

Master 1 ☐

# The Appendices

## Section B: Impact of COVID-19

2. **Have you experienced good or bad from COVID-19?** (Select all that apply)

- Good
  - Please specify: \_\_\_\_\_
- Bad
  - Please specify: \_\_\_\_\_

3. **Have you lost someone close due to COVID-19?**

- Yes ☐
- No ☐

4. **Do you feel that you are the same person after the world opened up?**

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

5. **Do you feel that you got smarter or less after the pandemic?**

- Much Smarter ☐
- Smarter ☐
- No Change ☐
- Less Smart ☐
- Much Less Smart ☐

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## Section C: Mental Health and Well-being

**How would you rate your current mental health compared to before the pandemic?**

- Much Better
- Better
- No Change
- Worse
- Much Worse

**2. How often have you felt anxious or stressed since the pandemic started?**

- Always
- Often
- Sometimes
- Rarely
- Never

**3. How has the pandemic affected your sleep patterns?**

- Significantly Improved
- Improved
- No Change
- Worsened
- Significantly Worsened

**4. Have you sought any mental health support during or after the pandemic?**

- Yes
- No

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## Section D: Academic Achievements

**2. How has the pandemic affected your academic performance?**

- Significantly Improved
- Improved
- No Change
- Worsened
- Significantly Worsened

**3. Have you faced any difficulties in adapting to asynchronous online learning?**

- Yes 
  - Please specify: \_\_\_\_\_
- No

**4. Do you feel more motivated to study now compared to before the pandemic?**

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

**5. How do you rate your current academic achievements compared to before the pandemic?**

- Much Better
- Better
- No Change
- Worse
- Much Worse



## The Appendices

6. Do you think the pandemic has affected your future academic or career plans?

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

7. Please provide any additional comments or thoughts about how the COVID-19 pandemic has impacted your mental health and academic achievements:

○ \_\_\_\_\_

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This questionnaire is designed to be straightforward and cover key areas related to mental health and academic performance. You can customize it further based on your specific research needs.