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Faculty of Letters and Languages

Department of English

**Exploring Teachers' and Students' Attitudes towards the
French-English Transition at the Computer Science
Department in Ibn Khaldoun University**

*This dissertation is submitted to the Department of English for the fulfilment of the
requirements for a Master's degree in Didactics*

Supervised by:

Submitted by:

Dr. BENAMOR Youcef

Miss: LOUKRIF Mounia Feriel

Miss: TAHAR Karima

Board of Examiners

Chairman Dr. TOUBEIDA Mustapha Ibn Khaldoun University-Tiaret

Supervisor Dr. Youcef BENAMOR Ibn Khaldoun University-Tiaret

Examiner Dr. Moulay HACENE Yacine Ibn Khaldoun University-Tiaret

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Dedications

At times, our own light goes out and is rekindled by a spark from another person. Each of us has cause to think with deep gratitude of those who have lit the flame within us.

Dad, your strength has shown me the value of hard work and perseverance. Your wisdom and unwavering belief in my abilities have been my guiding forces.

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Abstract

The French-mediated content teaching and learning strategies and methodologies employed in the Algerian higher education scientific institutions and faculties are undergoing significant changes in light of the recent English-ization drive. These changes reflect a broader trend towards the adoption of English as a medium of instruction, impacting both students and faculty members. Within this context, this study aims to investigate the potential transition from French to English by examining the attitudes of instructors and students at the Department of Computer Science, Ibn Khaldoun University, Tiaret. Adopting an exploratory research design with a mixed-method approach, a questionnaire that was constructed on Brown's (1995) Language Curriculum Development model was administered to a purposefully selected sample of Computer Science students (N=25), and an interview was conducted with their teachers (N=3). The quantitative and qualitative analysis revealed that in spite of their acknowledgment of the challenges that would hamper the English-sation process, approximately both students and their teachers showed positive attitudes towards the adoption of English as a medium of instruction. Precisely, half of the participants acknowledged the significance of English, with the majority suggesting its use as an instructional medium in other modules. Calling for a more smooth instructional transition from French to English, the three interviewed instructors likewise concurred on the benefits of incorporating English as a medium of instruction.

Keywords: Brown's (1995) model, Computer Science, English-mediated instruction (EMI), English-ization, French-mediated instruction

Table of Contents

Dedications.....	i
Acknowledgments.....	ii
Abstract	iii
Table of Contents	iv
List of Figures	vi
ABBREVIATIONS AND ACRONYMS	vii

Chapter One: Conceptual and Thematic Literature Review

Introduction	4
1.1 Background and Conceptual Understanding	4
1.1.1 English for Specific Purposes ESP	5
1.1.2 Content and Language Integrated Learning.....	5
1.1.3.1 The Reasons behind Adopting EMI	6
1.1.3.2 EMI Implementation Challenges	7
1.1.4. The conceptual Triad and its Relevance to Higher Education Settings.....	7
1.2. The Status of ESP and CLIL in the Algerian Higher Education.....	9
1.2.1. ESP in Algerian Tertiary Education.....	9
1.2.2. CLIL in Algerian Tertiary Education.....	10
1.2.2.1. CLIL Implementation Initiatives and Challenges.....	11
1.2.2.2. CLIL Implementation Partnership Project.....	12
1.3. Brown's (1995) Language Curriculum Development Model	13
1.3.1. Significant Importance of Brown's (1995) Approach.....	13
1.3.2. Curriculum Development Major Systems (Brown, 1995)	14
1.3.3. Six-stage Process of Brown's Curriculum Development.....	16
1.3.3.1. Needs Analysis	16
1.3.3.2. Goals and Objectives	16
1.3.3.3. Testing	17
1.3.3.4. Materials Development.....	17
1.3.3.5. Teaching.....	18
1.3.3.6. Programme Evaluation	18

Chapter Two: Research Contextualization, Design and Methodology

Introduction.....	22
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2.1. EMI in the Algerian Tertiary Education.....	22
2.1.1 English Status in Algerian Higher Education	23
2.1.2 The English-isation Process of the Algerian University.....	24
2.1.3 The Instructional Transition from French to English	26
2.1.4 The Instructional Transition Challenges	27
2.1.5 EMI in Computer Science Department.....	28
2.2. Research Design and Methodology	29
2.2.1. <i>Case Study and Mixed-Method Approach</i>	29
2.2.2 Participants' Context and Sampling Techniques.....	29
2.2.3. Data Collection Methods and Procedures.....	30
2.2.3.1 The Students' Questionnaire	30
2.2.3.2 The University Teachers' Interview.....	30
2.2.4. Data Analysis Methods and Procedures.....	31
2.2.4.1. Quantitative data analysis Techniques	31
2.2.4.2. Qualitative Data Analysis Techniques	Erreur ! Signet non défini.
2.2.5. Ethical Considerations	31
Chapter Three: Results, Discussion and Recommendations	
Introduction.....	37
3.1. Results / Findings	37
3.2. Discussion.....	50
3.3 Recommendations	54
Conclusion	54
General Conclusion.....	56
References	59
Appendix A. Students' Questionnaire	65

List of Figures

Figure 1.1	12
Figure 1.2	20
Figure 3.1	38
Figure 3.2	39
Figure 3.3	40
Figure 3.4	40
Figure 3.5	41
Figure 3.6	42
Figure 3.7	42
Figure 3.8	43
Figure 3.9	44

ABBREVIATIONS AND ACRONYMS

CLIL : Content and Language Integrated Learning.

EFL : *English As a Foreign Language* .

EMI : English as a Medium of Instruction.

ESP : English for Specific Purposes .

ICLHE: *integrating content and language in higher education* .

ILTC: Intensive Language Teaching Center.

LMD : License, Master, Doctorate.



**GENERAL
INTRODUCTION**

General Introduction

English language serves as a fundamental medium for communication and a vital channel for cultural exchange in our interconnected world. English has replaced French as the main language of instruction in Algerian colleges, marking a dramatic change with far-reaching effects. Following a statement by Tayeb Bouzid, the former minister of higher education, who supports switching to English (2019), He suggested introducing English in universities as the language of instruction instead of French. This shift is in line with a global trend that sees English becoming the standard language in academic settings in an effort to improve competitiveness and international collaboration. The choice to use English in Algerian institutions has generated discussions about how it would affect students; language skills, and teachers. The discrepancy between what students can understand and what they can convey is a major problem in EMI contexts.

In light of the previous discussions, the purpose of this paper is to have an idea about the opinions of teachers concerning the challenges they faced in the implementation of English as a medium of instruction as well as their recommendations and suggestions to facilitate the integration or the transition from French to English as a medium of instruction. As an overall aim, this dissertation tries to perform an investigation about the idea of transition from one language to another in Algerian higher education, with some specific objectives.

This exposure can help students develop critical thinking skills, broaden their perspectives and preparing them for engaging with a global academic community and To demonstrate the importance of English and to raise the visibility of research in higher education, Also To enhance the quality and relevance of education in Algeria. However, thinking again about the fact that English occupies a primordial place in the world, it is the medium of instruction in universities, and the motivation to go through this research attempting to answer the following questions:

Q1: What are the attitudes of the Computer Science students toward the instructional shift from French to English?

Q2: In what ways would the shift from French to English instruction impact teaching methods in Algerian higher education?

Q3: How challenging is students' adaptation to the new English-mediated content learning environment?

General Introduction

To reach reliable answers to the raised questions, the following hypotheses have been suggested:

H1: If they are cognizant of today's scientific facts, students will have a favorable attitude toward shifting to English.

H2: The transition to English as the primary language of instruction in Algerian higher education would help students comprehend the material more easily and become more engaged due to the teachers' use of interactive and student-centered teaching methods

H3: When switching to an English-mediated curriculum in higher education, students may first encounter problems to grasp abstract and technical academic ideas.

In order to check the validity of the set hypotheses and achieve the objectives of this research, we have opted for a mixed methodology of both quantitative and qualitative approaches. For the quantitative approach structured questionnaire based on Brown's model (1995) is distributed to a sample consisting of twenty five students at Computer Science department in the Faculty of Math and Computer Science at Ibn Khaldoun University. For the qualitative approach, an interview is addressed to three teachers at the same research setting. Such study points the importance of studying and reporting students and teachers' attitudes towards English-ization of science education. The findings of this study might help Algerian authorities, universities and the academic staff to develop appropriate educational programs in this course.

To achieve the objectives of the research, this work is divided into three chapters. The first chapter provides an overview of ESP and CLIL and the Implementation of EMI challenges and its reasons , also the model of curriculum design by Brown and its stages of curriculum development. The second chapter offers broad facts regarding the state of English in Algeria, more focusing on computer science department at Ibn Khaldoun university, in addition the implementation of EMI challenges, moreover it sets the stage for the upcoming research design and methodology ; quantitative analysis and qualitative interview , and interpretation of the findings are all covered in the third and the last chapter.



CHAPTER ONE

Conceptual and Thematic Literature Review

Chapter one: Conceptual and Thematic Literature Review**Introduction**

This chapter integrates the concepts of ESP and CLIL alongside Brown's model of curriculum development, by exploring how these methodologies such as *needs analysis goals and objectives*, *Testing, Materials development, Teaching*, and *program evaluation*, intersect with the transition from French to English in Algerian higher education. It also sets the stage for an in-depth exploration of the challenges and opportunities presented by the incorporation of ESP, CLIL, and Brown's model in the curriculum development process during the language transition.

1.1 Background and Conceptual Understanding

These days, it is widely acknowledged that English is a lingua franca and is essential to life in many spheres. This is especially valid when it comes to education. To give an example, for educational purposes, many nations have in recent years made English an official language or chosen it as their chief foreign language in schools (Crystal, 2003, p. 110). Furthermore, according to Crystal (2003), English has become the normal medium of instruction in higher education in many countries and is increasingly adopted by several nations this language has no official status.

AlBakri (2017) states that there are a number of justifications for using English as a medium of instruction (EMI). First of all, English is widely used around the world. Due to its dominance in a variety of academic sectors and online, where 54% of the top 10 million websites are in English, citing W3Techs (cited in McCarthy, 2019). Additionally, it is believed that students' mastery of English will be promoted by learning content through English (AlBakri, 2017, p. 48). Another reason to use EMI is to raise the standard of education. According to Hamid et al (cited in AlBakri, 2017, p. 49), particularly in developing countries, good education is often perceived as English education; it is also critical to acknowledge that English is a crucial language in the engineering profession.

