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**Students' Perceptions and Teachers' Attitudes Towards Implementing English as a
Medium of Instruction in Higher Education:
The Case of First Year Licence Students at the Department of Biology, Relizane University**

*Thesis submitted to the Department of English in partial fulfillment of the requirements for
the Degree of Master in Language and Communication*

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DEDICATION

I humbly dedicate this piece of work to my family members, whose love, sacrifices, and unwavering support have been my constant source of strength and inspiration. Your belief in me has carried me through the toughest times and motivated me to strive for success. I also fondly remember and honor the memory of my grandmother, whose love, wisdom, and values continue to guide and inspire me to strive for excellence. To my dear friends, thank you for your encouragement, laughter, and companionship throughout this journey. Your words of motivation and unwavering belief in my abilities have been invaluable.

This achievement is as much yours as it is mine.

FODIL Nada Abir

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Abstract

The implementation of English as a Medium of Instruction (EMI) has gained growing attention in non-English-speaking countries, particularly within higher education institutions aiming to align with global academic standards. In the Algerian context, the shift towards EMI poses several linguistic, pedagogical, and cultural challenges. The present research investigates first-year Biology students' perceptions and teachers' attitudes towards adopting English as a medium of instruction at Relizane University. This study aims to explore students' views on learning through English, analyze teachers' attitudes towards teaching in English, and identify the key challenges encountered by both groups in the adaptation process. A descriptive research design was employed, combining qualitative and quantitative approaches. Data were collected through a questionnaire administered to students and semi-structured interviews conducted with teachers. The findings revealed that both students and teachers generally support the integration of English as a medium of instruction, recognizing its importance for academic and professional development. However, the study also highlighted several obstacles, including limited language proficiency, lack of adequate training, and insufficient instructional resources, which hinder effective implementation. It is recommended to provide ongoing language support and professional development programs to facilitate the transition and ensure a smoother adoption of EMI in the biology department.

Keywords: English as a Medium of Instruction, Students' Perceptions, Teachers' Attitudes, Higher Education, Language Proficiency

List of Acronyms

EMI: English as a Medium of Instruction

CLIL: Content and Language Integrated Learning

CBI: Content-Based Instruction

ESP: English for Specific Purposes

EAP: English for Academic Purposes

ESL: English as a Second Language

EFL: English as a Foreign Language **ELT:** English Language Training

PD: Professional Development

L1: First Language (Mother Tongue)

CALP: Cognitive Academic Language Proficiency

ICL: Integrated Content and Language

PYP: Preparatory Year Program

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GENERAL INTRODUCTION

General Introduction

The implementation of English as a Medium of Instruction in Algerian universities has become a growing topic of interest, particularly in light of recent educational reforms and globalization trends. Traditionally, French has been the primary language of instruction in Algerian higher education, especially in scientific and technical fields. This is largely due to the country's colonial history, which continues to influence language use in universities. However, as English gains global prominence in academia, science, and international communication, Algerian institutions are beginning to reconsider their language policies. The shift towards EMI is seen as a strategic move to enhance students' academic mobility, access to scientific literature, and future career opportunities. Despite these potential benefits, the transition poses significant challenges, including resistance from both students and faculty, limited English proficiency, and a lack of training and resources. In this context, understanding how students and teachers perceive EMI is crucial for evaluating its feasibility and for informing effective language planning in Algerian higher education. The use of English as a medium of instruction in Algerian universities, particularly in the Department of Biology, presents several challenges. Despite the increasing emphasis on English in higher education, there is a limited understanding of how students and teachers perceive this shift. Language barriers, differences in attitudes, and a lack of adequate resources can hinder effective teaching and learning. Exploring the perceptions and attitudes of both students and teachers is crucial for identifying the challenges they face and for developing strategies that facilitate the successful implementation of EMI. This research aims to fill this gap in knowledge and inform policy decisions regarding the use of English as a medium of instruction in the Department of Biology at Relizane University.

To reach this aim, the current study sets the following research objectives:

- 1- to explore students' perceptions of using English as a medium of instruction
- 2- to analyze teachers' attitudes towards teaching in English
- 3- to identify the challenges faced by students and teachers in adapting to English as a medium of instruction.

In line with these objectives, the study seeks to answer the following research questions:

What are students' perceptions of learning in English at the Department of Biology?

How do teachers perceive the effectiveness of English as a medium of instruction in their courses?

What challenges do both students and teachers face when using English in the educational context of the Department of Biology?

To guide this investigation, the study proposes the following hypotheses: Students in the Department of Biology perceive learning in English as beneficial for their academic and professional development.

Teachers believe that using English as a medium of instruction enhances student engagement and understanding of course material.

Both students and teachers face significant challenges related to language proficiency, which impacts the effectiveness of EMI in the Department of Biology.

The current study adopts a descriptive research design to provide an in-depth understanding of students' perceptions and teachers' attitudes toward EMI. Data are collected through two main tools. The first is a questionnaire distributed to students, designed to collect both quantitative and qualitative data regarding their perceptions and the challenges they encounter. The second is a semi-structured interview conducted with selected teachers to gain deeper insights into their attitudes and teaching experiences.

This study is significant as it sheds light on the readiness of Algerian universities to adopt EMI. Understanding students' and teachers' perspectives can help policymakers and university administrators design effective strategies for EMI implementation. Additionally, the findings will contribute to the limited body of literature on EMI in non-English-speaking countries, particularly within the Algerian context.

This dissertation is divided into three main chapters. The first chapter provides the theoretical background of the study, including definitions, concepts, and an overview of previous research on EMI. The second chapter presents the research methodology, including the research design, population, sampling, and data collection tools. The third chapter analyzes the results of the

questionnaire and interviews, discusses the main findings, and relates them to the research questions and hypotheses. The study concludes with a summary of key findings, limitations, and recommendations for future research.

Chapter One

English as a Medium of Instruction in Higher Education

1.1 Introduction

English is increasingly becoming a global language, prompting many universities around the world including those in Algeria to adopt it as a Medium of Instruction (EMI). As Algerian universities expand the use of EMI, particularly in scientific fields such as biology, it becomes essential to explore the perspectives and experiences of both students and their teachers. This chapter is devoted to the theoretical framework of this research and is divided into two main sections. The first section examines EMI within the context of globalized academia. It begins with a definition of EMI, discusses the significance of implementing it in higher education, and provides an overview of its global development. The second section focuses on the application of EMI in Algerian universities. It explores the reasons behind its adoption, as well as the benefits and challenges experienced within the Algerian context. Additionally, it investigates students' perceptions of EMI by reviewing previous research, which highlights factors influencing their views such as motivation, language proficiency, and cultural background and examines the impact of EMI on their learning outcomes. The next part of this section addresses teachers' attitudes toward the implementation of EMI in higher education. It includes a review of studies focusing on teachers' views and experiences, particularly their efforts to balance effective content delivery with the language demands of EMI. The section also outlines the challenges faced by educators in EMI classrooms, including linguistic barriers, lack of sufficient training, and pedagogical difficulties. Finally, it highlights the importance of teacher training in promoting EMI success and discusses the role of English for Specific Purposes (ESP). The discussion emphasizes how ESP can bridge the gap between language and content, enhance subject-specific communication, support both students and educators in multilingual environments, and tailor language instruction to the specific needs of EMI contexts ultimately addressing the intersection of language, content, and pedagogy.

1.2 EMI in Globalized Academia

English as a Medium of Instruction (EMI) has become a major factor in global academia, shaping how knowledge is transmitted and accessed internationally (Dearden, 2014). As educational institutions strive to generate diverse student populations and create international partnerships,

the deployment of EMI programs has significantly expanded (Macaro et al., 2018). These programs enable students from different linguistic and cultural backgrounds to participate in academic debates, presentations, and research using English as a shared language. This transition facilitates mobility for both students and teachers and promotes collaboration between academic communities across national boundaries (Wächter & Maiworm, 2014). However, the increasing popularity of EMI also presents challenges. Non-native English speakers may face linguistic obstacles, which can negatively affect their academic performance and self-confidence when participating in discussions or completing assignments (Taguchi, 2014). Additionally, some scholars argue that EMI may contribute to the decline of native languages and traditional knowledge systems, resulting in a form of linguistic dominance or hegemony (Piller, 2016). Despite these limitations, the rise of EMI reflects the growing interconnectedness of academic environments. To ensure that EMI is both effective and inclusive, universities must adopt strategies that support language acquisition, foster intercultural understanding, and provide resources to help all students succeed in the global academic context, regardless of their linguistic backgrounds. Consequently, EMI presents both opportunities and responsibilities within the realm of global education.

The EMI framework originated in British post-colonial countries, where English is recognized as the official language in formal settings, rather than local languages. In countries such as India, Pakistan, and Ghana, colonial authorities implemented policies that continue to influence education systems today. The EMI framework is not merely a continuation of colonial practices; rather, these countries initially embraced it due to their marginalization and limited access to knowledge, as academic discourse was primarily conducted in English, French, or German. As Richards (2022) noted, “English is a remnant of the colonial administration” (pp. 22–25). Over the years, EMI has been increasingly adopted across all levels of education in countries like Sweden, the Netherlands, China, and Japan, where English has traditionally been taught as a second or foreign language. Despite having strong national languages, these countries have adopted the EMI model to internationalize higher education and create opportunities for students from diverse backgrounds to pursue academic studies in the common language, English.

1.3 Definition of EMI

There are several educational contexts in which the subject matter is taught in English, even when English is not the students' mother tongue. This phenomenon has various labels, such as English-medium education (Earls, 2016), English-medium teaching (Macaro et al., 2018; Tatzl, 2011), and English as the lingua franca medium of instruction (Björkman, 2010). For the purposes of this study, the term English Medium Instruction (EMI) is used. The medium of instruction refers to the language employed to convey skills, information, and values in the classroom, and to facilitate communication between the teacher and the students (Noor ul Islam et al., 2015). EMI is defined as “the use of English in the offer of university degree courses in higher education instead of the domestic language of the country” (Karakaş, 2015, p. 1); that is, academic disciplines are taught in English in countries where English is not the first language (Dearden, 2014; Macaro et al., 2018). The term EMI is often used in conjunction with other concepts, including Englishization, Content and Language Integrated Learning (CLIL), and Content-Based Instruction (CBI). Although these terms are sometimes used interchangeably, there are subtle differences among them. Englishization refers to the gradual replacement of a previously used language with English in various domains, particularly in education, politics, culture, and the economy (Wilkinson & Gabriëls, 2021). CLIL is an educational approach in which non-language subjects are taught through a foreign language (Dalton-Puffer et al., 2010). CBI involves the integration of language instruction with subject content (Snow, 2001). It focuses on developing both language skills and content knowledge by providing students with communicative opportunities that support their acquisition of the target language (Brinton et al., 2003).

Although CLIL and CBI appear similar to EMI, there are important distinctions. CLIL is commonly used in secondary-level education, while EMI is primarily implemented at the tertiary level. Furthermore, CBI places greater emphasis on language development than content (Simbolon, 2016), whereas CLIL emphasizes the integration of both. In contrast, EMI programs focus primarily on content, with language acquisition occurring incidentally (Aguilar, 2017; Banegas & Manzur Busleimán, 2021).

1.3.1 Language Integrated Learning (CLIL) and EMI

Two methodologies of teaching Content and Language Integrated Learning (CLIL) and English as a Medium of Instruction (EMI) are similar in that both integrate language learning with content instruction, thereby providing students with an accessible pathway to language acquisition. By maximizing the opportunities and benefits offered by CLIL and EMI, learners can enhance their academic language proficiency, metacognitive skills, and access to disciplinary knowledge.

CLIL's approach is particularly effective, as it builds the learning process on scaffolding, contextualization, and thematic organization. This method enables students to express themselves more freely and acquire essential academic skills. EMI, as previously mentioned, is also associated with improvements in lexical and syntactical features in academic writing. Additionally, EMI supports genre-based writing, academic vocabulary development, and the provision of language support within content courses. Despite these similarities, CLIL's integrated approach to language and content development contrasts with EMI's tendency to treat language and content as separate components. At the research and instructional design stage, educators can examine the similarities and differences between CLIL and EMI to determine the most effective strategies for integrating these methodologies into their teaching. This integration aims to promote educational equity by supporting both language and content learning, ultimately contributing to improved academic outcomes in higher education settings.

1.3.2 Significance of Implementing EMI in Algerian Higher Education

English is a global language that plays a significant role in making education more accessible. Several factors have enhanced teaching methods and encouraged educators, parents, and students to adopt English in educational institutions. These include increased access to educational resources, greater career opportunities, and advancements in knowledge and technology. The growing demand for English in the global market, along with developments in science and technology, significantly influences instruction in public schools in countries where English is not the primary language (Coleman, 2006). According to Coleman (2011), English is essential for enhancing employment opportunities, facilitating international travel, fostering development, accessing key information, and serving as a neutral language. As such, English Medium Instruction (EMI) is closely linked to the reality that English proficiency is often required for higher education and for working with international clients. Kalpana (2023) shows that EMI

supports economically disadvantaged groups by helping them learn English, thereby improving their opportunities in the global job market. Wang (2009) found that EMI provides students learning English as a Second Language (ESL) or English as a Foreign Language (EFL) with a strong foundation to achieve their academic and professional goals.

In many developing countries, non-native English speakers and governments seek to improve their global position by integrating English into various domains, including the workplace, media, commerce, education, and public institutions. By exposing students to other academic cultures and perspectives while also strengthening their critical thinking skills, EMI can enhance the quality of higher education in Algeria. It can also enable Algerian researchers to publish in reputable journals, engage with international academic systems, and participate in global conferences and seminars. Overall, expanding EMI in Algeria can support the nation's economic development and global integration by equipping graduates with essential English language skills. To better prepare students for the academic and professional demands of the 21st century, Algerian universities should prioritize English language training and integrate EMI into their programs (Ouarniki, 2023).

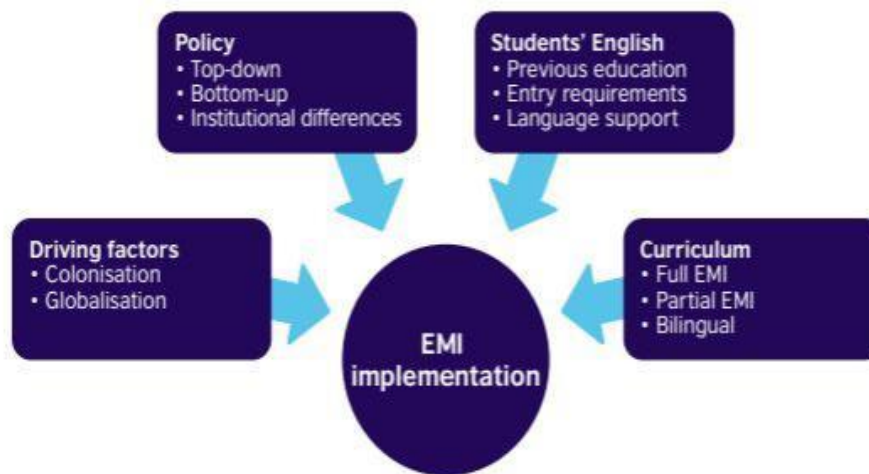


Figure1.1. EMI Implementation

1.4 Historical Context and Global trends in EMI implementation

The English language illustrates how human communication evolves over time. Originating from simple Anglo-Saxon roots, it has expanded over the centuries by incorporating words from Latin, French, German, and other languages. Today, technology connects people from diverse backgrounds and cultures, contributing to English's status as a global language. Its widespread use facilitates international interaction and establishes its significance in technology, business, and education. A clear example of this influence is English's role as a medium of instruction in schools worldwide, reflecting its importance as a language of communication and knowledge access. English has evolved from a local dialect to a national language and now to an international lingua franca. Its history as a teaching language is complex and shaped by various global developments. Many experts have predicted the continued growth of English and have offered explanations for this trend. For instance, Pitman (1873) observed that English would become the language of the future, noting that the British Empire then controlled nearly one-third of the Earth's landmass and that British subjects constituted almost one-quarter of the global population. During the rise of the British Empire in the 17th and 18th centuries, English was established as the official language in many colonies, used extensively in government, law, and education. Crystal (2003) highlights that English spread worldwide during this period, becoming an official language in countries such as Ghana and India under colonial rule. The establishment of English-based educational and legal systems was largely driven by colonial powers.

English usage expanded significantly in the late 19th and early 20th centuries when the British Empire was at its peak. By the mid-20th century, European nations began seeking a common language for teaching and learning due to English's broad use and influence across various fields. Consequently, English started to be employed in higher education across Europe during the 1990s, leading to notable developments since then. Tsou and Kao (2017) emphasize that English has established a strong presence in continental Europe, particularly in Northern Europe. After the end of colonial rule, English remained important due to its association with higher education, economic opportunity, and global communication. It became an official or secondary language in many former colonies, further enhancing its status.

Today, many countries use English as the primary medium of instruction, even when teaching in native languages might be simpler. One key reason for the widespread adoption of English as a

foreign language in classrooms is its central role in education. In this regard, Macaro et al. (2018) note that the use of English as a Medium of Instruction (EMI) is rapidly expanding in higher education institutions worldwide.

1.5 EMI in Algerian Universities

There has been a growing conversation in Algeria regarding the introduction of English as a medium of instruction in educational institutions. This approach involves teaching academic subjects in English rather than in Arabic or French. Many argue that this transition is essential for modernizing Algeria's education system and strengthening its connections with the global community. Historically, French has served as the primary language of instruction in Algerian institutions, particularly in fields such as science, medicine, and engineering. This practice is rooted in Algeria's colonial past, which left a lasting influence on the educational system even after independence. However, English has now emerged as the dominant global language in areas such as science, business, and international communication. As a result, a growing number of students, educators, and government officials are advocating for greater emphasis on English in university courses.

