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**Students' and Instructors' Attitudes Towards Implementing English
as a Medium of Instruction**

**The Case of Second-Year Students and their Instructors from the
Department of Cellular and Molecular Biology within the Faculty of
Natural and Life Science at Khenchela University**

A dissertation submitted in partial fulfillment of the requirements for the degree
of Masters in Language and Culture

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DEDICATION 1

FIRST AND FOREMOST, I THANK ALLAH FOR EVERYTHING HE HAS GIVEN ME, FOR HIS ENDLESS BLESSINGS, AND FOR GUIDING ME THROUGH EVERY STEP OF THIS JOURNEY.

TO THE MEMORY OF MY BELOVED FATHER,

YOU WERE MY GREATEST SOURCE OF STRENGTH, MY GUIDING LIGHT, AND MY QUIET SUPPORTER THROUGH EVERY STEP OF THIS JOURNEY. THOUGH YOU ARE NO LONGER HERE TO SEE THIS ACHIEVEMENT, I CARRY YOUR LOVE, WISDOM, AND DREAMS IN MY HEART.

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HIS FACE AND THE GREATNESS OF HIS SOVEREIGNTY.

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TOWARD GOODNESS AND SUCCESS.

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THE SECRET BEHIND MY SUCCESS EVERY WORD IN THIS THESIS IS DEDICATED TO YOU.

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TO MY FRIEND, WHOM I CONSIDER A SISTER IN SPIRIT AND HEART THANK YOU FOR YOUR
UNWAVERING PRESENCE THROUGH IT ALL

. AND FINALLY... TO THE SOUL OF MY BELOVED SISTER, WHO LEFT THIS WORLD TOO SOON
MAY ALLAH HAVE MERCY ON YOU AND GRANT YOU A PLACE IN HIS VAST PARADISE.

YOUR NAME WILL ALWAYS BE TIED TO MINE IN PRAYER, AND THIS ACHIEVEMENT IS
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ABSTRACT

English has become a dominant global language for international communication and scientific research. Many countries, including Algeria, have adopted it as a medium of instruction (EMI) in higher education. This study aimed to investigate the attitudes of both students and teachers toward the implementation of EMI. Using a mixed-methods research design, data were collected both quantitatively and qualitatively through student questionnaires, teacher interviews, and classroom observations. Random sampling was applied: the questionnaire was administered to 50 students, and interviews were conducted with six teachers. Additionally, four classroom observations were carried out, with each teacher's class observed twice. The findings revealed that most students strongly supported the use of EMI and recognized its benefits for academic learning and future career opportunities. Instructors also acknowledged the strategic value of EMI in science education and international research. However, both groups identified challenges, including limited English proficiency and insufficient institutional support. The study suggests that while EMI holds significant potential to enhance students' academic performance and global engagement, its success depends on addressing these practical and pedagogical barriers.

Keywords: Attitudes; Teachers; Students; English as a Medium of Instruction; Higher Education.

LIST OF ABBREVIATIONS

DFC	Double First Class (China Initiative)
EMI	English Medium Of Instruction
ESP	English For Specific Purposes
L1	Language 1
L2	Language 2
MENA	Middle East And North Africa
Q	Question
STEM	Science, Technology, Engineering, And Mathematics
UAE	United Arab Emirates

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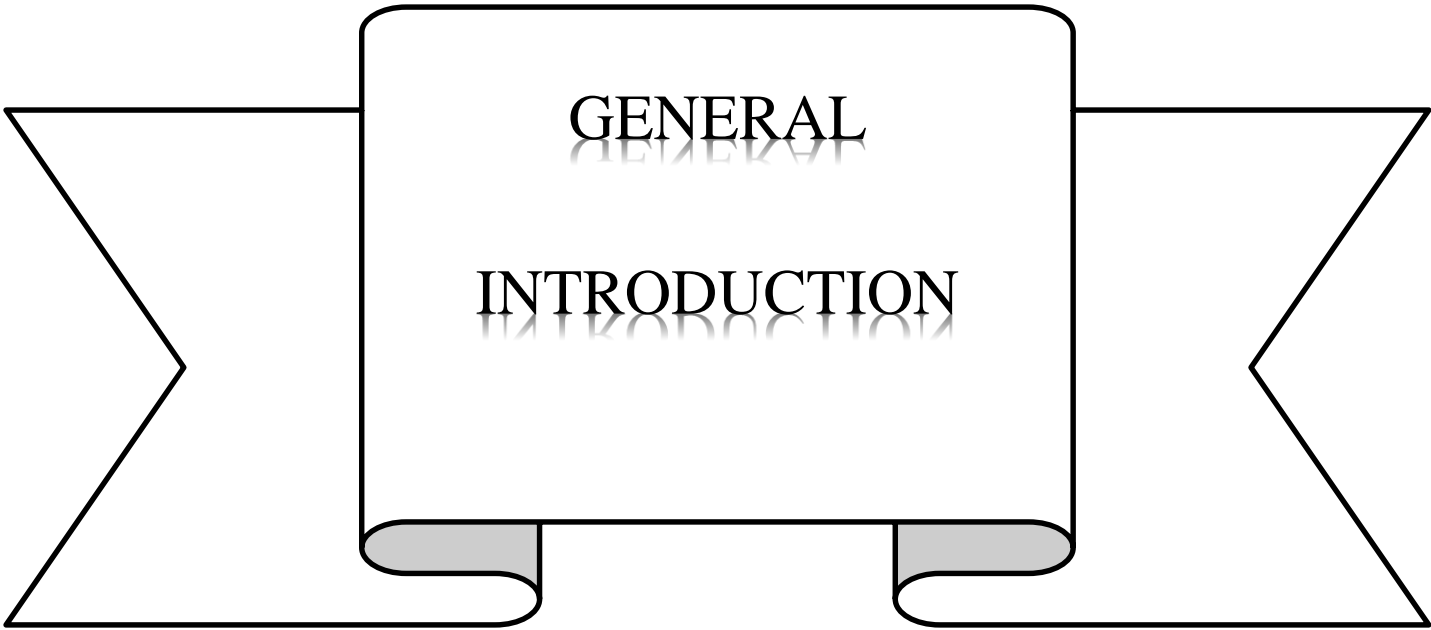
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GENERAL

INTRODUCTION

GENERAL INTRODUCTION

1. Background of the Study

English was not always the global powerhouse it is now. It started as just one simple language of many languages in Europe, but wars, trade, and empires spread it around the world. Now, it is the closest thing we have to a global language, the one people use to do business, share ideas, or even argue online. That is why so many schools and universities all over the world, especially in places where English isn't the main language, now teach subjects like science or economics in English. This unprecedented linguistic dominance has fueled the rapid expansion of English as a Medium of Instruction (EMI).

EMI can be comprehensively defined as the use of English to teach academic subjects in contexts where it is not the dominant or first language of students, with the primary aim of delivering subject-specific content and, in many cases, enhancing English language proficiency. Universities around the globe are increasingly implementing EMI language policies to teach degree programmes (at both Undergraduate and Graduate level) such as Business Administration, Law, Engineering, and Economics. Ostensibly this is to attract international students, to raise the university's global profile, and to increase the employability of their graduates. Research on whether such policies are perceived as effective by key stakeholders (professors and students) is vast; however, few studies have conducted a large-scale in-depth analysis in the Algerian context.

Research on EMI in non-English-speaking countries reveals mixed outcomes. While some experts argue it enhances higher education and job prospects, others highlight significant challenges, particularly when teachers and students struggle with limited English proficiency. Studies in places like Saudi Arabia, Rwanda, and Nepal show general support for EMI, yet

concerns persist about prioritizing English over native languages in instruction. To address comprehension issues, some schools have adopted code-mixing , blending English with local languages. Recommendations for improvement include better teacher training, adapted learning materials, and more supportive policies to make EMI more effective.

Algeria's linguistic landscape is complex, with Arabic, French, and Berber (Tamazight) serving as primary languages. However, English has increasingly been introduced in higher education, particularly in scientific disciplines, due to its status as the global language of science and technology (Senouci, & Gacem, 2024). The Algerian government has implemented policies to promote English in universities, aiming to align with international standards and improve students' employability (Boukhedimi, 2020).

The shift to EMI at Abbas Laghrour University mirrors Algeria's ambitious educational reforms, but reality paints a more complicated picture. Students stand at the crossroads of opportunity and frustration , while recognizing English as their ticket to global science and better careers, many first-years arrive woefully unprepared, having come through a Francophone school system that left them linguistically stranded (Benrabah, 2013; Boukhedimi, 2020). Professors face their own dilemma, trained in French but now expected to teach complex subjects concepts in English, they often straddle both languages in class, creating a linguistic patchwork that may defeat EMI's very purpose (Khelifa, 2019). Early signs show students gradually engaging with English research papers, yet progress remains fragile , held back by stubborn language gaps and deeply ingrained French academic habits (Boukhedimi, 2020). The experiment's success ultimately hinges on bridging these divides through intensive language support, redesigned curricula, and proper teacher training - otherwise, Algeria risks replacing one educational inequity with another (Belmekki & Bagui, 2021).

Switching to English as the main teaching language in Algerian universities is easier said than done. Students and teachers are trying to adapt, but without proper training, resources, and

gradual changes, this shift could do more harm than good. If Algeria wants EMI to work, it needs to fix these problems first ; otherwise, students might end up learning less, not more.

2. Statement of the Problem

The Algerian higher education system's shift toward EMI, particularly in scientific fields like cellular and Molecular Biology , aims to align with global academic practices and enhance students' access to international research and careers. However, this transition occurs in a multilingual context where Arabic and French dominate education and daily communication, creating unique challenges. At Khenchela University's Department of Cellular and Molecular Biology, second-year students, despite a year of EMI exposure, continue to grapple with advanced scientific terminology and complex concepts delivered in English, compounded by limited prior preparation in secondary education. Instructors as well, though recognizing EMI's potential benefits, face dilemmas in balancing linguistic accessibility with content depth, often resorting to code-switching (mixing French and English) to ensure comprehension, a practice that risks diluting EMI's objectives.

3. Aim of the Study

The study aims to investigate the challenges and benefits associated with EMI in Algeria's multilingual educational context, where Arabic and French are dominant languages, and to provide insights into how EMI impacts student performance and learning. Ultimately, this research seeks to offer recommendations for the effective integration of EMI in Algerian higher education

4. Research Questions

This study seeks to answer the following research questions:

1. What are the attitudes of second-year students and their instructors in the Department of Cellular and Molecular Biology at Khenchela University towards the use EMI?
2. What challenges do students and instructors face in EMI in the context of teaching and learning Cellular and Molecular Biology?
3. How do students and instructors perceive the impact of EMI on academic performance and knowledge acquisition in the field of Cellular and Molecular Biology?

5. Research Objectives

The objectives of this study are:

1. To investigate the attitudes and perceptions of second-year students and their instructors in the Department of Cellular and Molecular Biology at Khenchela University towards the use of EMI.
2. To identify the challenges faced by students and instructors in implementing EMI in the context of teaching and learning Cellular and Molecular Biology.
3. To explore the perceived impact of EMI on academic performance and knowledge acquisition in the field of Cellular and Molecular Biology among students and instructors.

6. Research Hypothesis

Second-year students and instructors in the Department of Cellular and Molecular Biology at Khenchela University have generally positive attitudes towards the implementation of EMI.

7. Rationale for the Study

As English dominates global science and academia, Algeria has adopted it as a medium of instruction in higher education. However, few studies examine EMI implementation in

Algeria, particularly at Khenchela University's Department of Cellular and Molecular Biology. This gap underscores the need to explore faculty and student perspectives, as their firsthand experiences with EMI are critical to understanding its challenges, benefits, and effectiveness in Algeria's unique multilingual context.

8. Significance of the Study

This research addresses the critical gap in understanding how EMI functions in Algeria's multilingual higher education context, particularly at Khenchela University. By capturing faculty and student perspectives, the findings will inform strategies to improve EMI implementation, ensuring it enhances, rather than hinders scientific education in Algeria. The study also contributes globally, offering insights for institutions in similar postcolonial, multilingual settings navigating the tensions between linguistic globalization and local educational equity.

9. Methodology

This study will employ a mixed-methods approach to gain a comprehensive understanding of the attitudes toward EMI and its outcomes. A combination of questionnaire, structured interviews and classroom observations will be used to gather both quantitative and qualitative data. This triangulation ensures a nuanced analysis of EMI's implementation, capturing both measurable outcomes and the complexities shaping student and instructor perspectives.

9.1 Data Gathering Tools

9.1.1. Questionnaire

The questionnaire used in this study targeted second-year Biology students enrolled in the EMI program. Its main objective was to assess the students' attitudes toward EMI and to

evaluate the challenges and benefits they perceived in this learning context. To achieve this, a questionnaire was developed that included both Likert-scale questions and multiple-choice items, allowing for a comprehensive exploration of their opinions and experiences.

9.1.2. Interviews

The interviews were conducted with faculty members from the Biology Department who were participating in the EMI program. The interview's primary objective was to explore the challenges and benefits of EMI in greater depth and to collect nuanced opinions on the program from the instructors' perspective. To accomplish this, structured interviews were conducted, allowing for a detailed and systematic examination of their experiences and viewpoints.

9.1.3. Observation Grid

The classroom observations focused on second-year biology students and their instructors during EMI sessions. Its objective was to observe real-time classroom interactions, teaching strategies, and the levels of student engagement within the EMI context. To achieve this, an observation grid was used to systematically document classroom dynamics. Observations were recorded in a grid format with predefined categories to ensure consistency and reliability in data collection.

9.2. Setting, Population, and Sampling

The participants of this study are limited to second-year students and faculty teachers from the Biology and molecular biology Department at Khenchela University. Due to the extensive time required to work with the entire population. We selected a sample of 50 students and 10 teachers (6 for interviews and 4 for real-life classroom observation) . These participants were randomly chosen to represent the larger group.

10. Structure of the Study

The work is divided into two complementary chapters to bridge theory and practice. Chapter One establishes the theoretical framework, examining the interplay between globalization and the dominance of English in academia, with a specific focus on Algeria's historical language policies and the evolving role of English Medium Instruction in its higher education system. Chapter Two shifts to the empirical dimension, employing a mixed-methods approach (questionnaires, interviews, and classroom observations) to analyze stakeholder attitudes and EMI outcomes. It concludes with actionable recommendations, critical reflections on limitations, and implications for aligning EMI implementation with Algeria's linguistic and educational realities.



CHAPTER ONE
LITERATURE REVIEW

Introduction

This chapter provides the theoretical and contextual foundation for investigating students' and instructors' attitudes toward English as a Medium of Instruction (EMI) in Algerian higher education, with a particular focus on Khenchela University. As Algeria increasingly integrates EMI into its academic programs, understanding stakeholder perceptions becomes critical to addressing implementation challenges and optimizing learning outcomes. This chapter begins by exploring the theoretical frameworks underpinning EMI, including language policy, attitudes and motivation theories, and the sociocultural implications of EMI in postcolonial contexts like Algeria. And it reviews existing research on EMI attitudes globally and within the MENA region (Middle East and North Africa), highlighting gaps in studies specific to Algerian universities, particularly those in non-metropolitan areas like Khenchela. Finally, the chapter outlines the study's objectives and research questions, which aim to uncover how attitudes shape EMI's feasibility and effectiveness at Khenchela University.

I.1. Definition and Background of EMI

English as a Medium of Instruction (EMI) involves teaching academic subjects in English in contexts where it is not the dominant first language ; a trend driven by globalization, international student mobility, and institutional competition (Macaro, 2018; Galloway, 2020).

According to Dearden (2014, p.2), EMI is "the use of the English language to teach academic subjects in countries or jurisdictions where the majority of the population does not speak English as their first language." This definition emphasizes the use of English in content-based education as well as the context of non-native English-speaking regions.

EMI is defined by Macaro (2018, p.19) as "the teaching of academic subjects through English in contexts where English is not the dominant language and where the aim is not primarily to teach the English language itself." This highlights the dual function of incidental language learning and subject delivery.

According to Kirkpatrick (2011, p.22), EMI is "the use of English to teach academic content in settings where English is not the students' first language, with the aim of enhancing both subject knowledge and English language proficiency." The goal of language proficiency is incorporated into this definition.

EMI is "a policy choice in higher education aimed at increasing the global competitiveness of graduates, often at the expense of local languages," according to Hamid (2013, p.7). This demonstrates how policy-driven it is and how it affects linguistic diversity. Despite differences in their focus on goals, difficulties, and ramifications, these definitions show that EMI is generally understood to be the use of English for teaching content, mainly in non-native contexts.

Unlike traditional English-language teaching, EMI integrates language and content learning, positioning English as a tool for education rather than a standalone subject. This change reflects larger goals to raise graduates' employability and conform to international academic standards (Dafouz & Smit, 2020). However, the rapid adoption of EMI has sparked conversations about its pedagogical impacts, including challenges for teachers who must balance the delivery of language and content as well as unequal access for non-native speakers (Kuteeva & Airey, 2023). EMI isn't always easy for both. Students sometimes struggle to keep up, feeling overwhelmed by complex material taught in a language they're still mastering (Macaro, 2018). Research shows that its success depends a lot on whether students and instructors believe in it (Tamtam, 2012). Still, the benefits are hard to ignore. Graduates with EMI experience often have better career opportunities, access to cutting-edge research, and the chance to connect with people from all over the world.

I.2. Importance of EMI and The Globalization of the English Language

I.2.1. Globalization of English Language

The globalization of English has significantly accelerated the worldwide adoption of EMI. As English consolidates its position as the dominant lingua franca in business, scientific research, and international diplomacy, proficiency in English is increasingly perceived as a critical determinant of academic and professional success (Macaro, 2018). This trend is particularly evident in higher education institutions seeking to enhance their global competitiveness and graduate employability. With the expansion of international trade and research, English facilitates cross-border communication, enabling students to engage with global academic materials and scholars. English has become a popular language to teach in universities due to its growing popularity throughout the world.

I.2.2.Importance of EMI

By implementing EMI, universities raise their profile and reputation globally, which attracts more international faculty and students to their programs. Furthermore, as English proficiency has become a highly valued competency in global academic and professional contexts, EMI programs provide local students with a significant competitive advantage in international job markets (Dearden, 2014). This aligns with national human capital development goals in many non-Anglophone countries seeking to upskill their workforce. The shift to EMI is not merely linguistic; it represents a broader educational and cultural change that aligns universities with the demands of globalization.

I.3. Globalization of EMI

I.3.1.EMI Worldwide

The adoption EMI has become a major trend in higher education worldwide. In Europe, Asia, and beyond, many universities have adopted EMI programs to improve internationalization and provide students with access to global networks. Dearden's (2014) research documents a significant expansion of English-medium programs, particularly in European higher education. Countries like Germany, Sweden, and the Netherlands have notably increased EMI offerings across both undergraduate and graduate levels, reflecting a strategic response to globalization and international student recruitment. Many Asian universities, particularly in China (Project 985), South Korea (MEEEST initiative), and Japan (Global 30 Project), have implemented widespread EMI programs as part of national strategies to enhance graduates' global competitiveness (Macaro, 2018). The rapid global adoption of EMI reveals a complex interplay of enthusiasm and concern. While 76% of non-Anglophone universities now offer EMI programs (Dearden, 2022), stakeholders express mixed attitudes. European students

report 32% higher stress in EMI courses (Wächter , 2023), while Asian faculty struggle with dual content/language teaching roles (Kuteeva, 2022). In the Middle East, 68% of students value EMI's career benefits but 57% fear academic struggles (Alseweed, 2023). These tensions persist despite EMI's advantages for international collaboration, highlighting implementation challenges (Macaro, 2018).

I.3.2.EMI in the Middle East

The Middle East has witnessed significant growth in EMI, particularly in Gulf nations where economic transformation agendas prioritize global competitiveness. The United Arab Emirates, Saudi Arabia, and Qatar have strategically implemented EMI programs, especially in STEM (Science, Technology, Engineering, And Mathematics) disciplines and professional fields, to enhance graduate employability and internationalize their higher education systems (Al-Bakri, 2021). This shift reflects broader regional efforts to transition toward knowledge-based economies, as seen in Saudi Arabia's Vision 2030 reforms that explicitly link English proficiency with human capital development (Alghamdi & Elyas, 2022, p.260). The rapid expansion of EMI in Middle Eastern universities reflects both the region's globalization ambitions and its economic diversification strategies. While policymakers promote EMI as essential for workforce competitiveness, instructors and students exhibit complex attitudes toward its implementation. Faculty surveys reveal significant concerns, with 62% of Qatari university lecturers reporting inadequate preparation to teach their disciplines effectively in English (Barnawi, 2022), while UAE studies show STEM instructors adapt more readily than humanities professors (Solloway, 2023). Students demonstrate pragmatic acceptance, with 78% of Saudi undergraduates recognizing EMI's career benefits, despite 54% struggling with technical content comprehension (Alseweed, 2023). These tensions between policy goals and classroom realities are particularly evident in Jordan, where EMI students score 15-20% lower

than Arabic-medium peers in annual assessments (Tahir, 2023), highlighting the need for targeted language support in EMI curricula.

I.3.3.EMI in Europe

Many countries in Northern and Western Europe created EMI graduate programs in English, including Sweden, Denmark, and the Netherlands, for the purposes of attracting international students and enhancing institutional competitiveness. The surge in EMI in European higher education began in the early 2000s (Wächter & Maiworm, 2021). Germany is a leader in EMI and continental Europe, with more than 1500 degree programs offered in English ; mostly in engineering and the natural sciences at prestigious institutions such as the Technical University of Munich (DAAD, 2023). Southern Europe (Italy and Spain) has needed to work harder to implement EMI, especially in consideration of the lower baseline of English skills and worries about contributing to the marginalization of local languages (Doiz, 2022). Expanding on this, Nordic countries have more easily negotiated EMI without the controversy, in part due to the status of English among both students and faculty (Hultgren, 2023). Research universities in the Netherlands such as Maastricht and Delft have effectively implemented EMI through an almost exclusive use of English in nearly all master's programs (Wilkinson, 2023). This has led some to discuss the gradual loss of Dutch academic identity in higher education as a result of EMI.

The move toward English-medium instruction in European universities reflects deeper changes in global academia, where English has become the shared language of research and international collaboration. While this shift happens at different paces across institutions, it's creating interesting discussions among those directly involved. University leaders tend to see EMI as essential for staying competitive, believing it attracts top students and faculty worldwide. Professors, however, often have more mixed feelings, many appreciate the

international connections but worry about teaching complex subjects in what might be their second or third language. Students show practical attitudes ; they recognize the career benefits but frequently report feeling overwhelmed when studying advanced material in English.

This situation creates an ongoing balancing act. While institutions pursue global recognition through EMI (Wächter & Maiworm, 2014), teachers remain focused on pedagogical effectiveness (Kuteeva, 2022), and students navigate both academic success and career preparation (Pecorari, 2020). Finding approaches that work for everyone remains an important challenge as European universities continue developing their EMI programs.

I.3.4.EMI in Asia

Due to factors like globalization, the recruitment of international students, and the perceived economic value of English proficiency, EMI is rapidly expanding in Asian higher education, mirroring European trends but operating within unique linguistic and cultural contexts (Kirkpatrick, 2022). EMI adoption has been especially aggressive in East Asian universities, as evidenced by South Korea's 40% increase in English-taught courses since 2015 and Japan's "Global 30" project, which established full English-track degree programs at prestigious universities like Tohoku and Kyoto (Galloway, 2023). Over 500 EMI degree programs, mostly in STEM and business fields, are now offered by prestigious universities like Tsinghua and Peking University thanks to China's "Double First-Class" initiative, although implementation issues still exist because of disparities in faculty English proficiency (Zhang, 2023).

The situation in Southeast Asia is more complicated ; Malaysia and Indonesia are having difficulty striking a balance between postcolonial language politics and EMI expansion, while Singapore's universities are fully run in English (Hamid, 2023). India dominates the EMI landscape in South Asia, where English-medium higher education is both a legacy of

colonialism and a sign of elite status, despite notable quality differences between regional colleges and prestigious institutions like the IITs (Annamalai, 2022). As demonstrated in Thailand, where only 32% of university lecturers feel comfortable teaching in English, Asian implementations of EMI often face pedagogical challenges and opposition from nationalist groups, in contrast to Europe's relatively easy adoption in Nordic countries (Draper, 2023). Thus, the Asian experience with EMI illustrates a conflict between enduring worries about educational equality, cultural identity, and language justice in postcolonial states with the practical demands of international academia (Phan, 2023).

I.3.5.EMI in Africa

EMI is also expanding in Africa, as part of broader efforts to meet global academic standards. As many African countries make English their official language of instruction, its continued spread across the continent is often framed as a legacy of colonialism. For this reason, English has become the dominant language in higher education programmes across many African universities. But EMI also brings its own challenges. According to Yallem (2021), EMI provides access to an extensive body of international research sources, but also presents considerable challenges, including a lack of English proficiency among students and instructors. These are acute challenges in sub-Saharan Africa, where many learners lack the proficiency in English beforehand to transition to university successfully

Nonetheless, EMI was adopted by African institutions as part of their efforts to modernize education and promote academic mobility because it is widely acknowledged that fluency in English is essential for engaging in global academic and professional environments. EMI has been connected to educational reforms in nations like South Africa and Kenya that are meant to raise university rankings and draw in foreign students (Yallem, 2021). While university leaders champion EMI as vital for internationalization, many lecturers struggle with

the dual demands of content delivery and language support. Students, though recognizing the career advantages, frequently report feeling disadvantaged when studying complex subjects in English.

I.3.6.EMI in the Maghreb

In the Maghreb region (comprising Algeria, Morocco, and Tunisia), EMI has seen significant growth over the past few years. These countries, which have complex linguistic landscapes due to historical colonialism and the use of both Arabic and French in daily life, are increasingly incorporating English into their educational systems, particularly in higher education.

Morocco's adoption of EMI is indicative of a strategic shift toward global competitiveness, especially in the business and STEM domains (Belhiah & Elhami, 2015). In Morocco, universities have begun offering programs in engineering, medicine, and economics through EMI as part of broader government efforts to position the country as a regional hub for global education. This shift is intended to enhance graduates' employability and align with international academic standards. For instance, Hassan II University in Casablanca has reported increased student interest in EMI, driven by the desire to access English-language scientific resources and pursue global opportunities (Zouhir, 2023). However, the transition is not without contradictions. Many instructors, having been trained in Francophone pedagogical traditions, struggle with teaching confidently in English, often reverting to French or Arabic during instruction due to language barriers (Bouzidi, 2022). Meanwhile, students, particularly those from public schools with limited English exposure, frequently rely on translation tools or external support to cope with course content, highlighting persistent gaps in preparedness (Bouzidi, 2022). While the Moroccan Ministry of Education has initiated training programs to support teachers' language development, experts argue that effective EMI implementation

requires more systemic reforms, including curriculum redesign, adequate resource allocation, and support systems for both educators and students (Hespress, 2023).

Although Tunisia's EMI journey is still in its early phases, it clearly shows a push driven by policy (British Council, 2018). Universities in Tunisia have increasingly begun implementing EMI, particularly in scientific and technical disciplines, recognizing the role of English in enhancing graduates' employability and enabling international research collaboration. For example, Tunis Business School has offered its entire business curriculum in English since its establishment in 2010, positioning itself as a national pioneer in EMI (Mahfoudhi, 2023). However, progress across institutions remains uneven due to a lack of coherent national policy and persistent reliance on French as the dominant instructional language. Faculty members often receive little to no professional development to improve their EMI competencies, with many expressing discomfort or resistance toward teaching in English, citing inadequate training and increased workload (Ounis, 2023; Said, 2023). For instance, a study by Ounis (2023) found that several instructors viewed EMI training programs as a burden rather than a developmental opportunity. Moreover, students frequently arrive at university with insufficient English skills, which significantly hampers their ability to comprehend lectures and participate in discussions. This is particularly problematic in scientific fields where complex terminology and abstract concepts are difficult to grasp even in one's first language, let alone a foreign one (Mahfoudhi, 2023). These issues highlight the urgent need for targeted language support for students and sustained faculty development to ensure effective EMI implementation in Tunisian higher education.

Perhaps the most politically significant is Algeria's EMI expansion, which symbolizes a shift toward international academic networks and a larger decolonization of education (Amara, 2025). With the help of government initiatives to lessen dependency on French, public

universities now heading towards providing medical, engineering, and technology programs taught in English. However, the difficulties are similar to those of its neighbors: student adaptation issues, a lack of teacher training programs, and gaps in faculty proficiency. Despite these obstacles, there is increasing agreement that EMI is a geopolitical decision that links Algeria's future to a variety of international partnerships rather than merely being an educational one.

I.4.EMI in Algeria

In Algeria, higher education institutions have made significant strides in adopting EMI, particularly in scientific and technical disciplines. This shift is viewed as a component of larger initiatives to update the nation's higher education system and raise its profile abroad. English adoption has been strongly pushed in a number of academic programs, particularly in STEM fields, as part of the National Strategy for the Development of Higher Education (Amara, 2025).

Despite the efforts to put EMI into practice, Amara (2025), Benrabah (2023), and Boukhanouf (2024) point out a number of enduring difficulties. Traditionally trained in French, instructors' poor language skills are a major issue. Benrabah (2023) observes that many faculty members have difficulty with both technical vocabulary and English pedagogical approaches. Furthermore, Boukhanouf's (2024) study found that students frequently struggle with the academic language demands of EMI, especially when it comes to comprehending complex scientific texts in English. This difficulty has a significant impact on comprehension and academic performance. According to Amara (2025) and Mihi (2023), a significant obstacle to successful implementation of EMI is the Algerian educational system's inability to adequately support it with resources, such as English-language textbooks and instructional materials.

Furthermore, the future of French as a language of instruction is called into question by Algeria's move to EMI. Some see that the adoption of English should not come at the expense

of the nation's linguistic heritage, especially Arabic and French, which are essential to Algeria's national identity, even though many view EMI as crucial for the country's international academic integration (Amara, 2025).

I.4.1. Sociocultural Implications of EMI in Postcolonial Algeria

The adoption of EMI in postcolonial Algeria carries profound sociocultural implications, shaped by the nation's colonial history, language policies, and competing educational ideologies. Algeria's linguistic landscape remains deeply influenced by French colonialism, which entrenched French as the dominant language of higher education and elite discourse, even after independence (Benrabah, 2013). The post-independence Arabization policies sought to reclaim Arabic as the primary language of instruction, partly as a decolonial gesture (Grandguillaume, 2004).

However, the recent shift toward EMI introduces a new linguistic hierarchy, potentially marginalizing both Arabic and French while privileging English, a language associated with globalization and neoliberal economic demands (Phillipson, 2009). This transition raises critical questions about cultural identity, epistemic access, and equity. For instance, students and instructors from disadvantaged backgrounds, particularly in regional universities like Khenchela, may face additional barriers due to uneven English proficiency, reinforcing existing educational inequalities (Belmihoub, 2018). Moreover, EMI's expansion risks being perceived as another form of linguistic imperialism, where global English dominance undermines local languages and knowledge systems (Canagarajah, 2005).

Yet, proponents argue that EMI could offer Algerian students greater access to international academic and professional opportunities, provided it is implemented equitably (Macaro, 2018). These tensions highlight the need for critical EMI policies that balance

globalization demands with Algeria's sociolinguistic realities, ensuring that English does not reproduce colonial-era linguistic exclusion but instead serves as a tool for empowerment.

I.4.2.EMI in Algerian Universities

Several Algerian universities have begun transitioning to EMI, particularly in scientific and technical fields, as part of the country's broader educational reforms. « The University of Science and Technology Houari Boumediene (USTHB) » in Algiers has been at the forefront of this shift, introducing EMI programs in engineering, computer science, and natural sciences since 2020 (Khelifa, 2022). Similarly, « The University of Constantine 1 » has implemented EMI in its medical and biotechnology departments, requiring all graduate students to submit their theses in English (Boukhanouf, 2023). In eastern Algeria, « The University of Annaba » has adopted a partial EMI model for petroleum engineering and renewable energy programs, collaborating with British universities to train faculty and develop curricula (Mihi, 2024). « The University of Oran 1 » has taken a more gradual approach, offering parallel French and English tracks in its computer science department while phasing in full EMI by 2026 (Saadi & Cherrad, 2023).