There is a growing movement in several countries to use English as the academic language of instruction (Coleman, 2006; Knight, 2008). English is currently used as a teaching medium at some university departments in Expanding Circle nations (see Kuchru, 1985), where English is not the major language of education or commerce, due

to the tendency of many higher education institutions to have a strong international character. Additionally, English is taught as a subject (Morrison, 2016). Several additional nations have lately expressed interest in adopting English as the language of instruction, at least at the postsecondary level. The increasing and pervasive usage of English in scholarly and research circles has sparked discussions among scholars over the function of English as a lingua franca.

1.1.1 English for Specific Purposes ESP

English for Specific Purposes (ESP) is a branch of language education focused on teaching English tailored to specific fields, such as business, science, or technology. It addresses the unique vocabulary, skills, and communication needs relevant to particular professional or academic contexts, making language learning more relevant and practical for learners.

1.1.2 Content and Language Integrated Learning

Content and Language Integrated Learning (CLIL) is an educational method where subjects are taught in a foreign language, combining content learning with language acquisition. This approach enhances both subject knowledge and language skills, using authentic contexts and encouraging higher-order thinking. CLIL promotes meaningful learning and cultural awareness, preparing students for global challenges.

1.1.3. English as a Medium of Instruction (EMI)

English Medium Instruction (EMI) can be pinned down as "the use of the English language to teach academic subjects (other than English itself) in countries or jurisdictions where the majority of the population does not speak English as their first language" (Macaro et al., 2018, p.37). According to this definition, nations with English as their official language—Australia, Canada, New Zealand, the United Kingdom, or the United States—that make up the so-called inner circle would not be eligible for EMI.

The term English as a medium of instruction (EMI) simply refers to the use of the English language during classroom teaching, when different subject matter is presented and taught in the language. Furthermore, the concept may be understood in terms of how it is applied with respect to other aspects. For instance, EMI refers to teaching all topics in English as outlined in the curriculum. Additionally, EMI refers to the usage of English in professional courses taught in that language. Furthermore, EMI might entail

conducting English-language lectures while supporting the students' acquisition of the topics covered in the curricula of the schools and universities.

The use of the English language to teach academic subjects in countries or jurisdictions where the first language (L1) of the majority of the population is not English is how Dearden (2014, p. 1) defines EMI. He adds that the use of English as a medium of instruction (EMI) for academic topics like physics, mathematics, geography, and medicine is rapidly changing on a global scale. Universities, secondary institutions, and even elementary schools are using EMI more and more these days.

1.1.3.1 The Reasons behind Adopting EMI

AlBakri (2017) states that there are a number of justifications for using English as a medium of instruction (EMI). First of all, English is widely used around the world. due to its dominance in a variety of academic sectors and online, where 54% of the top 10 million websites are in English, citing W3Techs (cited in McCarthy, 2019). Additionally, it is believed that students' mastery of English will be promoted by learning content through English (AlBakri, 2017, p. 48). Another reason to use EMI is to raise the standard of education. According to Hamid et al (cited in AlBakri, 2017, p. 49), particularly in developing countries, good education is often perceived as English education; it is also critical to acknowledge that English is a crucial language in the engineering profession.

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1.1.3.2.EMI Implementation Challenges

Dearden (2014) noted that there are a number of problems with EMI practice around the world, such as a lack of EMI-qualified teachers and teaching resources, uncertainties about which subjects should be taught in English, the age at which EMI begins, the absence of a set English proficiency requirement for EMI teachers, the role of the teacher, and the functions of language centres and professional development. ‘EMI’ is more appropriate for higher education where English is first of all used as the medium of instruction.

In the best-case scenario, students become a barrier since they don’t comprehend the lesson taught in English, even when teachers possess the necessary communication ability (Oktaviani, 2019). Their poor communication skills and low level of English proficiency may prevent them from participating in class discussions, leading to low achievement on their part. To close the communication gap and rekindle students’ enthusiasm and drive for the sessions, teachers typically turn to code-switching (Oktaviani, 2019). However, according to Lin (2016, p. 78), EMI instructors need to acquire the following skills: awareness of language demands, authentic integration of content and language, high expectations and high support, and designing explicit and visible pedagogy.

The ability of EMI teachers to effectively use English resources and communication strategies to display new concepts and information, impart goals and expectations for tasks, monitor students’ understanding and learning, adjust instruction as needed, and provide feedback on students’ performance are all crucial components of their content-teaching in First Language (L1) instruction (Pun, 2022).

1.1.4.The conceptual Triad and its Relevance to Higher Education Settings

Since all three concepts (i.e., ESP, CLIL & EMI) mostly integrate English as a language of instruction with different degrees of integration, it would be more than appropriate to begin with demystifying the term, *Englishization*. Wilkinson and Gabriëls (2021) describe *Englishization* as the process by which English is progressively taking over in some specific spheres (primarily education, politics, culture, and economy) where another language was previously employed. English is definitely superior in the field of higher education, as evidenced by the fact that numerous academic activities

(publications, master's-level instruction, etc.) now take place in English, depriving the vernacular of both prestige and space.

The terms Englishization, CLIL (content and language integrated learning), ICLHE (integration of content and language in higher education), and EME (English-medium education) are frequently used in conjunction with the term EMI despite the fact that writers frequently use them interchangeably or favor one over the other.

Both content and language integrated learning (CLIL) and English for special purposes (ESP) have different initial goals for teaching a second language in particular disciplinary contexts when they were first introduced at different socio-historical moments. The goal of ESP is to teach and learn English to meet the communicative needs of specific learners in a particular domain, while the goal of CLIL is to teach and learn subject content and an additional language at the same time (Ball et al., 2016; Coyle et al., 2010; Dalton-Puffer, 2016). (Hutchinson & Waters, 1987; Işık- Taş & Kenny, 2020; Paltridge & Starfield, 2013; Robinson, 1991). Differences between CLIL and ESP, despite their initial differences, are difficult to make because they both deal with teaching a second language—foreign, culture, or community language—through particular subject areas

Comparing CLIL and EMI is also necessary to clarify their relevance to higher education, CLIL is a far more prevalent word used at the pre-university level to describe an explicit dual focus on language and content. Even though there is no doubt about the linkages between CLIL and EMI, many scholars at the tertiary level use the term EMI instead of CLIL since EMI university instructors do not integrate language and content. According to Aguilar (2017), content is EMI's top goal. While accidental language acquisition is anticipated (Banegas & Manzur Busleimán, 2021), there are often no precise language objectives.

According to several research studies (e.g. Macaro, 2018), language is not evaluated in EMI programmes, and there is a noticeable lack of collaboration between content and language lecturers (unlike in CLIL, where such collaboration is not just suggested but also cultivated). Similarly, Pecorari and Halmström (2018a) found that 87 percent of the 496 papers they reviewed using the acronym EMI were conducted in

tertiary education settings, confirming the tight relationship between EMI and higher education.

The term ICLHE, which stands for "integrating content and language in higher education," is being widely used in higher education research studies, but it is not limited to English. We also come to the conclusion that there is not enough data from studies to say that EMI helps with language learning or that it is unquestionably bad for content learning. Additionally, it seems that not enough research has been done to show how classroom discourse may be used to model the sort of practice that can produce positive results. We contend that issues with research technique, both at the micro and macro levels, are partially to blame for this deficiency.

1.2. The Status of ESP and CLIL in the Algerian Higher Education

1.2.1. ESP in Algerian Tertiary Education

For almost fifty years, English for Specific Purposes (ESP) has been the focus of much interest, particularly in research. "Situations where the student has some specific reasons for wanting to learn a language" is how Harmer (2001) defined ESP.

French has been given precedence over English in the North African region for numerous administrative, professional, and educational objectives. However, due to the linguistic demands of the modern, globalized world, English is becoming more prevalent in these areas. The largest nation in the continent and in this region, Algeria is gradually embracing English as a first foreign language due to the growing demand for English language instruction among professionals and students in various fields. As a result, learning English is essential to surviving in the modern world of globalization, where it serves as the lingua franca—a language that people from different linguistic backgrounds use to communicate with each other. In order to stay in touch with the outside world, learning English has become crucial for many communities. More precisely, educated people typically pick up English to stay current on events in their community and new developments in any field in which they are experts.

English is the focus of both students' and teachers' attention at the Algerian University. The former want to study the language in order to advance more academically and acquire an advantage over their classmates. For their instructional and research aims, the latter require more up-to-date and recent data in order to reach a wider audience. They

also require an effective oral communicative skill for conferences, symposiums, and oral contact with colleagues worldwide.

The fact that Algerian universities do not provide sufficient specialized ESP courses cannot be overstated. It's possible that this assessment of the ESP situation in Algerian colleges is off. However, students from various specialties take this course for granted because ESP courses are given to undergraduate English students at random and lack set syllabi. Additionally, ESP courses are given less credit and coefficient than specialty modules. As a result, it is neglected that one of the key elements influencing intellectual, social, and economic development is English.

Benyelles (2009) reports that various collaborations between the Algerian Ministry of Higher Education and Scientific Research and a few British universities—Glasgow, Manchester, Leeds, Sheffield, Nottingham, and Salford—led to the creation of the ESP center.

Through the arrangement, some Algerian students will be assisted in enrolling in full-time postgraduate programs, fostering British-Algerian cooperation in scientific and technology-related disciplines. As a result, three ESP centers were established in the Algerian cities of Oran, Algiers, and Constantine. Their primary goals were to offer ESP courses on-site, assist various ESP units in developing closer ties with British universities, and establish the prerequisites for ESP teachers and subject matter experts with advanced degrees from the Anglo-Saxon countries.

At the ESP centers, Algerian professionals and foreign missionaries arranged various trainings and seminars for the specialized ESP teachers. Unfortunately these collaboratively established ESP centers had been soon dissolved. According to Benyelles (2009), the Ministry of Higher Education and Scientific Research's rejection of the ESP centers' request to legalize their position and their lack of legal standing are the primary causes of the centers' dissolution.

1.2.2. CLIL in Algerian Tertiary Education

According to Marsh & Langé (2000), one of the modern and effective strategies created to assist pupils in becoming multilingual is CLIL. Teaching disciplines other than English, like science, geography, history, mathematics, and physical education, applying the foreign language in place of the pupils' home tongue is known as this technique.

For educators, implementing CLIL is challenging and demanding because it requires a shift in work from traditional methods to new ones that are supported by this approach. As was previously said, CLIL is a type of bilingual education that integrates language and subject matter equally. However, based on the demands, the focus can at times change.