1.5.1. Reasons Behind the Implementation of EMI

Many higher education institutions around the world are adopting English as a Medium of Instruction (EMI) to enhance their international credibility. The goal of internationalizing higher education is to improve students' intercultural skills and proficiency in foreign languages. To achieve this, institutions implement strategies such as offering courses taught in English. EMI plays a key role in establishing English as a global medium of communication, contributing to the rise in international student enrollment a process closely tied to globalization. These universities provide international programs and emphasize the use of English in their curricula, attracting students from diverse backgrounds. Blommaert (2012) identifies three main motivations for the adoption of English in universities: to attract a larger number of international students, to boost the institution's global reputation, and to prepare students for careers in a globalized economy.

1.5.2. Benefits and Struggles in the Algerian EMI Setting

1.5.2.1. Benefits

Using English as the primary language of instruction at Algerian universities offers numerous benefits for students, teachers, and the education system. One major advantage is improved access to scientific knowledge and research. The majority of academic literature, textbooks, and research in fields such as medicine, engineering, and technology is published in English. By adopting EMI, students and teachers can stay up to date with global advancements and easily access international study materials. EMI also enhances career opportunities. Many employers in Algeria and abroad seek university graduates who are proficient in English, particularly in sectors like business, IT, and engineering. As Algeria expands its international business relations with English-speaking countries, English becomes an essential skill in the job market. Another benefit is that EMI fosters student interaction and global collaboration. It allows students to participate in exchange and study abroad programs in countries such as the US, Canada, and the UK. It also enables Algerian universities to build academic partnerships and conduct joint research with foreign institutions. Furthermore, EMI supports the adoption of modern teaching methods. Most online courses and digital learning resources are available in English. EMI encourages interactive learning through group projects and discussions, helping students improve their critical thinking and communication skills. Using EMI also reduces Algeria's dependency on France and aligns its education system with global academic and economic standards, enhancing the country's international reputation. Several non-English-speaking nations, such as Germany, Turkey, and China, have successfully implemented EMI, strengthening their academic and research standing.

Finally, EMI equips students with essential language skills needed in global industries, preparing them for the future. This is especially important in fast-growing fields like artificial intelligence, cybersecurity, and digital marketing, where most resources are in English. However, to ensure the success of EMI, Algeria must provide teachers with proper training, English-language resources, and support for students during the transition. If implemented effectively, EMI could transform Algeria's higher education landscape and strengthen its academic and economic competitiveness.

1.5.2.2. Struggles

Teaching English as a foreign language has increasingly become a universal demand. The prevalence of English as a Medium of Instruction (EMI) is growing globally, especially in higher

education. Tang (2020) stated that higher education institutions are becoming increasingly eager to offer undergraduate and graduate programs in English. Furthermore, teaching English as a foreign language remains a challenging task. In regions where English has only a limited role, both teaching and learning the language become more critical and time-consuming.

Barriers to EMI for Algerian Instructors

As noted by Vu and Burns (2014), teachers encounter four primary challenges when implementing English as a Medium of Instruction (EMI): their own language skills, students' proficiency, appropriate teaching methods, and a lack of resources. Firstly, teachers are often reported to face linguistic challenges. They may struggle to express themselves clearly by rephrasing, searching for vocabulary, and refining their statements. These difficulties can negatively affect student learning, resulting in diminished subject matter coverage and loss of knowledge. The second challenge EMI teachers face involves identifying effective teaching methodologies. Wilkinson (2005) discovered that the implementation of EMI by Dutch subject professors led to decreased communication and reduced educational quality due to inadequate oral language proficiency. To address this issue, he recommends that EMI can foster effective content learning if teaching strategies are appropriately modified. Additional research also highlights issues related to students' language skills. Kyeyune (2010) reported that communication problems were frequent in Ugandan classrooms due to students' poor English proficiency. The final challenge contributing to implementation difficulties is the lack of resources. Kaplan (2011), while examining the language policies of several Asian countries, concluded that "funding for textbooks, teacher training, and standard programs is all insufficient" (p. 318).

EMI Learnings Struggles for Students

Bradford (2016) identified four categories of barriers encountered in English Medium Instruction (EMI): linguistic challenges, cultural challenges, structural issues, and identity-related (institutional) challenges. The first category, linguistic obstacles, involves difficulties related to language proficiency. Students often struggle to understand lecture content delivered in English and may find it difficult to read academic materials due to limited language skills. The second category, cultural barriers, arises from differences between the backgrounds and expectations of international students and those of the host country. The experiences of EMI lecturers play a

significant role in these cultural challenges. Bradford (2016) observed that some Japanese lecturers felt compelled to adapt their teaching methods, which may conflict with national ideologies and affect identity formation, as explained by Sapolsky's theory. These cultural clashes may stem more from internal institutional dynamics than from broader cultural differences. The third category includes structural barriers, which relate to the overall organization and support of EMI programs. These issues involve the limited availability of EMI courses and the inability of support staff to effectively address the needs of a diverse student population. Numerous studies indicate that EMI courses demand exceptionally high levels of English proficiency, yet institutional support to help students meet these demands is often insufficient. Finally, identity-related institutional challenges refer to how the EMI program is externally perceived, including its reputation, the faculty's identity, and patterns of student enrollment (Bradford, 2016).

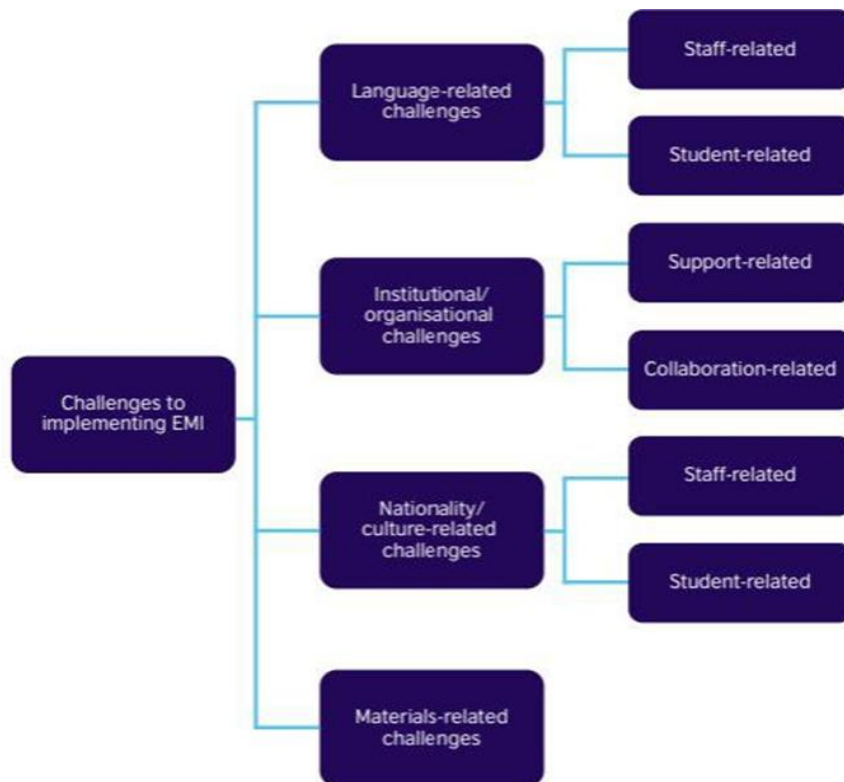


Figure 1.2. Challenges of EMI's Implementation

1.5.3. Arguments Supporting the Use of English in Algeria

As in many parts of the world, English has increasingly been used in Algeria to facilitate communication and improve access to knowledge for students, workers, researchers, and other social groups. Although Arabic and French remain the primary languages of instruction in Algerian educational institutions, policymakers are making concerted efforts to introduce English at all levels of education. This shift reflects the growing recognition that English plays a vital role in nearly every sector.. In this regard, Zughoul (200, p.122 as cited in Benyounes p.22) commented:

“In Arab North Africa, and despite the fact that French has had a strong foot hold in Tunisia, Algeria and Morocco, it has been retreating and Losing a lot of ground to English. In fact the Tendency of what can be termed a shift from French To English in these countries cannot be cancelled.”

Several researchers have argued that one reason for the positive attitudes towards English in Algeria is the perception that the language is "ethicized" and "neutral." It is not associated with religious, regional, or colonial connotations, making it less politically charged and more socially acceptable. As noted by Belmihoub (2015) and Jacob (2019), English is seen as a unifying and stabilizing force that promotes linguistic peace at the national level while connecting Algerian civil society with the global community. English is widely considered a gateway to better career opportunities and a higher quality of life. In Algeria, the language is increasingly used in vital sectors such as the oil and gas industry, international business, diplomacy, higher education, media, and journalism.

From a sociolinguistic perspective, social media platforms have played a crucial role in the spread of English, especially among Algerian youth. Many students have created Facebook pages dedicated to learning and practicing English. For example, the page “I’m DZ and I Speak English,” created in 2013, now has over 203,000 followers. Similarly, pages like “Nasri Anglais” and “Bilal English,” run by English graduates, provide online English lessons for high school and university students. University-based initiatives such as the “English Club University Mila” also

foster English learning through student-led activities. Additionally, the launch of the international Algerian news channel “AI 24 News” in 2021 marked a milestone in media broadcasting. It is the first national channel to consistently deliver news in Arabic, French, and English. This tri-lingual approach reflects the country's growing linguistic diversity and its efforts to reach broader audiences. Reading in English has also seen a notable rise in Algeria. The establishment of the publishing company “Scarlett Letter House” by an Algerian couple is a case in point. This company aims to translate Arabic literature into English and to distribute global English-language literature to Algerian readers—especially English students and teachers. The company has stores in both Annaba and Algiers (Belaref & Mhamdia, 2022, pp. 26–27).

At the university level, English has been introduced into many departmental curricula as a core subject, often with examinations required for course completion. In parallel, English for Specific Purposes (ESP) courses are being offered to help teachers improve their language skills. Redouane Belkhiri (2023), manager of telecollaboration and communication research, announced that a degree in English would soon become mandatory for university lecturers (El-Nahar Online, 2023). This initiative aims to ensure that instructors are linguistically prepared to teach their subjects in English. Furthermore, the Ministry of Higher Education launched a Facebook page titled The National Commission for Supervising and Monitoring the Implementation of the English Language Training Programs for Lecturer-Researchers and Doctoral Students. The page provides support to postgraduate students and researchers across various disciplines who wish to enhance their English proficiency.

In conclusion, Algerians are increasingly embracing English as the language of science, modernization, and progress. As the country continues to globalize, the adoption of English is seen not only as a strategic educational reform but also as a pathway toward national development and international competitiveness.

1.5.4..Arguments Against the use of English in Algeria

In Algeria, the use of English will allow the nation to progress, but some individuals are against its adoption; they argue that it would bring a set of disadvantages at all levels. First, Algerians have employed the French language since the era of colonization. They use it everywhere, even in regular conversation; therefore, French has become a fundamental component that symbolizes Algerians' identity. Even if they do not like France and want to reject everything associated with

it, French remains the first foreign language in the nation and is used as a medium of instruction at colleges, making its acquisition an obligation for individuals.

A report by the French National Assembly, “Parliament,” classified Algeria as a “Francophone country,” considering that more than 20 percent of Algerians actually speak French. This indicates that Algeria, though not a member of the International Organization of Francophonie, is still seen as a French-speaking nation: “The language spoken in Algeria is French!” (EL-Shorouk website, 2015). Also, Algerians, after years of independence, have come to understand that adopting French is crucial, as it acts as a tool to open up to the global economy and to meet the demands of globalization. In that context, President Abdelaziz Bouteflika commented: “For Algeria, I will speak French, Spanish, and English, and, if necessary, Hebrew” (El Watan, 2000, p. 23, quoted in Benrabah, 2005). Interestingly, Benrabah (1999) found that in the mid-1990s, there was an attempt to replace French with English in the fourth grade. However, this experimental program failed since most parents chose French over English. He suggested that one reason for parents’ rejection of English was their notion that French was simpler to master in Algeria and was more important for socioeconomic development.

Another aspect that makes the implementation of the English language in Algeria challenging is people’s low level in the language. As noted, Algerians are unfamiliar with English since they commonly use French or their dialect, which is a form of colloquial Arabic, in everyday conversation. Thus, they tend to reject all other languages, including English, and Algeria becomes a bilingual nation that employs Arabic and French in the educational context. Teachers and students often view English as a hindrance to critical thinking and the comprehension of academic topics. This is why language policymakers support the use of the mother tongue as a language of instruction and believe that it is preferable to assist the teaching-learning process. For Sakati (2016, p. 45), “the mother tongue as a language of instruction facilitates mutual communication between the teacher and learners. Effective communication leads to improved teaching on the side of teachers and better learning for learners.” Furthermore, a key reason for the limited use of the English language in the Algerian education setting is the immense funding this strategy demands from the government. Due to the tremendous contributions necessary—particularly in teacher training and the supply of educational resources—EMI policy is not frequently supported in underdeveloped countries. A study by Kouicem (2019) about English

education policy in Algeria demonstrates that the adoption of English is genuinely a strong political decision in the nation, and it demands a considerable budget to achieve acceptable teaching quality (p. 18).

1.6. Students' Perceptions Towards EMI

Students have various viewpoints on learning via English Medium Instruction (EMI). Many find EMI useful because it enhances their English competencies, which may benefit them in their education and future careers. A strong command of English may lead to greater job opportunities, particularly in industries where English is widely used. However, not all learners agree. Their thoughts on EMI depend on their English proficiency, the subject they study, and their experiences with the language. Some feel confident and ready to learn, while others struggle to follow courses, participate in discussions, or perform well on tests due to language barriers.

Institutional support plays an important role in shaping their experiences. When universities provide extra help, such as language courses and skilled instructors, students tend to have a more positive experience. But without enough support, EMI can be very difficult for many learners. Cultural and social factors also influence their views. Some consider English a necessary global language, while others worry it could degrade the status of their national language. There are concerns that students with lower proficiency in English may face greater challenges and achieve less academic success than their peers, leading to educational disparities.

1.6.1 Overview of Research on Students' Perceptions

The rising use of English as a Medium of Instruction (EMI) in higher education underscores the necessity of understanding students' perceptions of this system. Many researchers have examined how students perceive EMI. Despitasari (2021) studied students at a private university in Indonesia and found that students generally have positive feelings about EMI. They believe that English is important for their academic and career goals and do not see it as a threat to the Indonesian language and culture. Many students are also considering moving to another country for better living and working conditions. Overall, they are satisfied with how EMI is being applied at their university. Kırkgöz (2014) conducted a different study on students' perceptions. She found two groups: one received instruction in Turkish, their first language, while the other learned in English. Through questionnaires, interviews, and exam paper analysis, she discovered

that English instruction helped students improve their vocabulary and translation skills. The students felt positively about EMI, expecting it would lead to better job opportunities. However, they struggled with understanding the subject matter and relied on memorization to pass exams. This approach resulted in forgetting information quickly and a superficial grasp of the content. The Turkish-speaking group showed higher satisfaction and a deeper understanding of their studies but faced challenges in interpreting English resources and concerns about needing English for job prospects. These findings highlight the importance of EMI in higher education.

Moncada Comas (2022) looked at Catalan university students' attitudes towards EMI. Although teaching was mostly in their native languages, English was recently introduced. Her study focused on four areas: students' views on instructional differences between English and their first language, the multilingual practices of teachers and peers, perceptions of language performance, and experiences with English teaching. Results showed that students enjoyed being taught in English and considered themselves proficient. However, they thought their peers' English skills were lacking, which affected their understanding and led them to use their first language instead. Students felt EMI courses gave them more exposure to English, improved their skills, and expanded their vocabulary. When they struggled with English, they often switched to their first language for better understanding. In contrast, Kim et al. (2017) found that some students were unhappy with EMI and preferred Korean. They suggested that limited exposure to English contributed to their preferences. Students believed that changing school policies to require English learning would help them learn the language more easily. Aldawsari (2022) studied EMI at Prince Sattam bin Abdulaziz University in Saudi Arabia. Both students and educators had favorable views of EMI. However, students preferred using their first language, as they felt their English skills were limited. They also valued their first language and cultural background.

In summary, students' attitudes towards EMI differ significantly. Some see EMI as beneficial for their social and professional lives, while others face challenges and feel that learning in English leads to shallow understanding due to their limited language skills.

1.6.2 Factors Influencing Students' Perceptions

Students' perceptions of learning are shaped by various factors that impact their engagement with educational experiences. Notably, motivation, language proficiency, and cultural background play essential roles in how students interpret, process, and respond to information.

1.6.2.1 Motivation

Motivation has a major influence on shaping learners' views toward English as a Medium of Instruction (EMI). It may be categorized into three main types: integrative, instrumental, and intrinsic motivation, all of which profoundly affect the learning process. As Dörnyei (2001) points out, "Motivation provides the primary impetus to initiate learning a foreign language and later the driving force to sustain the long and often tedious learning process" (p. 117).