However, these initiatives face challenges, as seen at « The University of Batna 2 », where resistance from Francophone faculty led to the suspension of EMI in chemistry after just one semester (Benrabah, 2024). These case studies demonstrate Algeria's uneven but determined move toward English-medium education, reflecting both the promise and difficulties of linguistic transition in a traditionally Francophone academic system.

The country's higher education reform initiatives have been beset by a number of complex problems that have arisen during the implementation of English Medium Instruction (EMI) in Algerian universities. One major obstacle is faculty members' lack of language proficiency ; most professors received their education only in French-medium systems and now

struggle greatly to switch to teaching in English (Benrabah, 2023). This difficulty is especially severe in technical fields where teachers need to become proficient in both specialized language and English teaching techniques, frequently leading to the use of French or code-switching during lectures (Boukacem & Hamzaoui, 2024).

According to recent research, 72% of STEM undergraduates report feeling anxious when they are required to participate in English-medium seminars, and nearly 65% of them have difficulty understanding academic texts written in English. These findings highlight the equally daunting challenges that students face (Boukhanouf, 2024). The majority of universities lack sufficient English-language teaching resources, which exacerbates these challenges. According to a 2023 survey, 80% of Algerian STEM faculties still primarily use French textbooks when attempting to teach in English (Mihi, 2023).

Important concerns regarding cultural identity and educational equity are also brought up by this linguistic shift, as some academics contend that the quick implementation of EMI may disadvantage students from underprivileged homes who have had little exposure to English (Amara, 2025). . Additionally, the change has led to generational differences in academia, with younger professors typically being more open to EMI than their more experienced counterparts (Belmihoub, 2023). These difficulties are made worse by different institutions' uneven application of the policy; some require complete EMI adoption, while others continue to follow parallel French and English tracks (Khelifa, 2024).

Notwithstanding these challenges, supporters emphasize how EMI can improve global cooperation and graduate employability, especially in the engineering and medical domains where English is the primary language of professional communication and worldwide research (Saadi & Cherrad, 2024). Thus, Algeria offers a challenging case study of linguistic transition

in postcolonial higher education systems, where local educational realities and cultural preservation must be carefully balanced with the drive for internationalization.

Conclusion

This chapter has examined the theoretical foundations of EMI in global higher education, with particular attention to Algeria's complex linguistic landscape. By analyzing key studies on language policy, stakeholder attitudes, and pedagogical challenges, the review identified critical gaps between EMI's promised benefits and its on-the-ground realities, especially in postcolonial contexts where English competes with established academic languages. The discussion highlighted how Algerian universities' shift toward EMI, particularly in STEM fields, reflects both geopolitical aspirations and practical struggles with faculty preparedness and student adaptation. These theoretical insights lay necessary groundwork for Chapter 2's empirical investigation, which will explore how these tensions manifest in Algerian higher education classrooms through direct analysis of instructor and student experiences. The next chapter details the mixed-methods approach designed to test these theoretical propositions against real-world data.



CHAPTER TWO

RESEARCH METHODOLOGY,
RESULTS ANALYSIS AND
DISCUSSION

Introduction

This Chapter presents the fieldwork investigating EMI in Cellular and Molecular Biology classes at the University of Khenchela. Following the theoretical framework established in Chapter One, this practical study examines how both instructors and students experience EMI in real classroom settings. The chapter contains three key parts. First, it describes the research methods : questionnaires for students, interviews with six instructors, and multiple classroom observations. Second, it analyzes the collected data to reveal patterns and challenges in EMI implementation. Finally, it discusses the study's limitations and suggests practical ways to improve EMI teaching in similar contexts. This chapter provides concrete evidence about EMI use in Algerian science education, connecting directly to the theoretical issues raised earlier while offering actionable insights for educators.

II.1. Research Methodology and Design

II.1.1. Choice of the Method

This study employed a mixed-methods research design to comprehensively investigate the implementation of EMI at Khenchela University. By integrating both quantitative and qualitative approaches, the research captured multifaceted perspectives on EMI's effectiveness in Cellular and Molecular Biology education. The quantitative component utilized structured questionnaires to assess students' linguistic competence and academic performance through measurable, statistical data. This approach enabled broad pattern identification across a significant participant sample. Complementing this, quantitative and qualitative methods included in-depth interviews with instructors to explore their professional experiences, pedagogical challenges, and personal attitudes toward EMI implementation. Classroom observations served as a crucial third dimension, capturing authentic teaching practices and student-instructor interactions in the EMI environment. This multi-faceted approach enabled

cross-verification of findings across different data sources, revealing both consistencies and disparities between reported attitudes and actual classroom dynamics.

The combination of these methods proved particularly valuable for understanding the complex realities of EMI implementation. Statistical patterns from the questionnaires could be examined alongside qualitative insights from interviews, while observational data provided concrete examples of how these factors manifested in actual teaching and learning situations. This comprehensive methodology not only enhanced the study's reliability but also produced a more complete picture of the challenges and opportunities surrounding EMI adoption in this specific academic context, bridging the gap between numerical data and lived educational experiences.

II.1.2.Data Gathering Tools

To answer the study questions, we employed a triangulation of methodologies to collect quantitative and qualitative data. Students' questionnaire and teachers' interviews provided both quantitative and qualitative data, while classroom observations provided the majority of the qualitative data. After that, the informations gathered from the three study instruments was combined for analysis and interpretation.

Students were given anonymous questionnaires as the initial study instrument to gather information. Closed-ended questions and only two open-ended questions were included in the survey to gauge students' opinions regarding the use of English, as well as their perceptions of its difficulties and expected advantages. Mainly quantitative data were collected using this data gathering tool.

The interview was the second research method employed to collect data. Arranged Interviews with subject matter educators were undertaken. Regarding the use of EMI in their specialised professions, the instructors' structured interview, which included closed- ended

questions, was helpful in yielding quantitative and qualitative information that was utilised to bolster the information gleaned from the questionnaires to a better understanding of teachers perspectives and experiences.

Besides the questionnaire and interview, a third research tool was employed for data collection : observation grid. A number of classroom observations were conducted with instructors teaching second year students at the Department of Cellular and Molecular Biology within the Faculty of Natural and life sciences at Khenchela University.

II.1.3.Setting Population and Sampling

The study population under concern in this resaerch is second-year students and their instructors from the Faculty of Natural and Life Sciences' Cellular and Molecular Biology department during the academic year 2042/2025. Students total number on the lists at the level of administration is 298 (but a considerable number of them were not always present, very likely because of Ramadan), divided into groups. From these groups, fifty students (16.80%) have been selected using stratified random sampling. We aspired from a bigger sample, but due to high levels of absenteeism this was all we could obtain. Unlike the sample, the choice of the population was not actually random. The reason for selecting Second -year students was that they have gained sufficient exposure to EMI while still being in the early stages of their academic journey (compared to first year students) , making them ideal for evaluating both the adaptation process and developing attitudes. Third year students were not as much exposed to EMI indeed, the reason why choice of second year seemed best.

This study was mostly conducted during Ramadan across various academic and real-life settings to examine shifts in attitudes among participants. To ensure comprehensive data collection, the researchers actively participated in various events, such as classroom sessions, student-teacher meetings, conferences, study days, and seminars.

To enhance the study's validity, structured interviews were conducted with six instructors teaching second-year Cellular and Molecular Biology at the University of Khenchela's Faculty of Natural and Life Sciences. The primary objective was to explore their perspectives on using English as the medium of instruction. A predetermined set of twenty-one questions guided the interviews, enabling participants to elaborate on their views, experiences, and recommendations regarding this pedagogical approach. This structured methodology ensured a systematic and in-depth understanding of the instructors' attitudes, thereby strengthening the study's credibility. Worthy to note, we had to restructure the interview in accordance with the situation as the teachers declined to be recorded and were clearly reluctant to respond to open questions.

Through methodological triangulation, classroom observations were systematically conducted using a structured observation grid. This approach complemented data collected from questionnaires and interviews. Observations took place across four second-year Cellular and Molecular Biology classrooms in the department, with each of the four participating instructors being observed twice during separate teaching sessions. This dual-observation design ensured more reliable data collection by capturing teaching practices and classroom dynamics across different instances, thereby enhancing the study's overall credibility.

II.1.4. Description of Data Gathering Tools

II.1.4.1. Students' Questionnaire

The questionnaire designed for this study aimed to explore students' perspectives on the implementation of EMI in Algerian higher education. It was structured into multiple items using a five-point Likert scale ranging from Strongly Agree to Strongly Disagree, enabling the collection of both quantitative and qualitative data related to EMI.

The questionnaire consisted of 22 closed-ended statements and two open-ended questions. The questionnaire statements was crafted to assess students' attitudes, challenges, motivations, and support systems associated with EMI. These items addressed several key areas:

Support and Attitudes toward EMI: Statements such as "I support implementing English as the medium of instruction in my field of study" and "I recommend English as the medium of instruction to future students" aimed to capture participants' general support and advocacy for EMI.

Learning Experience and Language Proficiency: these items aimed to examine the perceived impact of EMI on students' learning, including their ability to understand content, use English in classroom discussions, complete assignments, and comprehend English-language materials.

Motivation and Career Outlook: The questionnaire explored whether EMI motivates students to improve their English and how they perceive its relevance to future career opportunities.

Challenges and Coping Mechanisms: Statements investigated common difficulties such as the need to switch to Arabic or French, and the use of dictionaries or peer support as strategies for coping with language barriers.

Institutional Support: Participants were asked to evaluate the support received, if that is the case, from teachers and university departments to help them adapt to EMI.

In addition to the Likert-scale items, the final section of the questionnaire included two open-ended questions. These were designed to elicit detailed feedback and suggestions for improving the implementation of EMI, as well as any additional comments the respondents wished to share about their experiences.

Overall, the questionnaire was carefully constructed to obtain a comprehensive understanding of students' experiences with EMI, and it underwent validation procedures to ensure clarity, relevance, and effectiveness in capturing the intended data.

ii.1.4.2. Teachers' Structured Interview

The structured interview designed for instructors participating in this study aimed to explore faculty perspectives on the implementation of EMI in Algerian higher education. The interview comprised 21 questions that combined both closed-ended and open-ended formats, allowing for a nuanced understanding of instructors' experiences, challenges, and attitudes related to EMI. However, some teachers expressed reluctance to be recorded and showed hesitation in responding to open-ended questions, suggesting instead that the interview be composed of multiple-choice questions to make them feel more comfortable sharing their views.

The instrument was divided into thematic categories addressing the following key areas:

Demographic and Professional Background: The first three questions gathered essential background information about the participants, including their academic specialization, years of teaching experience, and self-reported English language proficiency.

Attitudes Toward EMI: Several items investigated instructors' support for EMI and its perceived effectiveness in enhancing student employability, aligning with institutional goals, and improving educational standards.

Language Proficiency and Confidence: Questions explored instructors' self-confidence in using English as a teaching medium and whether they had received training to teach in English.

Student Language Proficiency and Classroom Practices: Participants were asked to assess their students' English proficiency and to reflect on classroom practices, including the frequency of code-switching and the challenges of preparing materials in English.

Use of English-Language Resources : The interview examined whether instructors incorporate English-language materials such as articles and videos to enrich their lectures.

Perceived Impact of EMI: Respondents were invited to evaluate how EMI has influenced their teaching effectiveness, student comprehension, and the overall standard of education in their field.

Institutional Support: One section was dedicated to evaluating the extent of institutional support received by teachers and identifying additional resources or assistance they deemed necessary for a smoother transition to EMI.

Policy and Implementation Perspectives: The final items explored instructors' views on the long-term viability of EMI in Algerian higher education, the need for policy modifications, and whether EMI should be expanded or restricted to certain disciplines.

The interview was concluded with an open-ended question inviting participants to share further comments or suggestions. This allowed for qualitative insights that complemented the structured responses and offered deeper perspectives on the EMI experience from an instructional standpoint.

The interview protocol was carefully constructed to ensure content validity, clarity, and alignment with the research objectives, facilitating the collection of reliable and relevant data from faculty members.

ii.1.4.3. Classroom Observation

The observation grid used in this study was developed to systematically document the classroom practices and interactions occurring during EMI sessions. The grid was organized into four main categories: Language Use, Classroom Interaction, Challenges Observed, and General Notes, each containing specific criteria to guide the observation process.

Language Use: This section focused on the linguistic behavior of instructors during EMI classes. It included items evaluating whether lectures were delivered entirely in English, the extent of code-switching between English and other languages (such as Arabic or French), the encouragement of student participation in English, and the use of translation techniques to clarify terminology.

Classroom Interaction: The observation aimed to assess the degree of student engagement in English through discussions and question-and-answer activities. It also evaluated students' demonstrated understanding of the content and their use of English during classroom interactions, including instances of code-switching.

Challenges Observed: This section captured observable difficulties faced by both instructors and students. It included indicators such as student hesitation in using English and any noticeable difficulties instructors encountered while delivering content in English.

General Notes: Observers were encouraged to record contextual factors that might influence EMI delivery, such as class size, available technology, and environmental conditions. Additional remarks could include observations on classroom culture, student-teacher rapport, and instructional strategies used to support EMI.

Each criterion was assessed using a frequency scale "Always, Often, Sometimes, or Never" allowing for a consistent and comparative evaluation across multiple classroom

observations. A column for open-ended notes was also provided for qualitative insights and explanations of observed behaviors.

This structured observation grid provided a valuable tool for triangulating data obtained from questionnaires and interviews. It helped capture the practical realities of EMI implementation, highlighting both successful practices and areas needing improvement. The grid was reviewed and piloted for clarity and relevance to ensure it effectively captured key aspects of EMI classroom dynamics.

II.2. Results Analysis and Discussion

II.2.1. Analysis of the Students' Questionnaire

Item 1: "I support implementing English as the medium of instruction in my field of study".

Table 01: Students' Support for EMI in Their Field of Study

	Frequency	Percentage
Strongly disagree	4	8
disagree	2	4
Neutral	3	6
Agree	19	38
Strongly agree	22	44
Total	50	100

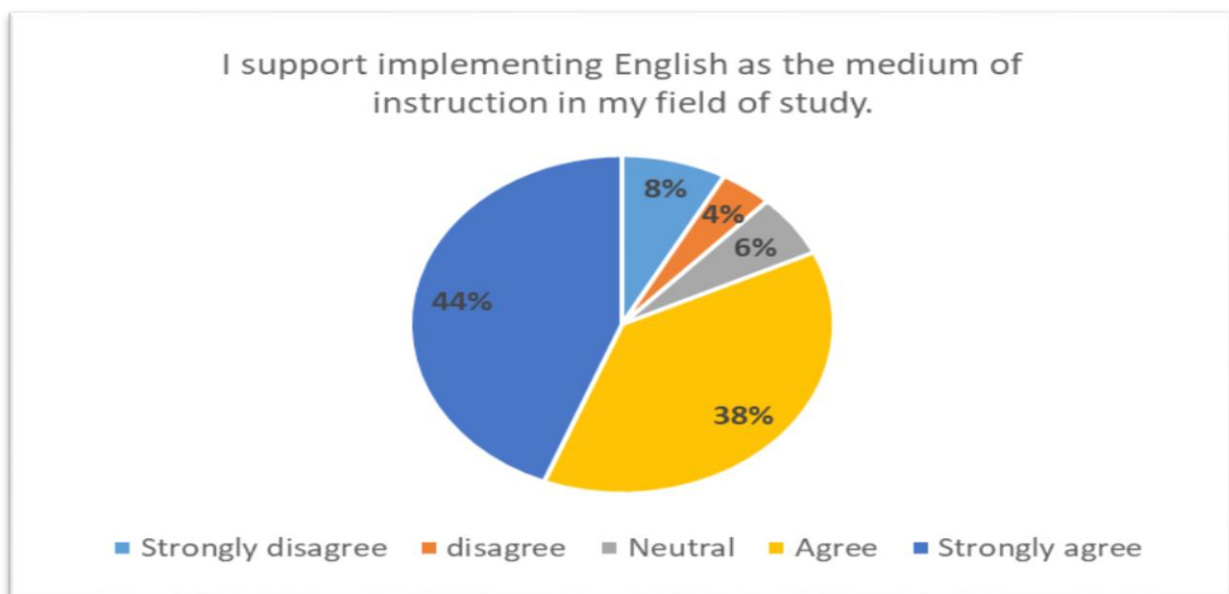


Figure 01: Students' Support for EMI Instruction in Their Field of Study

The item "I support implementing English as the medium of instruction in my field of study" shows that out of 50 respondents, the majority expressed support for EMI. Specifically, 44% respondents strongly agreed, and 38% agreed, totaling 82% in favor. Small portions of participants were neutral 6%, while only 4% disagreed and 8% strongly disagreed, making up a combined 12% expressing opposition.

Item2: “Using English as a medium of instruction benefits my learning experience”.

Table 02: Students' Perception of the Benefits of EMI on Their Learning Experience

	Frequency	Percentage
Strongly disagree	4	8
disagree	1	2
Neutral	2	4
Agree	16	32
Strongly agree	27	54
Total	50	100

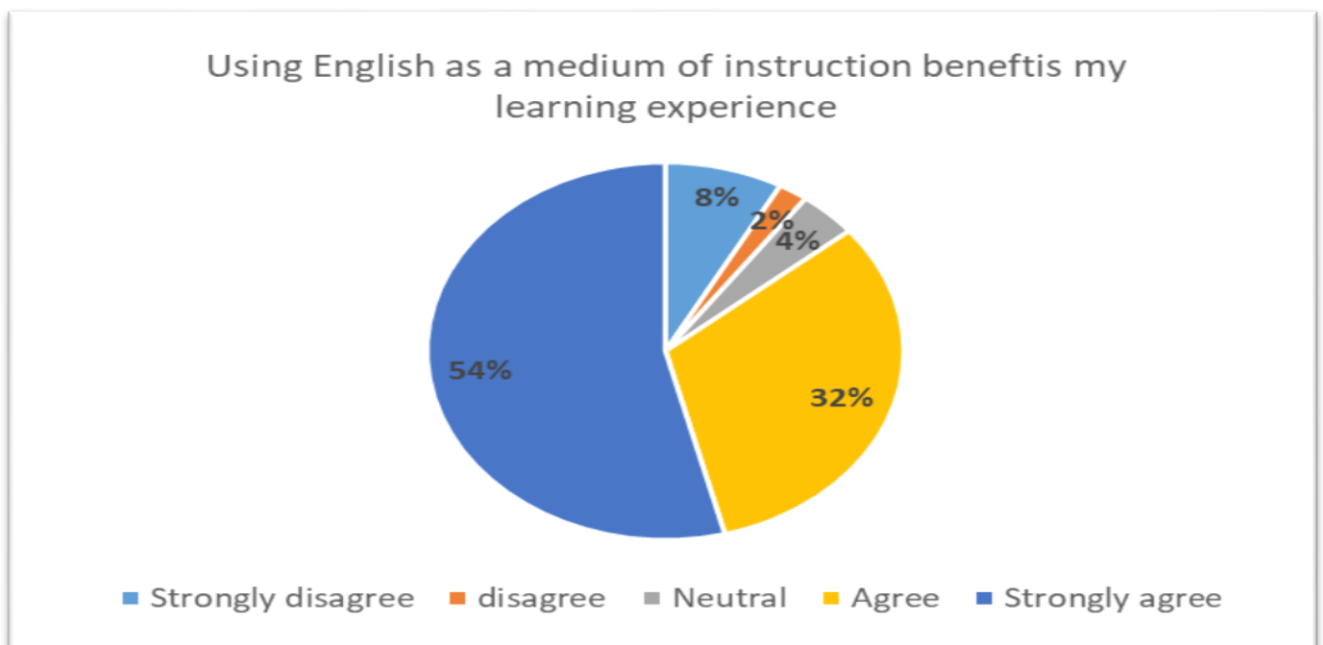


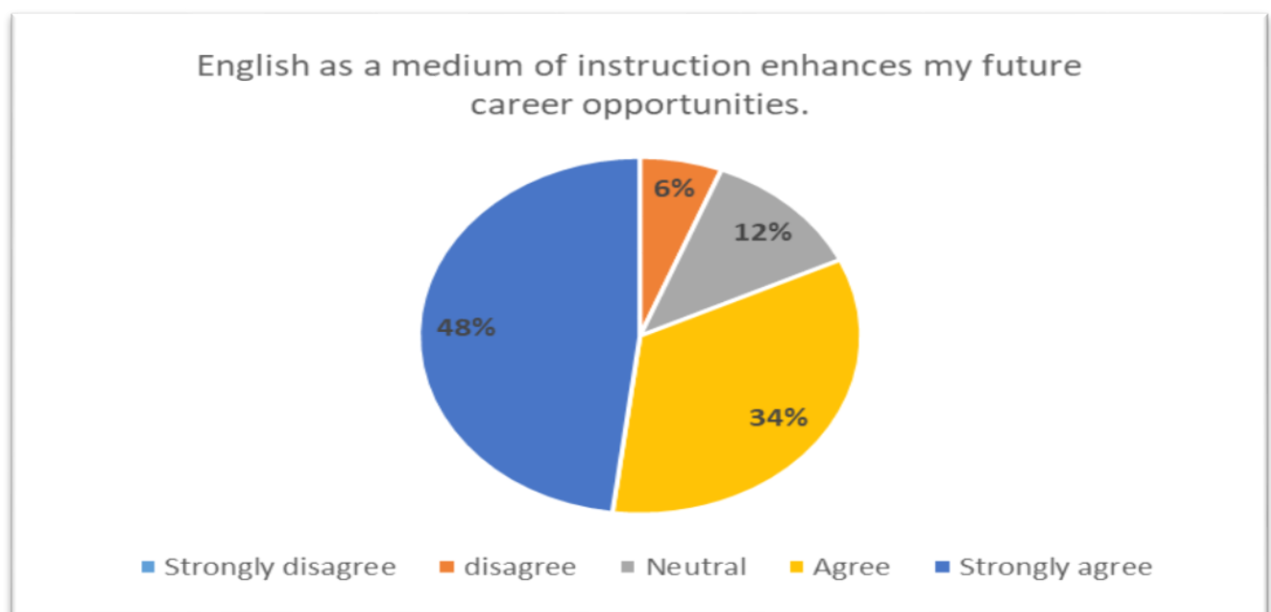
Figure 02: Students' Perception of the Benefits of EMI on Their Learning Experience

The item “Using English as a medium of instruction benefits my learning experience” reveals that a significant majority of respondents view EMI positively in terms of its impact on their learning. Out of 50 participants, 54% strongly agreed and 32% agreed, resulting in a combined 86% who perceive benefits from EMI. Only 4% were neutral, while a small minority expressed negative views, with 2% disagreed and 8% strongly disagreed.

Item3: “English as a medium of instruction enhances my future career opportunities”.

Table 03: Students' Perception of EMI's Role in Enhancing Future Career Opportunities

	Frequency	Percentage
Strongly disagree	0	0
disagree	3	6
Neutral	6	12
Agree	17	34
Strongly agree	24	48
Total	50	100

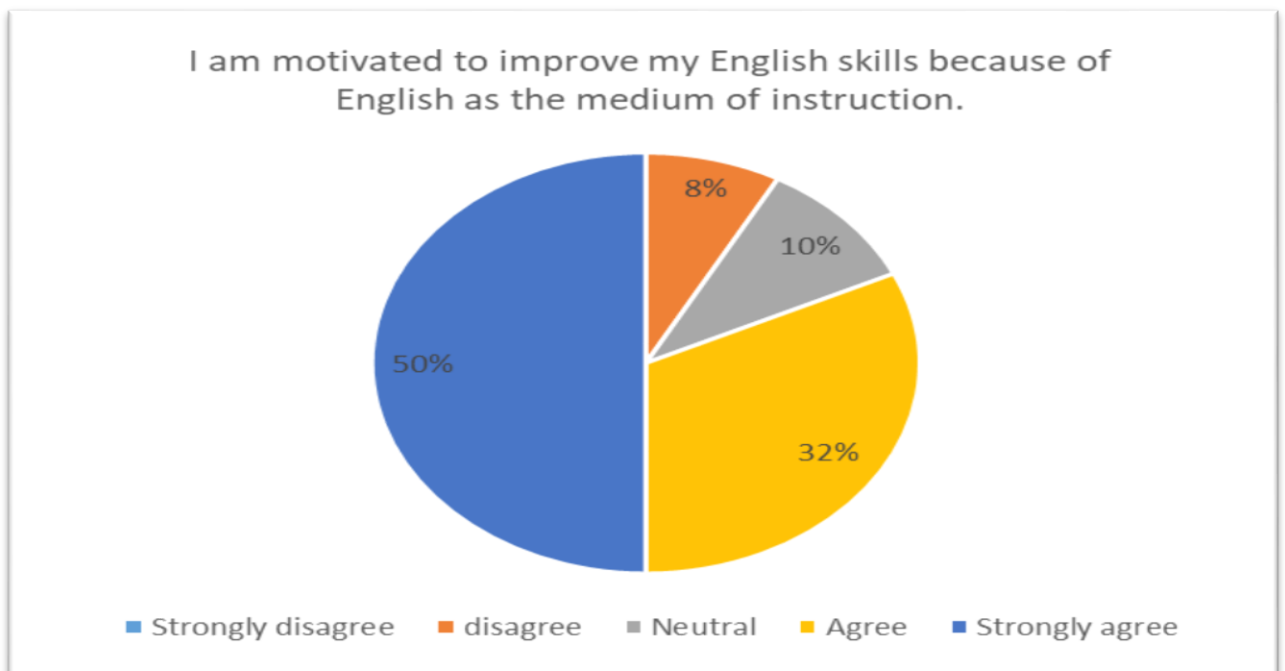
*Figure 03: Students' Perception of EMI's Role in Enhancing Future Career Opportunities*

The item “English as a medium of instruction enhances my future career opportunities” shows that the majority of respondents believe EMI has a positive impact on their professional prospects. Among the 50 participants, 48% strongly agreed and 34% agreed, totaling 82% who support the statement. A smaller portion, 6 respondents 12%, were neutral, while only 6% disagreed, and none strongly disagreed.

Item4: “I am motivated to improve my English skills because of English as the medium of instruction”.

Table 04: Students Motivation to Improve English Skills Due to EMI

	Frequency	Percentage
Strongly disagree	0	0
disagree	4	8
Neutral	5	10
Agree	16	32
Strongly agree	25	50
Total	50	100

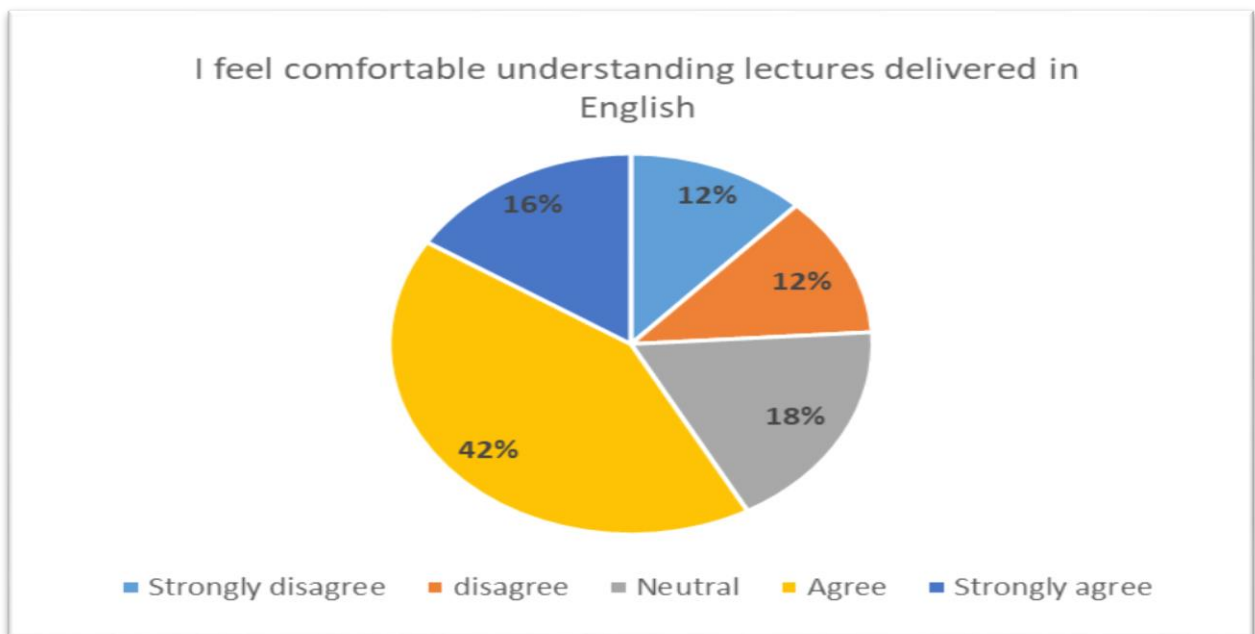
*Figure 04: Students Motivation to Improve English Skills Due to EMI*

The item “I am motivated to improve my English skills because of English as the medium of instruction” indicates that most respondents feel positively motivated by EMI. Out of 50 participants, 50% strongly agreed and 32% agreed, meaning 82% acknowledged increased motivation to enhance their English skills. Meanwhile, five respondents 10% were neutral, and only 8% disagreed. No participants strongly disagreed.

Item5: “I feel comfortable understanding lectures delivered in English”.

Table 05 : Students Comfort in Understanding Lectures Delivered in English

	Frequency	Percentage
Strongly disagree	6	12
disagree	6	12
Neutral	9	18
Agree	21	42
Strongly agree	8	16
Total	50	100

*Figure 05: Students Comfort in Understanding Lectures Delivered in English*

The item "I feel comfortable understanding lectures delivered in English" shows that while a majority of respondents are generally comfortable with EMI lectures, there is a noticeable portion who face challenges. Specifically, 42% participants agreed and 16% strongly agreed, making 58% who feel comfortable. However, nine respondents 18% were neutral, and 24% expressed discomfort, 12% disagreed and 12% strongly disagreed.

Item6: "I sometimes need to switch to Arabic or French to express/discuss my ideas in class".

Table 06: Frequency of Students Switching to Arabic or French to Express Ideas

	Frequency	Percentage
Strongly disagree	2	4
disagree	4	8
Neutral	5	10
Agree	15	30
Strongly agree	24	48
Total	50	100

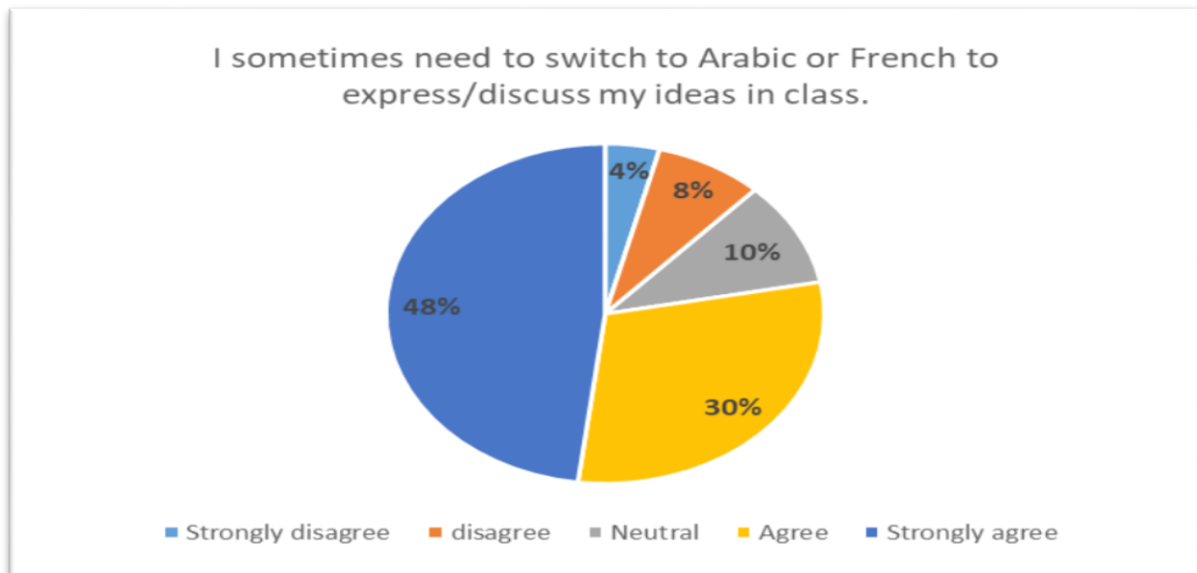


Figure 06: Frequency of Students Switching to Arabic or French to Express Ideas

The item “I sometimes need to switch to Arabic or French to express/discuss my ideas in class” reveals that a large majority of respondents rely on code-switching during classroom interactions. Out of 50 participants, 48% strongly agreed and 30% agreed, totaling 78% who acknowledge the need to occasionally use Arabic or French to communicate their ideas. Meanwhile, 10% remained neutral, and only 8% disagreed and 4% strongly disagreed, reported not needing to switch languages.