CLIL is rather a new concept in the Algerian Educational landscape. Therefore, not many teachers have had sufficient initial knowledge in English-medium CLIL. Hence, it is still an on-going new-born project in the Algerian Education. In Algeria in particular, as well as throughout the world, there is a notable lack of application of CLIL despite its developing popularity and potential advantages. One of the main challenges is the lack of trained teachers who are knowledgeable about both subject areas and English.

1.2.2.1. CLIL Implementation Initiatives and Challenges

The Algerian Ministry of Higher Education and Scientific Research has initiated programs to assist the implementation of CLIL in universities across the nation, realizing its significance. English is a crucial language for international communication and business, so raising students' English language ability, topic understanding, and learning motivation is one of the key reasons Algeria is interested in CLIL.

By combining language and topic learning in a way that encourages students' critical thinking and problem-solving abilities, CLIL is thought to be a means of improving Algerian education. Furthermore, the application of CLIL (with English serving as the *lingua franca* and preferred language) fosters bilingualism, multilingualism, and intercultural understanding. In summary, Algeria has been motivated to enhance its students' English language skills and better equip them for the global market by implementing CLIL in its higher education institutions.

The Ministry lists the following objectives in the agenda for the implementation of the English-medium project of Integrated Content and Language Teaching in Higher Education: creating a strong system for teaching dual languages; encouraging plurilingualism in the educational system; modernizing and internationalizing education through the adoption of fresh, cutting-edge pedagogical approaches; and creating links between subjects in the curriculum on both a horizontal and vertical plane. The Ministry also hopes to see increased linguistic competency among instructors and students as well

as tighter coordination and collaboration between Higher Education Institutions and foreign universities.

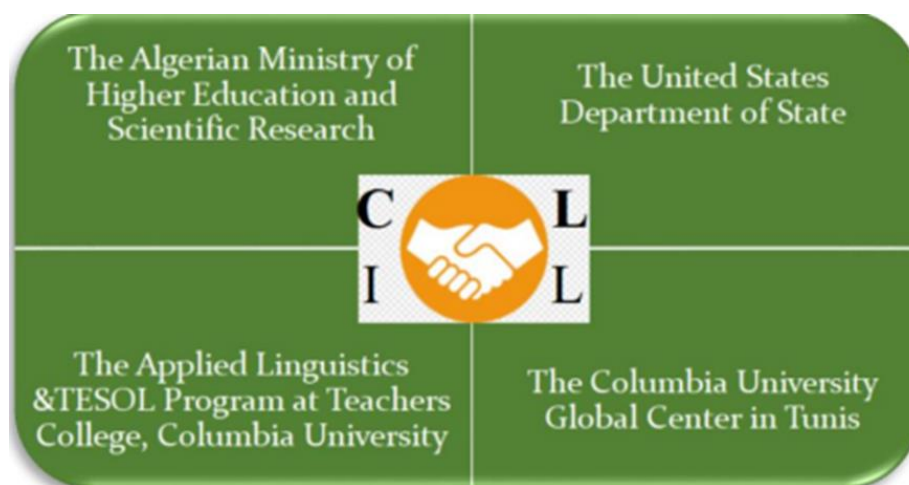
However, the transition to a teaching environment based on CLIL is not a simple procedure. The main cause of this is the absence of practice foundation and incomplete definition of the CLIL method for the Algerian setting. Thus, implementing CLIL in Algerian higher education can be difficult, but it can be done so successfully with the help of a well-thought-out roadmap.

1.2.2.2. CLIL Implementation Partnership Project

In January 2021, Professor James Purpura and his AL/TESOL research team experts including Donna Brinton, Brian Carroll, and Kimberly Tan at Teachers College, Columbia University, have embarked on a visionary three-year grant project entitled “Strengthening English Language Programming for Integrated Language and Content Teaching (ILCT) in the Algerian Higher Education Context”. The United States Department of State, the Columbia University Global Center in Tunis, the Teachers College (TC) of Columbia University, and the Algerian Ministry of Higher Education and Scientific Research are collaborators in this project in four different ways. Figure 1 shows a schematic illustration of the Four-way Partnership Program, highlighting the collaborative and interrelated aspect of the project.

Figure 1.1

A Four-way Partnership Program



Note. (Makhlouf & Hanifi, 2022)

Professors Purpura and Voss from TC and Donna Brighton from the University of California, Los Angeles, will provide integrated language and subject training to English language educators in Algeria throughout the project's latter two phases.

Thus, on behalf of the CEILs of Algerian Universities, some representatives of the Foreign Language Teaching Center of Hassiba Ben Bouali University of Chlef attended a conference in Algiers on Saturday, May 28, 2022, to Sunday, May 29, 2022, which gathered American experts from Teachers College Columbia University, Algerian experts in English language teaching, and the first cohort of teachers participating in the ILCT project (UHBC CEIL, 2022). A member of the steering committee, the CEIL of Hassiba Benbouali University of Chlef, gave insights into the project's effective execution in Algerian universities. As a result, Algerian universities will receive higher-quality English instruction in the areas of education, technology, and scientific cooperation thanks to a three-year, \$500,000 project (Henache, 2021).

1.3. Brown's (1995) Language Curriculum Development Model

James Dean Brown's "Model of Curriculum Design" is a seminal work in the field of curriculum development that has had a significant impact on educational theory and practice. This book, first published in 1964, offers a comprehensive framework for designing effective and meaningful curricula that align with the needs and goals of students, teachers, and society as a whole. The foundation of Brown's methodology is an organized, iterative process consisting of seven steps: (1) goal definition; (2) resource identification; (3) content selection; (4) content organization; (5) creation of learning experiences; and (6) evaluation. This book is a vital tool for instructors of all stripes since it thoroughly explains each step and provides real-world examples to support it.

1.3.1. Significant Importance of Brown's (1995) Approach

Brown's approach has the advantage of emphasizing the significance of formulating precise and unambiguous goals for every subject area. With this method, pupils are guaranteed to know exactly what is expected of them and how they will be evaluated. Additionally, Brown's model urges teachers to take into account the needs and interests of their students in addition to the human, material, and technological resources at their disposal.

Brown's model's emphasis on content structure and selection is another important component. Instead of just providing a broad range of topics, Brown contends that curriculum designers should choose content based on its relevance, coherence, and depth. Brown also stresses how crucial it is to arrange information in a logical and relevant way in order to promote student learning and engagement.

All things considered, "Model of Curriculum Design" is a timeless masterpiece that is still significant and important today. Because of its rigor, clarity, and practicality, it is a priceless tool for educators who are dedicated to creating excellent curriculum that support students' learning and achievement. "This book is a must-read for anyone involved in curriculum development or reform," one reviewer stated.

The following additional information regarding James Dean Brown's "Model of Curriculum Design" emphasizes its importance and impact:

- i. Brown's approach is based on constructivist ideas, which highlight how learning is both constructive and active. This method acknowledges that when students actively participate in the learning process and create their own conceptual frameworks, they acquire the material most effectively
- ii. Global educators and institutions like UNESCO and the World Bank have embraced and modified Brown's methodology extensively. Additionally, it has been translated into a number of languages, including Chinese, Spanish, and French.
- iii. AERA (American Educational Research Association) awarded Brown the Research Review Award in 1985 for his contributions to curriculum theory and practice, one of many accolades and honours bestowed onto his model. 2018 saw Brown's posthumous induction into the International Academy of Education Hall of Fame in honour of his profound influence on educational theory and practice.

1.3.2. Curriculum Development Major Systems (Brown, 1995)

A curriculum is composed of certain specific elements. From Brown's (1995) perspective, a curriculum usually contains a general statement of goals and specific objectives based on learners' needs. Besides, it indicates a certain selection and organization of contents/ materials, as well as the appropriate methodology and testing

tools required to achieve the intended goals/objectives. A curriculum also requires an overall program evaluation of the entire outcomes, as illustrated in the following figure.

Curriculum development in this methodology begins with needs analysis, which seeks to pinpoint issues and provide answers. Setting up goals and objectives, which relate to both intended learning outcomes and particular skills/knowledge that students need to master, is made easier by using needs analysis. To evaluate the extent to which the aims and objectives are achieved, language testing is included. The teaching component talks about the kinds of help language teachers require in order to teach effectively. Ultimately, assessment is the continuous process of evaluating and refining the five components that were previously discussed.

Approaches, syllabi, tactics, and exercises are the four categories into which Brown (1995) divided these language teaching activities. The grammar-translation method and the communicative approach are two examples of approaches that define what and how students need to learn. Approaches are founded on theories of language and language learning. The course contents, comprising structural, topical, skill-based, and task-based components, are arranged in syllabi.

Techniques are methods for teaching and presenting the content. These consist of talks on language rules, dialogues that demonstrate grammar, and discussions. The methods of practicing what has been provided include fill-in, cloze, copying, and restatement exercises. The course contents, comprising structural, topical, skill-based, and task-based components, are arranged in syllabi. Techniques are methods for teaching and presenting the content. These consist of talks on language rules, dialogues that demonstrate grammar, and discussions. Different teachers will have different theories and approaches, and many will employ a combination of them, along with varying syllabi, tactics, and exercises, depending on what they feel their students need in order to learn successfully and efficiently.

In order to create and manage a language curriculum, Brown uses a systems approach that makes program development logical and incorporates elements of several models. According to Brown, developing a curriculum is "a series of activities that contribute to the growth of consensus among the staff, faculty, administration, and students," so it is a continuous process.

1.3.3. Six-stage Process of Brown's Curriculum Development

Six interrelated activities make up the approach: *needs analysis, objectives, testing, materials, instruction, and evaluation*. In a nutshell, needs analysis for a given institution is the methodical gathering and examination of data indicating what is required to meet the language learning requirements of the students. Objectives, meaning precise statements on the abilities and topics the students should master to accomplish greater goals, must be set.

1.3.3.1. Needs Analysis

A common misconception about needs analysis in language programs is that it only refers to identifying the language forms or skills that a student will need to know in order to understand and speak the target language. The learners are the analytical focus, and their requirements are understood in terms of language. Beyond language needs and concerns, students have other needs and worries. Therefore, it is imperative to recognize the learner's non-linguistic requirements in addition to their human ones. Consequently, this implies that this broader understanding of requirements should be incorporated into the concept of needs analysis. One definition of needs analysis is the methodical gathering and examination of all pertinent data required to meet students' language learning needs within the framework of particular institutions involved in the learning situation.