Instrumental motivation is generally driven by practical objectives, such as ambitions for professional advancement or better job opportunities. Students motivated in this way typically view English as a necessary tool that can enhance their employability and develop their professional skills. According to Gardner (1985), instrumental motivation comprises "the desire to learn a language because it would fulfil certain utilitarian goals, such as getting a better job or a higher salary" (p. 10). On the other hand, integrative motivation stems from personal and cultural interests. Students with integrative motivation often have a strong desire to interact with English-speaking cultures or connect with native speakers. Their motivation may arise from a wish to enjoy English literature or to better understand different viewpoints in global conversations. Gardner and Lambert (1972) state that "integrative motivation reflects a genuine interest in the language and culture of the target community, leading to more effective and sustained language learning" (p. 132). Intrinsic motivation reflects a genuine appreciation for the learning process itself. Students who are intrinsically motivated typically show curiosity and derive enjoyment from studying the language without seeking external rewards. Ryan and Deci (2000) explain that "intrinsically motivated students engage in learning activities because they find them inherently enjoyable and satisfying" (p. 55). This type of motivation often fosters a deeper connection with English and a better understanding of its complexities.

The level of motivation significantly influences students' perceptions of EMI. Highly motivated students tend to engage more actively with course material, participate in class discussions, and seek additional opportunities to enhance their language skills through means such as conversation

clubs or immersion experiences. Their enthusiasm contributes to a positive learning environment, enriching their overall educational experience. In contrast, learners who lack motivation may struggle to keep up with their studies. They might find it difficult to maintain interest in assignments or take part in group activities, which can lead to more negative perceptions of EMI. Unmotivated learners may feel overwhelmed, resulting in reluctance to participate, ultimately harming both their academic performance and language development.

Understanding these motivational factors is essential for educators who aim to create supportive environments that foster engagement and positive attitudes toward English Medium Instruction. By identifying and cultivating different types of motivation, teachers can effectively enhance language learning and improve students' educational experiences. As Ushioda (2011) asserts, "Teachers play a crucial role in creating motivationally supportive environments that encourage students' autonomy and engagement in language learning" (p. 15).

1.6.2.2 Language Proficiency

On the other hand, sociolinguistic competence refers to the understanding of the social and cultural contexts in which language is used. This includes recognizing codes, accents, and linguistic features shaped by the speaker's background, identity, and relationships. For instance, learners who grasp these sociolinguistic elements are better able to perceive and respond to the nuanced intricacies of everyday interactions, thereby enriching their classroom experience. In contrast, pragmatic competence involves the appropriate use of language in real-life situations. This includes knowing how to make requests, express ideas, and engage in conversations in a socially and culturally acceptable manner. Students with strong pragmatic skills are better prepared to manage discussions and participate in collaborative activities in EMI courses.

Overall, students with a high level of language proficiency are more likely to succeed in EMI courses. They can actively contribute to class discussions, offer meaningful insights, and confidently complete assignments. Their ability to communicate ideas clearly and engage with a wide range of course materials helps foster a more positive perception of EMI. Conversely, students with limited language proficiency often struggle to meet academic expectations. They may feel overwhelmed by complex content or unable to participate in discussions, resulting in frustration and a more negative attitude toward EMI. As a result, their learning experience may

become less enjoyable and less productive, highlighting the crucial role of language proficiency in shaping educational outcomes in English Medium Instruction settings.

1.6.2.3 Cultural Background

A student's cultural background has a significant impact on how they interpret and experience EMI. It affects their linguistic abilities, values, beliefs, and attitudes toward learning and the EMI system in general. Culture serves as a lens through which students perceive their environment, leading to notable differences across diverse backgrounds (Kramsch, 1998). Students from collectivist cultures, such as those in Asia or Latin America, place a strong emphasis on collaboration, teamwork, and community in education. Studies show that group work is particularly effective for learning complex subjects, as it allows students to share ideas and solve problems collectively (Hofstede, 2001). In contrast, students from individualistic cultures, common in many Western countries, often prioritize independence and personal achievement. They may prefer studying alone and engaging in projects that highlight their individual strengths (Trompenaars & Hampden-Turner, 2012). Teachers must recognize these cultural differences and adapt their teaching strategies accordingly. By tailoring their approach to accommodate different learning styles and preferences, educators can foster an inclusive classroom that values diversity (Gay, 2010). For example, combining cooperative learning activities with opportunities for independent research can meet the needs of both collectivist and individualistic learners. This type of inclusive teaching not only enriches the overall learning experience but also encourages students from various cultural backgrounds to develop a positive attitude toward EMI, ultimately supporting improved language acquisition and academic performance (Macaro, 2018).

1.7. Impact of EMI on Learning Outcomes

Using English as the primary language of instruction at universities is becoming increasingly common across the world. This trend is largely due to its potential to enhance students' English skills and improve academic performance (Dearden, 2014; Macaro et al., 2018). Research suggests that EMI can help students learn more effectively, particularly in reading and writing in English (Macaro et al., 2018, p. 45). For instance, Macaro and his colleagues found that students who received instruction in English performed better in reading and writing than those taught in their native language. Dearden (2014) also highlights that EMI provides students with greater access to international learning resources and opportunities to engage with academic

communities worldwide. In addition, EMI can help students develop stronger critical thinking and problem-solving skills, as they are required to read academic texts and participate in discussions and debates (Doiz et al., 2013). These activities promote a deeper understanding of their subjects. However, challenges remain. One significant issue is that some students may struggle if their English proficiency is not sufficient (Kirkpatrick, 2011). To address this, universities should provide language support, tutoring services, and create an inclusive learning environment to ensure that all students can succeed.

1.8. Teachers' Attitudes Towards EMI

Teachers' attitudes towards English as a Medium of Instruction (EMI) can be both supportive and skeptical. While some educators advocate for its implementation, others remain doubtful, reflecting diverse perspectives on whether EMI enhances or hinders learning in educational settings.

1.8.1. Studies on Teachers Views and Experiences

Teachers' beliefs and attitudes play a crucial role in the success of EMI implementation in higher education. As Lasagabaster and Sierra (2009) noted, "the attitudes of teachers towards EMI are very important in determining the success of this language policy " (p.155). Some teachers perceive English as a Medium of Instruction (EMI) as a chance to enhance their own language skills while provide students with essential English proficiency that can benefit them in the global job market. According to Cots and Guerrettaz (2012), using EMI can improve students' communicative abilities in English and increase their employability in a globalized world (p. 87). However, some instructors reject EMI, perceiving it as a danger to their language and cultural identity or an extra obligation that adds to their already hard job (Lasagabaster & Sierra, 2010). Therefore, it is necessary for policymakers and educational institutions to realize the role of teachers' attitudes and beliefs in the implementation of EMI and to give adequate assistance and training to overcome any hurdles that may develop. As Hu and McKay (2018) underlined, "teachers need to be equipped with the necessary pedagogical skills and language proficiency to effectively implement EMI and ensure student success" (p. 238).

1.8.2 Balancing Content Delivery and Language Proficiency

The effective deployment of English as a Medium of Instruction (EMI) in higher education relies on balancing content delivery with language competency, although many instructors regard EMI just as a linguistic shift rather than a pedagogical revolution. Research indicates that language and the subject acquisition are interconnected, since students commonly struggle with academic discourse, making understanding and participation challenging. According to Cummins' (2008) notion of cognitive academic language proficiency (CALP), academic language abilities take years to acquire, which creates serious problems for EMI learners. However, many non-native English-speaking teachers lack formal training in integrating language assistance within subject matter instruction, causing them to concentrate largely on content while disregarding students' linguistic requirements (Utenberger, 2012, 2014). Consequently, students face difficulties in understanding lectures, expressing ideas clearly, and performing well in assessments, raising concerns about the fairness of evaluation methods in EMI settings (Macaro et al., 2018; Galloway & Rose, 2018). Given these challenges, researchers advocate for an Integrated Content and Language (ICL) approach, where content learning is complemented by embedded language instruction to support students' academic communication skills (Dale & Tanner, 2012). Effective EMI strategies include scaffolding techniques, collaborative learning, explicit language instruction, and EMI-focused teacher training to equip instructors with methodologies that enhance both content mastery and linguistic competence (Meyer, 2010; García & Li, 2014; Wilkinson, 2013). Moreover, curriculum planners must recognize language as an integral component of EMI success, incorporating discipline-specific language modules, revised assessment frameworks, and structured EMI pedagogy training to ensure that students can thrive academically (Lasagabaster & Doiz, 2016). Ultimately, maintaining a balance between content and language is indispensable for EMI to be successful, since disregarding linguistic development may hinder students' understanding, assessment performance, and overall academic achievement. By employing pedagogical practices that incorporate language assistance inside subject education, EMI programs can improve students' subject knowledge, communication skills, and long-term academic progress.

1.8.3 Challenges Facing Teachers While Using EMI

Teachers confront various complications while utilizing English as a Medium of Instruction (EMI). One of the primary challenges is linguistic competence. Teachers need to be extremely educated in English to successfully convey complicated subjects. If their skill is poor, it may cause to communication obstacles making hard for students to fully understand the content and join in conversations (Li, 2019). Another challenge related to EMI Implementation is pedagogy. Instructors must Be trained to deliver courses in English Effectively. They must have an understanding of the cultural and linguistic differences that may exist among students and be able to modify their teaching methods to accommodate these differences. This demands not simply language competency but also a deep understanding of instructional strategies that can be applied to a varied student group. Finally, curriculum design is another challenge that may occur during EMI implementation. Curriculum must be planned with the individual language requirements of the students in mind, and teachers must be able to provide materials that are suitable for the students' language level. This may take substantial commitment in both money and time to generate high-quality course materials that are successful for a wide range of learners. As Li (2019) pointed out, "EMI is not a simple process of replacing the medium of instruction. Instead, it involves a complex set of changes in the educational system that impact teachers, students, and administrators." Previous research on EMI implementation in various contexts has identified common challenges and approaches to address them. For example, Pham and Baldauf (2018) found that language proficiency and pedagogical challenges were the most significant barriers to successful implementation . They recommended that "teachers and students should be provided with language support, and appropriate pedagogical training should be given to teachers." Similarly, Ushioda and Dörnyei (2012) who had implemented EMI in Japan suggested that curriculum design should be aligned with the language proficiency level of students and that teachers should be trained to use appropriate teaching strategies.

In summary , the implementation of EMI in higher education requires careful consideration and planning. As Canagarajah (2018) noted, "EMI implementation is not about substituting one language for another. It requires a thorough understanding of the context, goals, and needs of the stakeholders involved."

1.9 The Role of Teacher Training in EMI Success

The efficiency of English-Medium Instruction (EMI) programs in higher education depends mainly on how well-prepared lecturers are in terms of language ability, teaching strategies, and student engagement. Many university teachers are professionals in their respective disciplines but usually lack the essential knowledge to teach effectively in English.

This may present difficulty in explaining complicated academic subject, especially to students who are non-native English speakers. Despite this, most institutions demand scholars to teach in English without offering proper training, which may lead to challenges in both teaching and learning. According to Sánchez-Pérez (2020), teacher training programs produced specifically for EMI may assist overcome these obstacles. Such programs should concentrate not just on boosting language abilities but also on training lecturers with teaching approaches appropriate for a diverse and multilingual classroom. By participating in these training programs, lecturers may increase their confidence, create strategies to explain complicated subjects, and build an inclusive learning environment that helps students from various language backgrounds. Additionally, research by Woldegebriel, Yigzaw, Shiefere, and Emiru (2024) underscores the direct relationship between well-trained EMI lecturers and student success. Their research reveals that instructors who get focused training are better at adopting effective instructional techniques that boost students' knowledge and academic accomplishment. The findings also recommend mentoring programs, in which experienced EMI instructors encourage younger colleagues, might be particularly useful. These programs enable knowledge-sharing, problem-solving, and creating best practices in EMI education. Moreover, EMI-focused teacher training should address crucial areas such as subject-specific language abilities, classroom management in multilingual contexts, and approaches for stimulating student engagement. Muttaqin (2022) declares that useful EMI training should be in progress and involve cooperation between language experts and subject specialists. Without such planned assistance, lecturers may struggle with language challenges and lack the confidence required to teach well in an EMI context.

1.9.1 The Characteristics of EMI Teacher

In the application of EMI, the key aspect that is needed from the teacher is to understand the English language according to him the material will be conveyed to learners. The instructor must be flexible and he should attempt various ways to promote communication within the classroom by employing different strategies like code switching in circumstances where the learners cannot obtain the appropriate meaning of tough terminology. In addition to that, EMI instructors should adopt various pedagogies that meet their learners' requirements. An example of such is to question them at the the end of the session if there is anything they failed to understand, and in case students have difficulty in comprehending specific points in the lesson, the teacher should reformulate and explain it in a more clear manner. Richards and Pun (2022) argued that "learning through EMI depends on understanding and assimilating concepts, schemata, and knowledge that provide the content foundation of different academic subjects in the school curriculum such as math, science, or social studies" (p 4).

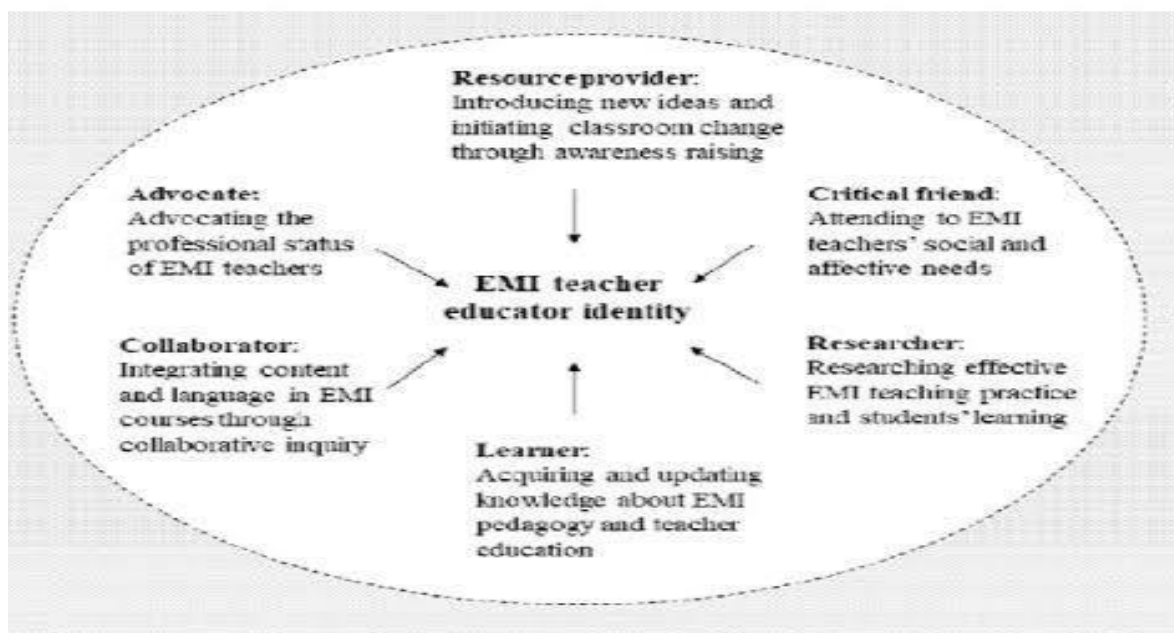


Figure 1.3. EMI Teachers' Characteristics

1.9.2 The Role of ESP in EMI Success

English for Specific Purposes (ESP) assist considerably in assisting students and instructors in English-Medium Instruction (EMI) situations by strengthening both language and academic abilities. Research has revealed that ESP and EMI impact each other, with ESP focused on both language and content, making it complimentary to EMI (Yang, 2016). While EMI primarily emphasizes subject knowledge, ESP ensures that students develop the necessary language proficiency to engage effectively in their disciplinary studies. Several studies have highlighted the interplay between ESP and EMI. Arnó-Macià & Mancho-Barés (2015) found that collaboration between language and content teachers in Spain could improve students' learning outcomes. Similarly, González Ardeo (2016) surveyed engineering students in Bilbao and discovered that those who attended an ESP course alongside their EMI studies had a more positive attitude towards both approaches. Additionally, Martín del Pozo (2017) emphasized the importance of listening comprehension training for EMI lecturers, which is often addressed in ESP courses. ESP courses can enhance EMI students' academic skills, such as presentation techniques, pronunciation, fluency, disciplinary lexical accuracy, note-taking, and exam preparation (Morell, 2020). They also provide support for students in proofreading, writing assignments, and participating in discussions (Dearden, 2018; Prior, 2021). Beyond student support, ESP also contributes to professional development for EMI instructors, offering training in pedagogical strategies and intercultural communication (Borg, 2003).

The integration of ESP into EMI curricula can follow different models. One such approach is "adjunct teaching," where ESP courses run parallel to EMI courses, addressing subject-specific language needs (Roquet et al., 2020). This model has been successfully implemented in multilingual university contexts, such as the Free University of Bolzano, where ESP courses support EMI students in mastering academic discourse (Costa & Mastellotto, 2022). Nevertheless, limitations exist in properly incorporating ESP within EMI programs due to a lack of collaboration between language and subject experts (Airey, 2016). At some point ESP promotes EMI success by educating students with the required linguistic abilities to navigate their academic subjects while also facilitating cooperation between language and content professors. As EMI continues to develop internationally, including ESP into curriculum preparation is crucial for ensuring that both students and educators can successfully participate in an English-mediated learning environment.