Item7: “I experience difficulties expressing my thoughts or asking questions in English during class”.

Table 07: *Students Difficulties in Expressing Thoughts or Asking Questions in English During Class*

	frequency	Percentage
Strongly disagree	2	4
disagree	6	12
Neutral	8	16
Agree	14	28
Strongly agree	20	40
Total	50	100

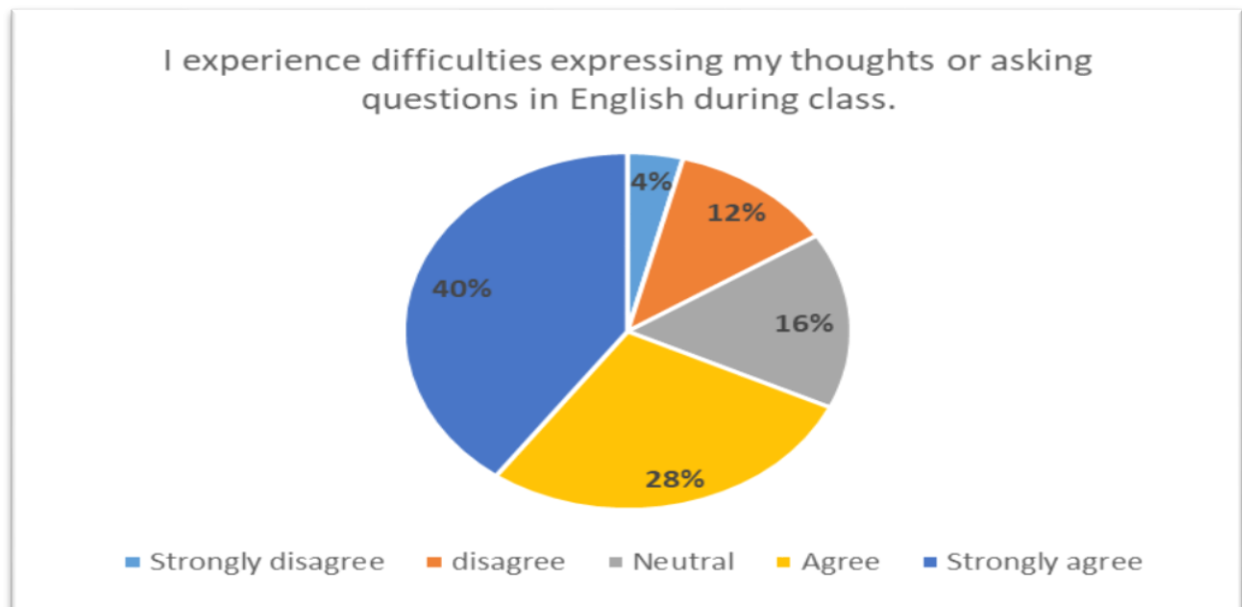


Figure 07: *Students Difficulties in Expressing Thoughts or Asking Questions in English During Class*

The item “I experience difficulties expressing my thoughts or asking questions in English during class”, shows that a significant portion of respondents face language-related challenges in EMI classrooms. Out of 50 participants, 40% strongly agreed and 28% agreed, meaning 68% reported experiencing such difficulties. Eight respondents 16% were neutral, while only a small number, 12% disagreed and 4% strongly disagreed, did not face these issues.

Item8: “English as the medium of instruction has positively influenced my comprehension of course content”.

Table 08: Students Perception of EMI’s Influence on Course Content Comprehension

	frequency	Percentage
Strongly disagree	6	12
disagree	5	10
Neutral	6	12
Agree	17	34
Strongly agree	16	32
Total	50	100

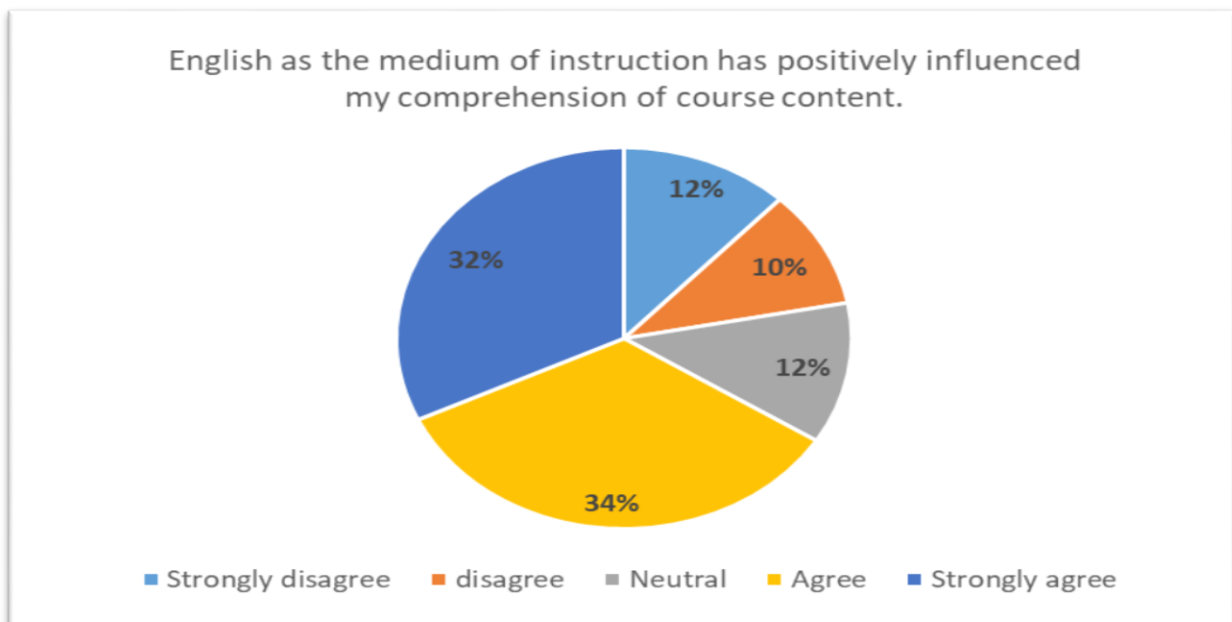


Figure 08: Students Perception of EMI’s Influence on Course Content Comprehension

The item “English as the medium of instruction has positively influenced my comprehension of course content”, indicates that a majority of respondents perceive EMI as beneficial for their understanding. Out of 50 participants, 32% strongly agreed and 34% agreed, meaning 66% reported improved comprehension due to EMI. Six respondents (12%) were neutral, while 10% disagreed and 12% strongly disagreed, did not find a positive influence.

Item9: “ I have no problem understanding the content of my studies and what I learn in English”.

Table 09: Students Confidence in Understanding Academic Content Delivered in English

	frequency	Percentage
Strongly disagree	7	14
disagree	9	18
Neutral	5	10
Agree	17	34
Strongly agree	12	24
Total	50	100

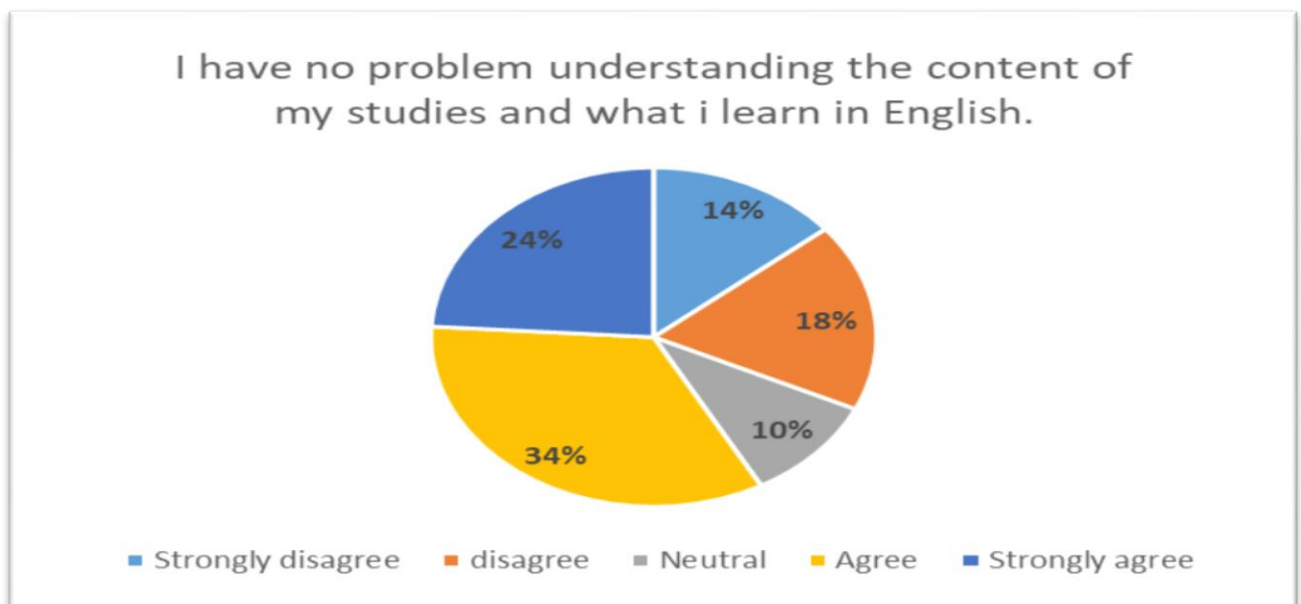


Figure 09: Students Confidence in Understanding Academic Content Delivered in English

The item “I have no problem understanding the content of my studies and what I learn in English” reveals mixed experiences among students in EMI programs. Out of 50 participants, 24% strongly agreed and 34% agreed, showing that 58% feel confident in comprehending their English-medium coursework. However, a significant minority, 18% disagreed and 14% strongly disagreed, totaling 32% who experience difficulties understanding the content. Five respondents 10% remained neutral.

Item10: "I seek support and help from my classmates who understand English".

Table 10: Students Reliance on Classmates for Support in Understanding English

	frequency	Percentage
Strongly disagree	2	4
disagree	6	12
Neutral	8	16
Agree	21	42
Strongly agree	13	26
Total	50	100

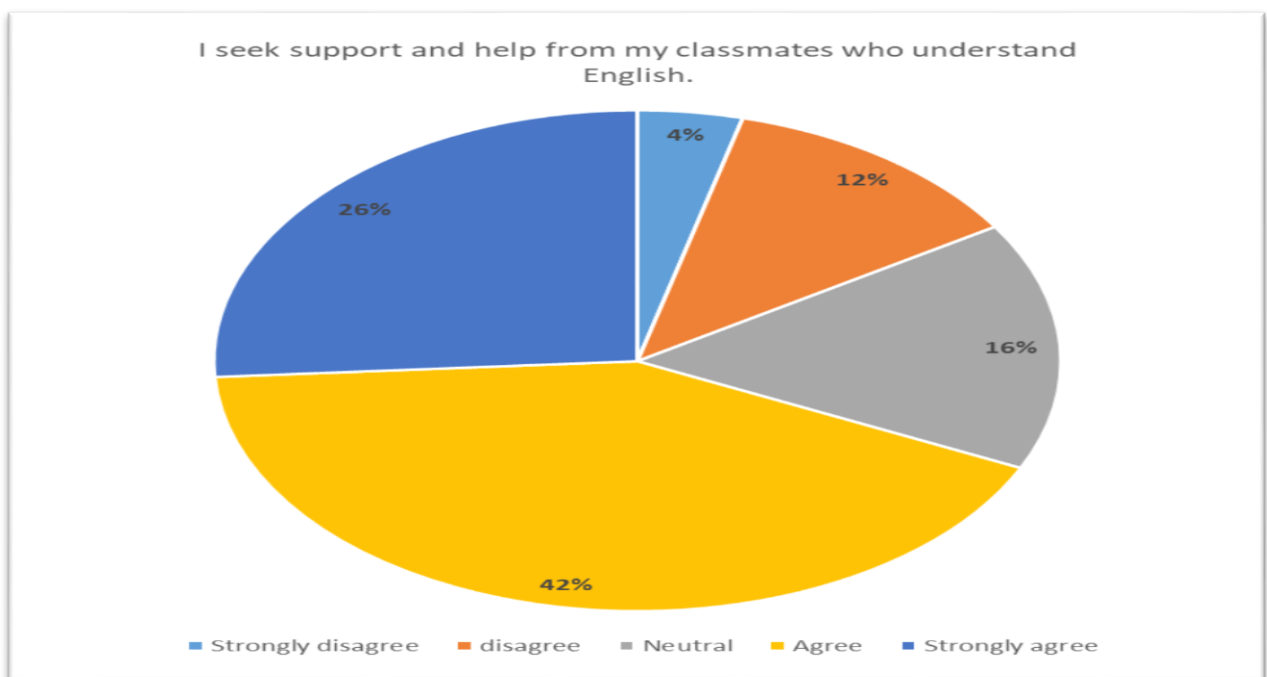


Figure 10: Students Reliance on Classmates for Support in Understanding English

The item "I seek support and help from my classmates who understand English" reveals that a large majority of respondents rely on peer assistance to overcome language barriers in EMI classrooms. Out of 50 participants, 26% strongly agreed and 42% agreed, meaning 68% actively seek help from classmates proficient in English. Eight respondents (16%) remained neutral, while 12% disagreed and 4% strongly disagreed, indicating they do not depend on peer support.

Item11: “I use a dictionary to understand unfamiliar terms”.

Table 11: Students Use of a Dictionary to Understand Unfamiliar English Terms

	frequency	Percentage
Strongly disagree	5	10
disagree	6	12
Neutral	5	10
Agree	19	38
Strongly agree	15	30
Total	50	100

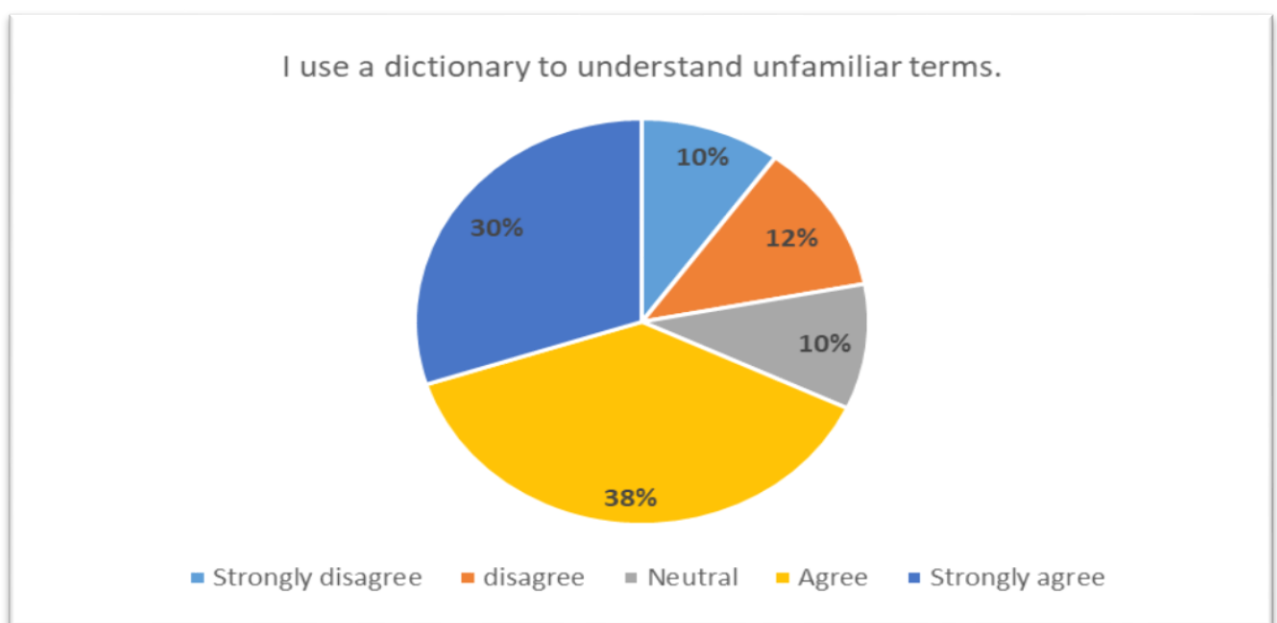


Figure 11: Students Use of a Dictionary to Understand Unfamiliar English Terms

The item "I use a dictionary to understand unfamiliar terms" shows that dictionary use is a common strategy among students in EMI classrooms. Out of 50 participants, 30% strongly agreed and 38% agreed, indicating that 68% regularly use dictionaries to clarify unfamiliar English terms. Five respondents (10%) were neutral, while 12% disagreed and 10% strongly disagreed with this statement. These results demonstrate that while the majority of students rely on dictionaries as a learning aid, a significant minority 22% either rarely use them or prefer alternative methods for understanding new vocabulary.

Item12: “English as the medium of instruction has helped me better understand the material”.

Table 12: students Perception of EMI's Role in Enhancing Understanding of Course Material

	frequency	Percentage
Strongly disagree	10	20
disagree	6	12
Neutral	5	10
Agree	15	30
Strongly agree	14	28
Total	50	100

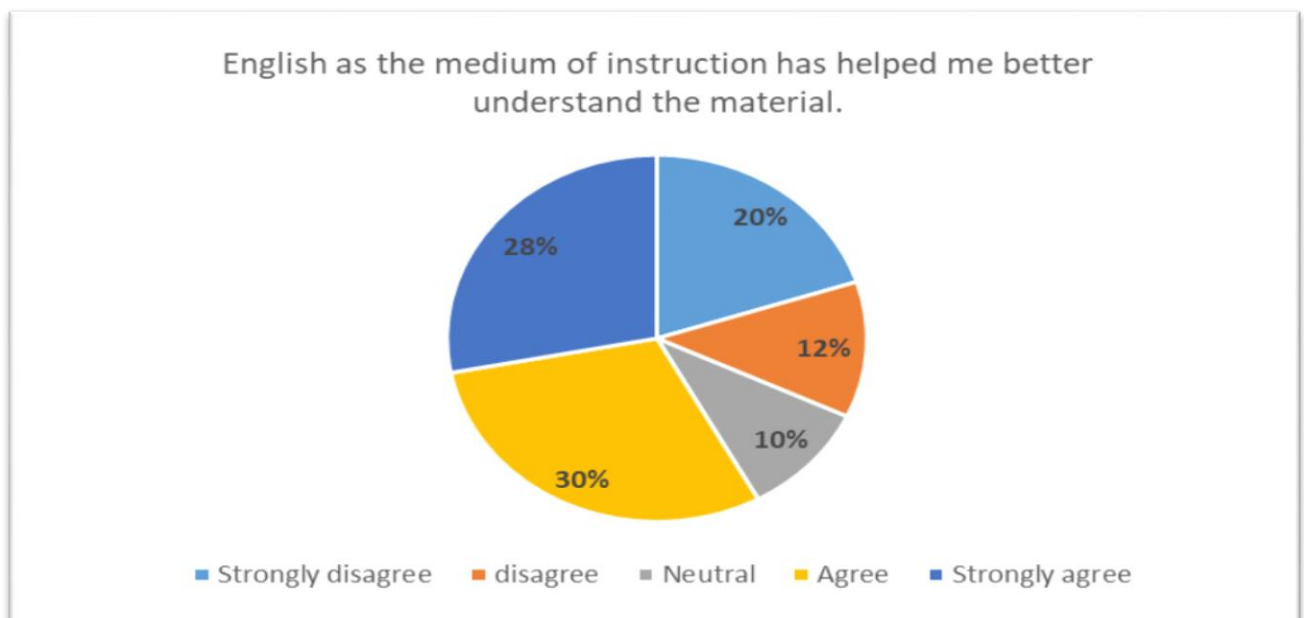


Figure 12: students Perception of EMI's Role in Enhancing Understanding of Course Material

The item "English as the medium of instruction has helped me better understand the material" presents mixed perceptions among students. Out of 50 participants, 28% strongly agreed and 30% agreed, showing that 58% believe EMI has improved their understanding of course content. However, 20% strongly disagreed and 12% disagreed - indicating 32% feel EMI does not enhance their comprehension. Five respondents (10%) remained neutral on this issue.

Item13: “English as the medium of instruction has influenced my overall academic achievement in a positive way”.

Table 13: Students Perception of EMI’s Impact on Overall Academic Achievement

	frequency	Percentage
Strongly disagree	6	12
disagree	7	14
Neutral	6	12
Agree	16	32
Strongly agree	15	30
Total	50	100

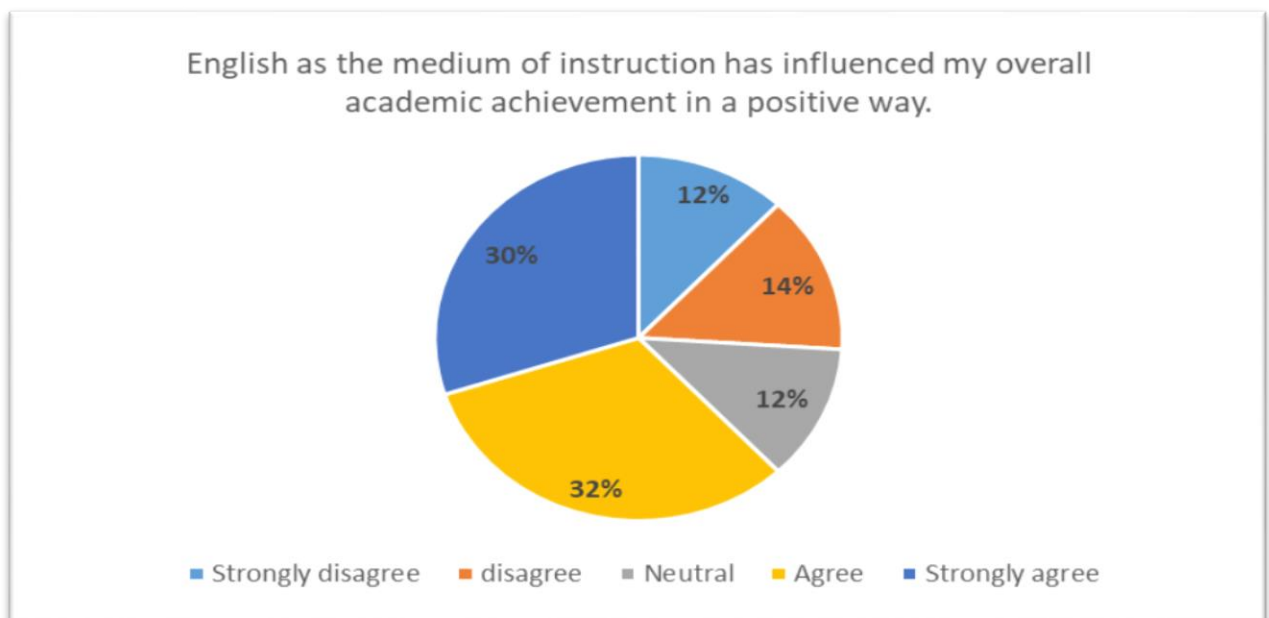


Figure 13: Students Perception of EMI’s Impact on Overall Academic Achievement

The item "English as the medium of instruction has influenced my overall academic achievement in a positive way" reveals divided perceptions among students regarding EMI's impact on their academic performance. Out of 50 participants, 30% strongly agreed and 32% agreed, indicating that 62% of respondents believe EMI has positively contributed to their academic success. On the other hand, 12% strongly disagreed and 14% disagreed, totaling 26%

who feel EMI has not benefited their achievement. Six respondents 12% remained neutral in their assessment.

Item14: “I find it challenging to complete assignments in English”.

Table 14: Students Perception of the Difficulty in Completing Assignments in English

	frequency	Percentage
Strongly disagree	5	10
disagree	8	16
Neutral	12	24
Agree	17	34
Strongly agree	8	16
Total	50	100

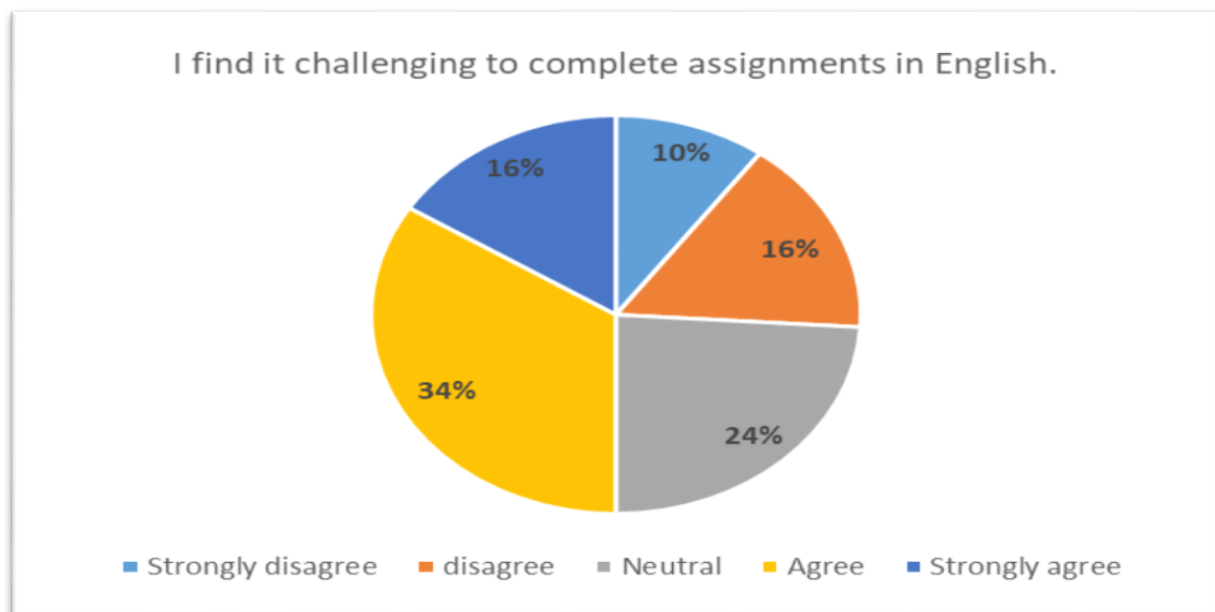


Figure 14: students Perception of the Difficulty in Completing Assignments in English

The item “I find it challenging to complete assignments in English” reveals significant difficulties faced by students in EMI classrooms. Among 50 participants, 16% strongly agreed and 34% agreed with this statement, indicating that half 50% of respondents experience challenges when working on English-language assignments. A substantial portion of students (12 respondents, 24%) remained neutral, suggesting they may encounter occasional difficulties

depending on assignment types or complexity. On the other side, 16% disagreed and 10% strongly disagreed, meaning 26% generally do not struggle with English-medium assignments.

Item15: “I feel encouraged to participate in class discussions conducted in English”.

Table 15: Students Motivation to Participate in English-Medium Class Discussions

	frequency	Percentage
Strongly disagree	4	8
disagree	2	4
Neutral	9	18
Agree	25	50
Strongly agree	10	20
Total	50	100

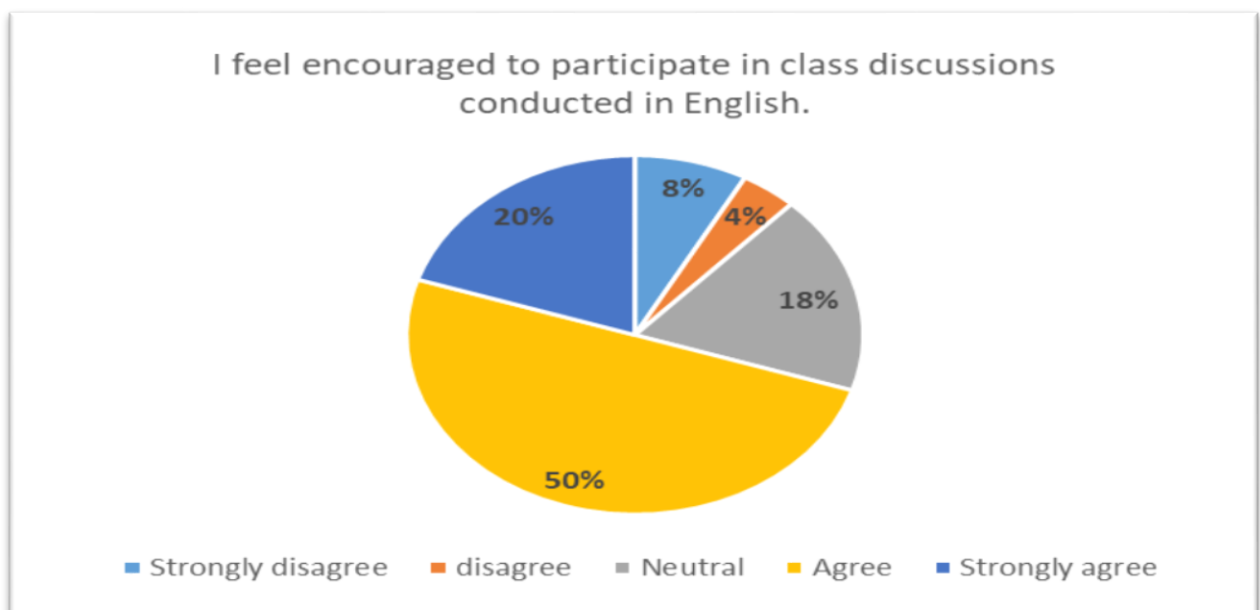


Figure 15: students Perception of the Difficulty in Completing Assignments in English

The item “I feel encouraged to participate in class discussions conducted in English” shows that most students in EMI classrooms feel motivated to engage in English discussions. Out of 50 participants, 50% agreed and 20% strongly agreed, meaning 70% of respondents feel comfortable participating. However, 9 students (18%) remained neutral, suggesting they may

participate only under certain conditions, while 12%, consisting of 8% who strongly disagreed and 4% who disagreed, do not feel encouraged to join discussions.

Item16: “The English-language materials (textbooks, articles, etc.) offered in my classes are beneficial”.