1.3.3.2. Goals and Objectives

Determining the needs of a group of language learners logically leads to the establishment of goals, which are broad declarations of what has to be done to meet the needs of the students. Conversely, objectives are explicit declarations of the material or abilities that students need to grasp in order to achieve a specific aim. The process of defining goals and considering the elements required to accomplish the program's objectives will result in the analysis, synthesis, and clarification of the knowledge and abilities required to satisfy the language demands of the students. The line that separates goals from objectives is not always obvious because the distinction between the two has to do with the degree of clarity. Still, the differentiation will be helpful in developing and sustaining language curricula. A program's discussion on meeting and satisfying students' linguistic needs can only be as explicit and clear as the resulting objectives. Because they can meet the demands of many students, who differ in terms of specificity themselves,

objectives can take many different shapes and have varying degrees of specificity, even within the same program.

1.3.3.3. Testing

The next natural step in developing a curriculum is creating assessments based on the aims and objectives of the program. Program goals and objectives may require the creation of lengthy tests for a variety of program reasons, such as achievement, diagnostic, and language proficiency testing, all of which can be extremely difficult to create. It is ultimately vital and valuable to look into the time, money, and resources needed to build a reliable testing program. Early in the process, planners can prevent waste in the critical and frequently costly material creation stage that follows by gathering as much information as possible about demands and objectives. A curriculum can be made cohesive and given a sense of coherence, purpose, and value by using sound assessments. A curriculum can be made cohesive and given a sense of control, purpose, and coherence by using sound testing. Exams have the power to steer a curriculum by influencing both teachers' and students' expectations.

1.3.3.4. Materials Development

Curriculum designers can begin addressing the issue of materials in a logical manner after they have at least drafted versions of needs analysis, objectives, and exams. Adopting, creating, or modifying resources for a program that has clear goals, objectives, and assessments is not too difficult. Selecting the best approach to implementing materials (adopt, develop, or adapt) is made simpler when we take into account the following questions:

- Is it possible to use materials that are currently available to meet the needs of the students?
- Do they need to be produced from scratch if there are no pre-made materials available?
- Should the current materials be modified to satisfy the requirements of the students and the goals of the program?
- Should adaptation be necessary?
- Will it be a small-scale or large-scale process?

Planners in the materials development process will greatly benefit from having precise needs analysis, objectives, and testing. In general, it is preferable to leave decisions on approaches, methods, tactics, and syllabuses to the people (teachers) who are there and have the most firsthand knowledge of the circumstances (student level, time constraints, etc.).

1.3.3.5. Teaching

Both professors and students should be informed about the goals of each course as well as the procedures for the final exam. In order to achieve these goals, educators require assistance as well as participation in the creation and modification of curricula. The fact that students, administrators, and other instructors are involved in establishing the goals of the course and the needs of the students can benefit all teachers. Historically, the instructor has been the only one responsible for this procedure. Course materials and exam creation have also fallen within the purview of teachers. Both professors and students should be informed about the goals of each course as well as the procedures for the final exam. In order to achieve these goals, educators require assistance as well as participation in the creation and modification of curricula.

Teachers shouldn't be expected to complete these extremely difficult duties (needs analysis, goal-setting, task creation, adoption, development, and adaptation of materials) by themselves. To the extent that it is feasible, curriculum designers should provide teachers with the assistance they need in their careers.

1.3.3.6. Programme Evaluation

The definition of evaluation might be described as "the methodical gathering and examination of all pertinent data required to encourage curriculum development and to appraise its efficacy within the specific institutions concerned" (Brown 1995, p.24). This description would be quite similar to the requirements analysis definition previously provided. In fact, the evaluation procedure ought to resemble a continuous wants assessment, but it should be grounded in much more superior data. Usually carried out in the early phases of curriculum creation, a requirements analysis requires a significant amount of professional judgment in addition to questionnaires, linguistic analyses (tests), and interview techniques. On the other side, evaluation may make use of all the data and resources mentioned above to determine how successful a program is, but may also make use of all the data acquired during the following procedures: (a) creating objectives; (b)

creating and utilizing exams; (c) adopting, creating, or modifying resources; and (d) instructing.

The process of "continuously gathering, analyzing, and synthesizing information with the ultimate goal of continuously improving each element of a curriculum on the basis of what is known about all the other elements, separately as well as collectively," is what is meant to be described as program evaluation" (Brown 1995, p.24). It is feasible to evaluate a curriculum's quality once it is implemented and to maintain it continuously with the help of such an ongoing evaluation method. When curriculum is seen as a finished product, it cannot be changed. When curriculum is seen as a process, it may adjust to new circumstances, whether they are new student demographics, modifications to language theory, new institutional political demands, or something entirely different.

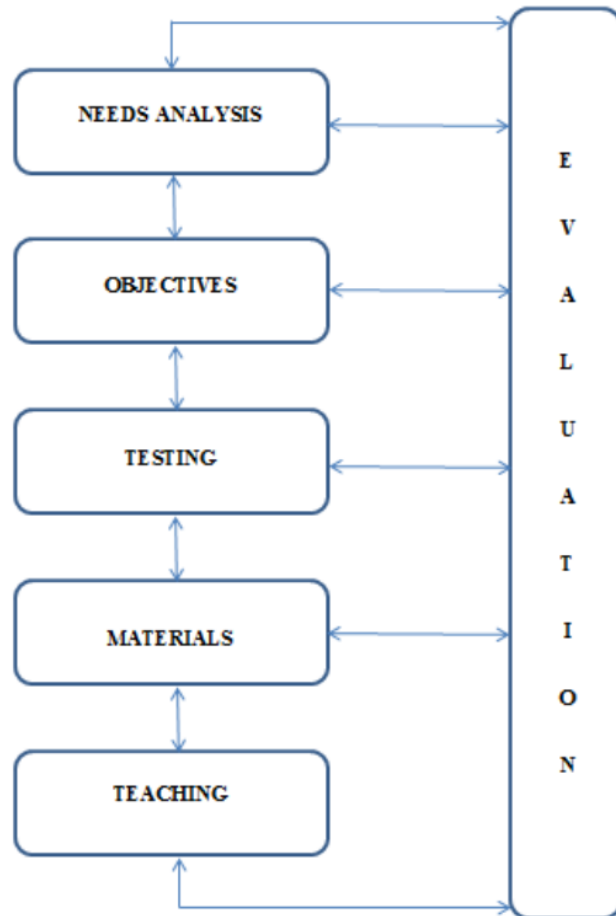
Evaluation is the highest, most intricate, and most useful phase of learning, according to Bloom et al. (1956). Evaluation is done to not only determine what is valuable but also to develop conclusions and acquire lessons that might guide future decisions. For instance, curriculum evaluation can entail assessing how the curriculum affects student performance and modifying the curriculum as necessary. Additionally, it might entail evaluating the method used to create the curriculum, the product's quality without calculating its impact, or the application of the product with respect to various purposes.

A curriculum evaluation is conducted to:

- Assess its influence on student outcomes, public satisfaction, employment prospects, economic development, etc. and to take appropriate action;
 - Revise its design and content in light of recent advancements in social, technological, economic, or scientific fields.
 - Reassess learning objectives, such as developing professional learning abilities; update content and design in accordance with new advancements in educational research and paradigms;
 - Attract financing; Make worldwide comparisons and report back to a donor.
- (Bloom, 1956)

Figure 1.2

Systematic Approach to Designing and Maintaining Language Curriculum



Note. (Brown, 1995, p.20)

Conclusion

This chapter attempted to touch upon the integration of ESP, CLIL, and EMI in the curriculum transition from French to English in Algerian higher education. Discussing how the incorporation of these methodologies alongside Brown's model influences the curriculum development process and shapes the learning experience for both teachers and students. By addressing the role of EMI in this shift.



CHAPTER TWO

Research Contextualization,
Design and Methodology

Chapter two: Research Contextualization, Design and Methodology**Introduction**

This chapter sheds light on the academic status of English in the Algerian higher education, we will hone in on Ibn Khaldoun University with more focus on Computer Science department such as: teachers, students, modules, and the implementation of EMI in teaching and learning content. Also this chapter has shown the shift from French to English Known as English-ization, with the common institutions that attempt to use EMI. The students' questionnaire and teacher's interview instrument, which were used to conduct the research, are presented in the second section of this chapter, in addition to the description of the methodology used in conducting this research.

2.1. EMI in the Algerian Tertiary Education

English language instruction in Algerian higher education appears to be advancing along the same path of popular and official endorsement. The Algerian academic community was asked to participate in an online survey in July 2019 by Taib Bouzid, the former Algerian minister of Higher Education and Scientific Research to determine the level of support for the advancement of English in higher education. 94.3 per cent of the 94741 respondents agreed that there should be more English used in scientific research and higher education (Echorouk online, 2019). The minister clarified in an interview with the Algerian Radio that increased international recognition is necessary for the Algerian institution to rank higher particularly in the fields of science and technology; this cannot be accomplished without publishing in English (Radio Algerie, 2019). The minister gave an order on July 21, 2019, to have Arabic and English headings on all official documents in order to increase the visibility of the academic and scientific activities of Algerian higher education institutions. This was part of an initiative to improve the use of English in Algerian universities (Elbilad, 2019). In addition to this stated goal, the action appears to conflict with Algerian universities; official documentation is written in French.

In an additional initiative, the ministry requested in August 2019 the establishment of a "brain trust" including six linguists and members of the top management team to develop a roadmap to encourage the use of English in Algerian-Hungarian education (Maghreb voices, 2019). The minister clarified that in order for Algerian students to successfully integrate into their economic environment, they must be

fluent in English. Additionally, for improved knowledge and expertise exchange, Algerian universities must be accessible to their international environment (Alaraby, 2021).

Several significant choices were made by the current Minister of Higher Education and Scientific Research, Kamel Baddari, to encourage the use of English in the Algerian academic system as a whole. The senior leadership in higher education appears to be taking a comprehensive approach to improving English learning and instruction in universities across the nation. To achieve this aim, it is imperative that all instructors receive English language instruction. The ministry designated level B2 or C1 of the CEFR as the training objective, particularly for English for Special Purposes (ESP). These courses ought to be offered in university English departments or in intensive language learning institutes. The main goal is for all institutions of higher learning to begin offering English-language courses in the academic year 2023–2024.

2.1.1 English Status in Algerian Higher Education

Algeria had to keep up with the times to remain in the unparalleled race between developed and emerging nations. The majority of English language classes should ideally aim to provide a broad standard of real English that can be used outside of the classroom. However, in a lot of Algerian circumstances, things like a lack of time or a high student-teacher ratio make this objective appear unachievable. It goes without saying that adopting English as the primary language of instruction can present both opportunities and challenges for learners and non-native English teachers.