1.9.3. Bridging Language and Content for Academic Success

Integrating language assistance with subject-specific information is significant for the success of English as a Medium of Instruction (EMI) in higher education, especially in contexts where students are non-native English speakers. Research demonstrates that poor English proficiency typically reduces students' capacity to master complicated subjects in academia, resulting to surface learning rather than deep knowledge (Airey, 2012; Doiz, Lasagabaster, & Sierra, 2013). Content and Language Integrated Learning (CLIL) has been offered as a solution, helping students learn both subject knowledge and language abilities immediately (Coyle et al., 2010). However, many EMI instructors lack expertise in language teaching, making it difficult for them to deliver appropriate linguistic help (Doiz et al., 2013). Kamaşak and Sahan (2023) highlighted that students with higher confidence in their English skills tend to participate more actively and do better academically, underscoring the demand for accurate language approaches alongside subject education. To resolve these obstacles, researchers have investigated translanguaging, which allows learners to employ both their original language (L1) and English for enhanced comprehension. Dillon et al. (2021) reported that students who received bilingual materials showed improved knowledge, while Almatrafi (2023) asserted that translanguaging enhanced student involvement in EMI courses. Despite its benefits, some institutions resist this approach due to concerns over English proficiency development and language policies (Macaro et al.,

2018). Additionally, a lack of sufficient language support in EMI can result in rote learning, as Dearden and Macaro (2016) observed in European and Asian universities. To mitigate these issues, some institutions offer English for Academic Purposes (EAP) programs, which have been shown to enhance students' academic performance (Bradford, 2016). Airey and Linder (2006) also emphasize the importance of subject-specific language support through tailored course materials to improve comprehension and academic success.

The effectiveness of EMI depends not only on student language proficiency but also on instructors' ability to make complex content accessible. Macaro et al. (2018) found that many lecturers struggle to balance subject knowledge with language demands, reinforcing the need for professional development programs in EMI pedagogy. To guarantee academic achievement, colleges must incorporate language-sensitive teaching practices, deliver educator training, and adopt flexible multilingual ways to teaching. Combining CLIL, translanguaging methods, and organized language assistance may help bridge the gap between language and content, eventually boosting student learning results in EMI environments.

1.9.4. Enhancing Subject-Specific Communication in EMI

Effective subject-specific communication is critical for success in English as a Medium of Instruction (EMI) educational settings, yet many students struggle with sophisticated academic terminology, limiting understanding and engagement (Airey, 2012; Evans & Morrison, 2011). According to research, although EMI students may improve their overall English skills, they often struggle with discipline-specific terminologies, which has an influence on their academic achievement. To overcome these obstacles, several EMI institutions have implemented English for Academic Purposes (EAP) courses. Bradford (2016) and Macaro et al. (2018) found that EAP education improved students' academic writing, understanding, and confidence. Furthermore, interactive teaching strategies, such as discussions and debates, improve subject-specific language abilities (Macaro et al., 2018). However, one significant difficulty is that many EMI teachers lack English competence, making it impossible to give effective language assistance (Doiz et al., 2013). Translanguaging has emerged as an alternative strategy, allowing students to use their first language alongside English to improve understanding (García & Lin, 2017). Research by Almatrafi (2023) suggests that translanguaging supports deeper comprehension and engagement in subject-specific learning. Despite concerns that it may limit English immersion,

studies indicate it helps students process complex material more effectively (Dillon et al., 2021). To enhance subject-specific communication in EMI, universities should integrate structured language support, such as discipline-focused EAP courses and faculty training in language-sensitive teaching methods. These strategies can bridge linguistic gaps, ensuring both students and instructors are better equipped to engage in EMI settings.

1.9.5. Supporting Students and Teachers in Multilingual Classrooms

Multilingual classrooms in EMI (English as a Medium of Instruction) settings have both benefits and challenges. On one hand, language diversity can make learning more interesting. On the other hand, students with different levels of English may struggle to understand lessons, participate in class, and perform well academically (Doiz, Lasagabaster, & Sierra, 2013). Teachers also face difficulties because they must teach their subjects while helping students with English, even if they have no special training in EMI teaching (Macaro et al., 2018). To help students, universities offer academic language programs like English for Academic Purposes (EAP), which improve their understanding and engagement in EMI courses (Bradford, 2016). Some researchers (Airey, 2012) suggest that using additional materials in students' native language can help without reducing their exposure to English. However, some universities avoid this because they believe full English immersion is more effective (Dearden & Macaro, 2016).

Teachers also need training to teach effectively in multilingual classrooms. Research shows that professional development programs help teachers use better language-support strategies (Galloway & Rose, 2015). Another useful method is translanguaging, where both English and students' native languages are used to improve understanding (Almatrafi, 2023; García & Lin, 2017). A study by Dillon et al. (2021) found that students learned better when translanguaging was allowed compared to strict English-only teaching.

1.9.6. Tailoring Language Instruction for EMI Contexts

Many students struggle to grasp complicated academic materials and lectures in English, which hinders their learning and involvement (Doiz, Lasagabaster, & Sierra, 2013). Teachers also experience difficulty in blending subject matter education with language assistance, particularly if they lack training in EMI teaching (Macaro et al., 2018). To support students, universities establish English for Academic Purposes (EAP) programs, which strengthen students' academic

language abilities and help them better comprehend EMI courses (Bradford, 2016). Another successful technique is Content and Language Integrated Learning (CLIL), where language and subject matter are taught at the same time, helping students gain English competence while studying their academic subjects (Airey, 2012). Some investigations show that offering bilingual learning materials may increase understanding without compromising English exposure (García & Lin, 2017). However, some institutions prefer full English immersion, fearing that bilingual support may slow language development (Dearden & Macaro, 2016). For educators, professional development programs focusing on EMI pedagogy are essential. These programs train teachers in language-sensitive teaching strategies, such as simplifying explanations, using visual aids, and encouraging student discussions (Galloway & Rose, 2015). Additionally, translanguaging strategies, which allow students to use both their native language and English when learning, have been shown to improve understanding and engagement (Almatrafi, 2023; Dillon et al., 2021).

1.9.7 The Intersection of Language, Content and Pedagogy

Previous research on English Medium Instruction (EMI) has revealed variations in how lecturers use language in their classrooms, particularly when they share a first language (L1) with students (Sahan, 2020). Studies have also shown that EMI teaching methods tend to differ from those in non-EMI settings, often resulting in reduced interaction (Pun & Macaro, 2019) and limited discourse (Lo & Macaro, 2012). To address these challenges, scholars emphasize the need for professional development (PD) initiatives aimed at improving EMI instruction (Macaro, Akincioglu, & Han, 2020). However, such training should go beyond enhancing English proficiency alone (Bradford, 2018). Since teachers' PD requirements vary, a crucial step is identifying different pedagogical approaches based on language use. Understanding language patterns in EMI classrooms can help design targeted PD programs that address teachers' specific needs. Macaro (2018) proposed four models for language support in EMI: (1) the multilingual model, where students access L1 instruction alongside EMI courses; (2) the concurrent support model, offering supplementary English classes such as ESP or EAP; (3) the preparatory year model (PYP), where students undergo intensive English training before EMI coursework; and (4) the selection model, which requires students to pass an English proficiency exam but does not provide additional language support.

Conclusion

Adopting English as a Medium of Instruction (EMI) policy will always play an important role in enhancing the quality of education. By depending on English and teaching it to students and teachers, they will be able to gain more knowledge and have better opportunities in the future. In Algeria, due to the complex linguistic situation, the French language has been used at all levels. However, this language loses its status globally, which makes it obligatory for the government to replace it with English. Now, all universities around the world adopt English as a medium of instruction to make it easier for students to use one language. So, Algeria should be open to the changes and adopt English as a medium of instruction at the higher education level. Furthermore, instructors should engage in English language training (ELT) programs in order to promote the quality of English teaching. Similarly, disciplinary instructors and ELT practitioners should engage in collaborative activities which are highly promising in developing English skills through instruction. Algerian universities are, indeed, aware of the importance of English as a medium of instruction policy, but its implementation needs a big preparation before using it in a real context.

Chapter Two

Research

Methodology Design,

Data Analysis and

Interpretation

2.1. Introduction

The present chapter is devoted to the practical part of this research, which aims to investigate the perceptions of students and teachers' attitudes towards using English as a medium of instruction in the scientific field. It presents and analyzes the findings from data collection in the current study, following the theoretical framework. To achieve this, two data-gathering tools were used: a questionnaire administered to first-year biology students and an interview conducted with their teachers at the University of Relizane. Furthermore, these results are interpreted to address the research questions. This chapter is organized as follows: first, it describes the research design, explaining how the study was conducted. This section details the data collection methods, tools used, steps taken, and participants involved. Then, the data analysis and interpretation section presents and explains the results from the student questionnaires and teacher interviews.

2.2. The Learning Context in the Biology Department

In the department of biology at Relizane university, there are approximately 488 first-year students and 6 teachers who deliver their lectures in English. The integration of English into the teaching process began progressively in 2023, with some teachers starting to use English partially in their instruction. In 2024, English was officially introduced as a part of the curriculum for certain scientific modules. First-year students follow a structured academic program that includes both scientific and language-related modules. The academic year is divided into two semesters, with students attending classes five days a week. Each semester, they study around 8 to 10 modules, including core scientific subjects such as Cell Biology, Botany, Zoology, Chemistry and Physics, which are currently taught in English. These classes are held on Monday, Tuesday and Wednesday respectively, and each session lasts for 2 hours. When students encounter difficulties understanding content in English, teachers often provide explanations in French or Arabic. In addition, students take the English for Academic Purposes module, which is fully delivered in English and focuses on developing their reading, writing and scientific vocabulary. The scientific methodology module also occasionally incorporates English terminology and sources. This learning context offers valuable insight for exploring students' perceptions and teachers' attitudes towards implementing EMI in scientific education.

2.3. Research Design

Quantitative and qualitative methods are employed in the current study, which focuses on examining students' perceptions and teachers' attitudes toward implementing English as a medium of instruction in higher education. The primary data collection instruments used are a questionnaire administered to first-year biology students and interviews conducted with teachers in the Department of Biology at Relizane University.

2.3.1 Data Collection Methods

This study employed both quantitative and qualitative data collection methods: questionnaires for students and interviews with teachers. These methods were chosen to gather comprehensive and insightful information. The questionnaire was distributed to first-year biology students at Relizane University to collect their views on learning in English. Interviews were conducted to gain a deeper understanding of teachers' perspectives on using English as a medium of instruction. By using both methods, the researcher was able to gather data from different groups and compare their perspectives, thereby enhancing the reliability and completeness of the research findings.

2.3.2. Research Instruments

This research used two instruments: a questionnaire and an interview. The questionnaire was designed for students and included both multiple-choice and open-ended questions. These questions aimed to explore students' thoughts, experiences, and challenges related to learning in English. The language of the questionnaire was kept simple to ensure easy understanding. The interview was intended for teachers and consisted of open-ended questions that allowed them to express their opinions and share their experiences. Its purpose was to gain insight into teachers' perspectives on teaching in English and whether they viewed it as appropriate and effective for their students. Both the questionnaire and the interview were created by the researcher and were directly aligned with the study's objectives.

2.3.3. Data Gathering Procedures

The data collection process began with the development of the questionnaire and semi-structured interview questions. After obtaining permission from the university to conduct the study, the questionnaire was printed and distributed to 57 first-year biology students. They were

given sufficient time to answer all questions thoroughly and honestly. For the interviews, six teachers from the same department were selected. Instead of face-to-face sessions, semi-structured interview forms were distributed to them in written format. These forms contained open-ended questions, allowing teachers to express their views in detail at their convenience. However, many teachers were not fully cooperative; several postponed returning the forms or provided brief and superficial responses. Common answers such as “yes,” “no,” or “I don’t know” were frequent, which limited the depth of the qualitative data. Despite these challenges, repeated efforts were made to collect the completed forms. The data collection process extended over several weeks to ensure sufficient time for distributing and collecting both the questionnaires and interview forms in an organized manner.

2.3.4 Participants

This study involved 57 first-year biology students and 6 teachers from the Biology Department at Relizane University. The students were selected because they were newly introduced to the use of English in their academic courses. Although they had limited familiarity with English, their diverse backgrounds and varying levels of language proficiency provided useful insights into how they perceive and cope with English as a medium of instruction. The teachers who participated had taught in the department for many years. They were selected because they actively use English in their classes, and their views can help us understand the advantages and difficulties of using English in higher education. All participants volunteered and knew the research’s purpose.

2.4. Data Analysis and Interpretation

This section consists of the results and findings of the students’ questionnaire and teachers’ interviews.

2.4.1. Students’ Questionnaire

The questionnaire is submitted to investigate students’ perceptions and teachers’ attitudes towards applying English as a medium of instruction in the scientific field, specifically biology. It also deals with the extent to which students are interested in using and applying this language, as well, the challenges faced by those learners and their teachers.

2.4.1.1 Description of the Students' Questionnaire

The questionnaire is designed to investigate students' perceptions and teachers' attitudes towards implementing EMI in higher education, addressing the field of biology. Through this questionnaire, the researchers seek to gather data on benefits, challenges, and overall experiences of students who are exposed to EMI, as well as their views on how effectively teachers adopt EMI in their teaching practices. This questionnaire is divided into three sections; each section focuses on a particular aspect (see Appendix 1). Both closed-ended and open-ended questions are used in this questionnaire, in addition to using a mix of Likert scale responses and multiple-choice options. The questionnaire begins with students' background information. It consists of three (03) main questions, which aim to gather demographic and linguistic background data, including gender, the duration of English language learning, and self-assessed proficiency. The first section contains six (06) questions, including both closed-ended and open-ended items designed to evaluate students' exposure to modules taught in English, their comfort level with learning biology in English, and their opinions on the usefulness of EMI for academic and professional development. It also tackles certain obstacles students may encounter. The second section contains five (05) questions, assessing students' perceptions of how often their teachers employ EMI and their readiness to implement it. It also examines perceived challenges faced by teachers. Furthermore, it explores the degree of support teachers provide when students struggle with English, and finally gathers student suggestions for improving EMI implementation.

2.4.1.2. Analysis and Interpretation of the Findings

Students' Background Information :

Q1: Gender :

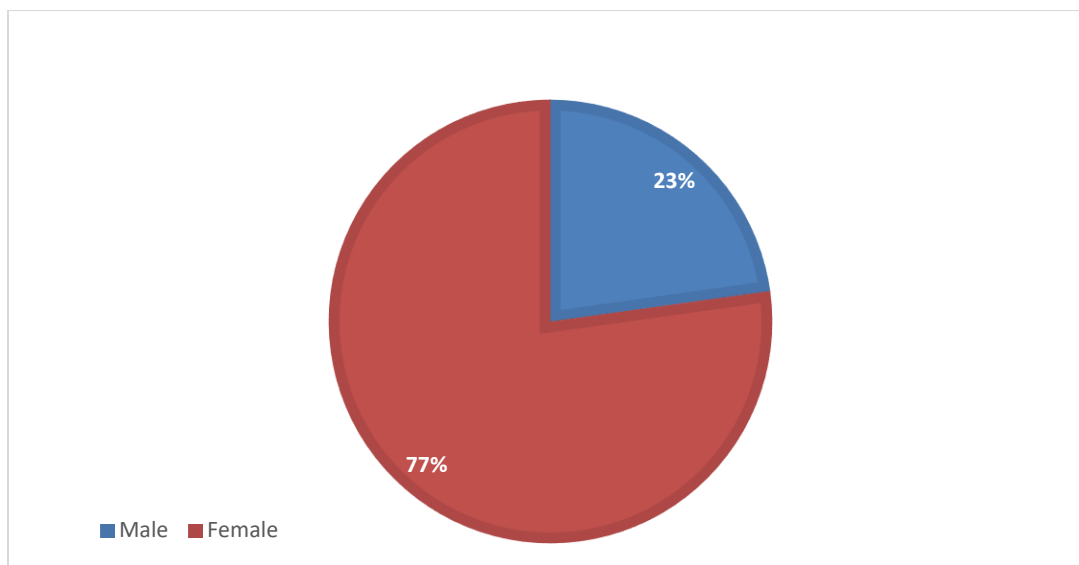


Figure 2.1.Students' Gender

As shown in the pie chart, which represents students' gender, it is evident that there are more females than males in the sample; males are 13, accounting for 23%, while 44 females account for 77% of the total sample. This reflects a considerable gender disparity, with females being overrepresented in this sample.

Q2: How long have you been learning English?

Table 2.1. Students' Experience in Study

Option	Number	Percentage
7 years	11	19.3%
8 years	40	70.2%
9 years	2	3.5%
10 years	4	7%
Total	57	100%

In addressing the second question, the majority of respondents, 70.2%, reported that they have been studying English for 8 years. Additionally, 19.3% have been learning the language for 7 years, while a small number of students, 3.5%, indicated they have been studying English for 9 years, and only 7% reported having 10 years of experience in learning English. The results

confirm that most of the students have succeeded in their studies, while just a few may have repeated at least one year. This also implies that all students have experience in studying English.

Q3: How would you rate your level of English?