Table 16: Students Perception of the Usefulness of English-Language Materials in Class

	frequency	Percentage
Strongly disagree	3	6
disagree	1	2
Neutral	8	16
Agree	24	48
Strongly agree	14	28
Total	50	100

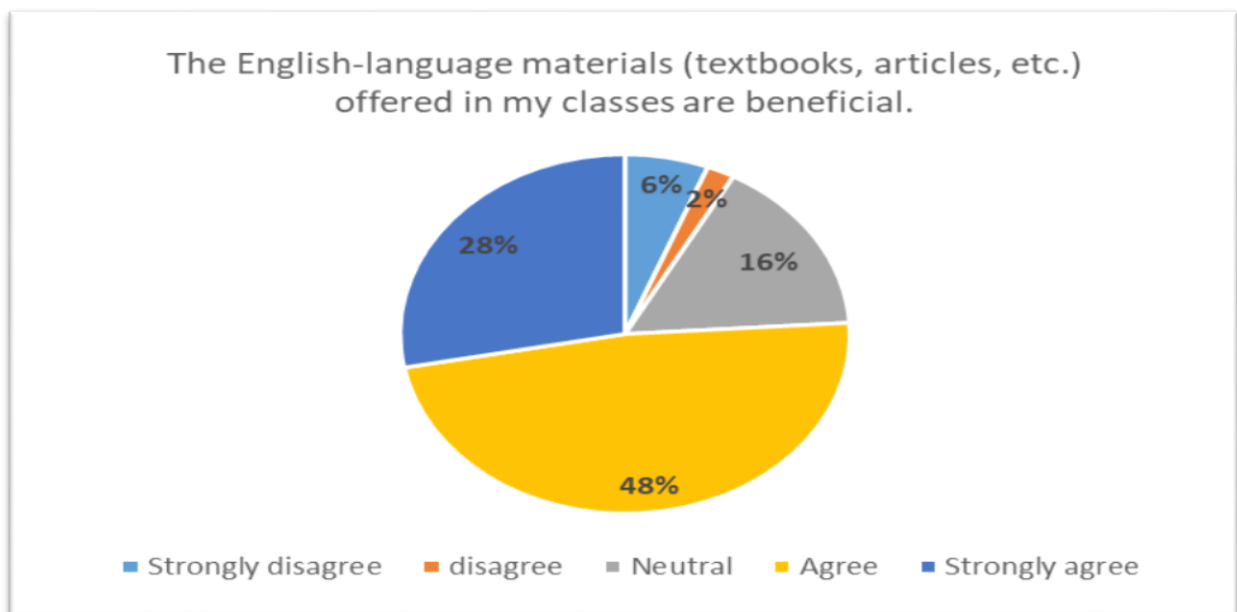


Figure16: Students Perception of the Usefulness of English-Language Materials in Class

The item “The English-language materials (textbooks, articles, etc.) offered in my classes are beneficial”, demonstrates strong student approval of EMI learning resources. Among 50 respondents, 48% agreed and 28% strongly agreed, showing that 76% find their English course materials valuable for learning. A minority of students expressed reservations,

with 16% remaining neutral and only 8% expressing disapproval (3 strongly disagreed and 1 disagreed).

Item17: “I find studying English-language materials to be challenging”.

Table 17: Students Perception of the Difficulty in Studying English-Language Materials

	frequency	Percentage
Strongly disagree	3	6
disagree	7	14
Neutral	7	14
Agree	19	38
Strongly agree	14	28
Total	50	100

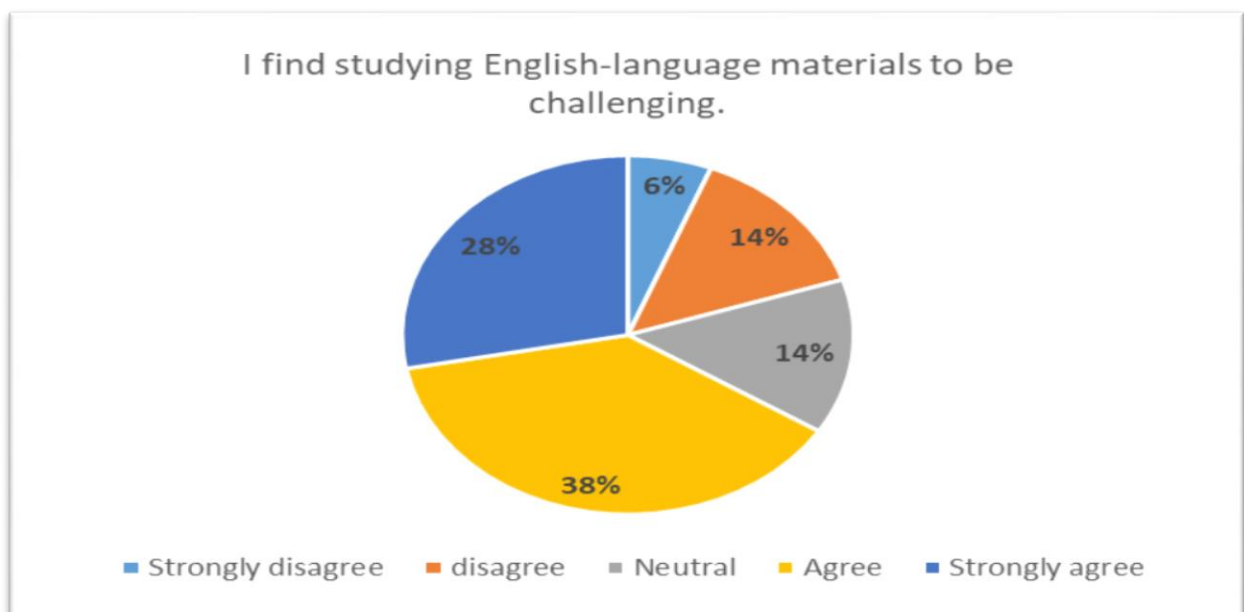


Figure 17: Students Perception of the Difficulty in Studying English-Language Materials

The item “I find studying English-language materials to be challenging”, reveals that a majority of students experience difficulties with EMI learning resources. Among 50 respondents, 38% agreed and 28% strongly agreed, indicating that 66% of students find English materials challenging to study. A smaller group expressed less difficulty, with 14% disagreeing

and 6% strongly disagreeing, totaling 20% who do not struggle significantly. The remaining 7 students (14%) were neutral, suggesting they may experience occasional or moderate challenges

Item18: “I have received sufficient support from the teachers to help me adapt to English as the medium of instruction”.

Table 18: Students Perception of Teacher Support in Adapting to EMI

	frequency	Percentage
Strongly disagree	3	6
disagree	8	16
Neutral	5	10
Agree	19	38
Strongly agree	15	30
Total	50	100

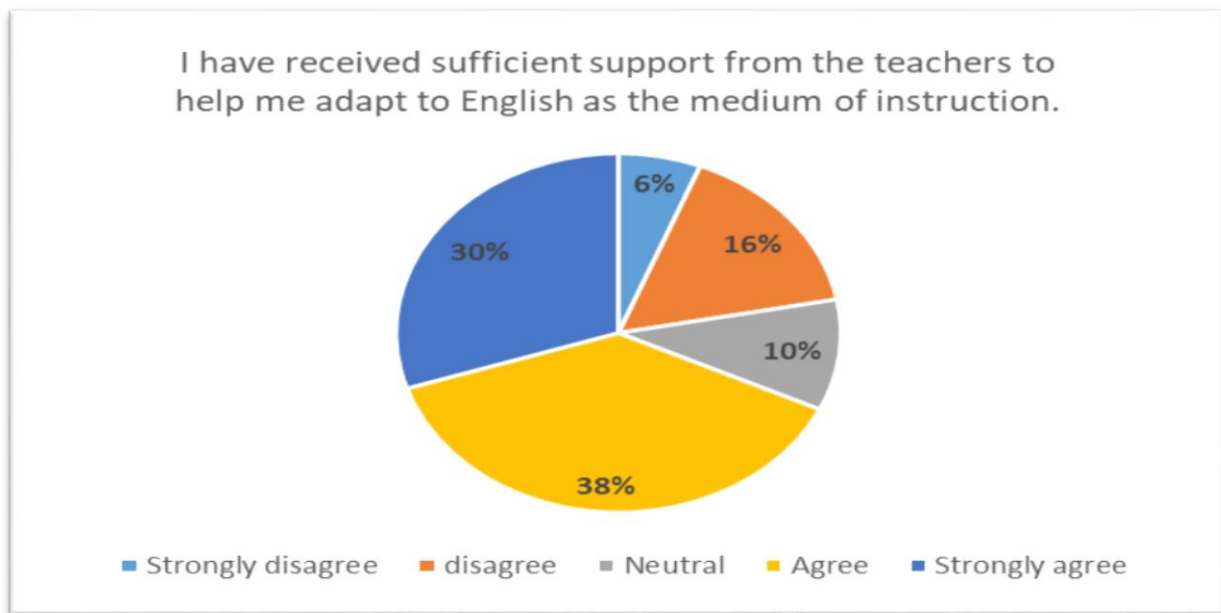


Figure 18: Students Perception of Teacher Support in Adapting to EMI

The item “I have received sufficient support from the teachers to help me adapt to English as the medium of instruction”, shows that most students feel adequately supported in their EMI learning. Out of 50 participants, 30% strongly agreed and 38% agreed, meaning 68% believe they receive enough teacher support. However, 16% disagreed and 6% strongly

disagreed, indicating 22% feel they need more assistance. Five respondents 10% were neutral about the level of support.

Item19: “Additional support (e.g., more tutoring and English language education) is necessary for better adaptation to English as the medium of instruction”.

Table 19: Students Perception of the Need for Additional Support to Adapt to EMI

	frequency	Percentage
Strongly disagree	4	8
disagree	0	0
Neutral	19	38
Agree	0	0
Strongly agree	21	42
Total	50	100

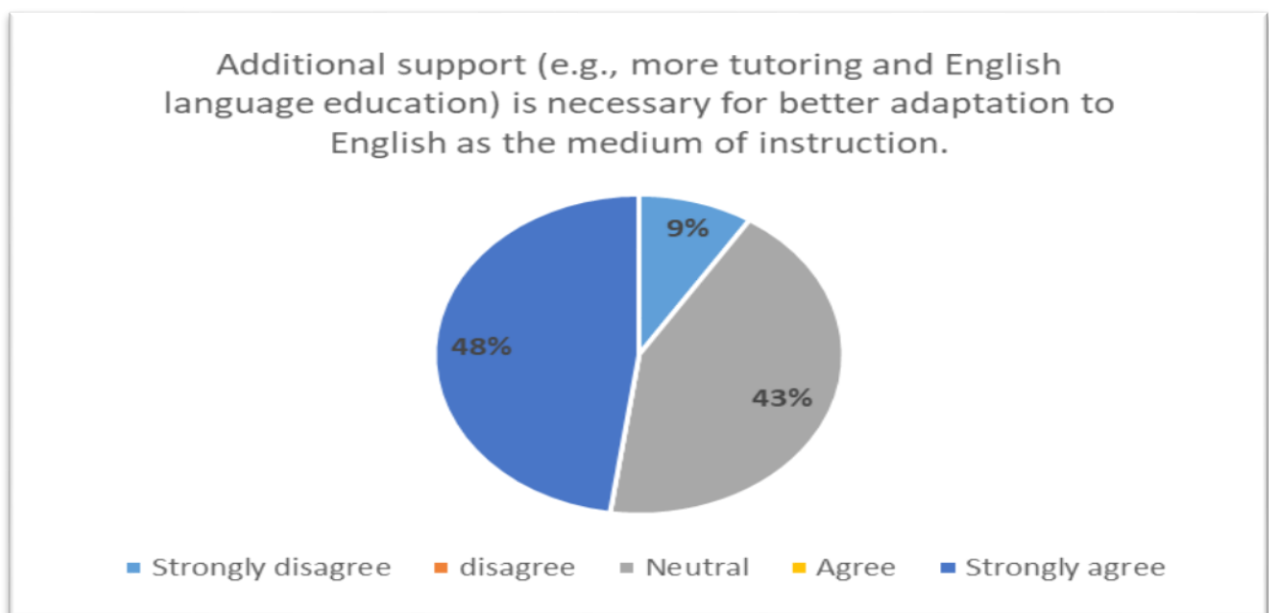


Figure 19: Students Perception of the Need for Additional Support to Adapt to EMI

The item “Additional support (e.g., more tutoring and English language education) is necessary for better adaptation to English as the medium of instruction” shows that many students believe more assistance is needed for EMI classes. Out of 50 participants, 42% strongly agreed that additional support is necessary. While no students simply agreed, a significant

number, 38% were neutral on this issue. Only 8% strongly disagreed, with none selecting disagree.

Item20: “ I recommend English as the medium of instruction to future students”.

Table 20: Students Recommendation of EMI for Future Students

	frequency	Percentage
Strongly disagree	4	8
disagree	0	0
Neutral	6	12
Agree	12	24
Strongly agree	28	56
Total	50	100

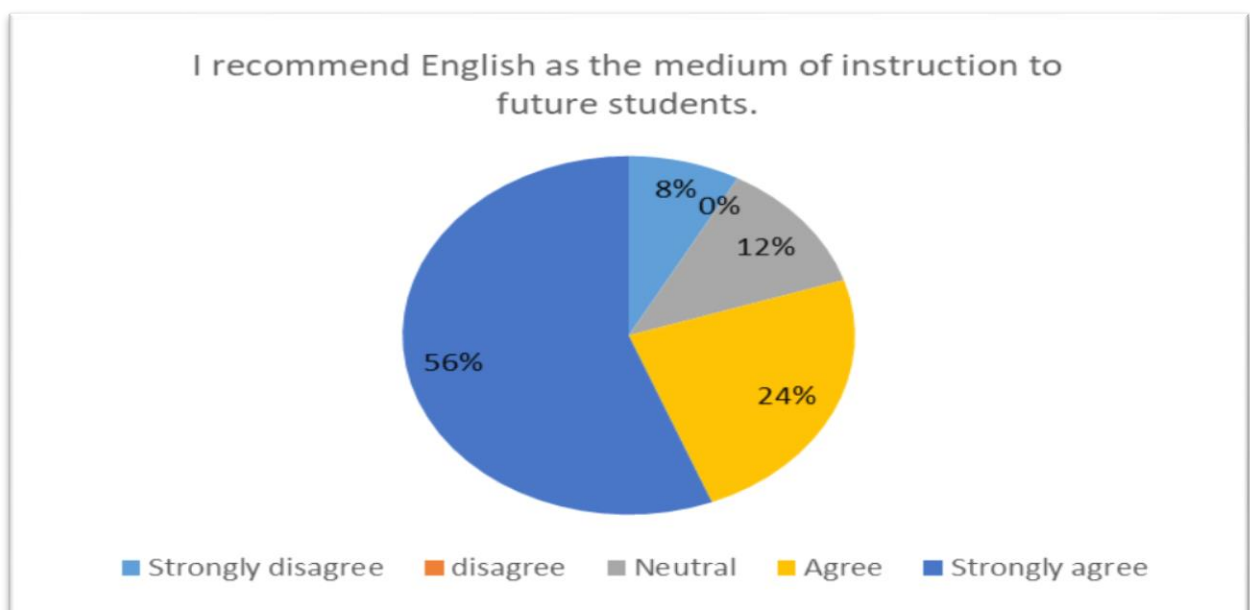


Figure 20: Students Recommendation of EMI for Future Students

The item “I recommend English as the medium of instruction to future students” shows that most students view EMI positively despite the challenges. Out of 50 participants, 56% strongly agreed and 24% agreed, meaning 80% would recommend EMI to others. Only 4

students (8%) strongly disagreed, while no respondents simply disagreed. Six students 12% remained neutral.

Item21: “I have received sufficient support from the university /faculty/ department to help me adapt to English as the medium of instruction”.

Table 21 : Student Perception of Institutional Support for Adapting to EMI

	frequency	Percentage
Strongly disagree	7	14
disagree	11	22
Neutral	10	20
Agree	12	24
Strongly agree	10	20
Total	50	100

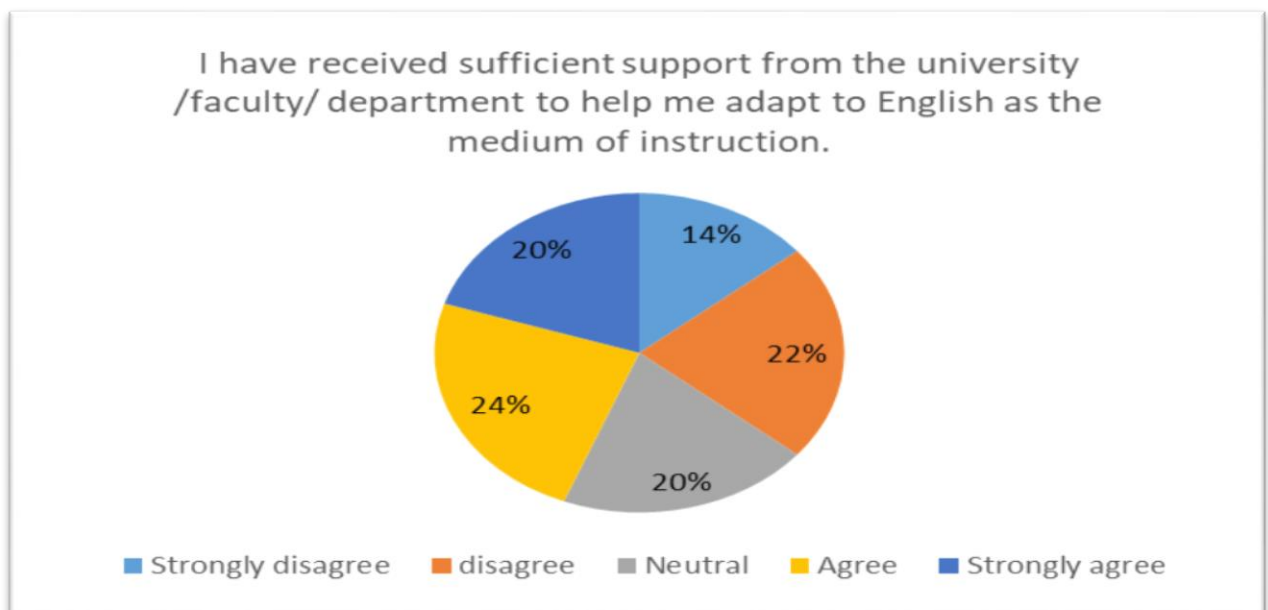


Figure 21: Students Perception of Institutional Support for Adapting to EMI

The item “I have received sufficient support from the university/faculty/department to help me adapt to English as the medium of instruction”, reveals divided perceptions about institutional support for EMI transition. Out of 50 participants, 20% strongly agreed and 24% agreed, showing that 44% feel adequately supported by their institution. However, 22%

disagreed and 14% strongly disagreed, totaling 36% who believe support is insufficient. Ten respondents (20%) remained neutral.

Item22: “ I believe that using English as the medium of instruction will enhance the quality of education at my university”.

Table 22: Students Belief in EMI’s Role in Enhancing Educational Quality at University

	frequency	Percentage
Strongly disagree	4	8
disagree	5	10
Neutral	3	6
Agree	8	16
Strongly agree	30	60
Total	50	100

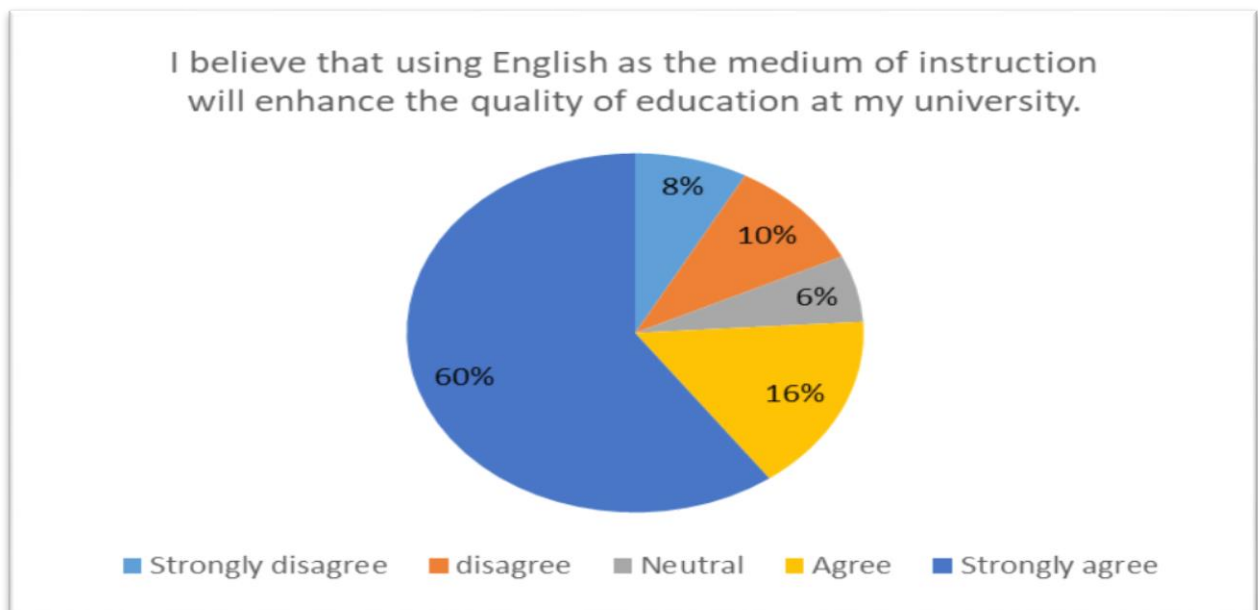


Figure 22: Students Belief in EMI’s Role in Enhancing Educational Quality at University

The item "I believe that using English as the medium of instruction will enhance the quality of education at my university" shows that most students strongly support EMI's role in improving educational standards. Out of 50 participants, 60% strongly agreed and 16% agreed, meaning 76% believe EMI enhances education quality. Only five students (10%)

disagreed and 8% strongly disagreed, totaling 18% who question EMI's benefits. Three respondents (6%) were neutral.

Q23: “What do you recommend to improve the implementation of English medium of instruction in your specialty and at university in general?”

28 students offered specific recommendations; their primary suggestions were in Arabic:

1- تكوين الطلبة من الصفر لرفع المستوى لدى الطلبة (Training students from scratch to raise the level of students).

2- تلقي الأساتذة تدريب في اتقان اللغة الإنجليزية و الاستغناء عن الفرنسية كلياً لتفادي تشويش عقل الطالب (Teachers receive training in English language proficiency and dispense with French completely to avoid confusing the student's mind.)

3 – Four students answered : دورات تكوينية (Training courses)

4- تكوين الأساتذة باللغة الإنجليزية من اجل لقاء الدرس بشكل افضل و مساعدة الطالب على فهم اللغة الإنجليزية لان المستوى رديء (Training teachers in English to deliver the lesson better and help the student understand the English language because the level is poor)

5- اللغة الإنجليزية تستعمل بالتدريج و ليس فجأة و الان نجد حتى الأساتذة لديهم مشكلة مع اللغة لانهم يتقنون اللغة الفرنسية - (English is being used gradually, not suddenly, and now we find even teachers having a problem with the language because they are fluent in French).

6- أرى ان التدريس باللغة الإنجليزية سيفتح لنا افاق جديدة في البحث العلمي و سيحسن من جودة التعليم الجامعي في البلاد. (I believe that teaching in English will open new horizons in scientific research and will improve the quality of university education in the country, but we sometimes face difficulty in understanding it).

7- تحسين اللغة الإنجليزية عند بعض الأساتذة اللذين يتمكنون فقط من اللغة الفرنسية - (Improving English for some teachers who only know French).

8- أرى ان يتم ترجمة مواضيع الامتحانات باللغتين الإنجليزية و العربية (I think the exam topics should be translated into both English and Arabic).

9- Three students answered : تحسين المستوى و إقامة دورات في اللغة الإنجليزية : (Improving the level and holding English language courses).

10- الاجتهاد الشخصي خارج أوقات الدراسة و العمل (Personal effort outside of study and work hours).

11- Six students answered : تكوين الطلبة و للأساتذة في اللغة الإنجليزية : (English language training for students and teachers).

12- استخدام اللغة العربية احسن من استخدام اللغة الإنجليزية و اظن ان استخدام اللغة الإنجليزية يكون فقط في المصطلحات العلمية (Using Arabic is better than using English, and I think that using English should only be in scientific terms).

13- We received sufficient from university and English language education is necessary for adoption english.

14- Support for English language lessons and reduction in the size of lectures.

15- Additional support more tutoring in English language

16-For my speciality should be visually cours lik videos to make it better comprehend , for the university they should join clubs for English to enhance.

17-To improve your english you should listen , write and speak this language.

18- 22 students declined to respond to this question.

Q24: “What do you recommend to improve the implementation of English as the medium of instruction (EMI)?”

Students provided varied suggestions. Among respondents, 10 students answered the additional open-ended question about further improvements, offering these key recommendations:

- 1 - One student emphasized that: يجب تدريس اللغة الإنجليزية من أصغر سن (English must be taught from youngest age).
- 2- One student answered: اللغة الإنجليزية جيدة للدراسة و التدريس بها (English is good for studying and teaching).
- 3- One student answered : اعتقد ان دورات تحسين استخدام اللغة الانجليزية : (I think that English language improvement courses).
- 4 – Four responses highlighted that: دعم الطلبة و تدريب الاساتذة (Student support and teacher training).
- 5 -One student suggested: courses must be delivered with using videos.
- 6 -One proposal involved: adding a session about English in the faculty program to teach English and it's bases.
- 7 -One student recommended: using Arabic in delivering the courses from teacher.

II.2.2. Analysis of the Teacher's Interview

Q1. What is the main area in which you specialize?

Table 23: Primary Area of Specialization

	Frequency	Percentage
Humanities	0	0
Social Sciences	0	0
Natural Sciences	6	100
Engineering/Technology	0	0
Other	0	0
Total	6	100

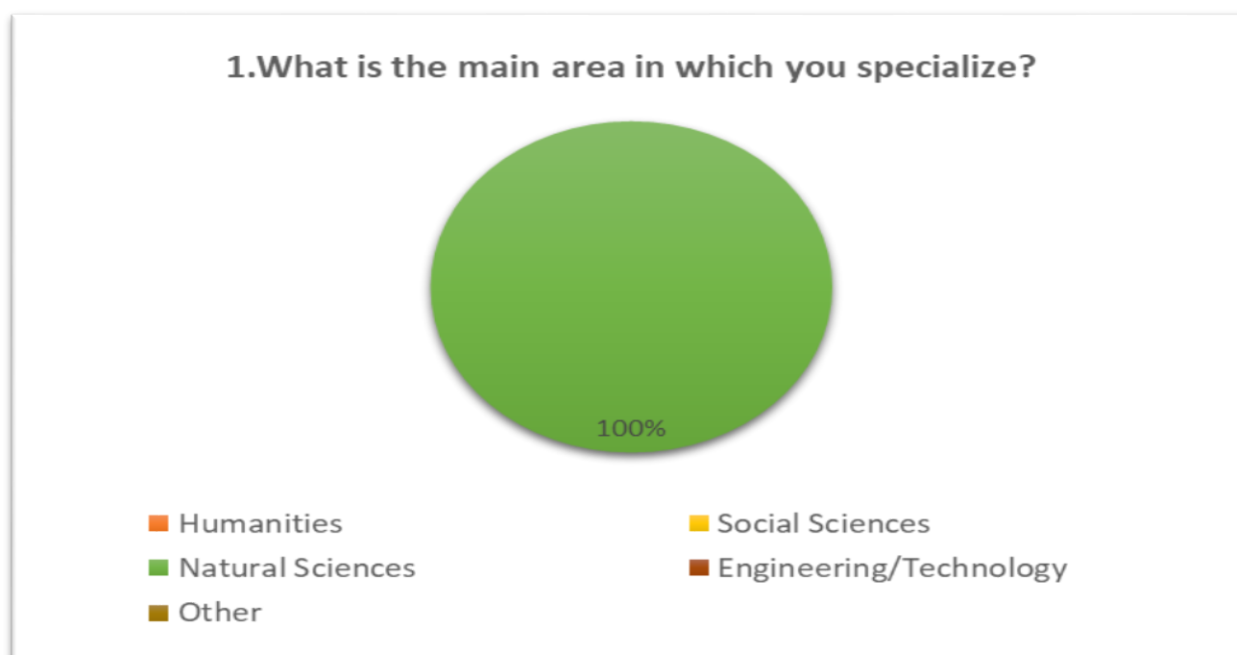


Figure23 : Primary Area of Specialization

Out of 6 respondents, all participants reported specializing in Natural Sciences, representing 100% of the sample. No respondents indicated specialization in other fields: Humanities 0%, Social Sciences 0%, Engineering/Technology 0%, or Other 0%

Q2. How many years have you been teaching at the university level?

Table24 : Years of University-Level Teaching Experience

	Frequency	Percentage
1-3 years	0	0
4-6 years	1	16,7
7-10 years	2	33,3
More than 10 years	3	50
Total	6	100

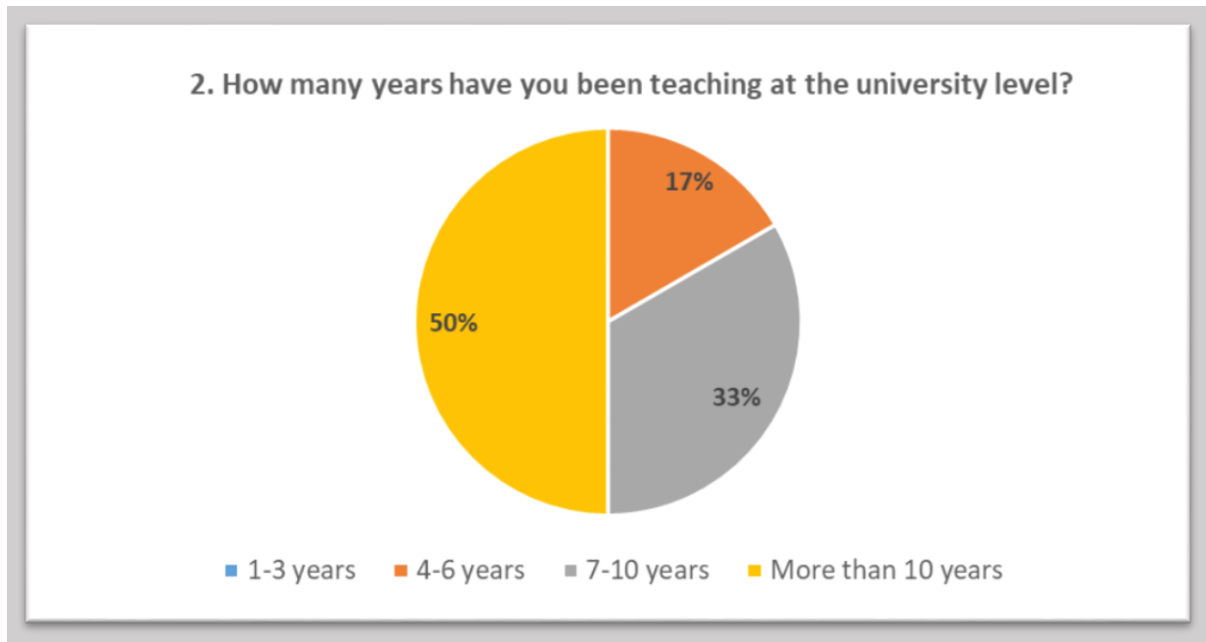


Figure24 : Years of University-Level Teaching Experience

Out of 6 respondents, the majority 50% reported more than 10 years of teaching experience at the university level. 33.3% had been teaching for 7–10 years, while 16.7% fell into the 4–6 years category. None of the respondents (0%) had 1–3 years of experience.

Q3. What is your level of English proficiency?