Setting goals for learning English as a foreign language has proven challenging for Algeria, a nation that has seen instability in the selection of languages used in school. For instance, students are frequently questioned about why they choose to specialize in English studies in higher education. “Because I like it; because it is the language of the world; and this was the only thing I could do with my marks, but it wasn’t my choice” are common responses they provide. It is vital to set settings for learning in such a situation.

Another observation is that our pupils’ motivation to learn is mostly derived from their grades. Algeria implemented the Bologna Process principles in 2004–2005, following their implementation in Europe in 1999. New training options tailored to the particular requirements of the nation have taken the place of conventional programs and

curriculum. New approaches to linguistics were founded on the ideas of personal development and mobility.

The Algerian Ministry has designated separate commissions to assess the master and license offerings at the higher education level. The latter was forced to depend on the creative approaches of linguistic competency. Several steps need to be taken at the curriculum design and integration level in order to make the LMD architecture more advantageous. Achieving success would require the following viewpoints:

1. Organizing and assessing the requirements of the students in relation to the socioeconomic market,
2. Expanding vocabulary and speech expressiveness using multimedia,
3. Promoting student growth through mobility
4. Fostering collaboration across academic institutions with similar goals and interests.
5. Establish listening cells and audits to document the suggestions made by pupils.
6. Use English as a language of instruction to get pupils ready for vocations.
7. Consider learner practice more than teacher explanations;
8. Schedule time for really communicative activities rather than only practicing language forms;
9. Tailor their instruction to the requirements of their students rather than just getting through the material on the syllabus or course book [10].

However, students also need to understand how important it is to study English as a source of knowledge as well as a topic. Genuine achievement in mastering the English language is not acknowledged by students.

2.1.2 The English-isation Process of the Algerian University

Imagine someone telling you, in 1900, “Guess what the universal language of science will be in the year 2000?” as you looked around the world. You would laugh at them first of all. Since it was evident that no language could be the language of science, Michael Gordin stated that a combination of French, German, and English would be the best option (Porzucki, 2014). Since the British Empire ruled over most of the world,

English has been extensively used everywhere, and this trend has continued as the USA has emerged as a major force in politics and culture. The amount of scientific information available is rather astounding: an old estimate placed the number of scientific journal articles at over 7000. English is now the language of science. Information Age English is progressively being recognized as a tool of advancement in the globalized world of today, where it is thought to be the primary language for scientific inquiry, technological advancement, and educational advancement.

Therefore, the Algerian authorities have always been interested in using English as a teaching tool in Algerian universities. They have recently started to take concrete steps towards the formal integration of the language in higher education, changing traditional pedagogical practices to fit the current teaching transformations that have reached Algerian universities. Truly, English has not only developed into a vital component of international education curricula and, moreover, a recognized tool for lesson delivery, but it has also become a lingua franca that breaks down barriers to communication and a means of conducting various international transactions.

English, however, is still, as it were, in its infancy in Algerian universities, and widespread its use among the university community of teachers is a gradual process that calls for a lot of time, coordinated efforts, and a multifaceted program to achieve its full integration in the higher education setting. As a result, there is general agreement among Algerians and the authorities alike that English acts as a bridge for the internationalization of Algerian universities because academic and scientific predominance coexist with this highly prevalent language. It is important to note that French, a language of former colonizers and consequently a second language after Arabic, has had a significant influence on Algerian society and numerous other areas of the nation, including higher education, for many years after the country's declaration of independence. Therefore, this has created an additional motivation to move from French to English, freeing the Algerian university from the constraints of French-oriented instruction.

Accordingly, the choice to use English as a medium of instruction at the university level has not been made in a vacuum; rather, it is the result of various factors. Furthermore, the officials overseeing scientific research and the Ministry of Higher Education in Algeria have encouraged teachers to use English as a teaching tool, even

though they are aware of this difficult process. They also want them to gradually move away from traditional academic settings and help Algerian universities gain comprehension globally. Therefore, the Algerian authorities felt that, in order to meet the demands of the twenty-first century, a gradual but drastic change was required. They felt that, in order to keep up with global trends in education, they needed to further internationalize Algerian higher education and raise the country's university to the top of the international ladder.

2.1.3 The Instructional Transition from French to English

The Algerian people and authorities have long sought the chance to switch from French to English. Indeed, they desired to devalue a language that brought back memories of 132 years of French colonization. Furthermore, as English became a more powerful worldwide language, French began to lose its position of power. Accordingly, Benrabah (2013) points out:

The goal of a French replacement was dual for Algerian language strategists. For modernity and technological advancement to be facilitated, the language to be adopted must first pass French in global dominance. A second need was that the language be free of the permanent marks of colonialism. The decision was made to choose English as the replacement for French, since it turned out to be the option with the greatest benefits (p.90).

Because its use fails to bring back memories of the past, the English language has consistently achieved the highest degree of consensus among the Algerian people. It was felt that English, as a historically neutral language in the Algerian context, would be able to play the modernizing role that was hoped for from French, but without the colonialist and non-Islamic associations (Benrabah, 2013). This process of switching from French to English began as soon as the country gained independence, even if at the time there was a growing realization that it would take time to happen. Thus, for many years, there have been several attempts to break the French monopoly on higher education. However, because the language is used in practically all academic transactions, this has proven to be an extremely difficult undertaking.

Because of the harsh criticisms levelled at the French language predominance in Algerian higher education curricula, the Algerian authorities tried to ensure a smooth

transition from French to English through this language policy. Because of this, a number of measures have been implemented recently to reduce the dominance of the French language and increase the usage of English. A lot of universities, schools and institutions are attempting to use English as a medium of instruction. The following provides a list of some of these higher education institutions:

- 1)Algiers University 2
- 2) École Supérieure en Sciences Appliqués
- 3) ENS Bouzarea
- 4)University M'hamed Bougara Boumerdes
- 5)Zian Achour University- Djelfa
- 6)University Mohamed Boudiaf- M'sila
- 7)Aflou University Centre
- 8)Quasdi Merbah University- Ouargla
- 9)ENS Constantine INATA – Constantine
- 10)Brothers Mentouri University Constantine
- 11)Mohammed Lamine Debaghine -Setif 2
- 12)Mila University Centre
- 13)Tlemcen University
- 14)Djilali Lyabes University- Sidi Bel Abbas ,
- 15) Ibn Khaldoun university in Computer Science Department – Tiaret

2.1.4 The Instructional Transition Challenges

The decision made by the Ministry of Higher Education to adopt English at university concerns mostly these teachers who belong to the scientific specialties since their teaching medium is mainly the French language. Fluency in English is a need for any career involving computer programming. In general, English is now the universal language of communication

The teachers were asked about the obstacles that they currently encounter in adopting English as a medium of instruction in the classroom and Due to a combination of factors, including low language proficiency among most learners and a lack of readiness on the part of both teachers and students, the majority of teachers reported finding it challenging to switch from French to English in the classroom. Also, as they work to get the necessary grade and have little internal incentive to study English for

other objectives, the teachers have observed that some of the pupils do not seem to be very interested in learning the language.

When presenting the topic in English, some professors brought up the students' comprehension issues because most of them still struggle with the language and do not have a strong command of it. The majority of teachers mentioned how the mother tongue interferes, while some others claimed that code-switching between the three languages during class discussions prevents students and teachers from fully embracing English as the language of the classroom. The teachers also emphasized how little the students knew about language and vocabulary connected to their English areas of specialization. Teachers found it extremely difficult to teach students the specialty language at first because so much of their time was spent training them. The teachers brought up the subject of how curriculum demands to reach targets limit successful language adoption in favour of focusing more on how to meet targets. The majority of educators cited the deficiency in proper in-service training for educators about the teaching and research of English.

Overall, Algerian English teachers understand the value of having a university where English is the primary language, meaning that students can use it for both scientific study and instruction. Teachers do, in fact, prefer to highlight the challenges that still need to be overcome in order to remove English as a foreign language and bring Algerian universities into the global arena, even though they generally have good attitudes toward its promotion in higher education.

2.1.5 EMI in Computer Science Department

EMI is a significant aspect of the Computer Science Department at Ibn Khaldoun University of Tiaret. EMI can greatly benefit students by providing a language-rich environment to enhance their English proficiency while studying technical subjects. Two specialized modules taught in English such as machine structure ,algorithmic and data structure. When we talk about exams , the teachers do their exams in English ,and all of them agreed that they are comfortable assisting in designing and correcting English exams . The English language curriculum has been developed by team of experienced teachers and curriculum developers in the Ministry of Higher Education. It is well aligned with the learning objectives of my modules and provides relevant and practical material that enhances the overall learning experience. For the students of computer science

department most of them prefer to study more modules in English , and recognize the importance of English and strongly believed that there should be a shift from french to English because it is so beneficial to open the doors to a world of learning and professional growth.

2.2. Research Design and Methodology

In this section, we aim to elucidate the rationale behind conducting this study, outlining the structure, main components, research questions, and hypotheses. The adoption of a case study coupled with a mixed-method approach, specifically a descriptive research design, will be thoroughly discussed. This approach integrates both quantitative and qualitative methodologies to provide a comprehensive understanding of the shift from French to English in Algerian higher education.

2.2.1. Case Study and Mixed-Method Approach

The adoption of a case study with a descriptive research design offers a holistic exploration of computer science department . This mixed-methods approach integrates quantitative and qualitative methodologies, providing in-depth insights into teaching and learning practices using EMI . By focusing on individual cases and collecting both numerical data from questionnaires and rich narratives from interviews, the study aims to offer comprehensive and nuanced findings. This approach allows for a thorough examination of the complexities within the field while ensuring validity and reliability through triangulation of data..

2.2.2 Participants' Context and Sampling Techniques

The study's context encompasses the exploration of perspectives within the use of English as a medium of instruction in the computer science department, involving two distinct categories of participants: computer science teachers and students. The selection of these participants was purposeful, chosen for their direct involvement and unique insights into the subject matter. Computer Science teachers, who typically have professional experience in the field, offer valuable perspectives, curriculum development, and challenges within the use of English as a medium of instruction in the Computer Science department, and we already chose the teachers who were implicated by the use of English during their classes. Meanwhile, first year Computer Science students provide firsthand experiences, preferences, and feedback on their learning journey using English as a medium of instruction instead of another language.

2.2.3. Data Collection Methods and Procedures

This section discusses the methodology for data collection using questionnaires and interviews. It highlights the structured design and administration processes for both instruments. Questionnaires aimed for quantitative data through closed-ended questions, while interviews sought qualitative insights via open-ended inquiries. The procedures ensured clarity, consistency, and ethical standards. The approach underscores a comprehensive strategy for capturing diverse perspectives on the research topic.