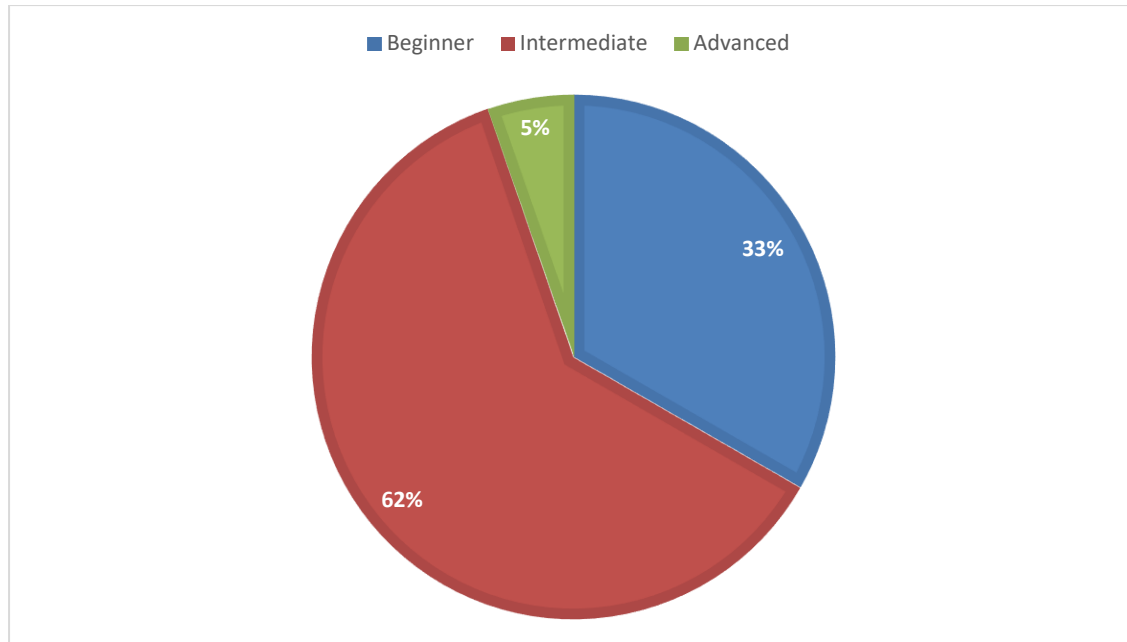


Figure 2.2. Students' Level

In this part, students are asked to evaluate their level in English. This graph represents the distribution of proficiency levels among the respondents, which indicates that 33% of respondents identify as beginners, while a majority of 62% classify themselves as intermediate. Additionally, 5% of participants consider themselves advanced in their English skills. This implies that most of the students are somewhat satisfied with their level and have achieved enough goals to reach it. Accordingly, it is worth mentioning that the chosen sample consists of students with an average level, who will help in valuing the results of the research.

Section One: Students' Perceptions of EMI

Q1 : Are you exposed to modules using English language?

Table 2.2. Students' Exposure to Modules Using English Language

Option	Number	Percentage
Yes	57	100%
No	0	0%
Total	57	100%

Table 2.2 clearly shows that all the respondents opted for “yes” in answering the above question; one hundred percent (100%) of the subjects claim that they are exposed to modules taught in English. This indicates that they are somewhat familiar with the teaching and learning process in English.

Q2 : If yes, how many modules do you study in English ?

The majority of students mentioned that they study three modules in English, suggesting that English is widely used in their academic programs. A smaller proportion reported studying four modules, which may reflect a slightly higher level of English usage. Meanwhile, a minority indicated studying two modules in English, showing that the use of English can vary. Overall, the responses demonstrate the significance of English in students' education, though the number of English-taught modules may differ depending on individual academic programs or preferences.

Q3 : Do you think using English as a medium of instruction helps improve your knowledge in your field of study ?

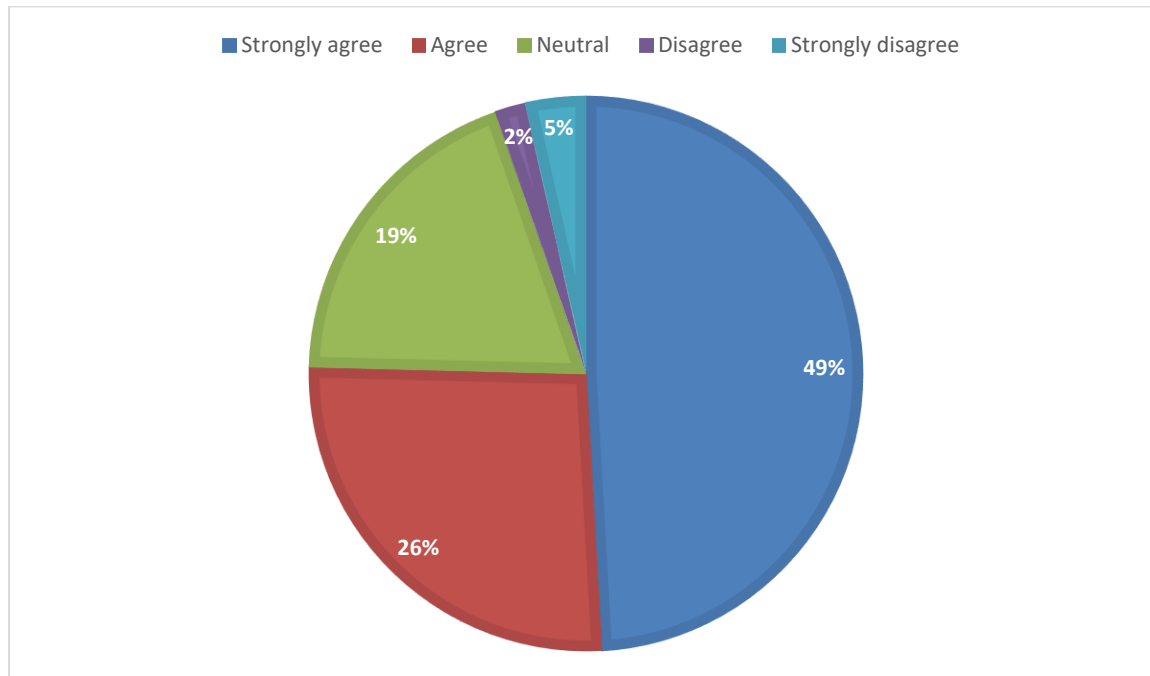


Figure2.3. Impact of EMI on Knowledge Acquisition

When it comes to students' opinions regarding whether using EMI enhances their knowledge in their field of study, a total of 49 respondents strongly agreed and 26 agreed, meaning that the majority believe learning in English helps them improve their academic knowledge. This suggests that many students see English as an important tool for understanding their subjects. However, a smaller portion, 19%, opted for neutral, suggesting uncertainty or that they have not yet seen a clear benefit. Meanwhile, only a small percentage disagreed (2%) or strongly disagreed (4%), indicating minimal opposition to the idea. Overall, the results suggest that most students perceive EMI as beneficial to their academic understanding.

Q4 : How comfortable do you feel learning biology in English ?

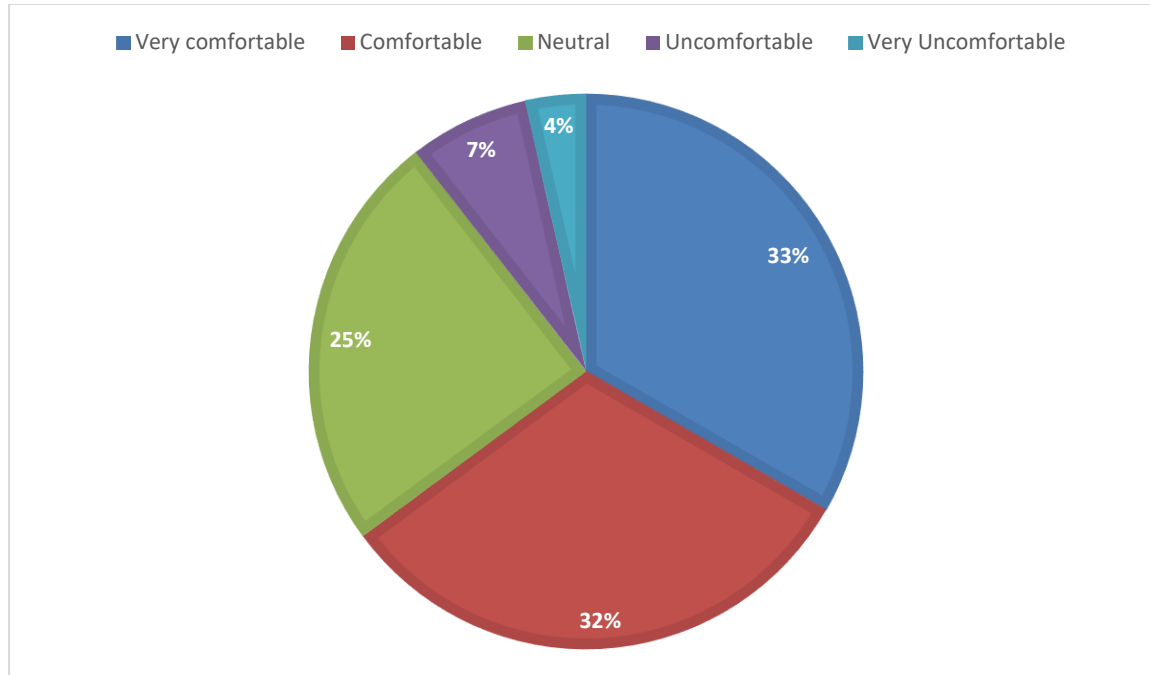


Figure2.4. Students' Comfort with Learning Biology in English

This question concerns participants' comfort level in learning biology in English. Thirty-three percent of students reported that they are very comfortable, and 32% felt comfortable, revealing a positive viewpoint towards learning biology in English. Additionally, 25% of participants remained neutral, which may indicate that they are still adopting the language or do not have a strong opinion. A smaller percentage of students feel less confident: 7% felt uncomfortable, and 3% felt very uncomfortable. As illustrated in the pie chart, the majority of students reported feeling very comfortable or comfortable learning biology in English, suggesting that many find the language suitable for studying the subject. Generally, these findings suggest that while most students are confident learning biology in English, a minority may benefit from additional language support or resources to enhance their learning experience.

Q5: Do you believe learning biology in English is beneficial for your future academic and professional career?

Table 2.3. Students' Perceptions on the Benefits of Learning Biology in English

Option	Number	Percentage
Yes	46	81%
No	4	7%
Not sure	7	12%
Total	57	100%

Table 2.3 displays the responses of 57 individuals. The majority of students, 81%, answered “Yes,” indicating a strong belief that English plays a valuable role in supporting their future goals. This suggests that many students recognize the importance of English in accessing scientific knowledge, engaging in international opportunities, and enhancing career prospects. Meanwhile, a smaller percentage, 12%, were unsure, which may reflect uncertainty about the long-term impact of English in their scientific fields. Only 7% of the participants did not believe it would be beneficial, possibly due to personal preferences. Overall, the results show that most students view English as an important advantage in both academic and professional contexts.

Q6: What challenges do you face when learning in English? (You can choose more than one answer.)

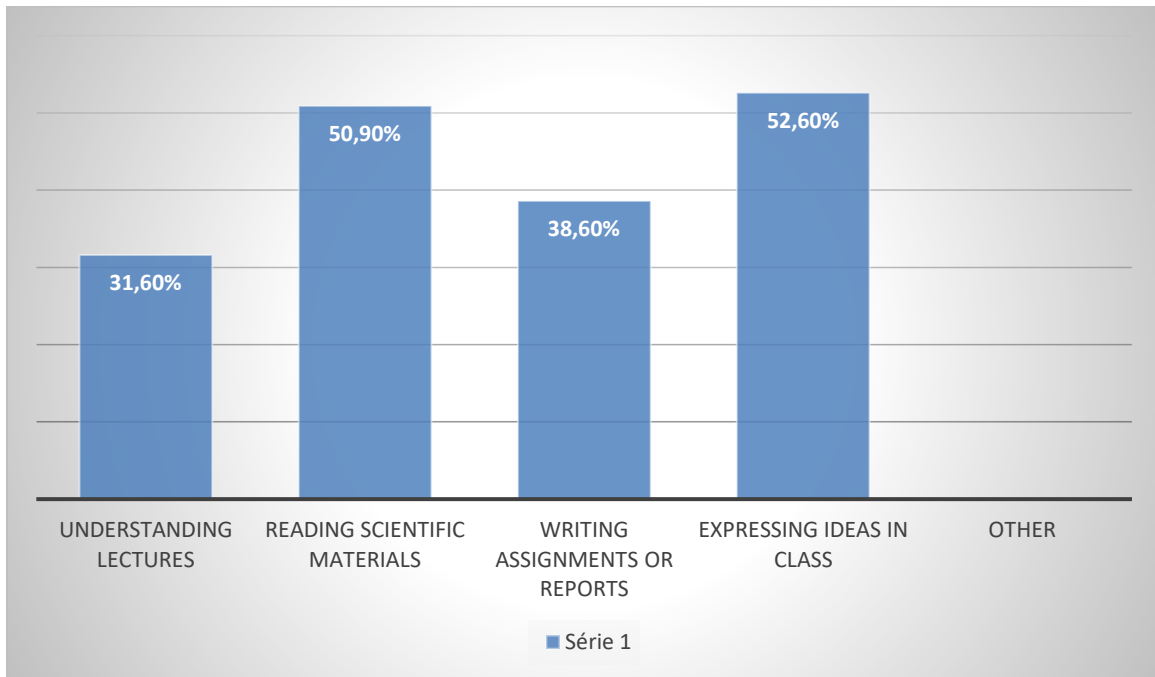


Figure 2.5. Challenges Faced While Learning in English

The question aims to shed light on the main challenges students encounter when learning biology in English. It turns out that over half of the participants, specifically 52.6%, find it tough to express their ideas in class, which suggests that speaking fluently and confidently in an academic setting can be a notable barrier for many. Additionally, reading scientific materials posed a significant challenge for 50.9% of the students, likely because of the complex language, technical jargon, or unfamiliar content. Writing assignments or reports is also a challenge for 38.6% of respondents, indicating that written academic English presents difficulties in structure, grammar, or clarity. Finally, 31.6% of students reported difficulties in understanding lectures, which may be influenced by the speed, accent, or vocabulary used by lecturers. Overall, the data highlight that students face multiple language-related challenges when studying in English, especially in areas that require active language production and comprehension of specialized content.

Q7: Do you think learning biology in English makes the subject more challenging?

Table 2.4. Challenges of Acquiring Biology Instruction in English

Option	Number	Percentage
Yes	29	51%
No	15	26%
Not sure	13	23%
Total	57	100%

As shown in the table, a notable portion of participants, 51%, feel that learning biology in English poses a real challenge. This could be due to the complex vocabulary or the struggle to express their ideas in English. On the other hand, 26% of the students do not think it makes biology harder, indicating that they are comfortable with English or accustomed to learning in it. Meanwhile, 23% were not sure, probably because their experience varies depending on the topic or how the subject is taught. In general, the responses show that English can be more difficult for many students, though this is not the case for everyone.

Section Two: Teachers' Attitudes Towards EMI and Challenges

Q1: How often do your teachers use English as a medium of instruction in your courses?

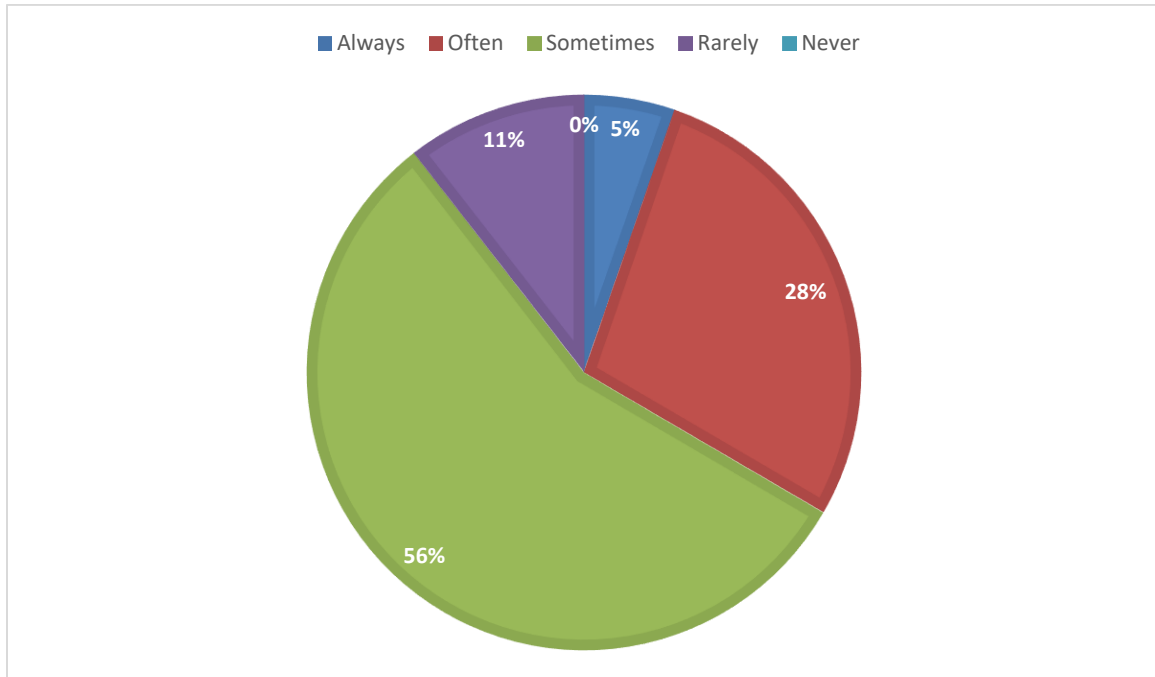


Figure2.6. Frequency of English Usage as a Medium of Instruction by Teachers

The findings reveal that most students, specifically 56%, indicated that their teachers sometimes use English during lessons, meaning that English is integrated into certain aspects of the class but not consistently. Approximately 28% of the participants reported that English is often utilized in their classes, showing that English is common but still not employed in every session. Meanwhile, 11% stated that it is rarely used. Only 5% of respondents mentioned that English is always used, indicating that very few teachers speak only English in class. Notably, none of the participants selected “never.” This means that all students hear some English in their classes, but the amount depends on the teacher. Consequently, English is part of the instruction but not the main language in most courses.