Table25 : Instructor's English Language Proficiency Level

	Frequency	Percentage
Beginner	1	16,7
Intermediate	4	66,7
Advanced	1	16,7
Native-like	0	0
Total	6	100

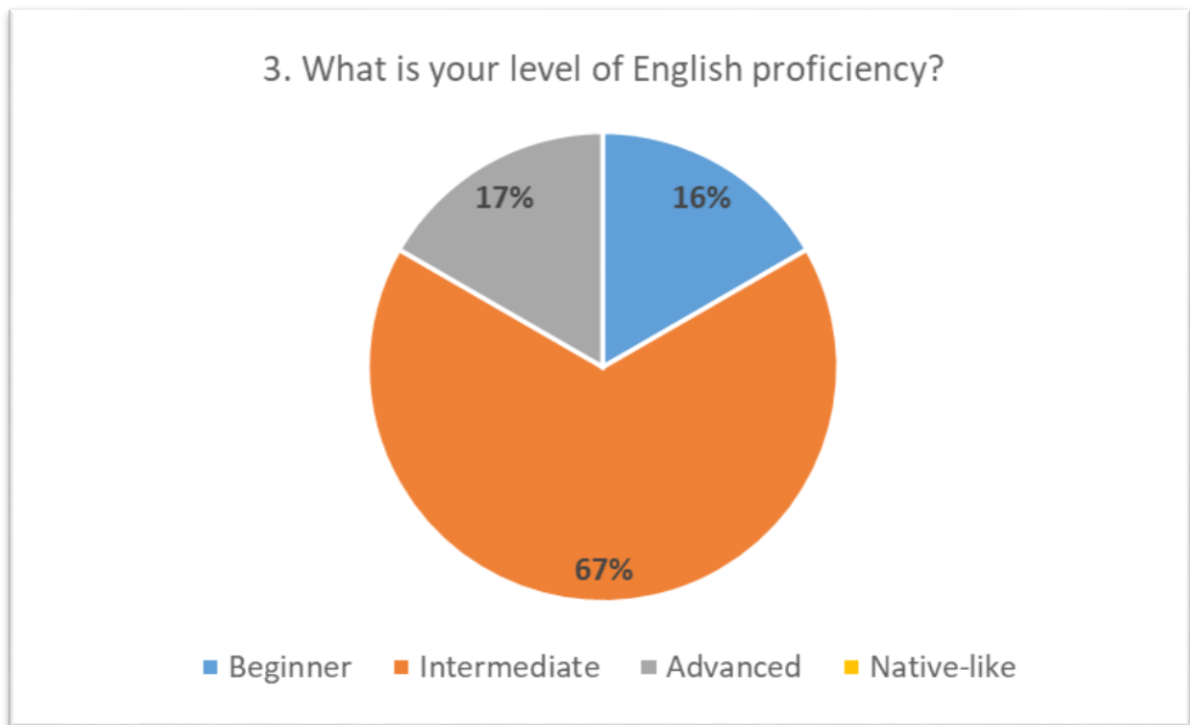


Figure25 : Instructor's English Language Proficiency Level

Out of 6 respondents, the majority 66.7% reported an Intermediate level of English proficiency. Equal proportions (16.7% each) identified as either Beginner or Advanced speakers. None of the respondents 0% claimed Native-like proficiency.

Q4. How do you feel about the implementation of EMI in your university?

Table 26: Faculty Perceptions of EMI Implementation

	Frequency	Percentage
Strongly supportive	2	33,3
Somewhat supportive	2	33,3
Neutral	0	0
Somewhat opposed	2	33,3
Total	6	100

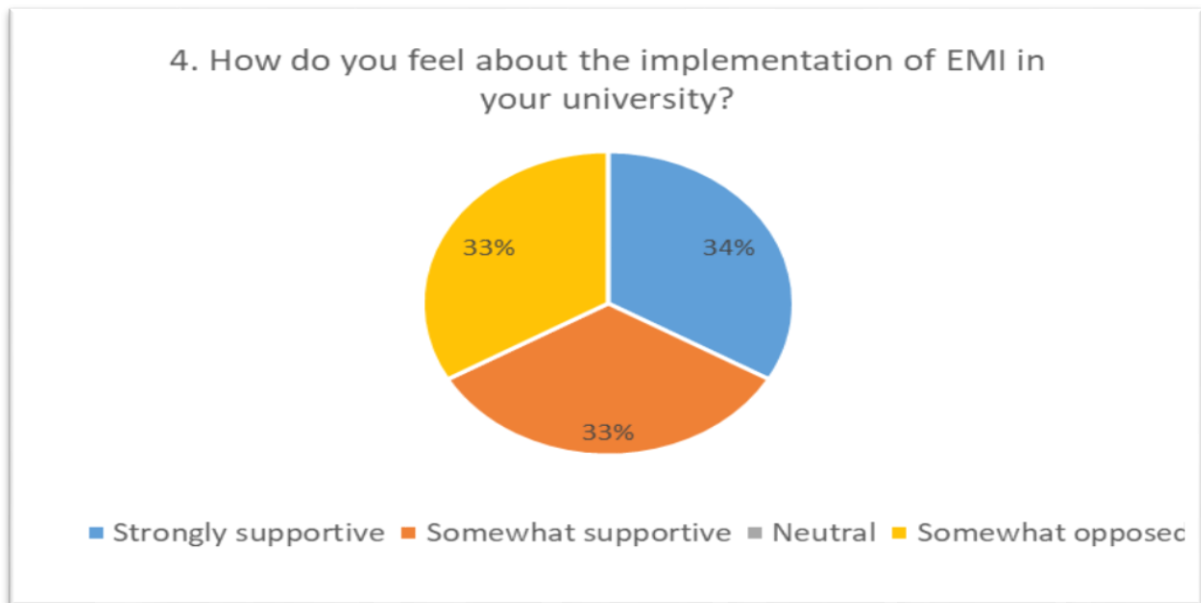


Figure 26 :Faculty Perceptions of EMI Implementation

6 university instructors revealed divided opinions about adopting EMI. One-third of respondents (33.3%, or 2 instructors) reported being strongly supportive of EMI, while another third 33.3% expressed moderate support. However, a significant portion 33.3% indicated some opposition to the policy. Notably, no respondents adopted a neutral stance or expressed strong opposition.

Q5. Do you believe EMI will help students get better jobs in the future?

Table 27: Faculty Beliefs on EMI's Impact on Student Employability.

	Frequency	Percentage
Strongly agree	1	16,7
Agree	1	16,7
Neutral	2	33,3
disagree	2	33,3
Strongly disagree	0	0
Total	6	100

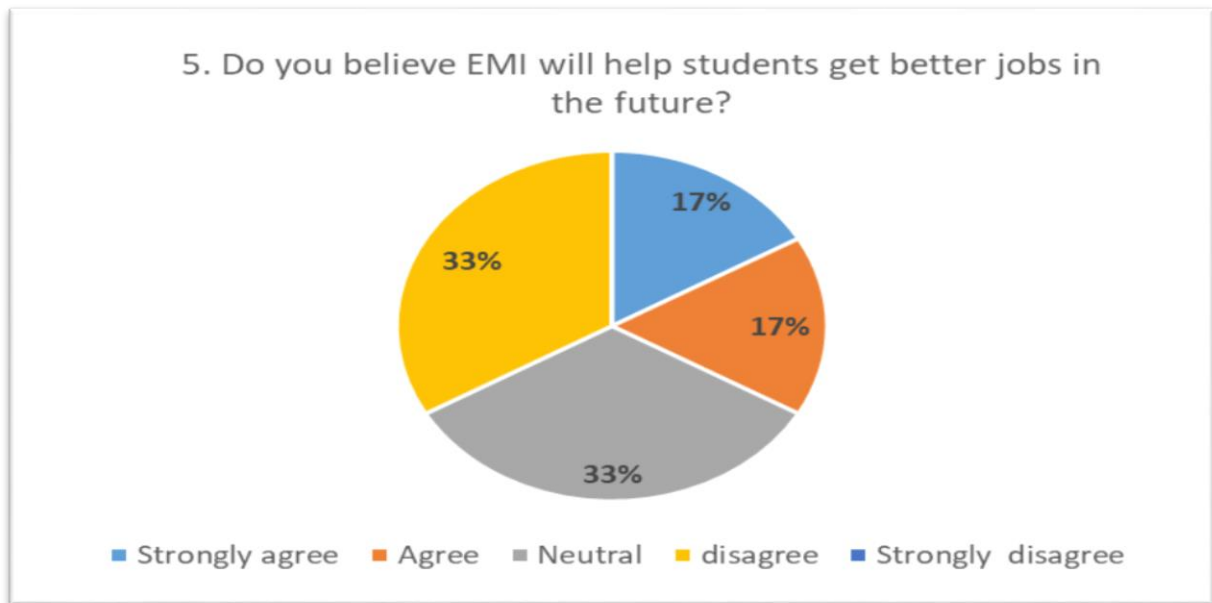


Figure 27 :Faculty Beliefs on EMI's Impact on Student Employability

Out of 6 respondents, opinions were divided regarding whether EMI would improve students' future job prospects. While a combined 33.3% of respondents expressed agreement (16.7% strongly agree and 16.7% agree), an equal proportion 33.3% maintained a neutral stance, and another 33.3% disagreed with the notion. Notably, no respondents strongly disagreed with the statement.

Q6. Do you think that EMI supports your institution's educational objectives?

Table28: Faculty Opinion on EMI's Alignment with Institutional Educational Objectives

	Frequency	Percentage
Strongly agree	2	33,3
Agree	1	16,7
Neutral	1	16,7
disagree	2	33,3
Strongly disagree	0	0
Total	6	100

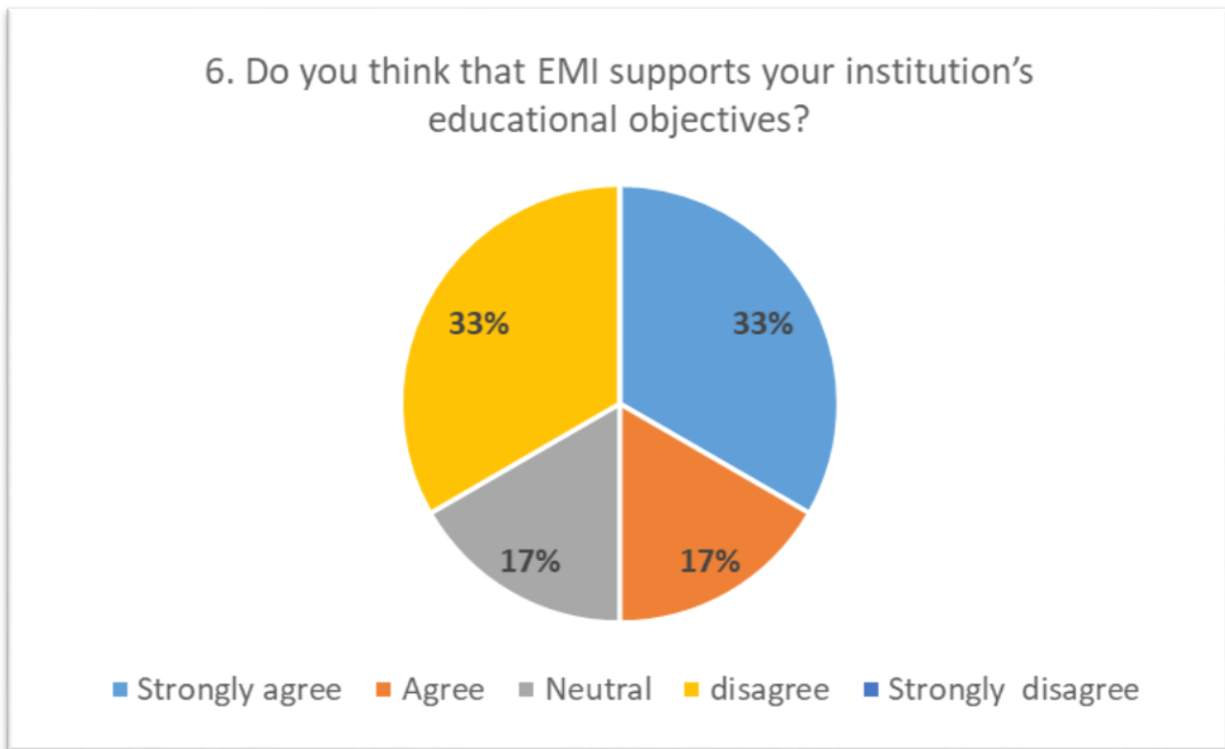


Figure 28 : Faculty Opinion on EMI's Alignment with Institutional Educational Objectives

Out of 6 respondents, faculty opinions were divided on whether EMI supports their institution's educational objectives. Half of the respondents 50% expressed agreement, with 33.3% strongly agreed and 16.7% agreed .However, 2 respondents disagreed (33.3%), while 16.7% remained neutral .Notably, none of the faculty members strongly disagreed with the statement.

Q7. How confident are you in teaching your subject in English?

Table 29: Instructor Confidence in Delivering Subject Matter in English

	Frequency	Percentage
Very confident	1	16,7
Somewhat confident	3	50
Neutral	1	16,7
Not very confident	0	0
Not confident at all	1	16,7
Total	6	100

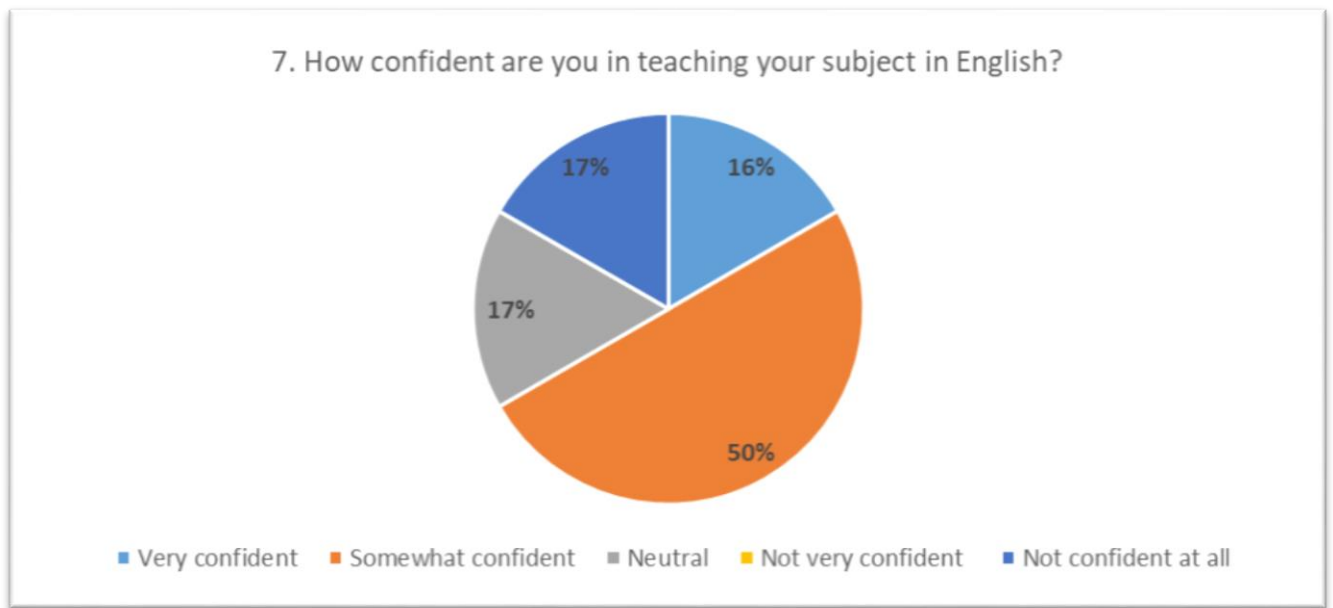


Figure29 : Instructor Confidence in Delivering Subject Matter in English

Out of 6 respondents, faculty members reported varying levels of confidence in teaching their subjects in English. Half of the respondents (50%, 3 faculty members) indicated they were somewhat confident, while 16.7% (1 faculty member) reported being very confident. An equal proportion 16.7% expressed neutral feelings, and another 16.7% (1 faculty member) stated they were not confident at all. Notably, none of the respondents selected not very confident.

Q8. Have you received specific training to improve your English teaching skills?

Table30: Availability of Training for Teachers to Improve English Teaching Skills.

	Frequency	Percentage
Yes, extensive training	2	33,3
Yes, some training	2	33,3
Minimal training	2	33,3
No training	0	0
Total	6	100

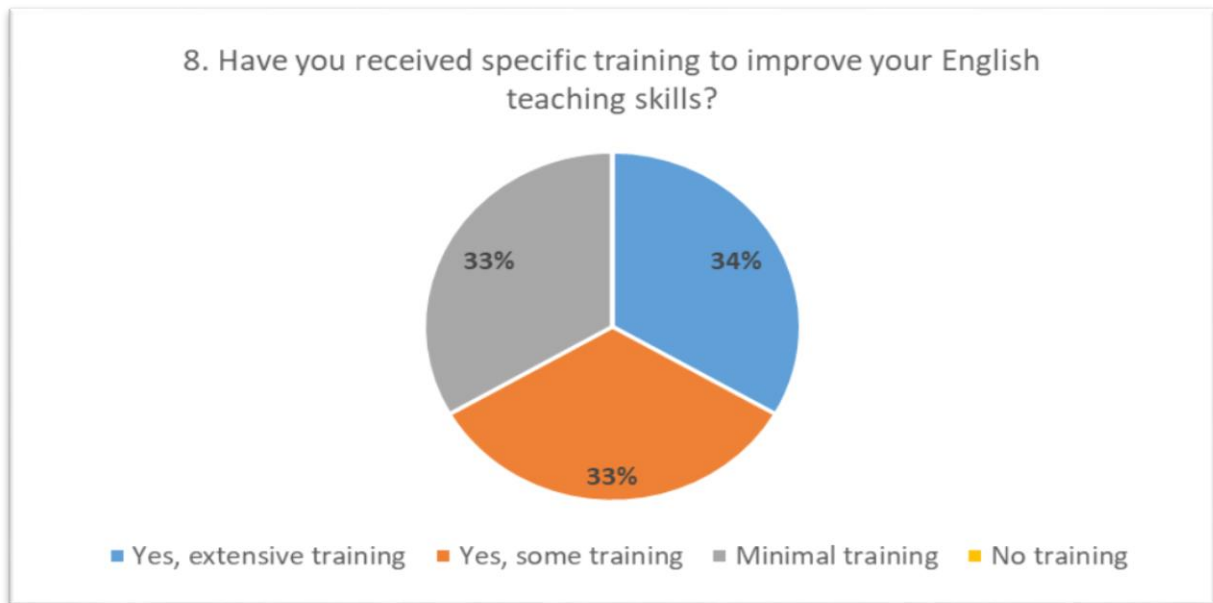


Figure30 : Availability of Training for Teachers to Improve English Teaching Skills

Out of 6 respondents, faculty members reported varying levels of training in English teaching skills. The results show an even three-way split, one-third (33.3%, 2 faculty members) received extensive training, another third 33.3% had some training, and the remaining third 33.3% reported only minimal training. Notably, none of the respondents indicated they had received no training at all.

Q9. How would you rate the English proficiency of your students?

Table31 : Instructor's Rating of Student English Proficiency.

	Frequency	Percentage
High	0	0
Moderate	1	16,7
Low	5	83,3
Very low	0	0
Total	6	100

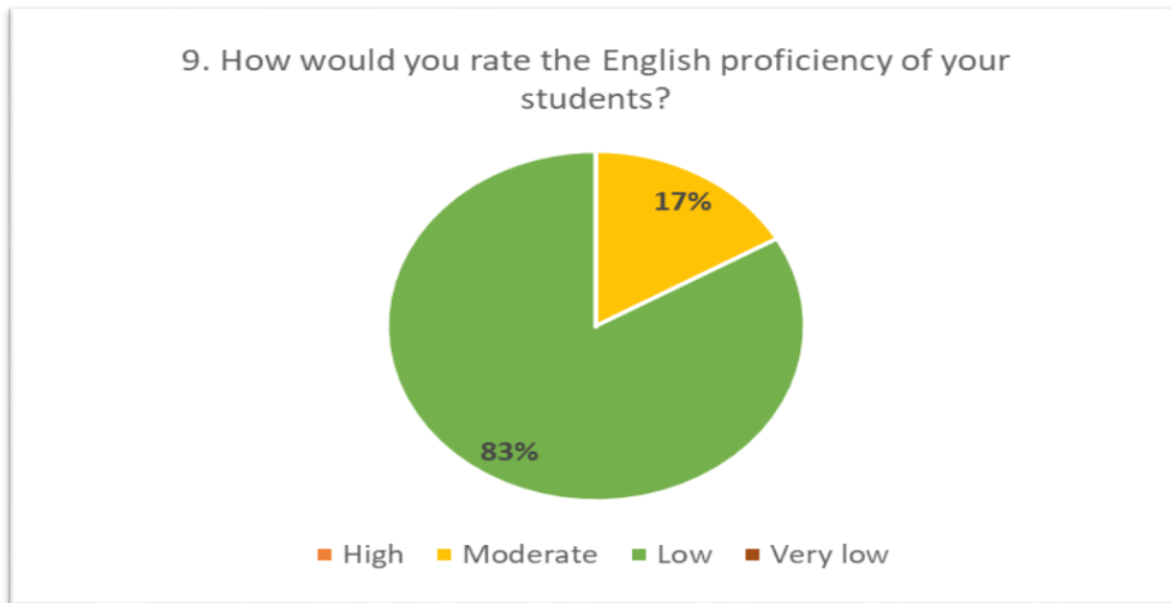


Figure 31 : Instructor's Rating of Student English Proficiency

Out of 6 respondents, faculty perceptions of students' English proficiency revealed significant concerns. The vast majority (83.3%, 5 faculty members) rated their students' proficiency as low, while a small minority (16.7%, 1 faculty member) considered it moderate. Notably, no respondents 0% described student English levels as high or very low.

Q10. How often do you code-switch (change between languages) during lectures?

Table 32: Frequency of Code-Switching During Lectures.

	Frequency	Percentage
Always	1	16,7
Often	2	33,3
Sometimes	2	33,3
Rarely	0	0
Never	1	16,7
Total	6	100

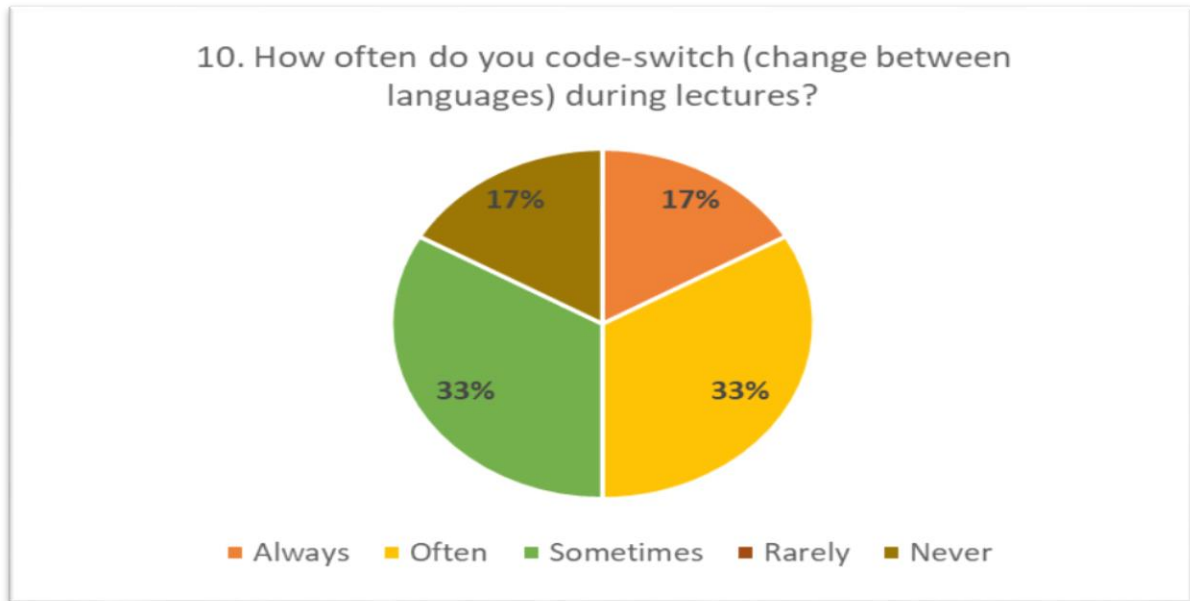


Figure32 : Frequency of Code-Switching During Lectures

Out of 6 respondents, faculty reported frequent use of code-switching during lectures. A third (33.3%, 2 faculty members) indicated they code-switch often, while another third 33.3% do so sometimes. Notably, 16.7% (1 faculty member) reported always switching languages, and an equal proportion 16.7% claimed they never code-switch.

Q11. How challenging is it to prepare course materials in English?

Table33: Difficulty of Preparing Course Materials in English.

	Frequency	Percentage
Very challenging	1	16,7
Somewhat challenging	1	16,7
Neutral	1	16,7
Not very challenging	3	50
Total	6	100

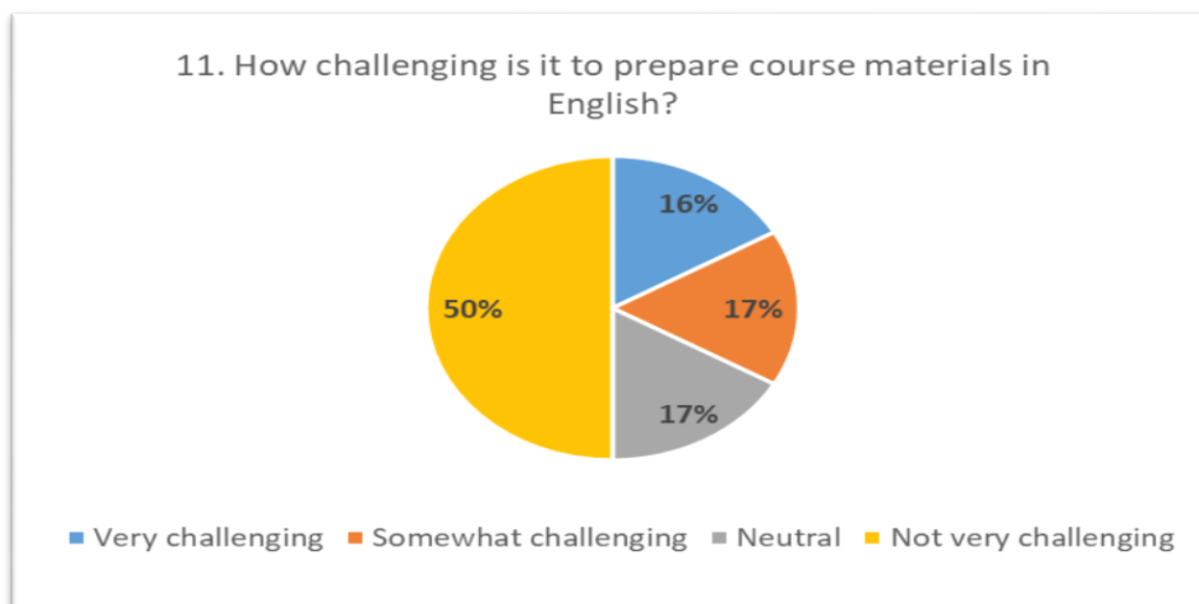


Figure 33 : Difficulty of Preparing Course Materials in English

Out of 6 respondents, faculty reported varying levels of difficulty in preparing English course materials. Half (50%, 3 faculty members) found it not very challenging, while the remaining responses were evenly split, 16.7% (1 faculty member) each for very challenging, somewhat challenging, and neutral.

Q12. Do you enrich your lectures using other English-language resources, such as articles or videos?

Table 34: Use of Additional English-Language Resources in Lectures.

	Frequency	Percentage
Always	2	33,3
Often	2	33,3
Sometimes	2	33,3
Rarely	0	0
Never	0	0
Total	6	100

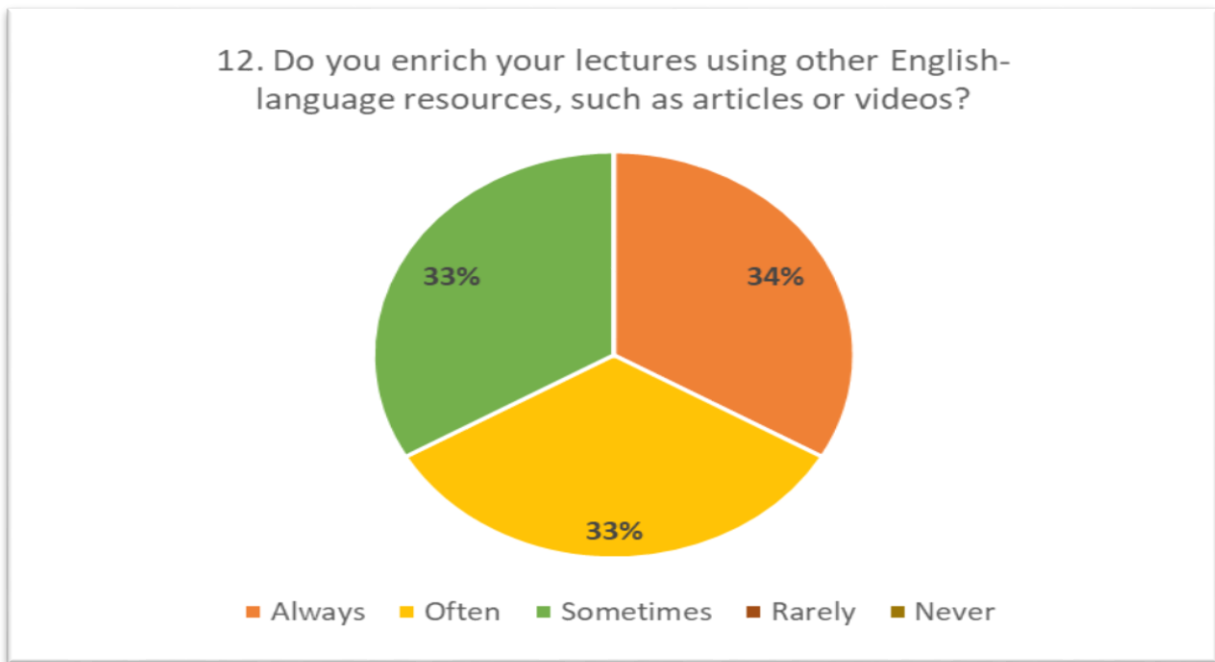


Figure34 : Use of Additional English-Language Resources in Lectures

Out of 6 respondents, faculty demonstrated consistent use of English-language supplemental materials in their teaching. The responses were evenly distributed, with one-third (33.3%, 2 faculty members) each reporting they always, often, or sometimes incorporate additional English resources like articles or videos. Notably, no respondents indicated they rarely or never use such materials (0% for both).

Q13. How has the shift to EMI affected your teaching effectiveness?

Table35 : Impact of EMI Shift on Teaching Effectiveness

	Frequency	Percentage
Improved significantly	2	33,3
Improved somewhat	0	0
No change	4	66,7
Decreased somewhat	0	0
Decreased significantly	0	0
Total	6	100

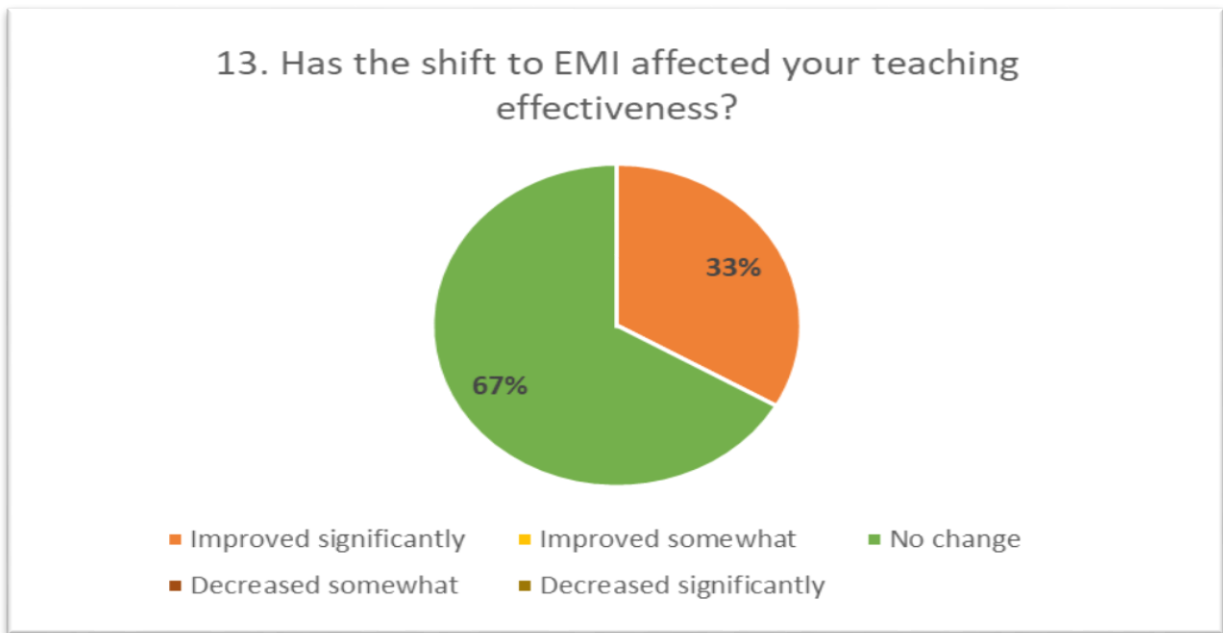


Figure35 : Impact of EMI Shift on Teaching Effectiveness

Out of 6 respondents, faculty reported mixed impacts of EMI on their teaching effectiveness. A third (33.3%, 2 faculty members) noted their effectiveness improved significantly under EMI, while the majority (66.7%, 4 faculty members) observed no change. Notably, no respondents reported any decrease in teaching effectiveness (0% for both decreased somewhat and decreased significantly).