2.2.3.1 The Students' Questionnaire

Depending on the Language Curriculum Development model developed by Brown (1995), we used a questionnaire for this investigation. a questionnaire directed to first-year students, contains 12 questions, and is divided into four sections. The first section's questions are mainly about language use in academic settings. The second and third sections focused on students' opinions and perceptions about the importance of the English language in their field (computer science specialism), and the section number four questions were about students' satisfaction and suggestions regarding the use of English in their department. and that helps us understand the challenges, benefits, and overall opinions on this language transition in scientific content teaching. Students' questionnaire is composed of 12 questions. It contains rating scale questions, and close-ended questions. The targeted sample from the Computer Science Department was approximately 30 students. But we only received 25 answers.

2.2.3.2 The University Teachers' Interview

The interview may be regarded as a more reliable instrument. It is intended for educators who have been charged with using EMI. As it allows personal explanations, it is a good method. Teachers would make clear the terms of teaching EMI in the Computer Science department. They would show the difficulties they have while teaching EMI. Therefore, they might suggest some solutions. There are questions on using English as a teaching language instead of French in the online interview that was sent to three science department teachers at Ibn Khaldoun University. Most interviewees agreed that there are advantages to utilizing English as a teaching language, including more chances for cross-border collaboration and easier access to resources around the world. especially when it comes to enhancing their employability in the global labor market. Nevertheless, others also voiced worries about the possible negatives, such as linguistic

obstacles that could affect both students and teachers, lower comprehension and learning outcomes, and the possible marginalization of pupils who don't speak English well.

2.2.4. Data Analysis Methods and Procedures

In this section, we focus on the methods used to analyze data collected from questionnaires. We employ Excel for closed-ended questions, utilizing descriptive statistics to summarize responses. For open-ended questions, we use content analysis to identify recurring themes. Our systematic approach ensures accuracy and clarity in our interpretations, facilitating a robust exploration of the data.

2.2.4.1. Quantitative data analysis Techniques

Analyzing closed-ended questions from questionnaires typically involves summarizing and interpreting the responses using descriptive statistics, tables, and graphs.

2.2.5. Ethical Considerations

We obtained participant consent by clearly explaining the purpose, procedures, risks, and benefits of the study. This was done to ensure that participants fully understood what their involvement entailed and had the freedom to decide whether to participate or not. We ensured participant anonymity by assigning codes or identifiers instead of using their names or other personally identifiable information. This allowed us to analyze the data without knowing the identities of individual participants, thus protecting their privacy.

We maintained confidentiality by securely storing any personal information provided by participants and restricting access to that information only to authorized personnel involved in the study. Any published results or reports should avoid including identifiable information about individual participants to uphold their confidentiality.

2.2.6. Limitations of the Study

Limited Sample Size: Due to constraints such as time, resources, and access to participants, we were unable to recruit a large sample size for our study. This limited the

generalizability of our findings and may have introduced biases in the results. This limitation restricted the depth and scope of our study.

Limited timeframes for data collection, analysis, and writing may have prevented us from exploring certain research avenues in depth or conducting follow-up studies to validate our findings. This constraint constrained the thoroughness and completeness of our study.

Acknowledging these limitations is essential for providing context to the study's results and interpretations. Additionally, addressing these limitations can inform future research directions and methodologies to overcome these challenges in subsequent studies within the Computer Science department or other departments.

Conclusion

This chapter was designed to provide in-depth data on the status of English in Algerian higher education , particularly focusing on English medium instruction (EMI) in the Computer Science department in Tiaret .The chapter not only discusses the impact of this transition on teachers and students but also delves into the challenges faced by both of them in adapting to EMI .Moreover , it sets the stage for the upcoming research design and methodology section , with details research questions, hypotheses, and the mixed-method approach



CHAPTER THREE

Results, Discussion and
Recommendations

Chapter Three: Results, Discussion and Recommendations**Introduction**

This chapter provides a link between the theoretical framework and the actual study conducted. It covers the different actions made to look into the implementation of English as a medium of instruction in the computer science department for some specialized modules. The purpose of this chapter is to give a clear and comprehensive explanation of this case study, including the methodology used, sample selection criteria, and research instrument utilized. It also covers the various adopted procedures used to address the research questions and presenting the investigation's findings.

3.1. Results / Findings

The main objective of this study, which employs a descriptive, quantitative methodology, is to characterize the usage of the English language as a medium of instruction in higher education. Therefore, the current study was carried out in the Computer Sciences Department of the IBN KHALDOUN University in Tiaret. Two specialized modules are taught in English in these department: the first is machine structure, and the second is algorithmic and data structure.

3.1.1. The Students' Questionnaire Results**3. 1.1.1 Importance of English and French in Computer Science Department****Rate the importance of English and French in your Computer Science studies.**

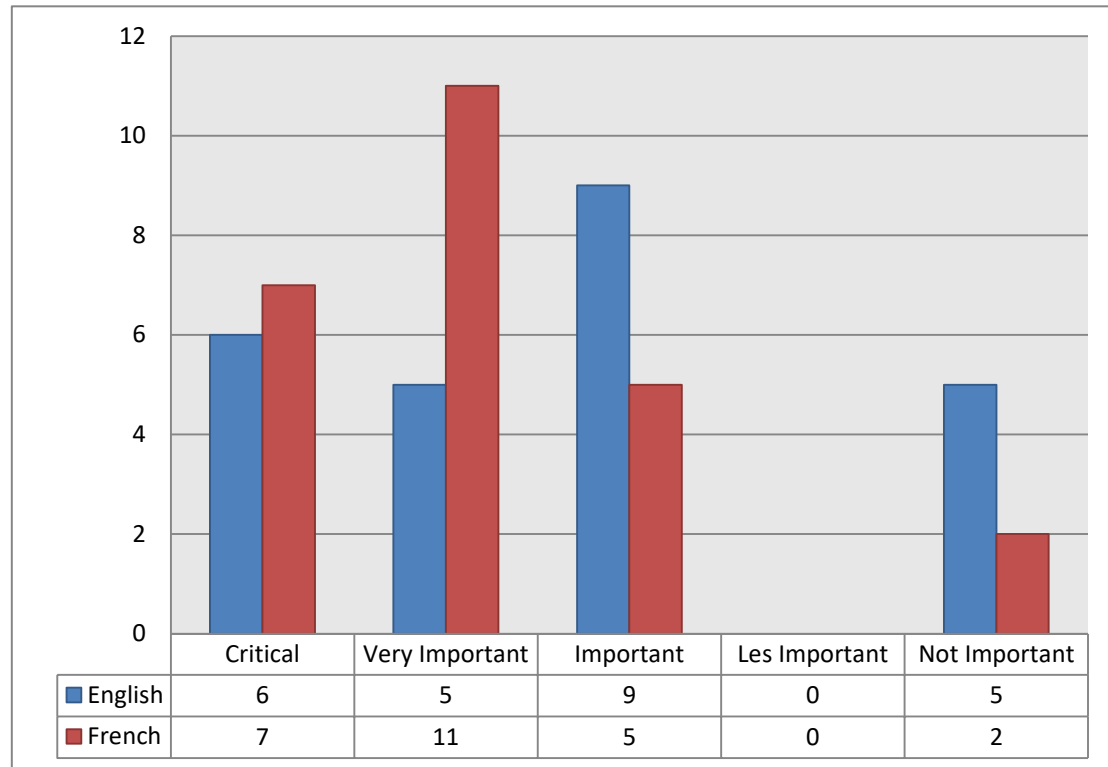
When comparing the importance of the English language to French, nearly half of the participants from the computer science department (36%) think it is important, 24% think it is critical, and 20% think it is very important. Figure 1 illustrates how few students—just five—believe that English is not important to their studies.

Concerning the French language, 44% of students reported this language to be very important and 28% critical. 20% of them consider French to be important and 20% also important. A tiny proportion of respondents, about 8%, consider it not important at all.

Students' language preferences are changing and they are favoring English over French more and more as they become more involved in academia.

Figure 3.1

Importence of French and English in Computure Science Department



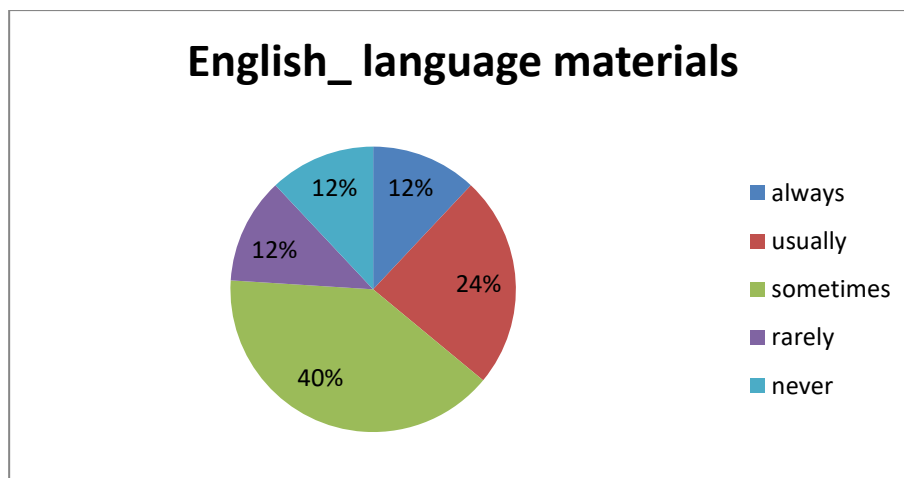
3.1.1.2. Frequency of Using English Language Materials

How often do your teachers recommend English-language materials (e.g., books, articles) for your courses ?

We asked students to indicate the extent to which they were referred to scientific books, articles, and journals in English by their teachers for courses. The answers varied from always to never. The majority of teachers sometimes refer students to materials produced in English, which shows teachers' awareness about this language's importance in science and academia. This point will be tackled more in teachers' interview analysis.