Q2: Do you think your teachers are well-prepared to teach in English?

Table 2.5. Students' Views on Teachers' Readiness to Teach in English

Option	Number	Percentage
Yes	12	21%
No	30	53%
Not sure	15	26%
Total	57	100

As indicated in the table, most students, 53%, believe that their teachers are not prepared to teach in English. This suggests that many students perceive a lack of confidence or skills among teachers when using English in the classroom. Only 21% of students stated that their teachers are well-prepared, which is a small proportion. Meanwhile, 26% of students reported being unsure about their teachers' preparedness to teach in English, indicating mixed experiences or uncertainty in judging their teachers' English teaching abilities. Overall, the data suggest that many students feel their teachers need more training or support to effectively use English during lessons.

Q3:What challenges do you think teachers face when using English in lectures ? (You can choose more than one answer)

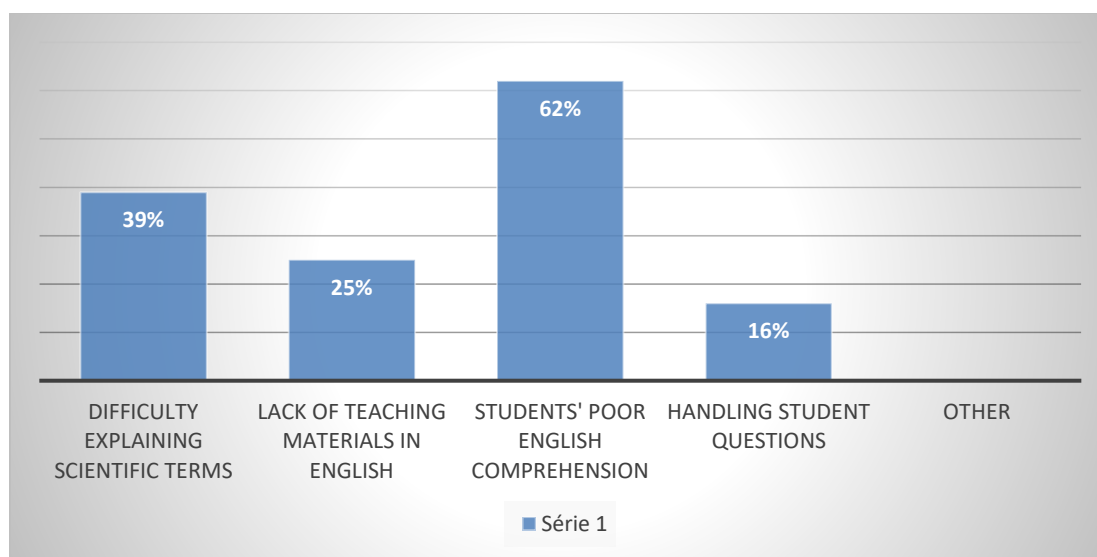


Figure2.7. Common Challenges for Teachers When Using English During Lectures

The diagram depicts the difficulties encountered by educators when delivering lectures in English. Based on the collected data, the most reported challenge, at 62%, is students' poor English comprehension. This indicates that many students find it difficult to understand lectures in English, making it hard for teachers to deliver lessons effectively. Additionally, 25% of respondents pointed to a lack of teaching materials in English, which may limit teachers' ability to prepare and deliver lessons. Lastly, 16% of students believe teachers have trouble handling questions in English. Overall, these challenges highlight the need for better support in both language training and resources for teachers.

Q4 : In your opinion, how supportive are your teachers when students struggle to understand English?

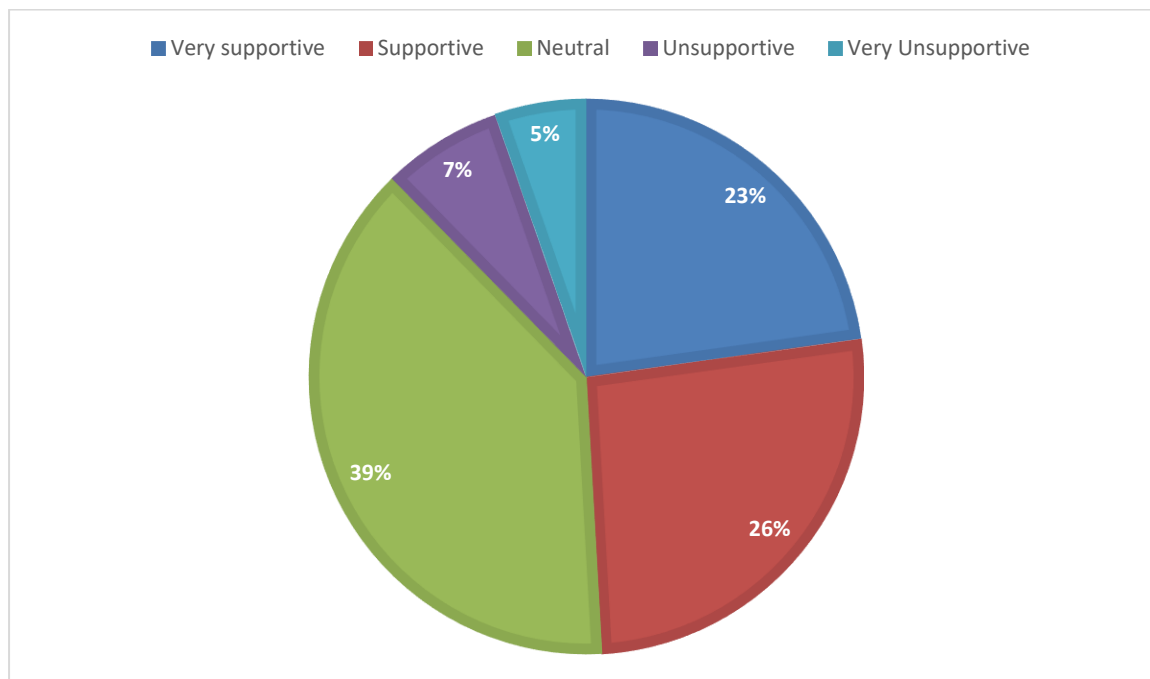


Figure 2.8. Students' Opinions on Teachers' Support When Struggling with English

The pie chart illustrates students' perceptions of the support they receive from their teachers when they struggle to understand English. Only 23% of students feel their teachers are very supportive, and 26% say they are supportive, showing that nearly half of the students feel their

teachers are trying to help. On the other hand, 39% expressed a neutral stance, which could mean that students do not notice either strong support or a lack of it. Meanwhile, a smaller group—7% said unsupportive, and 5% said very unsupportive—feel that their teachers are not helpful in these situations. These responses suggest that while some teachers provide help, there is still a noticeable gap in how students experience support during language difficulties.

Q5: What improvements would you suggest for better implementation of EMI at your department? (You can choose more than one answer)

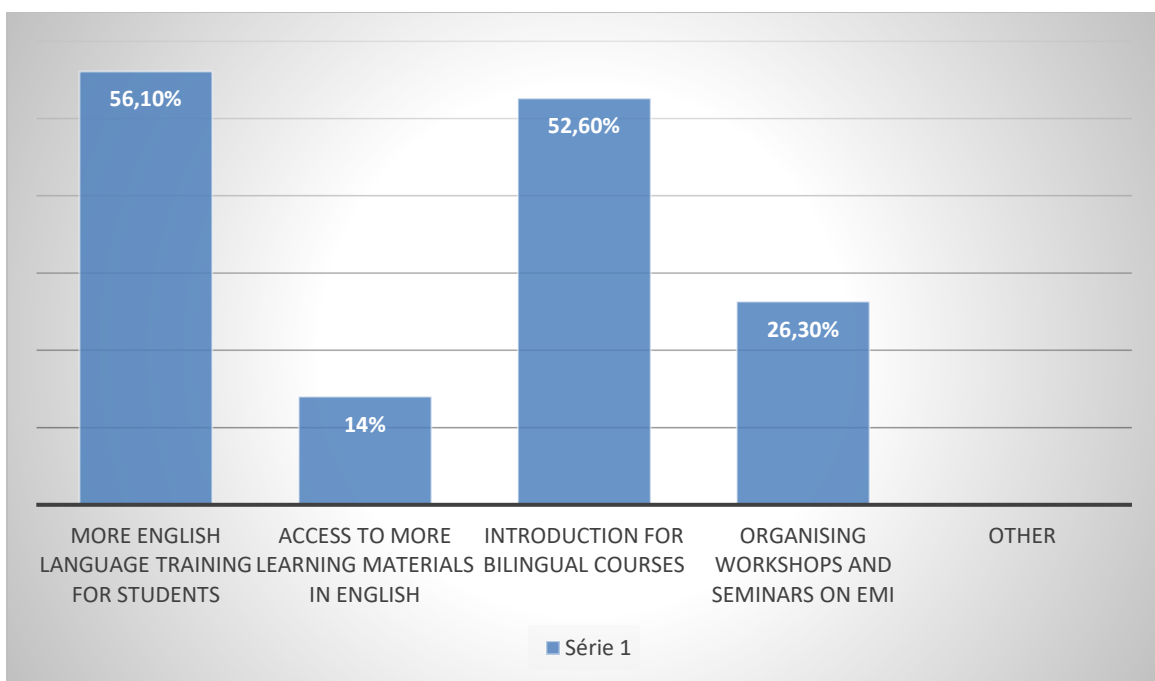


Figure2.9. Suggested Improvements for More Effective EMI Implementation

The findings indicate that students believe various improvements could enhance the effectiveness of EMI in their department. The most selected option, with 56.1%, is more English language training for students, showing that many require stronger language skills to keep up with their studies. A close second, chosen by 52.6%, is the introduction of bilingual courses, reflecting a preference for a gradual transition to English through a mix of familiar languages to support understanding. Workshops and seminars on EMI were favored by 26.3%, suggesting that students are also interested in practical sessions to help both learners and teachers adapt more effectively to EMI. Finally, 14% believe that having greater access to learning materials in

English would make a positive difference. Overall, the results suggest that a combination of improving language skills, offering bilingual courses, and providing better support can make EMI more effective. In particular, increasing students' access to English learning materials is seen as crucial for better comprehension and engagement in English classes.

2.4.2. Teachers' Interview

The interview is conducted with biology teachers to explore their views regarding EMI in scientific subjects, it aims to understand how teachers perceive the shift to English, the difficulties they encounter in teaching and their suggestions for improving EMI implementation in higher education.

2.4.2.1 Description

The interview conducted with Biology teachers aims to gain insights into their experiences and opinions regarding the use of English as a Medium of Instruction (EMI) in higher education. Designed as a semi-structured interview, it provides a balance between consistency across participants and flexibility for deeper exploration. The interview is organized into three (3) key parts:

The first part focuses on the teachers' background and experience in using English while teaching. It includes three (3) questions aimed at identifying how long they have been teaching, which language(s) they use in their instruction, and their previous use of English for delivering biology lessons. The second part examines teachers' views on EMI. Through four (4) questions, it explores their thoughts on using English at the university level, the potential benefits it offers for biology students, the main challenges encountered in teaching in English, and the extent of training or support they have received in this area. The final part looks into the methods and tools teachers use to support EMI and their recommendations for improving its application. It contains four (4) questions related to teaching strategies, available resources, departmental initiatives, and any further suggestions they may have.

2.4.2.2. Analysis and Interpretation

Question 1: How long have you been teaching in the department of biology?

All the teachers provided varying answers regarding how long they had been teaching in the Department of Biology. Teacher 1 reported having taught for 2 years, while Teacher 2 has the longest experience of 15 years. Teachers 3, 4, and 5 each indicated they have 6 years of teaching experience. Teacher 6 has been teaching for 11 years. These responses suggest that the department includes both new and experienced instructors. Most have around 6 years of experience, indicating a relatively stable teaching staff. Additionally, having a teacher like Teacher 2, with 15 years of expertise, could be highly beneficial for the department.

Question 2: What language do you use to teach the content of biology to your learners?

The responses show that the majority of teachers use French to teach biology. Specifically, four out of six instructors (Teachers 2, 3, 5, and 6) reported using French as their primary language of instruction. Two teachers (Teachers 1 and 6) stated that they use both French and English, whereas only one teacher (Teacher 4) uses English exclusively. These findings suggest that French remains the dominant medium of instruction in the biology department. However, the use of both French and English by some professors indicates a degree of flexibility. The limited exclusive use of English may reflect challenges in fully adopting it as the primary teaching language or a preference for French among both instructors and students.

Question 3: Have you ever used English to teach biology? If yes, how long?

Out of the six, five teachers (1, 2, 3, 5, and 6) have taught in English to some extent, while only one (Teacher 4) has not. The duration of their English teaching experience varies considerably. For example, Teacher 1 has used English for about five months, Teacher 2 for roughly six months, and Teacher 5 for a full year. Teacher 3 started using English only this year, whereas Teacher 6 has the most experience, with two years of teaching in English. These responses indicate that English is gradually becoming integrated into the department's instruction. While some teachers have recently begun using English, others have more established experience. Teacher 4's lack of experience may suggest a need for additional support or training to help all instructors feel more confident teaching in English.

.Question 4: Based on your experience, what do you think about the use of English as a medium of instruction at the university level?

The results reflect a range of viewpoints on the use of English as a medium of instruction (EMI) at the university level. Teachers 1, 2, and 4 emphasized the importance of EMI, highlighting that English is the dominant language in science, research, and academic writing. They suggested that using English would give students greater access to global knowledge and resources. However, Teachers 3, 5, and 6 expressed concerns about the challenges associated with EMI. Teacher 3 acknowledged personal limitations and students' lack of readiness, while Teachers 5 and 6 stressed the difficulties students face due to their prior education in French and Arabic. These responses reveal a division within the department: although some instructors recognize the crucial role of English for academic success, others worry about its practical implementation. The recurring theme of English as the primary language of scientific communication underscores the importance of EMI, yet concerns about language proficiency and student preparedness suggest that additional support may be needed for effective integration.

Question 5: What advantages does EMI offer for biology students?

All the teachers seem to agree that teaching biology in English opens valuable opportunities for students. They all highlight that EMI can significantly improve students' chances for further studies and career advancement. The advantages mentioned can be grouped into three main categories:

Firstly, International Opportunities. Teachers 1, 2, and 6 pointed out that EMI enables students to pursue studies abroad, collaborate internationally, and participate in future research projects. Secondly, Access to Resources. Teachers 2, 3, and 5 stressed that EMI provides students with direct access to scientific documents and literature published in English, which are essential for staying updated in their field. Thirdly, Academic and Professional Skills. Teachers 4 and 5 emphasized that EMI helps students develop key skills such as understanding and writing scientific articles in English—an important asset for both academic and career growth.

In summary, these perspectives underscore that English Medium Instruction (EMI) is widely recognized as a crucial tool for preparing biology students for global careers and fostering academic success. Access to English-language resources and the ability to communicate

scientifically in English are seen as vital competencies for students aiming to excel internationally.

Question 6: What difficulties do teachers face when teaching English?

Teachers face various challenges when teaching in English, which generally fall into three main areas:

Language Barriers: Teachers 1, 2, 3, and 5 reported difficulties related to language skills, including students' limited English proficiency, misunderstandings during lessons, and the instructors' own struggles with fluency. As a result, professors often switch to French and Arabic to help students better understand the material. **Student Readiness:** Teachers 1 and 4, along with others, noted that many students arrive unprepared or lack the necessary skills to learn effectively in English, which makes teaching more challenging. **Logistical Challenges:** Teacher 6 emphasized that linguistic difficulties make it harder to maintain course materials and complete the curriculum on time, potentially slowing down the overall progress.

Overall, language barriers significantly hinder the effectiveness of English Medium Instruction (EMI). Students' fluency and preparedness are critical factors, and instructors may require additional support and resources to overcome these challenges and enhance student learning.

Question 7: Do you feel you have enough training or support to teach in English?

The answers demonstrate a split viewpoint regarding whether teachers believe they have adequate training or support to teach in English. Two teachers (Teachers 1 and 2) expressed confidence in their proficiency, with Teacher 1 emphasizing a commitment to continuous self-improvement. However, four teachers voiced concerns about their language skills or felt they needed more training. Teachers 3, 4, and 5, despite having relatively high language proficiency levels (C1 and B2), expressed dissatisfaction with their abilities, highlighting a gap between their perceived competence and the demands of teaching. Teacher 6, who felt inadequately trained, represented the more critical perspective on this issue.

These findings reveal that although some instructors feel prepared, there is a clear need for ongoing training and support to enhance teachers' language competency and confidence in teaching English. The department may need to provide more structured professional development

opportunities to address these gaps and ensure that instructors are fully equipped to teach successfully in English.

Question 8: Which teaching strategies enhance student comprehension?

The replies suggest that instructors employ a range of strategies to promote student comprehension, demonstrating an understanding of various learning styles and the diverse needs of students. The strategies mentioned include:

Visual Aids: Teachers 1 and 5 emphasized the use of videos and data presented during sessions as tools to make teaching more accessible and engaging. **Simplification and Bilingual Support:** Teacher 2 highlighted the importance of rephrasing and using simpler language to help students grasp challenging concepts. They also stressed the use of bilingual dictionaries and the translation of scientific terms to aid understanding, especially for learners with limited English proficiency.