Q14. In your opinion, how has EMI impacted students' understanding of the subject?

Table36: faculty Opinion on EMI's Impact on Students' Understanding of the Subject

	Frequency	Percentage
Significantly improved	0	0
Somewhat improved	3	50
No impact	1	16,7
Somewhat worsened	2	33,3
Significantly worsened	0	0
Total	6	100

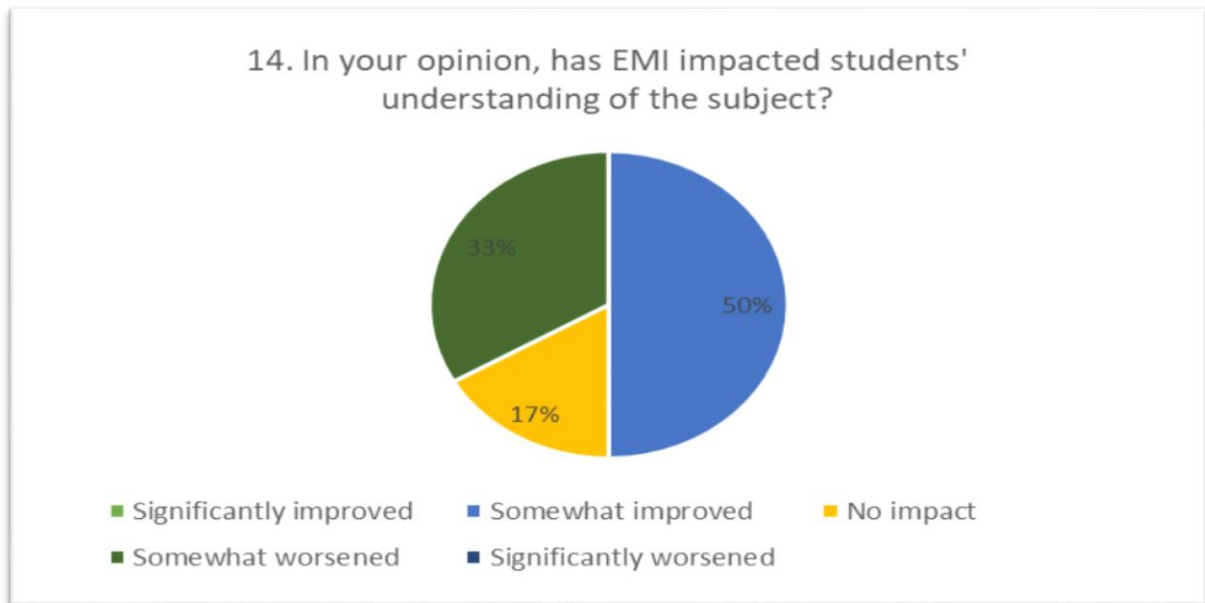


Figure36 : faculty Opinion on EMI's Impact on Students' Understanding of the Subject

Out of 6 respondents, faculty reported divergent views on EMI's impact on student comprehension. 50% observed somewhat improved understanding, while a third 33.3% noted it somewhat worsened. 16.7% saw no impact. Notably, no respondents reported significantly improved or significantly worsened outcomes (0% for both extremes).

Q15. How has EMI affected the standard of education in your field as a whole?

Table37: Impact of EMI on the Standard of Education in the Field

	Frequency	Percentage
Significantly improved	1	16,7
Somewhat improved	3	50
No impact	2	33,3
Somewhat decreased	0	0
Significantly decreased	0	0
Total	6	100

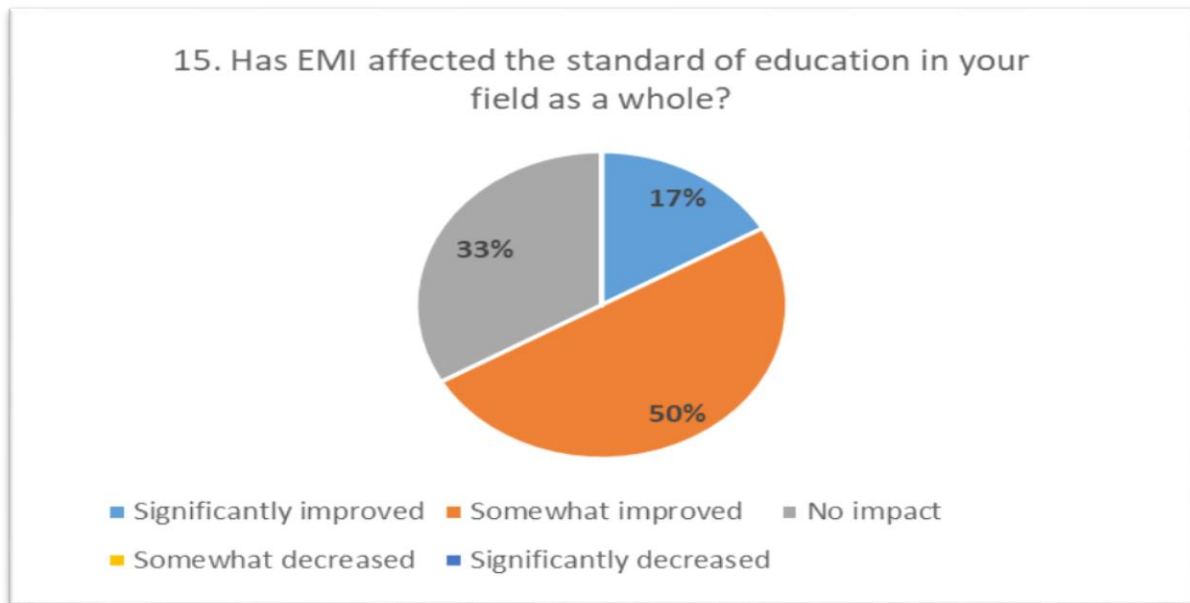


Figure37 : Impact of EMI on the Standard of Education in the Field

Out of 6 respondents, faculty reported predominantly positive or neutral views on EMI's impact on educational standards in their field. 50% observed somewhat improved standards, while 16.7% noted significant improvement. A third 33.3% perceived no impact. Notably, no respondents reported any decline in educational standards (0% for both somewhat and significantly decreased).

Q16. Has the university provided enough support and assistance to help you adjust to EMI?

Table38: University Support for Faculty Adjustment to EMI

	Frequency	Percentage
Always	0	0
Often	1	16,7
Sometimes	0	0
Rarely	5	83,3
Never	0	0
Total	6	100

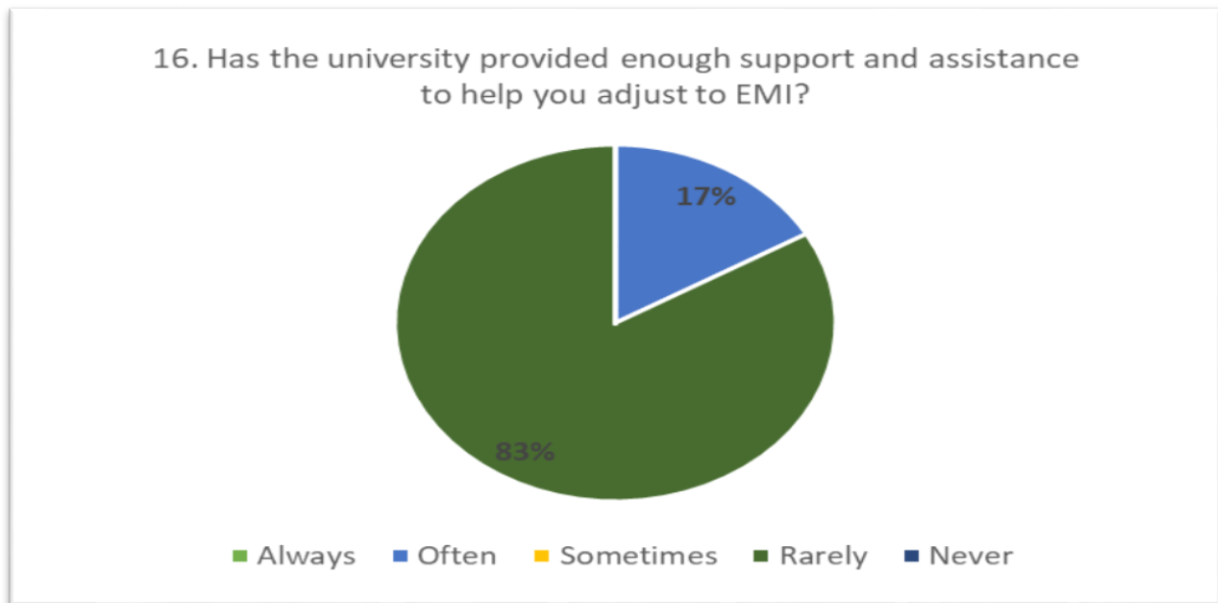


Figure38 : University Support for Faculty Adjustment to EMI

Out of 6 respondents, faculty expressed significant dissatisfaction with institutional support for transitioning to EMI. The overwhelming majority (83.3%, 5 faculty members) reported they rarely receive adequate support, while a small minority (16.7%, 1 faculty member) indicated support occurs often. Notably, no respondents selected always, sometimes, or never (0% for all three).

Q17. What other resources or forms of assistance do you think EMI needs?

Table39: Additional Resources or Assistance Needed for EMI Implementation

	Frequency	Percentage
Language training	3	50
Pedagogical workshops	0	0
Access to English-language resources	0	0
Mentorship or peer support	0	0
Other	0	0
Language training & Pedagogical workshop	2	33,3
Language training & Pedagogical workshop & Access to English-language resources	1	16,7

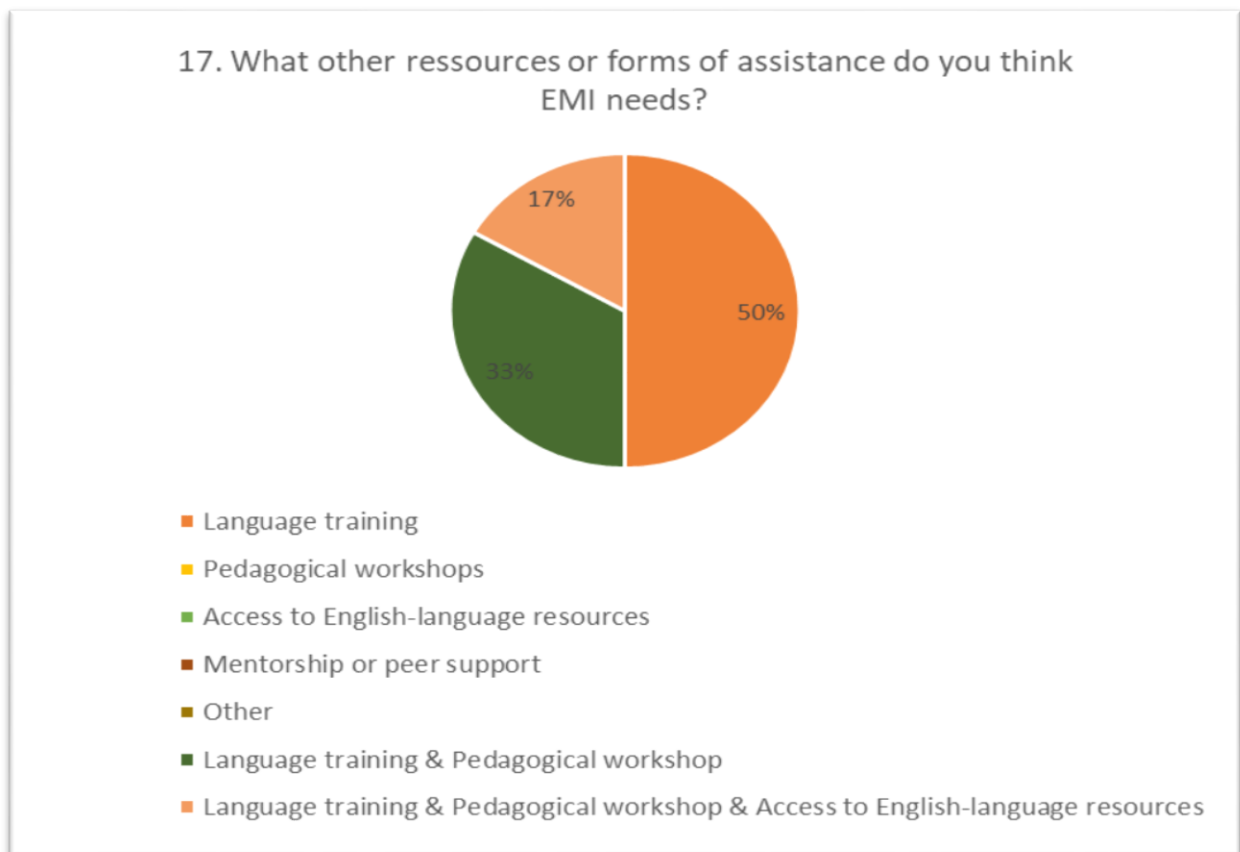


Figure39 : Additional Resources or Assistance Needed for EMI Implementation

Out of 6 respondents, faculty identified clear priorities for improving EMI support. Half (50%, 3 faculty members) singled out language training as the sole critical need. A third (33.3%, 2 faculty members) advocated for combined language training and pedagogical workshops, while 16.7% (1 faculty member) requested a trio of supports, language training , pedagogical workshops and English-language resource access.

Q18. Do you believe that EMI is a viable strategy for Algerian higher education?

Table40: Teachers Opinion on the Viability of EMI in Algerian Higher Education

	Frequency	Percentage
Strongly agree	2	33,3
Agree	1	16,7
Neutral	2	33,3
disagree	0	0
Strongly disagree	1	16,7
Total	6	100

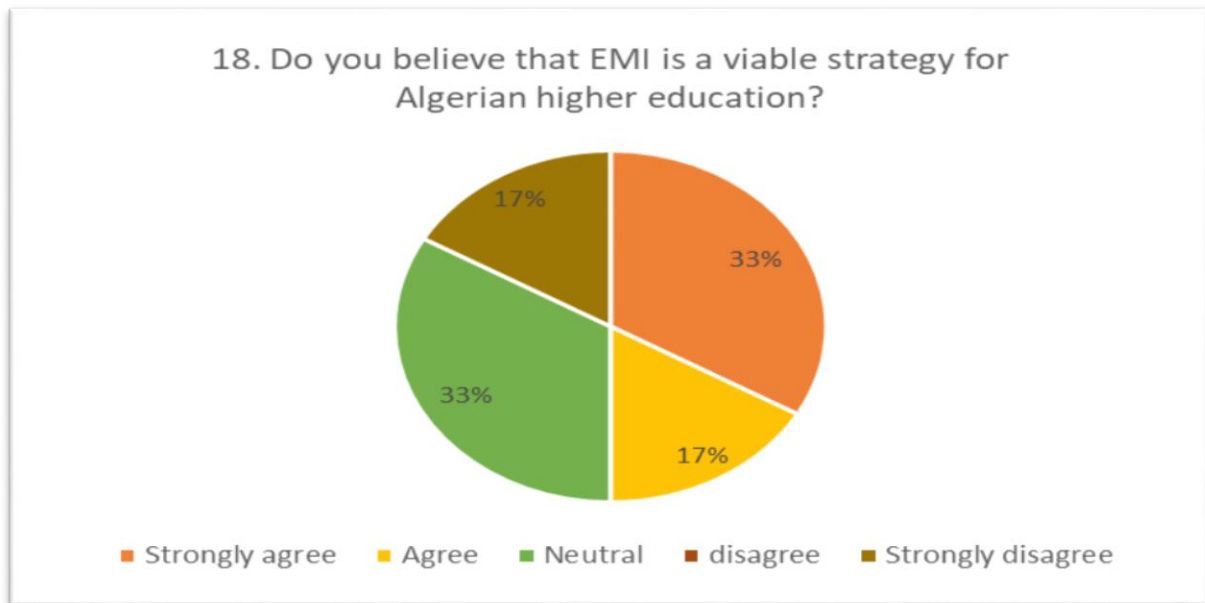


Figure 40: Teachers' Opinion on the Viability of EMI in Algerian Higher Education

Out of 6 respondents, faculty opinions on EMI's viability in Algerian higher education present a nuanced perspective : Half of the respondents 50% expressed support, with 33.3% strongly agreeing and 16.7% agreeing that EMI is a viable strategy. However, a third 33.3% remained neutral, while 16.7% strongly disagreed with EMI's feasibility

Q19. Would you suggest making any changes or modification to the existing EMI policy?

Table41: Teachers' Recommendations for Improving the EMI Policy

	Frequency	Percentage
Yes, major modifications needed	6	100
Yes, minor modifications needed	0	0
No changes needed	0	0
I am not sure	0	0
Total	6	100

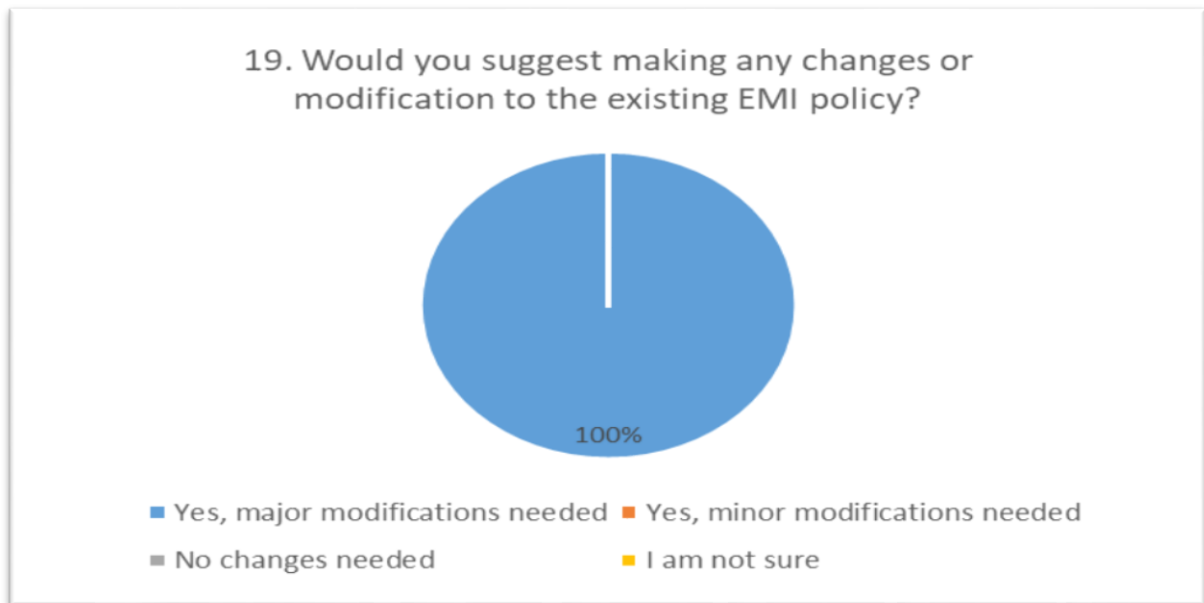


Figure41 : Teachers' Recommendations for Improving the EMI Policy

Out of 6 respondents, faculty unanimously 100% agreed that major modifications are needed to the existing EMI policy, with no respondents suggesting minor changes 0%, no changes 0%, or uncertainty 0%.

Q20. Should EMI be restricted only to certain fields or expanded to other disciplines, in your opinion?

Table42: Teachers' Opinion on Whether EMI Should Be Restricted to Certain Fields or Expanded to Other Disciplines

	Frequency	Percentage
Expanded to all disciplines	2	33,3
Maintained in current fields	2	33,3
Reduced to a few key fields only	2	33,3
Phased out completely	0	0
Total	6	100

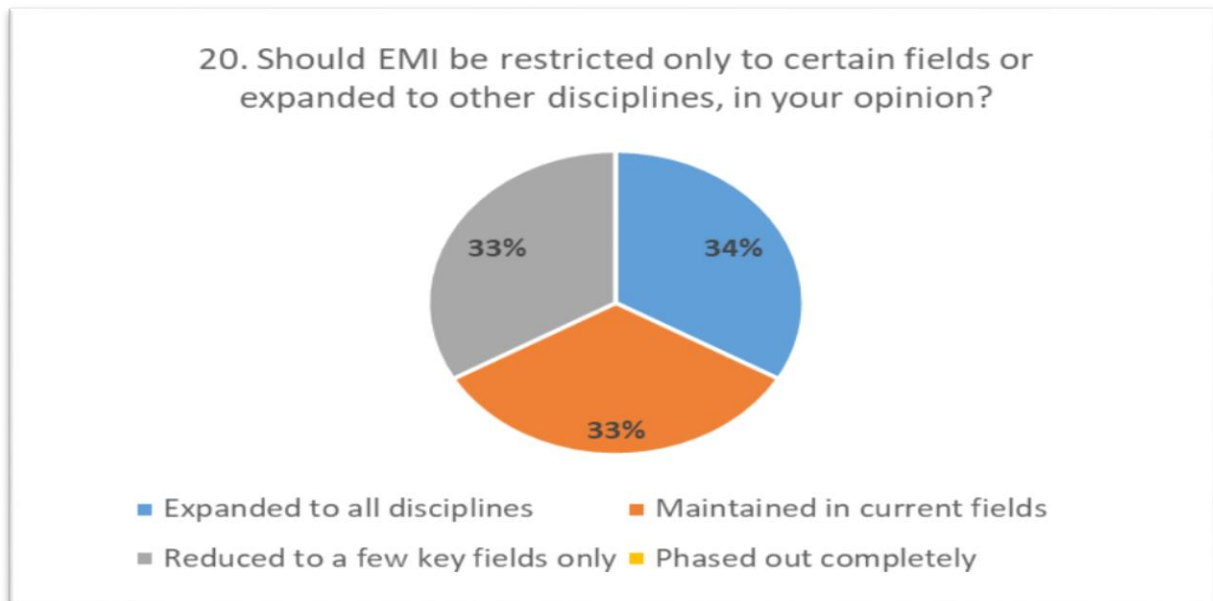


Figure42 : Teachers' Opinion on Whether EMI Should Be Restricted to Certain Fields or Expanded to Other Disciplines

Out of 6 respondents, faculty opinions about the future scope of EMI implementation revealed a clear three-way split. One-third (33.3%, 2 faculty members) advocated for expanding EMI to all disciplines, while an equal proportion supported maintaining the current implementation 33.3% or reducing it to only a few key fields 33.3%. Notably, no respondents suggested completely phasing out EMI 0%.

Item21 :Please provide additional comments or suggestions regarding the implementation of EMI in your academic experience.

A total of four teachers responded to this question , with three answering in English and one in Arabic.

1-Effective EMI requires faculty training in language and teaching methods, along with language support , interactive learning , use of technology tools and clear institutional policies.

2- This change in language must be done in early levels like primary and secondary schools, so they can improve their levels in English and contexts on acquiring the info.

3- Doing workshops for developing the technical terms in each specialities.

4- حسب رأيي المتواضع كأستاذ وإداري متابع لعملية التدريس باللغة الإنجليزية اظن ان العملية متسرعة نوعا ما لذلك ادعو الى تطبيق هذه العملية على الأجيال القادمة التي تدرس حاليا اللغة الإنجليزية في الابتدائي.

(In my humble opinion as a teacher and administrator who follows the process of teaching the English language, I think that the process is somewhat hasty, so I call for applying this process to the future generations who are currently studying the English language in primary school).

II.2.3.Observation Grid Analysis

To investigate the classroom practices and language use under EMI an observation grid was used to collect data from four different teachers. Each teacher was observed twice, during a course lecture and during a tutorial session. The observations were conducted over a two-week period to ensure consistency and minimize disruption to regular class activities.

Table 43 : Observation Schedule

Teacher	Session 1	Session 2
Teacher 1 (male)	Lecture	Tutorial
Teacher 2 (male)	Lecture	Lecture
Teacher 3 (male)	Lecture	Tutorial
Teacher 4 (female)	Lecture	Tutorial

II.2.3.1. Quantitative Data

First Category: Language Use

Item 01: "Instructor delivers lectures entirely in English".

Table 44: Instructor's Use of English in Lectures

	Frequency	Percentage
Never	2	%25,0
Sometimes	1	%12,5
Often	1	%12,5
Always	4	%50,0
Total	8	%100,0

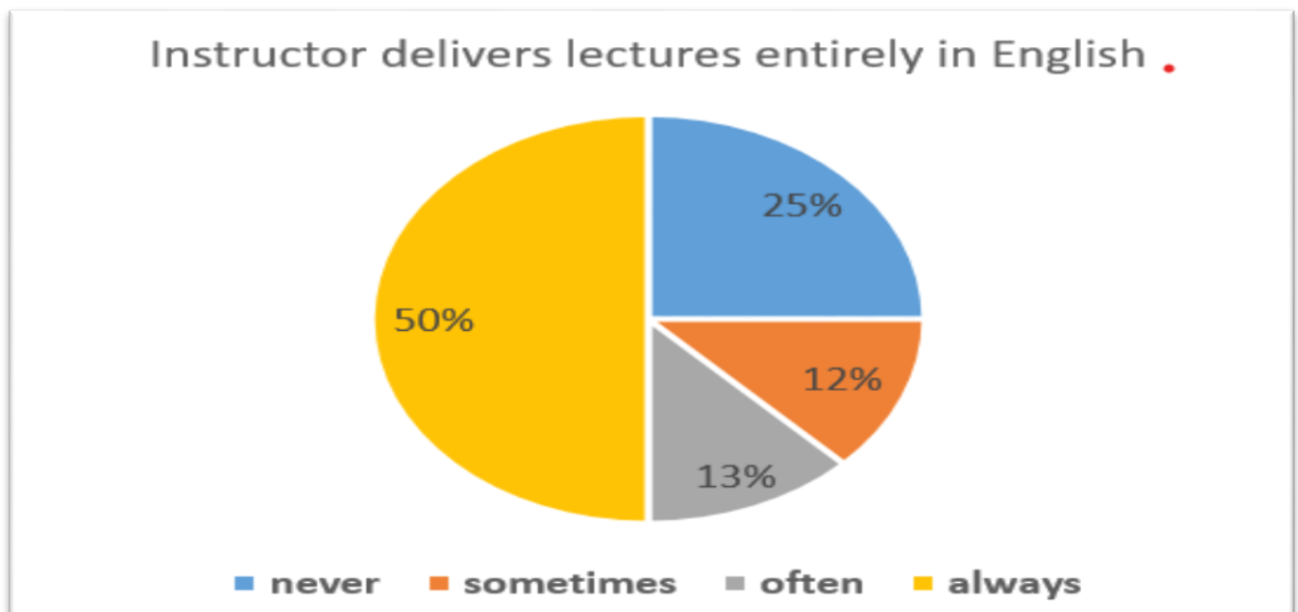


Figure 43: Instructor's Use of English in Lectures

Classroom observations revealed that instructors delivered lectures exclusively in English 50% of the time, while 25% avoided English-only instruction completely. The remaining 25% showed partial adoption, with 12.5% frequently and 12.5% occasionally using English as the sole lecture language.

Item 02: “Instructor switches between English and another language (e.g., Arabic, French)”.

Table 45: "Frequency of Instructors Switching Between English and Other Languages"

	Frequency	Percentage
Often	2	%25,0
Always	6	%75,0
Total	8	%100,0

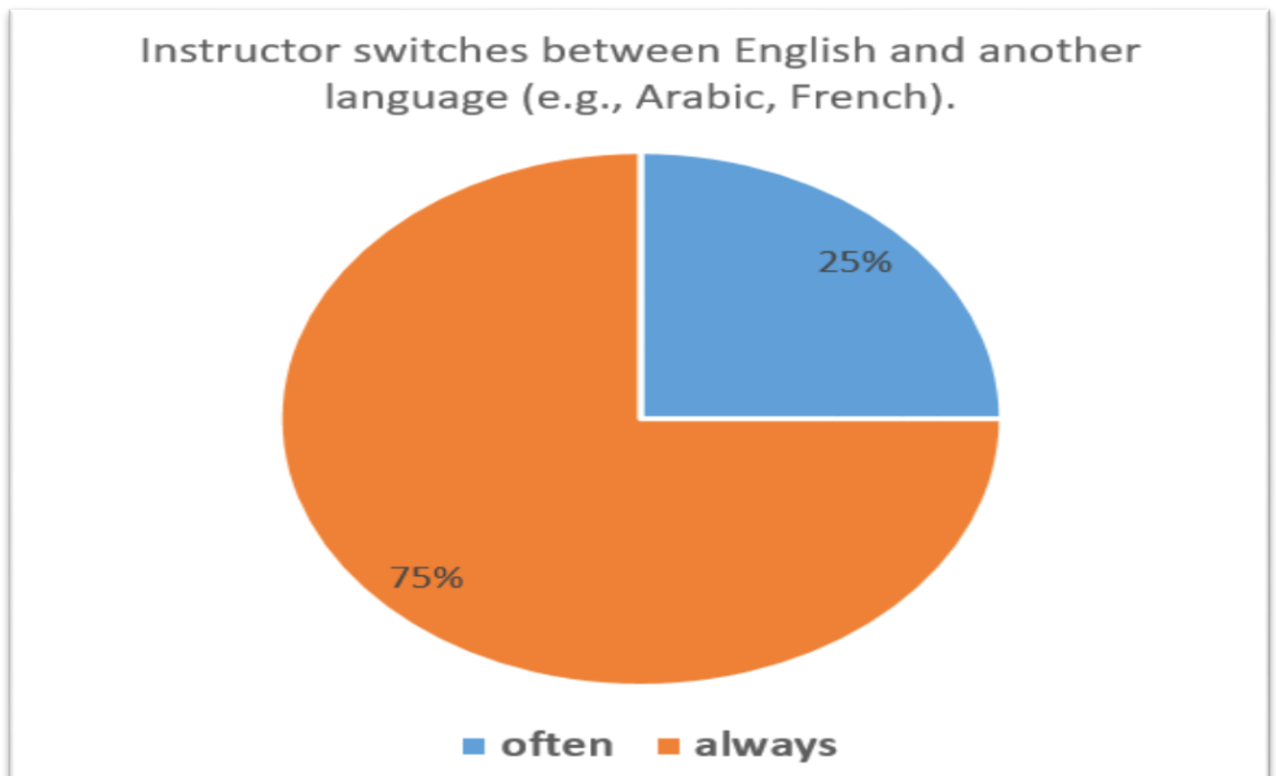


Figure44: "Frequency of Instructors Switching Between English and Other Languages"

Classroom observations revealed consistent use of language switching during instruction: the majority of instructors 75% always alternated between English and other languages (e.g., Arabic/French) during lectures, while the remaining 25% did so frequently.