Figure 3.2

Frequency of Reading Materials in English Language



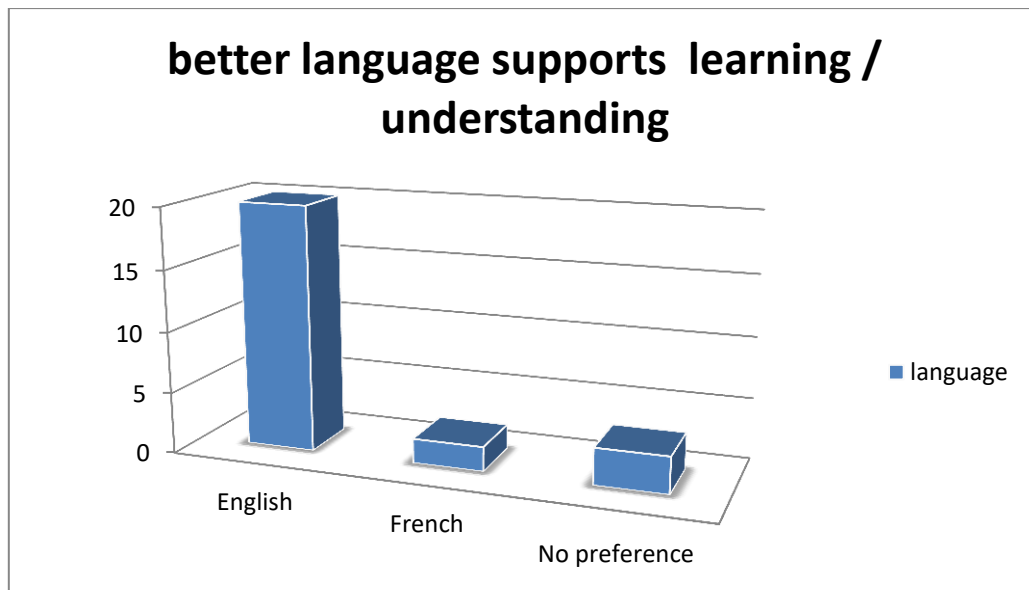
3.1.1.3. Comparison English to French according to their Siutability

In your opinion, which language better supports your learning / understanding in Computer Science?

Among all the questions that matter most to our investigation is this one, **In your opinion, which language better supports your learning / understanding in Computer Science?**. The third question's responses clearly demonstrate that respondents support using English to do their jobs and studies. As the language of science and technology, English has become essential for social and professional success, leading 80% of participants to feel that it is a more suitable language for instruction (learning and understanding). French has become less popular among Algerians throughout the 2000s. According to Belmihoub (2017), English is becoming more and more valued. French was chosen only 8% of the time. Furthermore, a small percentage of respondents (approximately 12%) stated they had no preference between the two. English is now more widely used worldwide, including in Algeria, thanks to the internet and globalization.

Figure 3.3

Comparison of English and French according to their Suitability



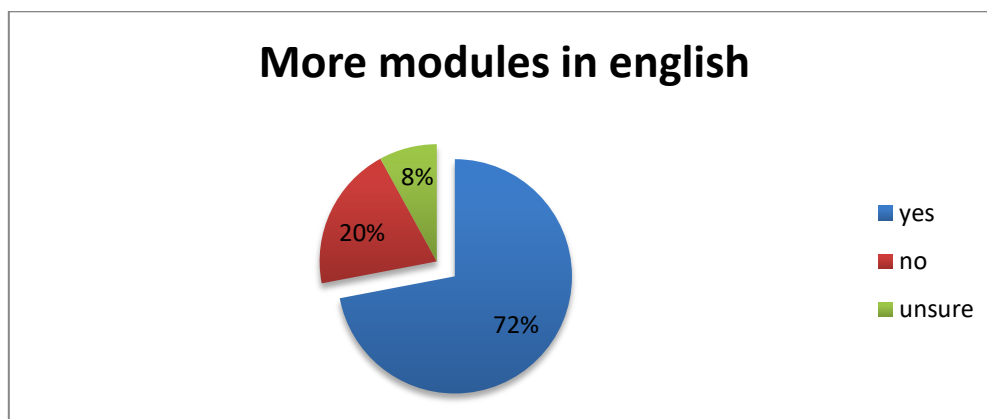
3.1.1.4. English as a Medium of Instruction

Would you support more modules taught in English within your Computer Science specialism?

We asked participants about their support for more modules taught in English within their specialism. The majority (72%) of them said yes. Only 20% means 5 students, said no, while the remaining 8% were unsure. Most of them reported that they prefer to study more modules in English.

Figure 3.4

More Modules in English

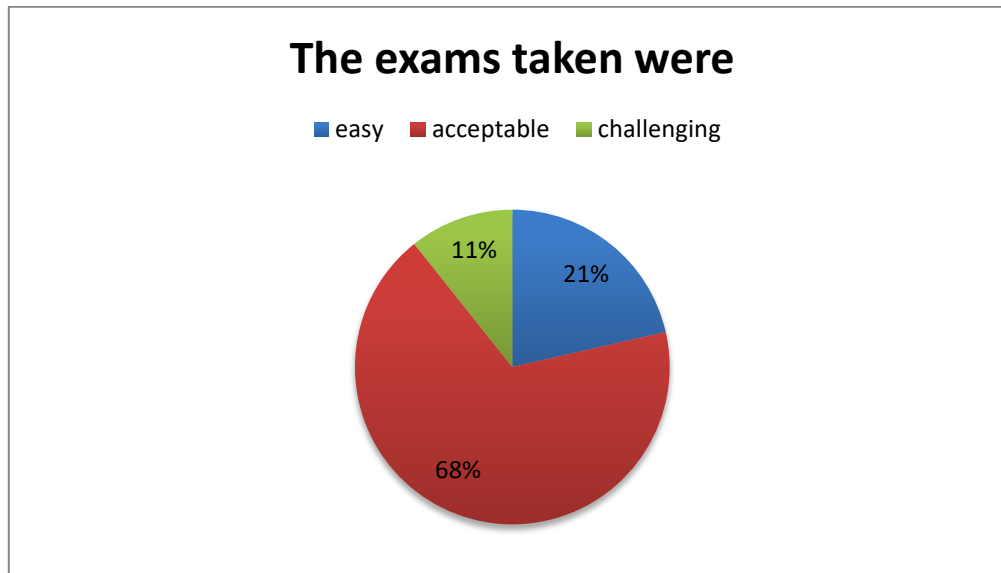


3.1.1.5. English as a Medium of Instruction

How much difficult have you found the exams taken in English?

Figure 3.5

Students' Opinions about English-Designed Exams



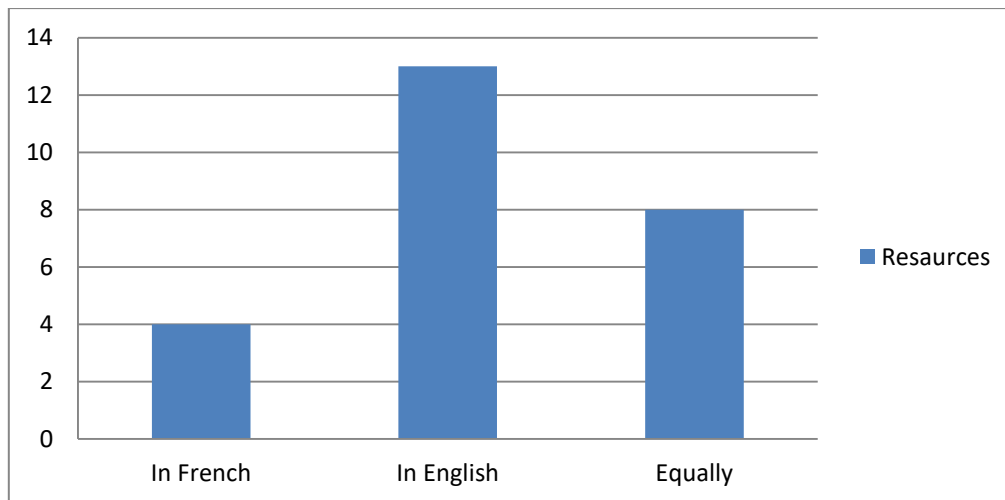
As clearly shown, students were asked to answer about whether they find the exams easy, acceptable, or challenging in English. The analysis of this question revealed that the majority of students responded positively, as 68% of them responded with acceptable and 21% as easy, and a small percentage found it challenging, about 11%, which shows that the process of adopting English in exams is welcomed by the majority of students.

3.1.1.6. English as a Medium of Instruction

How do you perceive the availability of Computer Science resources (e.g., textbooks, research articles) in English compared to French?

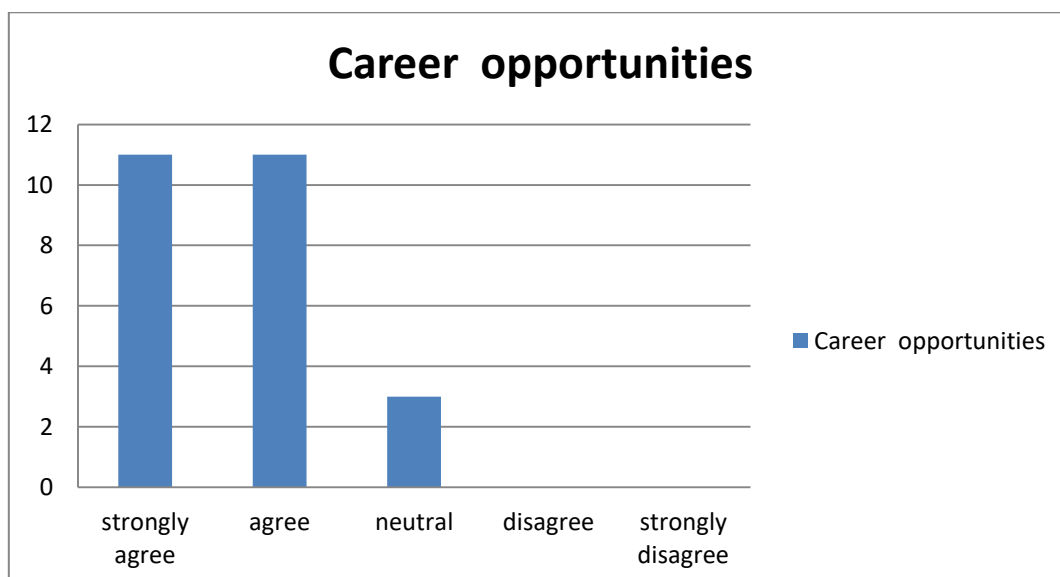
Question six was asked to see students' awareness of the scientific community and reality. 52.5% of subjects indicated that academic resources are available in English. Meanwhile, the same informants (16%) indicated that resources in French are fairly available. and 32% indicate that they are available in both. The overall results show that resources in the English language are more available than in French, since 80% of the internet and scientific contents are in English.

Figure 3.6

Resources Availability in each Language**3.1.1.7. Impact on Learning and Career****Do you believe that studying more modules in English would enhance your career opportunities in the field of Computer Science?**

The answers to question seven are clearly in favor of English. 44%, less than half of the students strongly agree, and 44% agree on the fact that studying more modules in English will enhance their career opportunities. 12.5% of students remained neutral.