Autonomous Learning: Teachers 3 and 4 recommended encouraging students to engage in self-directed study by reading scientific documents and articles. **Effective Communication:** Teacher 5 underscored the necessity of clear communication to help students better understand their subjects. **Uncertainty in Strategies:** Teacher 6 expressed uncertainty about effective teaching strategies, indicating a lack of knowledge or experience in this area.

These findings imply that educators recognize the importance of employing multiple strategies to support student understanding. While multilingual support and autonomous learning are acknowledged as effective approaches, visual aids and simplifying complex concepts are more commonly used. The variety of methods reflects the department's effort to address different student needs, though further exploration of successful strategies could benefit instructors like Teacher 6.

Question 9: What resources would improve your teaching in an EMI context?

The responses show that teachers find a variety of materials helpful when teaching in an EMI setting. These resources can be grouped into several key areas:

1. **Multimedia Resources:** Teachers 1, 2, and 5 mentioned the usefulness of online videos (such as those on YouTube or interactive videos) and multimedia options like English movies. They view these as effective tools for engaging students and providing real-world examples related to the subject.
2. **Reading and Summarizing Scientific Articles:** Teachers 3 and 4 emphasized the importance of reading scientific papers and summarizing them. They also believe that doing this in multiple languages or with pronunciation assistance can facilitate teaching and comprehension.
3. **Extra Training:** Teacher 5 stressed the need for additional training, particularly to help teachers develop the skills necessary to teach effectively in an EMI environment.
4. **Pronunciation Support:** Teacher 4 specifically highlighted the importance of tools that improve pronunciation for clear and effective communication in English. Teacher 6 appeared uncertain about which materials are most useful, indicating that some teachers may require more guidance in selecting appropriate resources.

Overall, these points suggest that teachers highly value a range of resources—especially multimedia and reading materials—to enhance their teaching in an EMI context. Their expressed need for more training and pronunciation support highlights areas where further assistance could help them teach more confidently and effectively in English. Teacher 6’s uncertainty underscores a probable gap in knowledge regarding resource selection, emphasizing the importance of providing more professional support.

Question 10: How can the biology department enhance the effective implementation of EMI?

The responses highlight various ways the department can support teachers in an EMI context, with suggestions ranging from providing resources to offering training. The proposed forms of support include:

1. **Encouraging Student Writing and Publication:** Teacher 1 believes the department should encourage students to write, edit, and publish their work in English, which would help reinforce their language abilities.

2. Providing Multimedia Resources and Collaboration with English Teachers: Teacher 2 emphasizes the need for multimedia resources and recommends collaboration with English language teachers to enhance teaching effectiveness.
3. Promoting English Use in Daily Life: Teacher 3 suggests that the department encourage instructors to use English in daily interactions, creating a more immersive environment for both teachers and students.
4. Gradual Integration and Specialized Training: Teacher 5 proposes that English be gradually integrated into classes, accompanied by specialized training in scientific English to help instructors adapt more successfully.

However, Teacher 4 expresses the view that language training should be the responsibility of individual teachers rather than the department, while Teacher 6 is uncertain about what kind of assistance would be most helpful. These responses indicate that instructors value departmental programs offering resources, training, and organized support to encourage English use. The gradual incorporation of English and training in scientific English are seen as essential steps. Teacher 4's opinion reveals that there may be differing views on the department's responsibilities, which could be addressed through further discussion. Teacher 6's uncertainty points to the need for open communication between the department and faculty to ensure instructors are aware of available support and feel prepared to use English effectively in their teaching.

Question 11 : Do you have any additional insights or suggestions regarding the implementation of EMI?

Most teachers (4 out of 6) did not suggest improvements for language training, which may indicate that they are either satisfied with the current provisions or unsure about what changes are necessary. However, two teachers offered valuable ideas:

1. Experiential Learning: Teacher 3 proposed increasing the number of trips dedicated to language training, suggesting that immersive experiences could significantly enhance teachers' language proficiency through practical application in real-world contexts.

2. Consistent Practice: Teacher 5 emphasized the importance of integrating language training into everyday routines, highlighting that continuous practice is essential to build comfort and fluency in English during regular activities.

These insights emphasize two fundamental pillars of effective language training: immersive experiential learning and the necessity of sustained, regular practice. The absence of additional suggestions from most teachers might indicate a need for greater engagement or more effective communication from the department about available language development resources. Moving forward, it may be beneficial for the department to promote more immersive and consistent language training programs to better support teachers in improving their English proficiency.

Conclusion

The present chapter has focused on analyzing the data collected to explore students' perceptions and teachers' attitudes toward the implementation of English as a Medium of Instruction (EMI) in higher education. The research employed a case study design that combined both quantitative and qualitative methods, utilizing student questionnaires and teacher interviews. This approach provided valuable insights into the current status of EMI within the Department of Biology at Relizane University. Findings from the student questionnaires revealed varied levels of acceptance and readiness to adopt English as the primary language of instruction. Meanwhile, interviews with teachers highlighted a spectrum of attitudes from supportive to hesitant, often influenced by concerns about students' language proficiency and the availability of teaching resources. Overall, the results reflect a growing awareness of EMI's potential benefits, including enhanced access to global knowledge and academic opportunities. However, they also emphasize significant challenges faced by both teachers and students, such as linguistic barriers and the need for targeted pedagogical training and institutional support.

Chapter Three

Discussion and Recommendations

3.1. Introduction

The present chapter has two main objectives. First, it presents the results of the study. It gives answers to the main research questions about how students and teachers view the use of English as a medium of instruction in higher education. The results are based on the data collected from student questionnaires and teacher interviews. These findings will be explained clearly and linked to what other researchers have found in similar studies. This will help us understand whether the results of this study are similar to or different from what has been found in other places. Second, this chapter brings the study to a close. It looks back at the research process and gives a summary of the most important results. It also highlights what went well in the study and what could have been better. In addition, the chapter discusses what these findings mean for teaching in universities, especially in places where English is not the first language. It will give useful suggestions for teachers, university staff, and others who are interested in improving EMI. Finally, it will point out topics that future research could explore to better understand EMI in higher education.

3.2. Discussion of Key Findings

This section discusses the main results of the study. It highlights the important points from the data collected and explains what they mean in relation to the use of English as a Medium of Instruction (EMI) in the biology department. The discussion helps to understand how students and teachers feel about EMI and what challenges and benefits they experience.

3.2.1 Summary of the Results and Findings from Students' Questionnaire

Students' questionnaire presents some interesting insights about their experience with learning through English. First, it is clear that there are considerably more female students than male, which may affect how the findings reflect the whole student population. Most of the learners have been studying English for approximately eight years, so they have a good amount of experience with the language. When the students were asked to assess their English level, most see themselves as intermediate learners, with fewer beginners and very few advanced participants. This shows that although they feel fairly competent, many are still trying to improve

their skills. All the students reported taking some courses taught in English, with most studying three English modules, which illustrates how important English is in their academic programs, even if the number of English-taught courses varies. Most students say that studying in English helps them understand their courses better, which is a good sign that they recognize the importance of English in their studies. When it comes to studying biology in English, many feel comfortable or very comfortable, but there is still a small minority who find it difficult and may need extra support. Looking ahead, a large majority believe that English will be useful for their future jobs and academic goals, although some are unsure or do not yet see it as essential. Despite this, students face some real challenges: over half find it hard to express their ideas in class, and many struggle with reading scientific materials and writing assignments in English. This suggests that while students are learning, academic English can still be difficult, especially when it comes to speaking and understanding complex vocabulary. English is used in classrooms to varying degrees, but only a few students think it is always the main language spoken. Interestingly, more than half of the students believe their teachers are not fully prepared to teach in English, which shows a need for better teacher training. Students also report that one of the biggest challenges teachers face is that many students do not understand English well during lectures, making it harder for instructors to explain the content clearly. When students struggle with English, about half feel their teachers are helpful, but many feel unsure or unsupported, showing that there is room for improvement in how teachers assist students with language difficulties.

Finally, students suggest several ways to improve learning in English. They want more English language training for themselves, bilingual classes that mix English with their native language, workshops and seminars to help both students and teachers adjust to EMI, and more learning resources in English. Overall, the students' feedback suggests that although they understand the importance of English and are making good progress, they still need additional help to overcome language barriers and succeed in their studies.

3.2.2. Summary of the Findings from Teachers' Interview

The interview with biology educators uncovers key insights about the use of English as a Medium of Instruction (EMI), along with the challenges and opportunities it presents. First, there is a wide range of teaching experience among faculty members, from very new teachers with 2 years to more experienced ones with 15 years. This mix provides a balance between fresh

perspectives and long-term expertise, which can benefit both students and curriculum development. A notable finding is that French remains the main language of instruction, with four out of six professors primarily using it. However, English is increasingly being incorporated, as five teachers have some experience teaching through EMI, although the length of this experience varies greatly—from a few months to two years. This trend suggests that English is gradually becoming more integrated into the department, though its adoption is still uneven. Some instructors, like Teacher 4, rely exclusively on French, pointing to significant challenges in language readiness or institutional support. Teachers recognize the benefits of EMI, especially in expanding students' international opportunities, access to scientific resources, and academic writing skills. Many agree that English is essential for global academic and professional success, as it improves access to research, international collaboration, and job prospects. However, there are notable challenges hindering EMI's effective implementation. These include students' limited English proficiency, teachers' own language difficulties, and logistical issues such as managing course content and schedules while switching languages. Some instructors switch to French or Arabic during lessons to aid understanding, indicating that students may not yet be fully ready for EMI. Another important challenge is the varying confidence and training levels among teachers. While some feel capable, others—even those with relatively high language skills (C1/B2)—express doubts about their ability to teach effectively in English. This highlights the need for organized professional development, including language courses, teaching workshops, and specialized training in scientific English. Teachers also use various strategies to support student understanding, such as visual aids, bilingual glossaries, and simplified explanations, showing their adaptability to students' needs. Regarding departmental support, teachers suggest more multimedia resources, collaboration with English language instructors, gradual EMI integration, and immersive language training. However, some teachers remain uncertain about what support would be most useful, underscoring the need for clearer communication and targeted professional development programs.

In conclusion, while EMI is seen as important for students' future success, its implementation faces barriers related to language skills, teaching readiness, and student preparedness. To overcome these, the department should strengthen teacher training, provide focused resources, and adopt a gradual, supportive approach to EMI. This would help balance the benefits of English-medium instruction with the practical challenges of the current academic context.

3.2.3. Correlation between the Students' Questionnaire and Teachers' Interview Findings

Based on the students' questionnaire and teachers' interviews, both teachers and students generally have a positive view of using English as the main language of instruction (EMI) in the biology department. They recognize advantages such as better access to scientific resources and more international opportunities. However, French still remains the primary language used for teaching, which slows down the switch to EMI. Teachers who feel comfortable speaking English are more open to the change, while others worry about their language skills and students' readiness for EMI. Teachers also face challenges such as students' limited English skills, their own language difficulties, and disruptions during lessons when switching between languages. These issues align with earlier studies that highlight the need for more teacher training and better resources to support effective EMI implementation. Students report having studied English for many years and feel somewhat comfortable with EMI, but most still see themselves as intermediate rather than fluent. They believe learning biology in English can help with future careers, but they face challenges such as explaining their ideas, reading scientific terms, and writing academic articles. Many students feel their teachers are not fully prepared to teach entirely in English, which makes learning harder. This situation is common in EMI settings, where students often struggle with specialized vocabulary and complex content.

Both teachers and students share suggestions for improving EMI. They propose targeted language training, gradually increasing the use of English in class, and providing bilingual materials along with interactive workshops and seminars. Some teachers recommend creating specific courses focused on scientific English to help students build the vocabulary and language skills needed for their subjects. These ideas aim to address current gaps and make EMI more effective, comprehensive, and beneficial for everyone involved.

3.3. Implications for Practice

The data gathered for the present research study indicate that both students and teachers hold positive views on using English as a medium of instruction in higher education. However, many biology students at the University of Relizane still face difficulties studying in English due to limited English language proficiency, largely because French has long been the main language of instruction in medicine and related fields. In this context, this section aims to offer pedagogical

implications for teachers, students, and especially policymakers, to help ensure the effective introduction and implementation of English as a medium of instruction in Algerian universities.

3.3.1. Students' Implications

Students play a vital role in ensuring the success of English-Medium Instruction (EMI) in higher education. As more universities in Algeria begin to shift from French to English, students need to take active steps to adapt to this change and improve their language skills.

First, it is important for students to accept the transition from French to English and view it as an opportunity for growth. English is now widely used in science and international academic communities. By embracing English as the main language of instruction, students can enhance their academic success and open up new opportunities for further study and global collaboration. Second, students must understand that mastering a language is a long-term process that requires patience and commitment. Learning English, especially for academic purposes, is not easy. It demands consistent effort, self-discipline, and a positive attitude, even when the process becomes difficult. Another important step is learning scientific vocabulary in English. Students should regularly study and practice using scientific terms in context. This not only strengthens their academic English skills but also improves their understanding of the subject matter. Using the correct terminology will help them communicate ideas more clearly and effectively in both writing and speaking. In addition, students are encouraged to communicate with English speakers from different parts of the world. This interaction can improve their language skills, expose them to different accents and cultures, and expand their global perspective. It also helps build confidence in using English in real-life situations. Reading scientific articles in English is also a valuable strategy. By doing so, students can become familiar with the style and structure of academic writing. It also helps them understand how English is used in teaching, research, and publishing, which can support their academic performance. Finally, students should consider joining language centers or enrolling in intensive English courses. These programs can offer structured support and personalized guidance to help students reach a higher level of proficiency.

In conclusion, students have a key role in making EMI successful. By accepting the change, working hard to improve their English, and using effective learning strategies, they can overcome language barriers and achieve academic success in an English-medium environment.

3.3.2. Teachers' Implications

Teachers play a central role in making English-Medium Instruction (EMI) successful, especially in Algerian universities and more specifically in biology faculties. As the shift from French to English becomes more common, teachers need to be well-prepared and actively engaged in this transition. The following suggestions offer practical ways for teachers to better integrate EMI into their teaching practices.

First, teachers should plan English language support courses that focus on the four main skills: listening, speaking, reading, and writing. These courses will help students build a strong foundation in English and feel more confident when studying their academic subjects. Second, it is essential for teachers themselves to receive proper training in scientific English. This includes learning how to explain complex biological terms in English and practicing these skills in the classroom. With better training, teachers can deliver their lessons more clearly and effectively. Third, teachers should help students understand the global importance of English. They can do this by showing how English is used in international research, science, and communication. This awareness can motivate students to take learning English more seriously and recognize its value for their future careers. Fourth, teachers should encourage students to practice English both inside and outside the classroom. By creating a learning environment that supports the use of English in daily activities, teachers can help students become more comfortable using the language. Another helpful strategy is giving students the opportunity to write their research papers in English. This practice not only improves their writing skills but also prepares them for future academic work and publishing in international journals. Finally, teachers themselves can improve their own English proficiency by taking part in intensive language programs offered by their universities. These programs often provide courses in multiple languages, including English, and can be a great resource for professional development.

In conclusion, teachers have a powerful influence on the success of EMI. By improving their own language skills, encouraging students, and using effective teaching strategies, they can help make the transition to English smoother and more beneficial for all.

3.3.3. Implications for Policy Makers

To ensure the successful implementation of English as a Medium of Instruction (EMI) in Algerian universities, it is important for policymakers to take a number of well-planned actions. These reforms aim to improve the quality of education and better prepare both teachers and students for using English in academic settings.

First, the government should equip educational institutions with the necessary technology and tools. This includes computers, projectors, internet access, and software that support both teaching and learning in English. Having access to these resources can make a big difference in the effectiveness of EMI programs. Second, building partnerships between Algerian universities and international institutions where English is already used for instruction would be highly beneficial. These collaborations could provide Algerian institutions with guidance, shared experiences, and even exchange programs that can help strengthen EMI efforts. Third, universities and technical colleges should be given access to key resources for conducting research in English. These include academic databases, translation tools, and editing software that help both students and teachers engage more fully with English-language materials. Fourth, there needs to be strong cooperation among policymakers, language planning experts, subject-matter specialists, and English teachers. Together, they can develop a well-rounded plan to improve the role and status of English in Algerian higher education. Fifth, it is crucial to provide English language training to students before they begin studying in EMI programs. This preparatory training will help them gain the language skills they need to follow their lessons and complete their assignments more effectively. Sixth, the government should consider adopting a broader educational reform focused on the English language. This reform would guide the introduction and integration of English into the educational system in a more structured way. Seventh, English should be introduced gradually. One way to do this is by redesigning the current syllabi so that certain modules are taught in English from the early stages of university study. This allows students to get used to the language without feeling overwhelmed. Eighth, English courses should be made mandatory starting from the first year of the undergraduate degree and continuing through to the end of the master's degree. This continuous learning will help students steadily improve their language skills. Ninth, training should be provided for teachers to help them master English and become confident in teaching their subjects using English. This also includes learning the best methods and techniques for teaching through EMI.

Finally, the government should establish special commissions to oversee the adoption of EMI in universities across the country. These commissions should work based on national and international guidelines and include experts who can provide clear recommendations on how to implement EMI effectively.

In conclusion, these reforms can help lay the foundation for a more successful use of English in Algerian universities. By providing the right resources, training, and planning, policymakers can ensure that both teachers and students are well-prepared to benefit from English as a language of instruction.