Item 03: “Instructor encourages students to ask and respond in English”.

Table 46: Instructor Encouragement of English in Student Participation

	Frequency	Percentage
Never	5	%62,5
Sometimes	3	%37,5
Total	8	%100,0

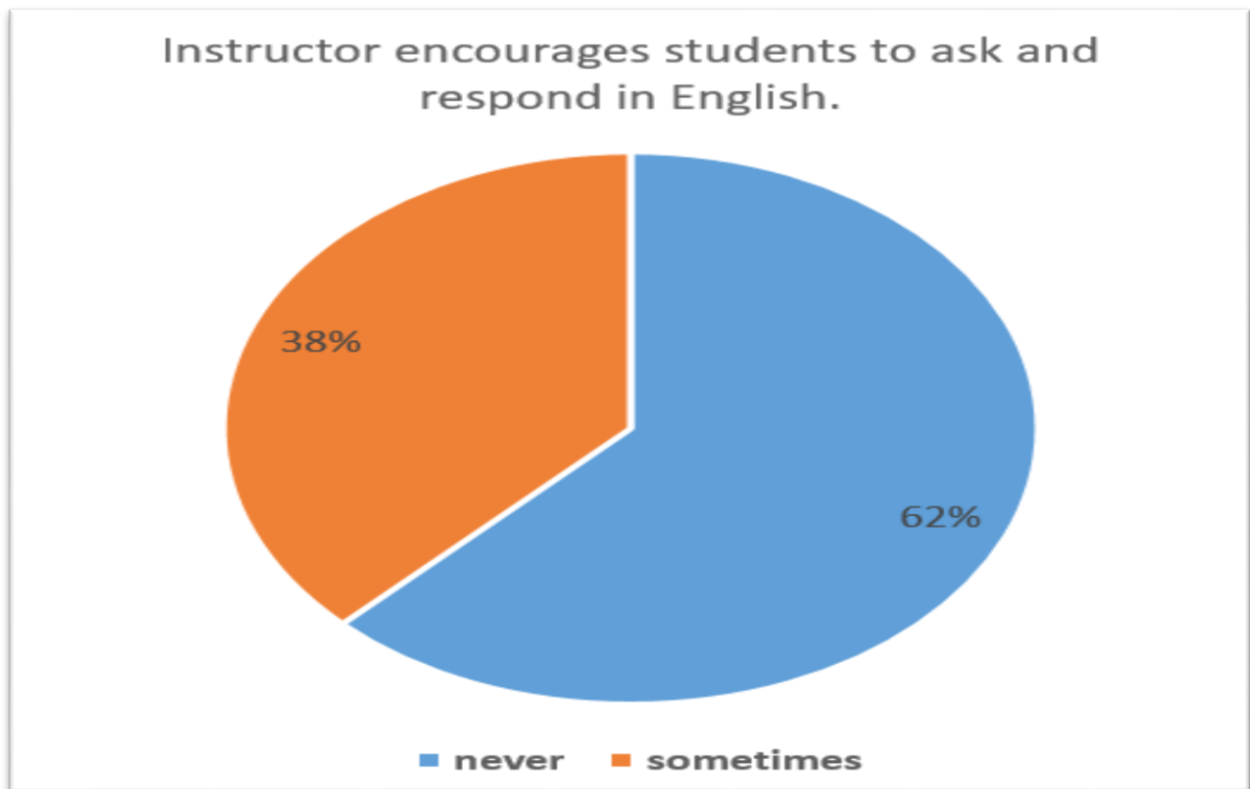


Figure 45: Instructor Encouragement of English in Student Participation

Classroom observations showed that the majority of instructors (62.5%) never encouraged students to ask or respond in English, while the remaining 37.5% only sometimes did so.

Item 04: "Instructor uses translation to clarify key terms".

Table 47: Frequency of Translation Used by Instructor to Explain Key Terms

	Frequency	Percentage
Often	3	%37,5
Always	5	%62,5
Total	8	%100,0

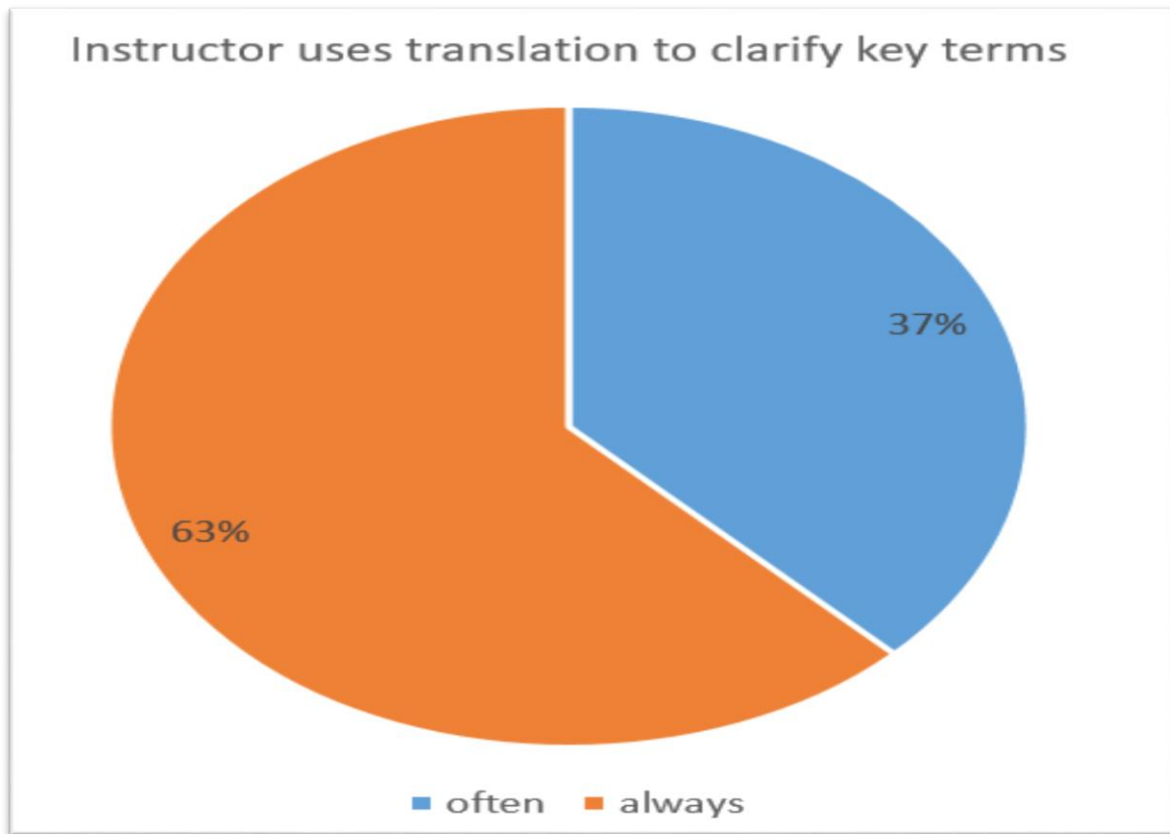


Figure 46: Frequency of Translation Used by Instructor to Explain Key Terms

Classroom observations revealed that 62.5% of instructors consistently translated key terms during lectures, while 37.5% did so frequently.

Second Category: Classroom Interaction

Item 05: “Instructor engages Students in discussions or Q&A in English”.

Table 48: Frequency of English Use in Classroom Discussions and Q&A

	Frequency	Percentage
Never	7	%87,5
Sometimes	1	%12,5
Total	8	%100,0

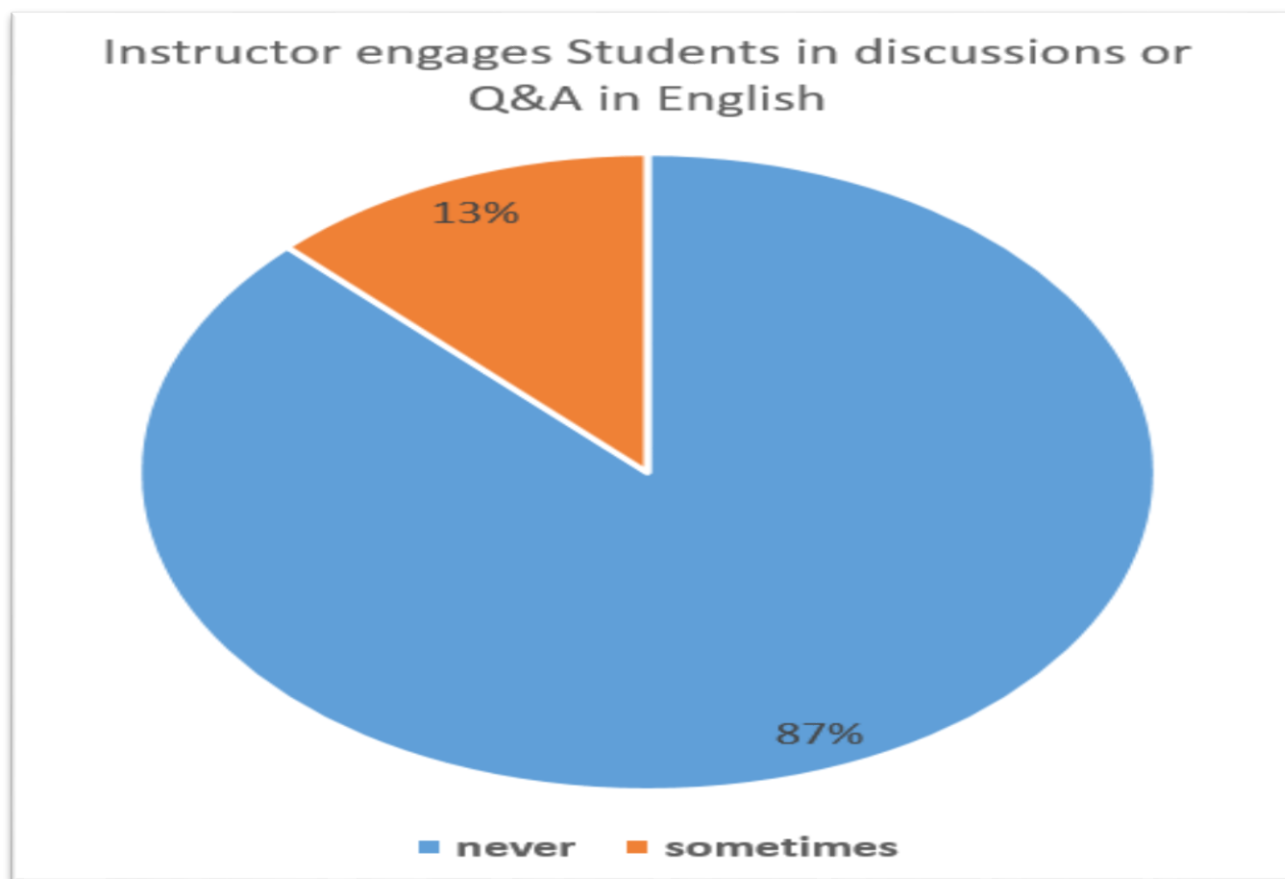


Figure 47: Frequency of English Use in Classroom Discussions and Q&A

Classroom observations demonstrated a striking lack of English use in interactive segments, with 87.5% of instructors never conducting discussions or Q&A in English and only 12.5% doing so occasionally.

Item 06: “Students demonstrate understanding of the content in English”.

Table 49: Frequency of Students Demonstrating Content Understanding in English

	Frequency	Percentage
Sometimes	5	%62,5
Often	3	%37,5
Total	8	%100,0

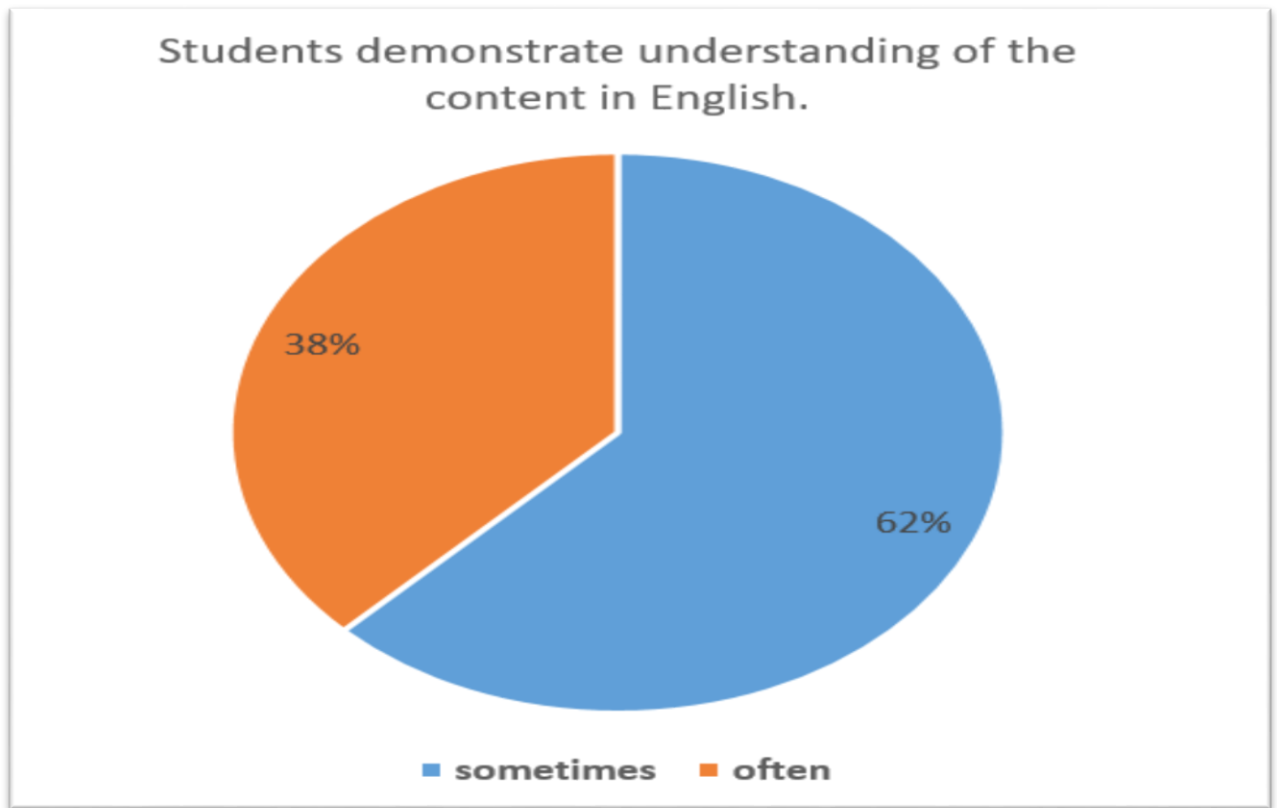


Figure 48: Frequency of Students Demonstrating Content Understanding in English

Classroom observations revealed moderate student ability to demonstrate content understanding in English, with 62.5% of classes showing occasional English comprehension and 37.5% exhibiting frequent demonstrations.

Item 07: “Code-switching by students during interactions”.

Table 50: Instances of code switching by students during discussions

	Frequency	Percentage
Often	2	%25,0
Always	6	%75,0
Total	8	%100,0

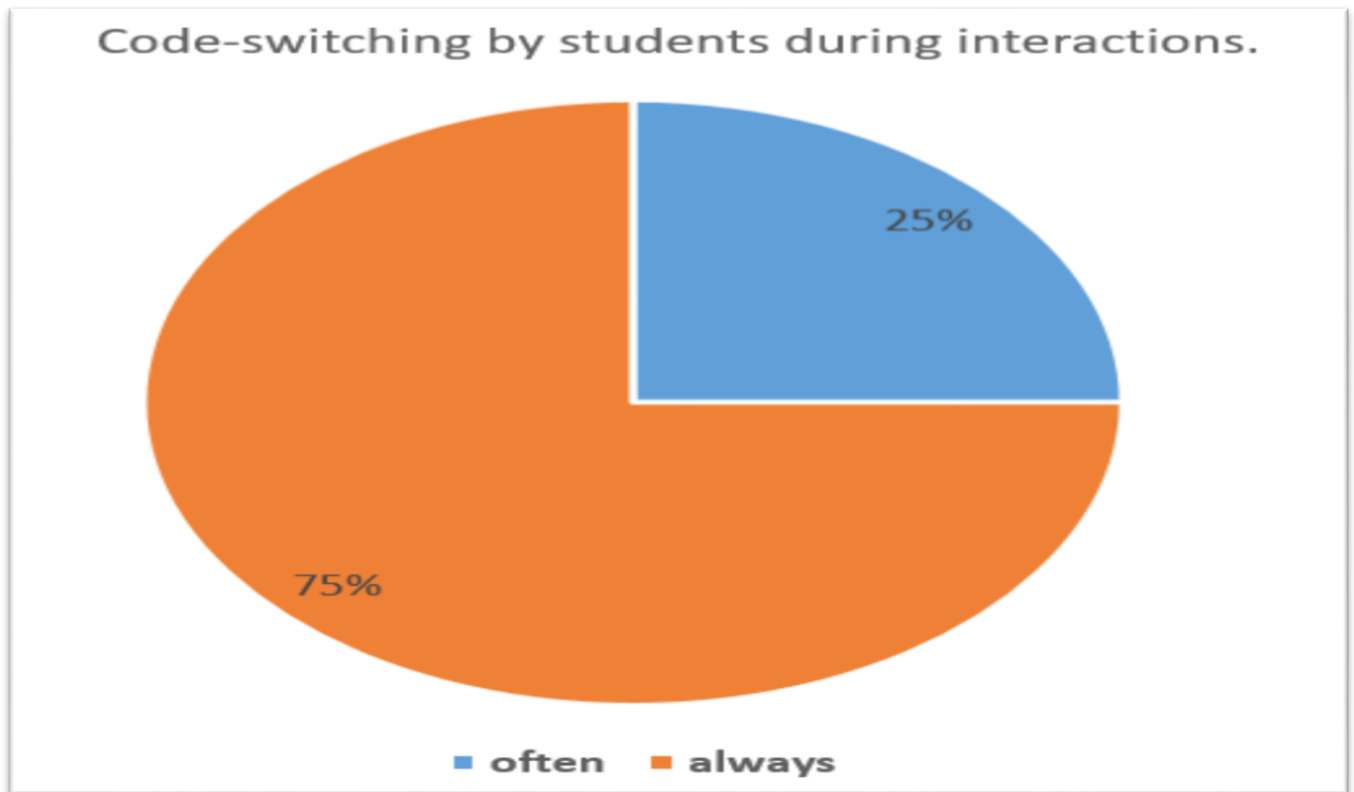


Figure 49: Instances of code switching by students during discussions

Classroom observations revealed pervasive code-switching by students during interactions, with 75% of classes showing constant language alternation and 25% exhibiting frequent shifts.

Third Category: Challenges Observed

Item 08: “Students seem hesitant to engage in English”.

Table 51: Frequency of students’ hesitation to participate in English

	Frequency	Percentage
Sometimes	2	%25,0
Often	2	%25,0
Always	4	%50,0
Total	8	%100,0

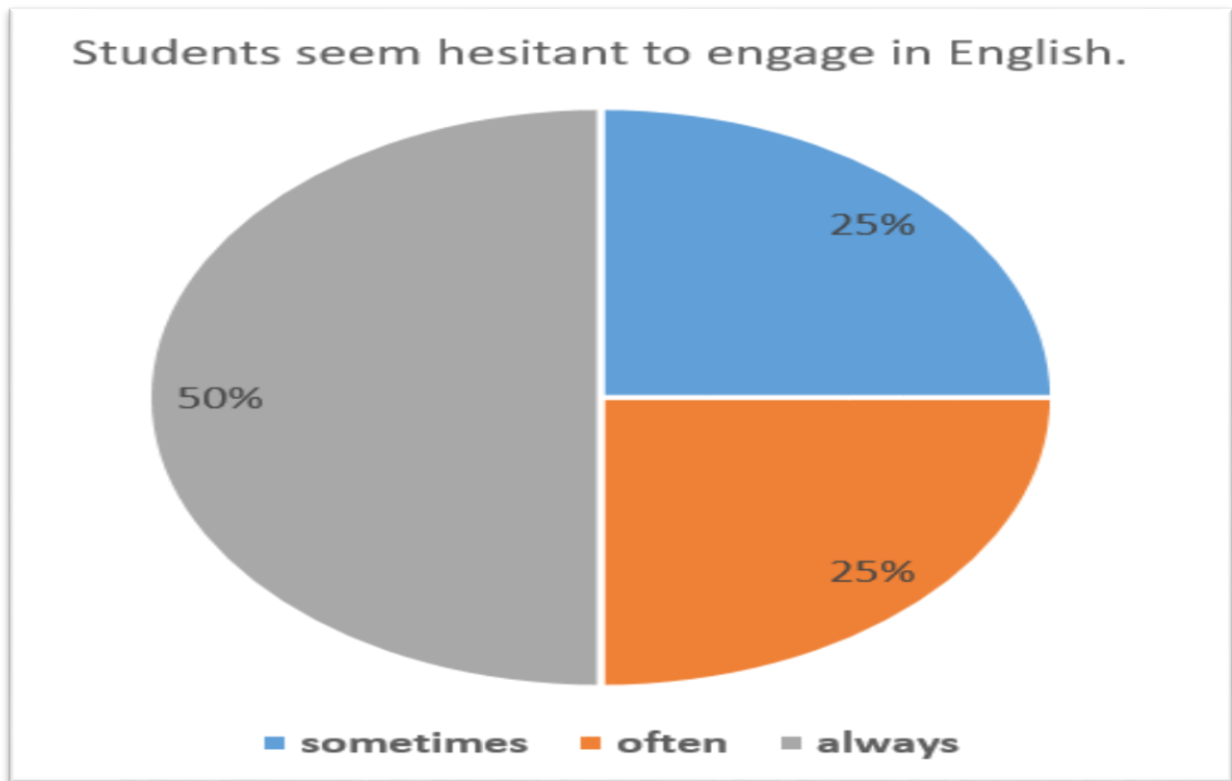


Table 50: Frequency of students' hesitation to participate in English

Classroom observations revealed significant student hesitation when engaging in English, with half of all classes (50%) showing constant discomfort, while another 25% exhibited frequent hesitation and 25% occasional reluctance.

Item 09: "Instructor shows signs of difficulty using English fluently".

Table 52: Perceived Fluency Challenges in Instructor's Use of English

	Frequency	Percentage
Sometimes	3	%37,5
Often	4	%50,0
Always	1	%12,5
Total	8	%100,0

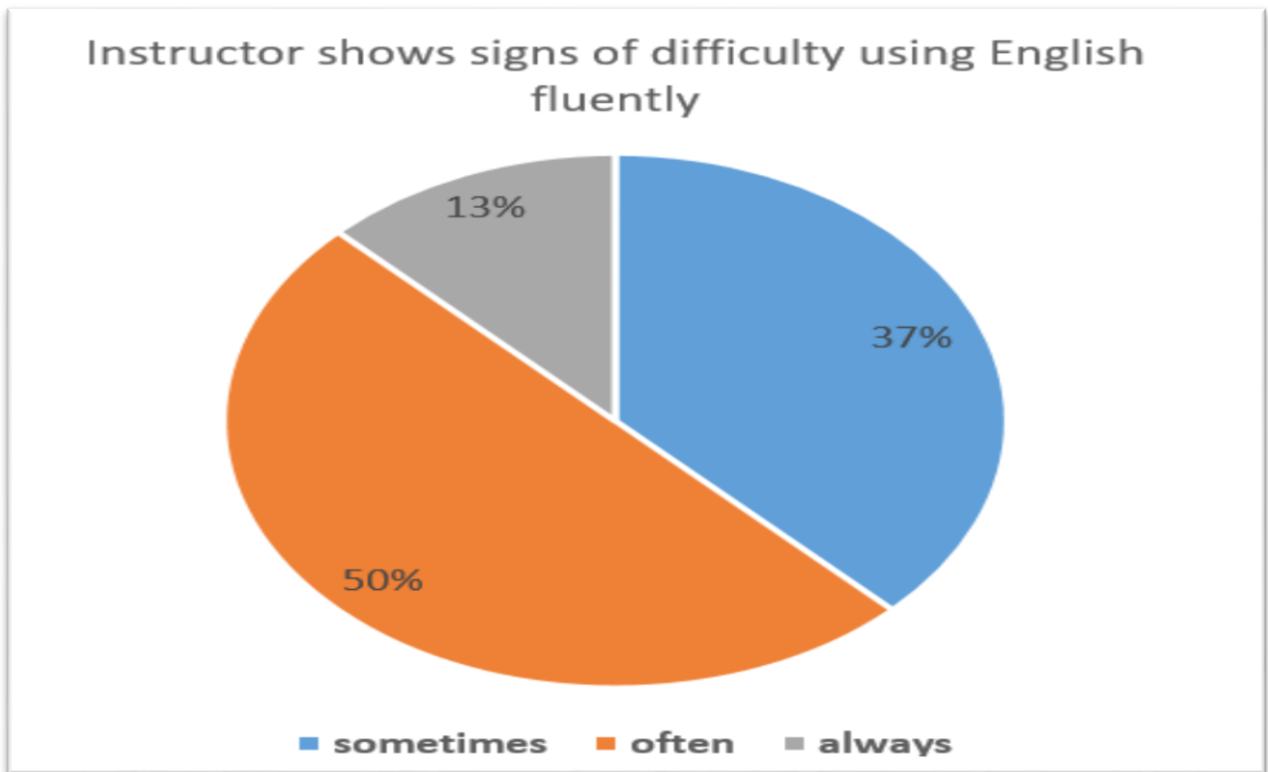


Figure 51: Perceived Fluency Challenges in Instructor's Use of English

Classroom observations revealed that instructors frequently struggled with English fluency, with 50% often facing difficulties and 12.5% consistently challenged. Another 37.5% sometimes encountered fluency issues, meaning all observed instructors (100%) experienced at least occasional English delivery problems.

II.2.3.2 .Qualitative Data

To complement the quantitative frequency analysis, a thematic analysis was conducted on the qualitative notes taken during classroom observations. This analysis aimed to uncover patterns and deeper insights into how EMI is being practiced in real classroom settings. Based on the observation notes, six key themes emerged : language barriers and code-switching, instructor language proficiency and comfort, student participation challenges, superficial use of EMI, instructional strategies and tools and classroom environment and atmosphere.

Table 53: Emerging Themes from Observation Notes

Theme	Description	Example evidence
Language Barriers and Code-Switching	Frequent use of Arabic or French by both teachers and students due to difficulty sustaining English use	“Students often respond in Arabic”; “Teachers always code-switch to French”
Instructor Language Proficiency and Comfort	Teachers show discomfort or lack fluency in English, affecting EMI delivery	“Teachers are not fluent in English”; “Not comfortable delivering in English”
Student Participation Challenges	Low student interaction in English due to hesitation or language limitations	“Students don’t engage in English in discussions”; “Students appeared confused”
Superficial Use of EMI	English used only for reading slides; explanations revert to L1, L2	“Teachers exclusively use English when presenting information from the data show, then explain the content in French”
Instructional Strategies and Tools	Use of visual aids such as data shows was observed, but often with minimal engagement or interaction.	“Teacher used data show in their classes”; “Teachers read from slides in English but switched to French.”
Classroom Environment and Atmosphere	The classroom was teacher-centered with limited peer interaction and little	“Students rarely spoke in class; teachers dominated the session.” (inferred pattern)

encouragement for English
communication.

Language Barriers and Code-Switching

Classroom observations showed that both instructors and students frequently alternated between English and other languages, particularly Arabic and French. Instructors often resorted to translating key concepts or switching languages entirely during explanations. Students were frequently observed responding in Arabic, even when questions were asked in English. This recurring use of multiple languages was a consistent feature across most observed sessions.

Instructor Language Proficiency and Comfort

Several instructors demonstrated difficulty in sustaining English throughout the lesson. We noted visible hesitation when speaking, as well as regular reliance on French language. Some instructors appeared uncomfortable delivering entire lessons in English, and their spoken English was sometimes limited in fluency and accuracy. These observations were consistent across multiple classrooms.

Students Participation Challenges

Students were generally reluctant to speak in English during classroom interactions. In most cases, students either did not respond to the teacher's questions or replied in Arabic. Few instances of student-initiated communication in English were recorded. Participation in English was minimal, both in teacher-led and peer-to-peer exchanges.

Superficial Use of EMI

In several observed sessions, instructors made use of English only for reading content from projected slides or texts, while the main explanations and interactions were conducted in Arabic or French. In these cases, English was used in a limited, scripted form rather than as the sustained medium of communication. EMI appeared to be implemented formally but not consistently integrated into classroom practice.

Instructional Strategies and Tools

Instructors were observed using technological tools, such as data shows, during their lessons. The use of these tools was mostly limited to projecting text or reading paragraphs aloud in English before switching to another language for explanation. While visual aids were present, their pedagogical use appeared limited to content display rather than fostering interactive or language-rich learning. Instructional strategies remained largely teacher-centered, with little use of task-based or communicative activities to support English use in the classroom.

Classroom Environment and Atmosphere

The classroom environment appeared to influence the delivery of EMI lessons. In some cases, the observations reflected a passive learning atmosphere, with minimal verbal exchange between the instructor and students. The seating arrangement and the overall classroom setup did not seem to encourage student interaction. Additionally, no observable group work or peer collaboration in English was recorded. The overall classroom culture leaned toward lecture-based delivery, with little evidence of language immersion strategies being integrated into the environment.

II.3. Interpretation And Discussion

This section discusses the main findings drawn from the analysis of data collected through student questionnaires, teacher interviews, and classroom observations, all focused on the use of EMI in the Faculty of Natural and Life Sciences, Department of Cellular and Molecular Biology at Khenchela University. These findings provide a clearer understanding of how both students and instructors experience EMI in real classroom settings and whether the initial assumptions of the study are supported by the data. Similar to findings by Macaro (2018), the data in this study reveal both promising attitudes toward EMI and a number of practical challenges in its implementation.

The findings from the student questionnaire revealed strong support for EMI. A large majority of students expressed positive attitudes toward the use of English in their academic program. Over 80% agreed that EMI enhanced their learning, increased their motivation to improve English skills, and contributed positively to their academic and professional future. Many students also believed that EMI could elevate the overall quality of education at their university.

This reflects the global trend of students in non-English-speaking countries perceiving English as a pathway to international education, employability, and research opportunities. In this case, students clearly recognize that fluency in English can grant them access to global scientific literature and facilitate participation in international academic networks. As such, their support for EMI is driven not only by internal institutional policy but also by external aspirations related to global mobility and career development.

However, this positive attitude is coupled with a desire for increased support. Many students recommended structured programs such as English for Specific Purposes (ESP) courses, use Bilingual Teaching Approaches, offer academic English courses or discipline-

specific English support before or during EMI programs, and access to visual and audio resources. This indicates that while students are willing and motivated, their success under EMI depends on the availability of adequate linguistic and pedagogical support. This proactive approach mirrors suggestions from Moroccan graduate students in a 2023 study by Ben Hammou and Kesbi, who advocated for gradual EMI implementation and early English language education to better prepare students for higher education demands.

Teachers in the Department of Cellular and Molecular Biology also expressed strong support for EMI, especially in terms of its relevance to their scientific field. They acknowledged that English is the dominant language in scientific publishing, conferences, and academic communication. Their support stems from the belief that EMI provides students with access to international resources and prepares them for participation in the global scientific community.

Nonetheless, their support was tempered by critical concerns about practical implementation. Teachers reported varying levels of confidence in using English for instruction. Most identified themselves as having only intermediate proficiency, and a few admitted to having received minimal training in English or EMI methodologies. Code-switching between English and Arabic or French was a common strategy, used to compensate for linguistic limitations, both their own and those of their students.