3.4. Recommendations for Educators and Institutions

Based on the findings of this study, several Suggestions and recommendations can be made to support the implementation of EMI in Algerian higher education:

3.4.1. Recommendations for Educators

1. Join national awareness efforts about using English in teaching.

Educators play a key role in shaping public opinion and influencing students' attitudes toward English. Participating in national campaigns, seminars, or community meetings allows teachers to explain the benefits of English as a Medium of Instruction (EMI), clear up doubts, and share their own positive experiences.

2. Use translanguaging by sometimes using Arabic or French to help students understand.

In the early stages of EMI, it is important to help students bridge their understanding. Using Arabic or French when explaining complex terms can make learning easier while still encouraging the gradual use of more English. This method supports comprehension without stopping the transition to English.

3. Join training programs to improve your English and your teaching in English.

To effectively teach in English, educators must be confident in both the language and subject delivery. Attending regular training sessions will improve both general English fluency and subject-specific language skills, making lessons clearer and more engaging for students.

4. Use technology like videos, slides, and online tools to make lessons easier to understand.

Educational technology can enhance learning by presenting content in visual and interactive formats. Teachers should integrate digital tools like multimedia presentations, simulations, and learning platforms to support diverse learning styles and help students who struggle with English.

5. Work with English departments to create special English lessons for your subject.

Cooperation between subject departments and English teachers is essential for designing English for Specific Purposes (ESP) lessons. These lessons can teach students the terminology and writing styles used in their academic fields, making their learning more relevant and effective.

6. Join or start English clubs to help practice speaking and understanding in your subject area.

Creating academic English clubs provides students and teachers with a space to practice the language in a relaxed and supportive environment. Activities like debates, journal reviews, or guest talks can boost confidence and fluency.

7. Help students build their academic English by giving feedback on writing and presentations.

Teachers should support students in developing academic English skills by regularly reviewing their work and giving practical advice. Encouraging class presentations, group discussions, and research assignments also provides useful practice.

3.4.2. Recommendations for Institutions

1. Organize awareness campaigns to show the importance of teaching in English.

Universities should take the lead in promoting EMI through open events, advertisements, and public discussions. Raising awareness among students, parents, and faculty helps build support and readiness for the change.

2. Provide more English books, journals, and online materials in university libraries.

Access to English-language resources is essential for both teachers and students to succeed in an EMI environment. Libraries should invest in relevant textbooks, research journals, and online databases to meet the academic needs of each department.

3. Make agreements with international universities to allow exchange programs and shared projects.

Partnerships with universities abroad offer valuable exposure to global EMI practices. These programs help teachers and students improve their English and develop a better understanding of international academic standards.

4. Train teachers in both English and teaching in English.

Institutions must provide regular professional development programs that focus on English fluency and subject-specific instruction methods. This ensures that teachers feel confident using English in lectures and class discussions.

5. Support English departments to make special English courses for different subjects (ESP).

By funding and encouraging ESP development, institutions ensure that students gain the vocabulary and language skills required in their field of study. This can be offered through standalone courses or integrated modules.

6. Create language centers to teach English to students, teachers, and staff.

Universities should set up language learning centers equipped with trained staff and digital resources. These centers can offer flexible learning opportunities for all members of the university community.

7. Change school English programs to focus more on speaking and writing.

To prepare students for EMI, schools should teach English in a more practical way. This includes more speaking, writing, and listening practice to build real communication skills.

8. Slowly start using English in teaching, beginning with science subjects.

A gradual introduction to EMI allows universities to monitor progress and make improvements. Starting with disciplines like science and technology, where English is already commonly used globally, can make the transition smoother.

9. Change the university programs to match EMI by updating lessons and tests.

Institutions should revise their course materials and assessments to be delivered in English. Clear guidelines and support must be provided to ensure a smooth transition without lowering academic standards.

10. Give extra English classes and tools to help students improve their academic English.

Support programs such as academic writing classes, speaking labs, and tutoring services help students improve the language skills they need to succeed in EMI courses.

11. Provide the tools and resources teachers and students need.

This includes fast internet, projectors, language learning software, and access to English textbooks. Without these tools, EMI cannot succeed.

12. Make clear EMI policies and make sure schools follow them.

The Ministry of Higher Education should create clear rules and provide funding to ensure that EMI is implemented in a consistent and effective way across universities.

13. Regularly check how well EMI is working.

Ongoing evaluation through surveys, student performance, and classroom observations will help identify problems early and improve the overall process.

3.5 Limitations

Our study has some limitations that need to be considered. First, it focused on only one department at a single university, which means the results might not represent other subjects, universities, or regions. The number of participants was also small—only 57 students and 6

teachers—which may reduce the reliability of the findings. The study used questionnaires and interviews, which relied on participants' self-reported experiences. This kind of data can be influenced by personal opinions or the desire to give socially acceptable answers, which might affect the accuracy of the results. Another limitation is the varying levels of English proficiency among participants. This may have made it difficult for some to express their thoughts clearly, especially when responding in English. In addition, there were challenges in gaining full cooperation from some participants. Some were too busy or unwilling to take part, which limited the range of viewpoints included in the study. Finally, the research was conducted over a short period, which restricted our ability to observe long-term changes or developments in attitudes and practices related to EMI.

Conclusion

The chapter summarized the main results and checked whether the research questions and ideas mentioned at the beginning were true. It showed that both students and teachers generally have a positive view of using English as a Medium of Instruction (EMI), but they also face some real challenges. These include problems with English language skills, a lack of resources, and not enough training for teachers. Based on these results, the chapter suggested useful ideas for students, teachers, and decision makers. For students, the suggestions focused on improving their English and getting more involved in learning through English. For teachers, it was recommended that they join training programs, use helpful teaching tools, and support students during the EMI process. For decision makers, the chapter advised bigger changes, like improving school facilities, offering English courses, working with international universities, and slowly adding more English into the study programs.

At the end, the chapter gave some final suggestions to help make the move to EMI smoother and more successful. These included starting slowly, offering more support, improving teamwork between everyone involved, and checking progress regularly. All these steps are meant to help make English more useful and easier to use in Algerian universities in the future.

General Conclusion

General Conclusion

As English continues to solidify its role as a global lingua franca, particularly in scientific and academic contexts, the implementation of English as a Medium of Instruction has become a significant trend among non-Anglophone countries. Many governments and educational institutions are increasingly adopting EMI policies to align their higher education systems with international standards, improve graduates' global competitiveness, and facilitate access to scientific knowledge. Algeria is among these countries and has recently made a major policy shift by officially introducing EMI in higher education, particularly in scientific and technical disciplines. Starting from the academic year 2023–2024, English began to replace French as the language of instruction in many Algerian universities. This policy change marks a significant linguistic and pedagogical transition in the Algerian higher education landscape.

In this context, the present research aimed to investigate the early stages of EMI adoption in Algeria by focusing on the scientific fields, with a particular emphasis on the Biology Department at the University of Relizane. The study sought to examine the perceptions, attitudes, challenges, and readiness of both students and faculty members regarding the use of English as the language of instruction. Two data collection instruments were employed: a structured questionnaire administered to 57 first-year biology students, and semi-structured interviews conducted with 6 teachers from the same department. These instruments were selected to gather both quantitative and qualitative insights into the stakeholders' experiences with EMI.

The structure of the research consists of three main chapters. Chapter One presented the theoretical framework underpinning the study, including a comprehensive overview of EMI, its definitions, historical development, and its growing prevalence in higher education systems around the world. It also examined the benefits and drawbacks of EMI as reported in the literature, especially in similar postcolonial and multilingual contexts. Chapter Two focused on the research methodology. It described the research design, the academic and linguistic background of the participants, the instruments used for data collection, and the procedures followed for data analysis. A combination of descriptive statistics and thematic content analysis was employed to interpret the findings. Chapter Three presented the key results of the study, integrating data from

both the student questionnaires and teacher interviews. It also discussed how the results support or challenge the initial hypotheses and concluded with practical recommendations for improving EMI implementation.

The analysis of student responses indicated that most students held generally positive attitudes toward learning in English. Many participants recognized English as the dominant language of science and technology, believing it offered broader access to academic resources, scientific literature, and online learning materials. Furthermore, students perceived English proficiency as a critical skill for improving their employability and enhancing their international academic and career prospects. However, the transition to EMI has not been without challenges. Students reported difficulties in expressing complex ideas in English, understanding specialized scientific texts, and participating actively in classroom discussions. These linguistic obstacles often led to reduced comprehension and engagement. As a result, students expressed a strong demand for enhanced English language training, tailored to their academic and disciplinary needs.

Teacher interviews revealed a variety of perspectives on EMI implementation. While most teachers acknowledged the rising importance of English in global scientific communication, their attitudes toward using it in their own classrooms were mixed. On the one hand, they were supportive of the long-term goals of EMI, such as improving students' international mobility and integrating Algerian science into global networks. On the other hand, they raised several concerns about the practicality of EMI in the current context. These included their own limited proficiency in English, the absence of EMI-specific pedagogical training, the lack of appropriate teaching materials in English, and skepticism about students' preparedness to follow lectures in a foreign language. Teachers also pointed out institutional issues, such as inadequate support structures, unclear policy implementation strategies, and the absence of coordinated efforts between language and content departments.

A common theme that emerged from both student and teacher responses was the lack of sufficient exposure to English in prior educational stages. This deficiency created a significant barrier to the smooth implementation of EMI at the university level. In addition, both groups highlighted the urgent need for institutional support, including professional development programs for teachers, the development of English-based textbooks and resources, and the gradual introduction of English into the curriculum rather than a sudden replacement of French.

In conclusion, the findings of this study suggest that both students and teachers at the University of Relizane are generally receptive to the use of English as a medium of instruction, recognizing its potential to elevate the academic quality and international relevance of Algerian higher education. However, the successful implementation of EMI will require strategic planning, sustained support, and coordinated efforts by educational authorities. Addressing language proficiency gaps, investing in EMI training programs for faculty, and creating English-based instructional materials are essential steps to ensure a smoother and more effective transition. This study offers valuable insights for policymakers as they design and refine language-in-education policies aimed at modernizing the Algerian higher education system in a globalized world.

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Appendices

Appendix 1

Students' Perceptions and Teachers' Attitudes Towards Implementing English as a Medium of Instruction in Higher Education.

Dear students,

You are kindly invited to answer the following questionnaire which attempts to gather information needed for our research about Implementing English as a medium of instruction (EMI) in the field of biology. Your answers will be treated with complete confidentiality and will only serve the objectives of the present research.

Thank you in advance for

your cooperation

Please tick (✓) in the corresponding brackets, and make full statements when necessary.

Students' Background Information

1. Gender

() Male

() Female

2. How long have you been learning English?

.....

3. How would you rate your level of English?

() Beginner

() Intermediate

() Advanced

Section One: Students' Perceptions of EMI

1. Are you exposed to modules using English language ?

() Yes

() No

If yes, how many modules do you study in English?

.....

2. Do you think using English as a medium of instruction helps improve your knowledge in your field of study?

() Strongly Agree

() Agree

() Neutral

() Disagree

() Strongly Disagree

3. How comfortable do you feel Learning biology in English?

() Very Comfortable

() Comfortable

() Neutral

() Uncomfortable

() Very Uncomfortable

4. Do you believe learning biology in English is beneficial for your future academic and professional carrer?

- ☐ Yes
- ☐ No
- ☐ Not Sure

5. What challenges do you face when Learning in English? (You can choose more than one answer)

- ☐ Understanding lectures
- ☐ Reading scientific materials
- ☐ Writing assignments or reports
- ☐ Expressing ideas in class
- Other (please specify): _____

6. Do you think learning Biology in English makes the subject more challenging ?

- ☐ Yes
- ☐ No
- ☐ Not Sure

Section Two: Teachers' Attitudes Towards EMI and Challenges

1. How often do your teachers use English as a medium of instruction in your courses?

- ☐ Always
- ☐ Often
- ☐ Sometimes
- ☐ Rarely
- ☐ Never

2. Do you think your teachers are well-prepared to teach in English?

- ☐ Yes
- ☐ No
- ☐ Not sure

3. What challenges do you think teachers face when using English in lectures? (you can choose more than one answer)

- ☐ Difficulty explaining scientific terms
- ☐ Lack of teaching materials in English
- ☐ Students' poor English comprehension
- ☐ Handling student questions
- ☐ Other (please specify): _____

4. In your opinion, how supportive are your teachers when students struggle to understand English?

- ☐ Very supportive
- ☐ Supportive
- ☐ Neutral
- ☐ Unsupportive
- ☐ Very unsupportive

5. What improvements would you suggest for better implementation of EMI at your department?

- () More English language training for students
- () Access to more learning materials in English
- () Introduction of bilingual courses (English + Arabic/French)
- () Organizing workshops and seminars on EMI
- () Other (please specify): _____

Thank You

Appendix 2

Students' Perceptions and Teachers' Attitudes Towards Implementing English as a Medium of Instruction in Higher Education.

Teachers' Interview

Dear Teachers,

You are kindly invited to participate in a research study exploring your attitudes about using English as a medium of instruction (EMI) in the field of biology. Your insights will significantly contribute to the validity of our research. Thank you in advance for your participation

1. How long have you been teaching in the Department of Biology?

Answer:

.....

2. What language do you use to teach the content of biology to your learners ?

Answer:

.....

3- Have you ever used English to teach biology ? If yes, how long ?

Answer:

.....

4- Based on your experience , What do you think about the use of English as a medium of instruction at the university level ?

Answer:

.....

5. What advantages does EMI offer for biology students ?

Answer:

.....

6. What difficulties do teachers face when teaching English ?

Answer:

.....

7. Do you feel you have enough training or support to teach in English ?

Answer:

.....

8. Which teaching strategies enhance student comprehension ?

Answer:

.....

9.What resources would improve your teaching in an EMI context ?

Answer:

.....

10.How can the biology department enhance the effective implementation of EMI ?

Answer:

.....

11. Do you have any additional insights or suggestions regarding the implementation of EMI ?

Answer:

.....

Résumé

La mise en œuvre de l'anglais comme langue d'enseignement (EMI) a suscité une attention croissante dans les pays non anglophones, en particulier au sein des établissements d'enseignement supérieur cherchant à s'aligner sur les normes académiques mondiales. Dans le contexte algérien, le passage à l'EMI pose plusieurs défis linguistiques, pédagogiques et culturels. La présente recherche examine les perceptions des étudiants de première année en biologie et les attitudes des enseignants envers l'adoption de l'anglais comme langue d'enseignement à l'Université de Relizane. Cette étude vise à explorer les points de vue des étudiants sur l'apprentissage en anglais, à analyser les attitudes des enseignants envers l'enseignement en anglais, et à identifier les principaux défis rencontrés par les deux groupes dans le processus d'adaptation. Un design de recherche descriptif a été employé, combinant des approches qualitatives et quantitatives. Les données ont été collectées par le biais d'un questionnaire administré aux étudiants et d'entretiens semi-structurés menés avec les enseignants. Les résultats ont révélé que les étudiants et les enseignants soutiennent généralement l'intégration de l'anglais comme langue d'enseignement, reconnaissant son importance pour le développement académique et professionnel. Cependant, l'étude a également mis en évidence plusieurs obstacles, notamment une maîtrise limitée de la langue, un manque de formation adéquate et des ressources pédagogiques insuffisantes, qui entravent une mise en œuvre efficace. Il est recommandé de fournir un soutien linguistique continu et des programmes de développement professionnel pour faciliter la transition et assurer une adoption plus fluide de l'EMI dans le département de biologie.

Mots-clés : Anglais comme langue d'enseignement, perceptions des étudiants, attitudes des enseignants, enseignement supérieur, Université de Relizane.

ملخص:

لقد حظيت تطبيق اللغة الإنجليزية كوسيلة للتعليم (EMI) باهتمام متزايد في البلدان غير الناطقة باللغة الإنجليزية، لا سيما في مؤسسات التعليم العالي التي تهدف إلى التوافق مع المعايير الأكاديمية العالمية. في السياق الجزائري، يشكل التحول نحو استخدام الإنجليزية كلغة تعليمية تحديات لغوية وتربوية وثقافية عدة. تبحث هذه الدراسة في تصورات طلاب السنة الأولى في علم الأحياء ومواقف المعلمين تجاه اعتماد اللغة الإنجليزية كوسيلة للتدريس في جامعة غليزان. تهدف هذه الدراسة إلى استكشاف آراء الطلاب حول التعلم من خلال اللغة الإنجليزية، وتحليل مواقف المعلمين تجاه التدريس باللغة الإنجليزية، وتحديد التحديات الرئيسية التي يواجهها كلا المجموعتين في عملية التكيف. تم استخدام تصميم بحث وصفي يجمع بين النهجين الكمي والنوعي. تم جمع البيانات من خلال استبيان تم توزيعه على الطلاب ومقابلات شبه منظمة أجريت مع المعلمين. كشفت النتائج أن كل من الطلاب والمعلمين يدعمون بشكل عام دمج اللغة الإنجليزية كوسيلة للتعليم، معترفين بأهميتها للتطوير الأكاديمي والمهني. ومع ذلك، أظهرت الدراسة أيضاً عدة عقبات، بما في ذلك ضعف الكفاءة اللغوية، ونقص التدريب الكافي، وندرة الموارد التعليمية، التي تعيق التنفيذ الفعال. يوصى بتوفير دعم لغوي مستمر وبرامج تطوير مهني لتسهيل الانتقال وضمان تبني أكثر سلاسة لتعليم اللغة الإنجليزية كلغة وسيطة في قسم البيولوجيا. الكلمات المفتاحية: اللغة الإنجليزية كوسيلة للتدريس، تصورات الطلاب، مواقف المعلمين، التعليم العالي، جامعة غليزان.