The instructors unanimously agreed that EMI policy in Algeria requires major reforms. All six instructors called for language training, pedagogical workshops, and better access to English-language teaching materials. Furthermore, most of them rated their students' English proficiency as low, which posed additional challenges to effective content delivery and classroom interaction. This dual-layered language issue, affecting both teachers and students, highlights the gap between policy ambition and classroom reality.

These challenges are echoed in a 2024 study by Dang , T.K, which emphasized the need for professional development programs to equip educators with the necessary skills for effective EMI delivery. The study highlighted that without adequate training, instructors may struggle with language proficiency and pedagogical strategies, potentially hindering the success of EMI programs.

The classroom observation provided a more nuanced and grounded perspective. While teachers attempted to use English during lectures, their reliance on code-switching and translation was evident. In many cases, English was used only to present content visually (e.g., reading from slides), while deeper explanations were given in Arabic or French. Student participation in English was limited, with many students reluctant to engage in discussions or ask questions in English. This observation aligns with findings from a 2024 study by Pun,J.K, which identified similar patterns of code-switching in EMI science classrooms. The study noted that such practices often result from instructors' and students' varying levels of English proficiency and the complexity of scientific content, leading to a hybrid instructional approach.

These patterns indicate that the use of EMI is still in a transitional stage. Instead of full use of English throughout the lessons, a mixed approach is being used, where English is present but not consistently used in classroom interactions and discussions. We noted teacher-centered classrooms with minimal peer interaction in English, limited communicative tasks, and a general hesitancy among students to use English spontaneously. This aligns with previous findings in EMI literature, where the shift to English is often more symbolic than functional in early stages of implementation, such as a 2024 study by Choi and Poudel, which reported that in EMI classrooms, especially in non-English-speaking countries, student engagement in English is often minimal due to lack of confidence and limited opportunities for active participation. The study emphasized the importance of creating interactive and student-centered learning environments to enhance language use and comprehension.

Moreover, all teachers were observed using visual aids and technology (e.g., data shows), but often without fully integrating them into an interactive, language-rich learning process. The result is a superficial use of EMI that emphasizes form over function, where English appears in materials but is not consistently used as the main tool for teaching and learning.

Conclusion

This chapter has presented an empirical exploration of EMI implementation within the Faculty of Natural and Life Sciences at Khenchela University, drawing on student feedback, instructor perspectives, and classroom observations. The findings reveal a generally positive attitude toward EMI among students, who see it as beneficial for their academic and professional futures, while instructors recognize its importance for accessing global scientific discourse. Nonetheless, both groups point to significant barriers, including insufficient training, language-related challenges, and inconsistent instructional practices. These results strongly align with findings from Macaro (2018) and Dearden (2014), both of whom highlight that the success of EMI depends not just on policy but on practical investment in training and materials. However, the current stage of EMI practice remains incomplete, marked by challenges in language proficiency, classroom interaction, and instructional consistency. These findings now lead to a reflection on key limitations and targeted recommendations, followed by a synthesis of the study's overall contributions in the general conclusion.

II.4. Limitations

The study had several limitations that should be acknowledged:

-The data collection took place during the month of Ramadan, which affected student attendance. As a result, only a limited number of students were available to participate in the study.

- Some instructors requested that the interview questions be reformulated into multiple-choice format rather than open-ended responses, which limited the richness of qualitative insights.

- Several instructors declined to be audio-recorded during the interviews, which may have limited the depth of data collected and the accuracy of subsequent analysis.

- When permission was requested to conduct classroom observations, some teachers asked to postpone the visits, stating they were not adequately prepared. This delay restricted the number and timing of classroom sessions observed.

- A few teachers declined permission for classroom observation altogether, which reduced the opportunity to observe EMI practices in action.

-Although we initially planned to conduct a t-test to compare groups, this analysis was not possible because the respondents did not specify their gender or group affiliation

II.5. Recommendations

Based on the analysis of student responses, teacher interviews, and classroom observations, several recommendations are proposed to improve the implementation of EMI in the Department of Cellular and Molecular Biology at Khenchela University. These suggestions aim to address the challenges identified in language proficiency, instructional practice, institutional support, and student engagement.

Firstly, it is essential to improve the English language proficiency of both students and instructors. The study revealed that limited language skills remain one of the most significant obstacles to successful EMI implementation. To address this, the university should offer structured English for Specific Purposes (ESP) courses tailored to scientific fields. These courses would help students develop the necessary vocabulary and communication skills to understand course content and engage confidently in classroom discussions. In parallel, instructors should receive regular English language training focused on academic instruction and scientific communication. This will enhance their ability to deliver lectures in English and reduce reliance on code-switching during explanations.

Secondly, professional development programs should be provided for instructors to support their adaptation to EMI. While language training is crucial, it must be complemented by pedagogical support. Instructors need to be equipped with effective teaching strategies suited for EMI environments. Pedagogical workshops focusing on classroom interaction techniques, student engagement strategies, and the integration of English-language resources should be regularly organized.

Thirdly, the university should consider adopting a gradual and structured approach to EMI implementation. Instead of introducing EMI abruptly across all modules, a phased model should be applied. For example, instructors can begin by using English primarily for introducing scientific terminology and reading materials, while offering bilingual explanations for complex concepts. This transitional phase would allow students and teachers to build confidence in using English without compromising comprehension or academic performance.

Fourthly, classroom practices should be improved to encourage active student participation in English. The study found that many students are hesitant to speak in English due to fear of making mistakes or lack of practice. Teachers should create more opportunities for students to use English in class through group activities, question-and-answer sessions, and

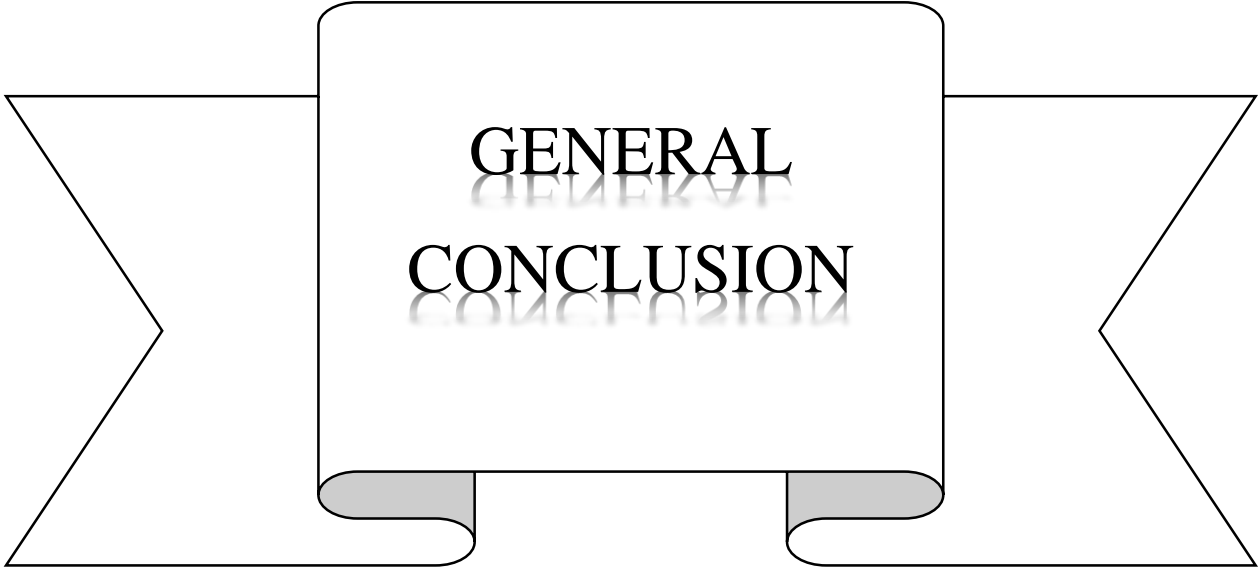
presentations. Incorporating interactive teaching methods, such as problem-solving tasks or peer discussions, can foster a more student-centered learning environment and improve both language use and scientific understanding.

Fifthly, specific support mechanisms should be introduced to assist students in their adaptation to EMI. These may include extracurricular programs such as conversation groups and tutoring sessions. Such initiatives would help create a learning-friendly environment that promotes English usage beyond the classroom. Students should also be given training in academic writing, note-taking, and oral presentation skills, which are critical for success in EMI settings.

Sixthly, To enhance the effectiveness of EMI, it is recommended that universities encourage collaboration between subject matter instructors and English language specialists. Such partnerships can lead to the development of EMI-adapted teaching materials and joint strategies that support both language development and content understanding. Additionally, integrating English language support courses alongside core scientific subjects would help students build the academic vocabulary and comprehension skills necessary for success in an English-medium environment. These measures would reduce the linguistic burden on both students and instructors and contribute to a more effective and inclusive EMI implementation.

Finally, continuous monitoring and evaluation of EMI practices should be carried out to ensure that progress is being made and challenges are identified early. Feedback from both students and teachers should be systematically collected and used to inform policy revisions, curriculum improvements, and training needs. By engaging all stakeholders in this reflective process, the university can adapt its EMI strategy over time and ensure that it remains responsive to actual classroom realities.

In conclusion, the implementation of English as a Medium of Instruction (EMI) in the Department of Cellular and Molecular Biology at Khenchela University presents both encouraging opportunities and pressing challenges. While students and teachers generally support EMI and recognize its academic and professional value, the findings of this study highlight the urgent need for targeted language training, pedagogical support, improved classroom strategies, and stronger institutional commitment. The recommendations provided aim to guide the university toward more effective, inclusive, and sustainable EMI practices. However, to further strengthen EMI implementation, it is crucial that new research be conducted at the university level. Future studies should explore the long-term effects of EMI on students' academic outcomes, language development, and employability after graduation. Additionally, research should examine how EMI affects teaching quality, disciplinary knowledge acquisition, and student motivation in other scientific and non-scientific departments. Comparative studies between departments that have adopted EMI and those still using Arabic or French could also provide valuable insights into the broader impact of language policy on higher education in Algeria. Such research will help us better understand how EMI works in real classrooms and will guide university leaders to make informed decisions. It will also help make sure that language policies meet the needs of both students and teachers in Algerian universities.



General Conclusion

This study aimed to examine the implementation of EMI in the Department of Cellular and Molecular Biology at Khenchela University, with a focus on the attitudes, experiences, and challenges faced by both students and instructors. The investigation was guided by three key objectives : to explore the attitudes and perceptions of second-year students and their instructors toward the use of EMI; to identify the main challenges encountered in applying EMI in teaching and learning contexts; and to examine the perceived impact of EMI on academic performance and knowledge acquisition in the scientific field of Cellular and Molecular Biology. In line with these objectives, the study tested the hypothesis which posited that students and instructors would hold generally positive attitudes toward EMI. Using a mixed-methods research design, data were gathered through three complementary tools: student questionnaires, teacher interviews, and classroom observations. Each tool contributed important perspectives to the analysis.

The student questionnaire provided mainly quantitative data showing that a large proportion of students supported the use of EMI. Many viewed English as essential for scientific learning, future career opportunities, and access to global research. However, they also reported challenges, including limited language proficiency, difficulty understanding lectures, and reliance on translation tools or peer support.

The teacher interviews offered quantitative and qualitative insights that further confirmed the positive overall perception of EMI. Instructors acknowledged the strategic importance of English in science and global academia. However, they also highlighted practical barriers such as students' low English proficiency, the lack of training for instructors, and insufficient institutional resources. All six instructors agreed that major policy adjustments and stronger support mechanisms are necessary.

The classroom observations provided direct evidence of how EMI is applied in real teaching contexts. Although English was used to deliver lectures and present materials, code-switching to Arabic or French was frequent. Student participation in English was limited, and instructors often struggled to maintain English throughout the lesson. These findings indicate that EMI is currently in a transitional phase, where full immersion is not yet achieved, and a hybrid approach is more common.

Together, the data confirmed the hypothesis, both students and instructors showed generally positive attitudes toward EMI, even though the practice remains inconsistent and challenged by several factors. The triangulation of data strengthened the reliability of the findings and provided a comprehensive understanding of EMI implementation in the department. It is clear that while there is support for EMI in principle, its successful application requires targeted interventions, including language training, pedagogical development, institutional reform, and continued evaluation.

This research concludes that EMI has the potential to enhance academic quality, international visibility, and student preparedness for global scientific engagement. However, to realize these benefits, universities must invest in capacity building, create supportive learning environments, and apply EMI policies in a gradual and flexible manner.

Finally, the study recommends that further research be conducted at Khenchela University and other Algerian institutions to explore EMI's long-term effects on learning outcomes, student success, and disciplinary knowledge across both scientific and non-scientific fields. Such research will not only deepen the understanding of EMI in the Algerian higher education context but will also guide evidence-based policy development that aligns with the real needs of teachers and students.

References

- Al-Bakri, S. (2021). English-medium instruction in the Gulf Cooperation Council (GCC) countries: A critical policy analysis. *Language, Culture and Curriculum*, 34(1), 27–41. <https://doi.org/10.1080/07908318.2020.1797083>.
- Alghamdi, A. K. H., & Elyas, T. (2022). The role of English in developing human capital in Saudi Arabia's Vision 2030: A critical discourse analysis. *World Englishes*, 41(2), 256–267. <https://doi.org/10.1111/weng.12542>.
- Al-Amri, M. (2011). *English as a medium of instruction in higher education in Saudi Arabia*. *World Journal of English Language*, 1(1), 1-10.
- Alseweed, M. A. (2023). Students' perceptions of English as a medium of instruction in Saudi higher education: Benefits and challenges. *International Journal of Language and Linguistics*, 11(1), 22–29. <https://doi.org/10.11648/j.ijll.20231101.14>.
- Amara, A. (2025). English-medium instruction in Algeria: Decolonizing education and expanding international partnerships. *Algerian Journal of Education and Society*, 9(1), 1–18. <https://doi.org/10.1234/ajes.2025.0123>.
- Ammon, U. (2004). *English as a global language: A threat to multilingualism?* A paper presented at the conference "Language and Communication in a Globalized World," 4th International Conference on Multilingualism.
- Annamalai, E. (2022). English medium instruction in India: A legacy of colonialism and the quest for elite status. *South Asian Journal of Education*, 33(2), 78–94. <https://doi.org/10.1080/09738178.2022.1934568>.
- Airey, J. (2012). "I don't teach language." The linguistic attitudes of physics lecturers in Sweden. In A. Doiz, D. Lasagabaster, & J. M. Sierra (Eds.), *English-Medium Instruction at Universities: Global Challenges* (pp. 13–34). Multilingual Matters.
- Airey, J., & Linder, C. (2006). Language and the experience of learning university physics in Sweden. *European Journal of Physics*, 27(3), 553–560. <https://doi.org/10.1088/0143-0807/27/3/009>.

- Aguilar, M., & Rodríguez, R. (2012). Lecturer and student perceptions on CLIL at a Spanish university. *International Journal of Bilingual Education and Bilingualism*, 15(2), 183–197. <https://doi.org/10.1080/13670050.2011.615906>.
- Ben Hammou, S., & Kesbi, A. (2023). English-medium instruction (EMI) in Moroccan higher education: Graduate students' attitudes. *Journal for Multicultural Education*, 17(1), 43–55. <https://doi.org/10.1108/JME-01-2022-0011>.
- Benrabah, M. (2013). The language planning situation in Algeria: The complex relationship between Arabic, Berber, and French. *Language Policy*, 12(2), 1–28. <https://doi.org/10.1007/s10993-013-9295-x>.
- Benrabah, M. (2023). Challenges in implementing English-medium instruction in Algeria: A case study of higher education in science and technology. *Language Policy*, 22(3), 301–319. <https://doi.org/10.1007/s10993-023-09756-2>.
- Belhiah, H., & Elhami, M. (2015). English-medium instruction in Moroccan higher education: Policy, challenges, and implications. *Language Policy*, 14(3), 337–356. <https://doi.org/10.1007/s10993-015-9373-3>.
- Belmihoub, D. (2018). The sociocultural implications of EMI in Algeria: Inequality and cultural identity. *Language in Society*, 47(2), 169–189. <https://doi.org/10.1017/S0047404518000420>.
- Bolton, K. (2004). *English in the World: The Internationalization of English*. In M. H. Long & C. J. Doughty (Eds.), *The Handbook of Language Teaching* (pp. 191-208). Wiley-Blackwell.
- Boukhanaouf, A. (2023). Faculty perceptions of EMI implementation at Constantine University. *Journal of Language and Education Policy in North Africa*, 5(2), 65–82.
- Boukacem, A., & Hamzaoui, M. (2024). Code-switching and the challenges of EMI in Algerian universities: A case study. *International Journal of Education and Development*, 16(2), 121–138. <https://doi.org/10.1504/ijed.2024.056230>.
- Boukhanouf, H. (2023). The impact of English-medium instruction on students' academic performance in Algeria: Issues and challenges. *Algerian Journal of Higher Education Research*, 12(2), 149–165. <https://doi.org/10.11648/ajher.2023.1223>.

- Bouzidi, H. (2022). EMI in Morocco: Attitudes, Merits, Challenges, Strategies, and Implementation. *ResearchGate*.
- Canagarajah, S. (2005). Reclaiming the local in language policy and practice. *The Modern Language Journal*, 89(3), 399–417. <https://doi.org/10.1111/j.1540-4781.2005.00304.x>.
- Choi, J., & Poudel, T. (2024). English-medium instruction as an internationalisation strategy at a second-tier Chinese University: Instructors' challenges and their shaping factors. *Asian-Pacific Journal of Second and Foreign Language Education*, 9, Article 45. <https://doi.org/10.1186/s40862-024-00295-9>.
- Dearden, J. (2014). English as a medium of instruction : A growing global phenomenon. *British Council*. https://www.teachingenglish.org.uk/sites/teacheng/files/pub_english_as_a_medium_of_instruction.pdf.
- DAAD. (2023). English-taught programs in Germany: A guide for international students. DAAD. Retrieved from <https://www.daad.de/en/study-and-research-in-germany/plan-your-studies/english-taught-programs>.
- Dafouz, E., & Smit, U. (2020). *Roadmapping English medium education in the internationalised university*. Palgrave Macmillan.
- Doiz, A., Lasagabaster, D., & Sierra, J. M. (2011). Internationalisation, multilingualism and English-medium instruction. *World Englishes*, 30(3), 345–359. <https://doi.org/10.1111/j.1467-971X.2011.01718.x>
- Draper, P. (2023). EMI in Asia: Pedagogical challenges and cultural resistance. *Journal of Asian Englishes*, 45(3), 289–302. <https://doi.org/10.1080/13488678.2023.1916782>.
- Flowerdew, J., Li, Y., & Miller, L. (1998). Lectures in a second language: Understanding teachers and students. *English for Specific Purposes*, 17(2), 121–140. [https://doi.org/10.1016/S0889-4906\(97\)00027-0](https://doi.org/10.1016/S0889-4906(97)00027-0).

- Galloway, N. (2020). *Global Englishes and Change in English Language Teaching: Attitudes and Impact*. Routledge.
- Galloway, N. (2023). EMI and English language teaching in Japanese universities. *Asia Pacific Journal of Education*, 43(1), 33–49.
- Grandguillaume, G. (2004). Arabization in Algeria: Linguistic, social, and political dynamics. *International Journal of the Sociology of Language*, 167, 1–20. <https://doi.org/10.1515/ijsl.2004.033>.
- Hamid, M. O. (2013). Sociolinguistics and language education in developing countries: EMI policies in Asia. *Routledge*.
- Hamid, M. O. (2023). English language ideology and EMI in Southeast Asia. *Language Policy Review*, 5(1), 13–28.
- Hesperess. (2023). The role of language support in the successful implementation of English-medium instruction in Morocco: A policy perspective. *Hesperess Education*, 22 March 2023. <https://www.hesperess.com/education/emi-implementation-morocco>.
- Hultgren, A. K. (2023). English-medium instruction in the Nordic countries: A comparative perspective. *Journal of English for Academic Purposes*, 59, 5-14. <https://doi.org/10.1016/j.jeap.2023.101071>.
- Khelifa, A. (2022). English-medium instruction at the University of Science and Technology Houari Boumediene: Challenges and opportunities in the STEM fields. *Journal of Higher Education Policy*, 25(1), 45–59. <https://doi.org/10.17507/jhe.2501.04>.
- Kirkpatrick, A. (2011). Internationalisation or Englishisation? Medium of instruction in today's universities. *Centre for Governance and Citizenship, HK Institute of Education*.
- Kirkpatrick, A. (2022). The evolution of EMI in East Asia: A comparative overview. *Asian Englishes*, 24(3), 267–285.

- Kuteeva, M. (2022). Disciplinary variation and ESP/EMI tensions in Swedish higher education. *ESP Today*, 10(1), 15–36.
- Kuteeva, M., & Airey, J. (2023). Integrating content and language in EMI: Swedish university teachers' views and practices. *Language Teaching Research*, 29(4), 533–556. <https://doi.org/10.1177/13621688211046402>.
- Lillis, T., & Curry, M. J. (2010). *Academic writing in a global context: The politics and practices of publishing in English*. Routledge.
- Li, L., & Zhang, Q. (2023). The impact of EMI on Chinese higher education: A study of university students' attitudes. *Asia Pacific Journal of Education*, 43(1), 50–64. <https://doi.org/10.1080/02188791.2022.1994845>.
- Macaro, E. (2019). *The teaching of English as a foreign language in a multilingual world*. Routledge.
- Martínez, A. G. (2023). The role of English as a medium of instruction in European universities: Challenges and outcomes. *Language and Intercultural Communication*, 23(2), 171–186. <https://doi.org/10.1080/14708477.2023.2055165>.
- Mahboob, A., & Lin, A. (2016). *English medium instruction in universities: Global challenges and local responses*. Springer.
- Müller, P. (2013). English-medium instruction in European higher education: Policy, challenges, and implementation. *European Journal of Education*, 48(3), 357-374.
- Miller, A. (2020). English-medium instruction and its implications for language policy in higher education. *Language and Policy Review*, 15(1), 1–13.
- Phan, L. H. (2023). EMI and identity politics in postcolonial universities in Southeast Asia. *Language and Education*, 37(1), 1–15.

- Popescu, I. A., & Almonte, R. D. (2024). The role of English in academic settings: EMI policies and faculty challenges in Latin America. *International Journal of Education Policy*, 9(3), 34–47.
- Pun, J., & Thomas, N. (2020). English-medium instruction in Hong Kong: Teacher perceptions. *ELT Journal*, 74(2), 153–163. <https://doi.org/10.1093/elt/ccz063>.
- Sert, N. (2008). The language of instruction dilemma in the Turkish context. *System*, 36(2), 156–171. <https://doi.org/10.1016/j.system.2007.11.006>.
- Smit, U. (2014). The implementation of English-medium instruction in higher education: A language policy issue. *Language in Education*, 28(2), 124–137. <https://doi.org/10.1080/09500782.2014.888136>.
- Wilkinson, R. (2013). English-medium instruction in higher education: A case study of the University of Barcelona. *International Journal of Bilingual Education and Bilingualism*, 16(6), 731–743. <https://doi.org/10.1080/13670050.2013.822270>.
- Zhu, H., & O'Dowd, R. (2023). English-medium instruction in Chinese higher education: Moving forward with interdisciplinary research. *Language Teaching Research*, 27(4), 521–542. <https://doi.org/10.1177/13621688221075174>.

APPENDECIES

1. Questionnaire

Dear Participant,

Thank you for taking the time to complete this survey. The purpose of this likert-scale questionnaire is to explore students' perspectives on the implementation of English as a Medium of Instruction (EMI) in higher education. Your responses will help us in understanding how EMI affects learning experiences, academic performance, and professional prospects.

Your participation is entirely voluntary, and all responses will remain anonymous.

If you have any questions or concerns, feel free to contact the researcher.

Please indicate your degree of agreement to the following statements by T ticking (√) the corresponding answer on the likert-scale range (Strongly Agree through Strongly Disagree).

EMI : IMPLEMENTING ENGLISH AS A MEDIUM OF INSTRUCTION

Survey statements	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
I support implementing English as the medium of instruction in my field of study.					
Using English as a medium of instruction benefits my learning experience					
English as a medium of instruction enhances my future career opportunities.					
I am motivated to improve my English skills because of English as the medium of instruction.					
I feel comfortable understanding lectures delivered in English					
I sometimes need to switch to Arabic or French to express/discuss my ideas in class.					
I experience difficulties expressing my thoughts or asking questions in English during class.					
English as the medium of instruction has positively influenced my comprehension of course content.					
I have no problem understanding the content of my studies and what i learn in English.					
I seek support and help from my classmates who understand English.					
I use a dictionary to understand unfamiliar terms.					
English as the medium of instruction has helped me better understand the material.					
English as the medium of instruction has influenced my overall academic achievement in a positive way.					
I find it challenging to complete assignments in English.					
I feel encouraged to participate in class discussions conducted in English.					
The English-language materials (textbooks, articles, etc.) offered in my classes are beneficial.					
I find studying English-language materials to be challenging.					
I have received sufficient support from the teachers to help me adapt to English as the medium of instruction.					
Additional support (e.g., more tutoring and English language education) is necessary for better adaptation to English as the medium of instruction.					

I recommend English as the medium of instruction to future students.					
I have received sufficient support from the university /faculty/ department to help me adapt to English as the medium of instruction.					
I believe that using English as the medium of instruction will enhance the quality of education at my university.					

What do you recommend to improve the implementation of English medium of instruction in your specialty and at university in general?

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

If you have any additional things to add about this topic, please feel free to write them down here:

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

Thank you for your collaboration

2. Structured Interview

Interview Introduction:

Dear Participant,

Thank you for agreeing to take part in this interview. The purpose of this discussion is to explore your perspectives on the implementation of English as a Medium of Instruction (EMI) in higher education. Your insights will help us understand how EMI influences learning experiences, academic performance, and professional opportunities.

1. What is the main area in which you specialize?

- a) Humanities
- b) Social Sciences
- c) Natural Sciences
- d) Engineering/Technology
- e) Other (please specify)

2. How many years have you been teaching at the university level?

- a) 1-3 years
- b) 4-6 years
- c) 7-10 years
- d) More than 10 years

3. What is your level of English proficiency?

- a) Beginner
- b) Intermediate
- c) Advanced
- d) Native-like

4. How do you feel about the implementation of EMI in your university?

- a) Strongly supportive
- b) Somewhat supportive
- c) Neutral
- d) Somewhat opposed
- e) Strongly opposed

5. Do you believe EMI will help students get better jobs in the future?

- a) Strongly agree
- b) Agree
- c) Neutral

- d) Disagree
- e) Strongly disagree

6. Do you think that EMI supports your institution's educational objectives?

- a) Strongly agree
- b) Agree
- c) Neutral
- d) Disagree
- e) Strongly disagree

7. How confident are you in teaching your subject in English?

- a) Very confident
- b) Somewhat confident
- c) Neutral
- d) Not very confident
- e) Not confident at all

8. Have you received specific training to improve your English teaching skills?

- a) Yes, extensive training
- b) Yes, some training
- c) Minimal training
- d) No training

9. How would you rate the English proficiency of your students?

- a) High
- b) Moderate
- c) Low
- d) Very low

10. How often do you code-switch (change between languages) during lectures?

- a) Always
- b) Often
- c) Sometimes
- d) Rarely
- e) Never

11. How challenging is it to prepare course materials in English?

- a) Very challenging

- b) Somewhat challenging
- c) Neutral
- d) Not very challenging
- e) Not challenging at all

12. Do you enrich your lectures using other English-language resources, such as articles or videos?

- a) Always
- b) Often
- c) Sometimes
- d) Rarely
- e) Never

13. Has the shift to EMI affected your teaching effectiveness?

- a) Improved significantly
- b) Improved somewhat
- c) No change
- d) Decreased somewhat
- e) Decreased significantly

14. In your opinion, has EMI impacted students' understanding of the subject?

- a) Significantly improved
- b) Somewhat improved
- c) No impact
- d) Somewhat worsened
- e) Significantly worsened

15. Has EMI affected the standard of education in your field as a whole?

- a) Significantly improved
- b) Somewhat improved
- c) No impact
- d) Somewhat decreased
- e) Significantly decreased

16. Has the university provided enough support and assistance to help you adjust to EMI?

- a) Always
- b) Often
- c) Sometimes

- d) Rarely
- e) Never

17. What other resources or forms of assistance do you think EMI needs?

- a) Language training
- b) Pedagogical workshops
- c) Access to English-language resources
- d) Mentorship or peer support
- e) Other (please specify)

18. Do you believe that EMI is a viable strategy for Algerian higher education?

- a) Strongly agree
- b) Agree
- c) Neutral
- d) Disagree
- e) Strongly disagree

19. Would you suggest making any changes or modification to the existing EMI policy?

- a) Yes, major modifications needed
- b) Yes, minor modifications needed
- c) No changes needed
- d) I am not sure

20. Should EMI be restricted only to certain fields or expanded to other disciplines, in your opinion?

- a) Expanded to all disciplines
- b) Maintained in current fields
- c) Reduced to a few key fields only
- d) Phased out completely

21. Please provide any additional comments or suggestions regarding the implementation of EMI in your academic experience.

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Thank you for your collaboration

3. Observation Grid

Observation number :

Date:

Time/ Part of the day (morning/afternoon):

Specialty:

Level:

Teacher:

Category	Observation criteria	Frequency (Always/often /sometimes/ never)	Notes/ comments
Language use	Instructor delivers lectures entirely in English		
	Instructor switches between English and another language (e.g., Arabic, French).		
	Instructor encourages students to ask and respond in English.		
	Instructor uses translation to clarify key terms		
Classroom Interaction	Instructor engages students in discussions or Q&A in English		
	Students demonstrate understanding of the content in English.		
	Code-switching by students during interactions.		
Challenges Observed	Students seem hesitant to engage in English.		
	Instructor shows signs of difficulty using English fluently.		

General Notes	Contextual factors affecting EMI delivery (e.g., class size, technical issues).		
	Overall observations or additional remarks about the class environment, culture, or teaching strategies.		

الملخص

لقد أصبحت اللغة الإنجليزية اللغة العالمية الأولى في مجالات التواصل الدولي والبحث العلمي. وفي هذا السياق، تبنت العديد من الدول، بما في ذلك الجزائر، اللغة الإنجليزية كوسيلة للتدريس في التعليم العالي. تهدف هذه الدراسة إلى استقصاء مواقف كل من الطلبة والأساتذة تجاه تطبيق التدريس باللغة الإنجليزية (EMI). وقد تم اعتماد منهج بحثي مختلط يجمع بين الأساليب الكمية والنوعية، حيث تم جمع البيانات من خلال استبيانات موجهة للطلبة، ومقابلات معمقة مع الأساتذة، إضافة إلى ملاحظات صفية. تم اختيار العينة بشكل عشوائي، حيث شمل الاستبيان 50 طالبًا، وأُجريت مقابلات مع ستة أساتذة، كما تم تنفيذ أربع ملاحظات صفية، بحيث تمت ملاحظة كل أستاذ في حصتين مختلفتين. كشفت نتائج الدراسة أن غالبية الطلبة يُبدون دعماً قوياً لاستخدام اللغة الإنجليزية في التدريس، ويُقرّون بفوائدها في تعزيز التحصيل الأكاديمي وفتح آفاق أوسع في سوق العمل. كما عبّر الأساتذة عن وعيهم بأهمية التدريس باللغة الإنجليزية في تطوير التعليم العلمي وتعزيز فرص الانخراط في البحث الأكاديمي الدولي. ومع ذلك، أشار كل من الطلبة والأساتذة إلى تحديات قائمة، من أبرزها ضعف الكفاءة اللغوية في اللغة الإنجليزية، إلى جانب نقص الدعم المؤسسي اللازم لإنجاح هذا التحول. وتخلص الدراسة إلى أن تطبيق التدريس باللغة الإنجليزية يحمل إمكانيات واعدة لتعزيز الأداء الأكاديمي والانفتاح العالمي للطلبة، غير أن نجاحه مرهون بتجاوز العقبات اللغوية والبيداغوجية من خلال توفير الدعم والتكوين المناسبين.