Figure 3.7

Career Opportunities and Modules in English

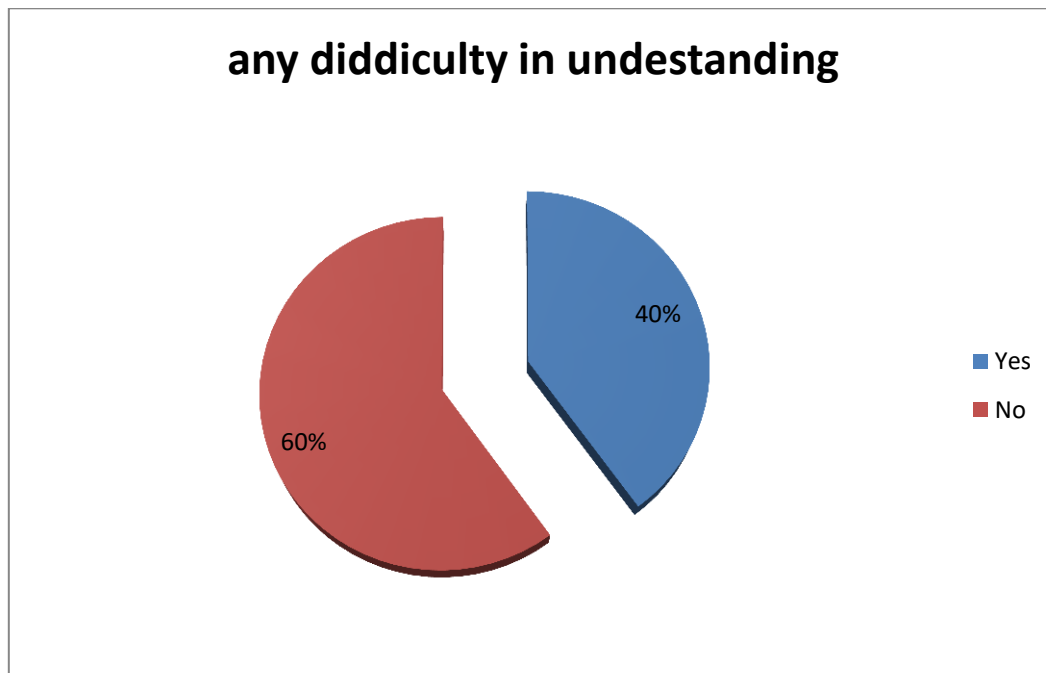
3.1.1.8. Impact on Learning and Career

Have you faced any difficulty in understanding Computer Science terminology in English?

As clearly shown in Figure 8, the students have been asked to respond with yes or no on whether they face any difficulties in understanding computer science terminology in English. This is an obstacle that would hinder the process of replacing French with English as a teaching tool. The vast majority of respondents, with a percentage of 60%, responded with no and 40% with yes, considering this a positive sign because the majority do not face any difficulties.

Figure 3.8

Difficulty in Understanding English Terminology



3.1.1.9. Satisfaction and Suggestions

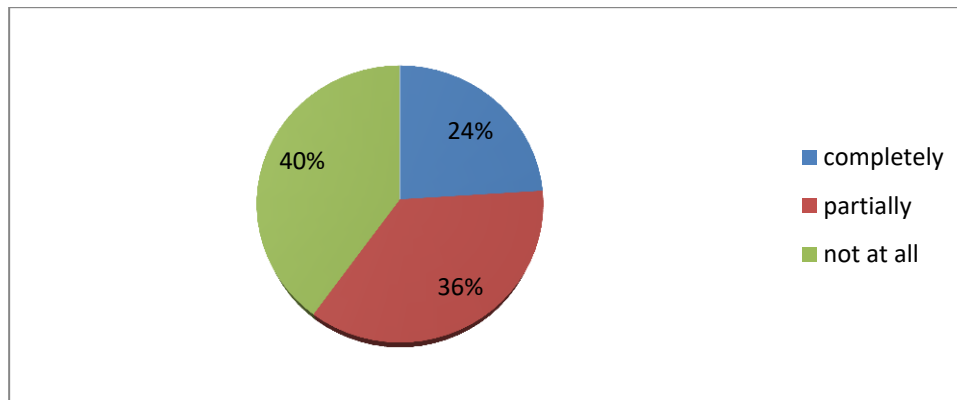
To what extent does the current English instruction meet your needs as a Computer Science student?

Evaluating students perceptions regarding the support of the English implementation in the computer science department and to what extent it meets their needs. Among the participants, 40% voted with not at all that, which means that English instructions does not meet their needs. Furthermore, 36% considered that it specifically

met their needs significant as a positive answer. However, a small percentage, 24% expressed satisfaction by saying it is completely meeting their needs.

Figure 3.9

English-Mediated instruction and Computer Science Students' Needs



3.1.1.10 Impact on Learning and Career

If yes, what strategies do you suggest to improve your English vocabulary related to Computer Science?

After analyzing 25 answers from different students, the answers were somewhat similar. The most popular strategies were: taking an English training course with different teachers; and having an ESP module, which means English for Specific Purposes, which will cover all English vocabulary relating to computer science.

3.1.1.11. Satisfaction and Suggestions

How would you like your courses be taught to better meet your Computer Science needs?

All students replied that they prefer having courses taught in English supported by Arabic.

3.1.1.12 Satisfaction and Suggestions

What are your suggestions regarding the use of English in your Computer Science education?

Implementing English as a medium of instruction in Algerian higher education and especially computer science at Ibn Khaldoun University elicited a range of valuable opinions and suggestions from respondents. One promising promimants recommandation is the comprehensive participation of students in presentations and studysshops. Furthermore, stressing the need for a gradual and well-prepared transition to English, and they also focus on having an English language module and an esp module.

3.1.2. University Teachers' Interview Results

3.1.2.1 Balancing Languages in lecture preparation :Utilizing of French and English Resources

Q2. How often do you use French and English resources when preparing your lectures? Could you give examples of when you prefer one language over the other?

According to the data, almost all of the sample's teachers own doctorates, demonstrating a high level of education attained, as shown above.

T1: Electronics engineering diploma from the Ecole Nationale Polytechnique Algiers also Master's degree in electronics from the USA. Enrolled for a PhD "subject biometrics identification" at Lancaster University UK .

T1:a PhD student at the University of Tiaret Master's degree from this establishment in the field of software engineering.

T3:a PhD in electrical engineering with a specialization in electronics.

The language of "instruction" used would depend on the context and the preferences, using a mixture of Arabic, French, and English.

3.1.2.2 How often do you use French and English resources when preparing your lectures? Could you give examples of when you prefer one language over the other?

A1. All teachers agreed that the choice of language depends on various factors, but all available resources are written in English. When preparing their lectures, they often utilize both French and English resources. They prefer resources in English because they are invaluable for their comprehensive scientific contributions and wealth of information.

A2. One of the teachers clarified more about the preference of one language over the other by:

- If you're interacting with someone who has a limited understanding of English, you might switch to simpler language or even another language if you share one.
- If you're giving a presentation to a large audience, you might choose to use formal language even if you're comfortable with informality in other contexts.
- A casual chat with friends might involve slang or regional dialects, while a business meeting would likely call for more formal and professional language.

3.1.2.3. In your opinion, how important is each language (French and English) to your teaching and to your students' learning? Why?

They guess when we talk about computer science and software engineering, the French language is somehow useless. All academic research papers in this field are written in English; even French researchers write their essays in English. and also to improve the quality of the educational system, they prefer to switch to English. Also, they see that the majority of students are struggling with French because it's complicated. On the other hand, English is essential for accessing a wide range of global academic resources, enabling students to keep abreast of the latest research and developments in their field

3.1.2.4. How frequently do you assign reading materials in English to your students?**What influences your decision to use English-language books and scholarly papers?**

All teachers frequently assign reading materials in English to their students. The decision to use English-language books and scholarly papers is influenced by the quality, availability, and relevance of these materials. English texts often provide more comprehensive coverage of topics and are indispensable for subjects with extensive research conducted in the English-speaking world. They also added that the choice of language depends on what best serves your needs and provides the most comprehensive and relevant information for the topic at hand and . Here's why English materials are often prominent:

- Vast majority of academic information is published in English. This reflects its global use in research and higher education
- English materials are often more readily available online and easier to process
- they prioritize using English sources that align with our understanding.

3. 1.2.5 Teacher's proficiency in creating and designing exams

How comfortable are you with designing, and correcting exams and exercises written in English?

Can you share any experiences where language presented a challenge?

All of the teachers agreed that they are comfortable assisting in designing and correcting English exams and exercises.

3.1.2.6.The preferable language for teaching

From your perspective, which language would be more suited for teaching your module and courses -French or English?

Why do you believe so?

From the perspective, English is more suited for teaching modules and courses. This preference is primarily because the majority of academic resources, research papers, and textbooks in fields like computer sciences and electrical engineering are published in English. Moreover, proficiency in English is crucial for students' future academic and professional opportunities, as it is the predominant language of international communication and scholarship. also T2 :adds that the choice between French and English for teaching a module or course should be based on a careful assessment of the needs, preferences, and goals of the students, as well as the requirements of the subject matter and the broader educational context.

3. 1.2.7. Preparatory training for implementing EMI

Have you participated in any training programme before embarking on using English as a medium of instruction?

They already had training before embarking for emi as shown here:

T1:SAIS THAT last semester,he studied the B2 program at CIEL .

T2: SAIS THAT Yes, he took courses to improve his English level when he was doing his PHD and he was a member of an Algerian team taking part in a multi-year international research project.

3. 1.2.8. Involvement of teachers and students in transitioning to EMI

Have teachers and students been informed or consulted before launching the project of teaching content in English instead of French?

Teachers have been informed, but I don't think the students have been notified yet. However, we can see that the government has started the switch from primary school. To prepare students, they should focus on English at all levels, from primary, secondary, and high school. Teachers are improving their English skills through courses and accelerated programs. The decision to change the language of instruction would likely originate from educational administrators or policymakers. They might propose the change based on various factors, such as educational goals, internationalization efforts.

3. 1.2.9. Development of English Curriculum

Who has developed the English curriculum / canvas? Is it helpful and relevant to your modules?

T2 informs us that the English language curriculum has been developed by a team of experienced teachers and curriculum developers in the Ministry of Higher Education. It is well aligned with the learning objectives of my modules and provides relevant and practical material that enhances the overall learning experience.

3. 1.2.10 The impact of documents written in English for teaching purposes
Do you currently use documents written in English for teaching purposes? How does this impact your teaching?

Teachers currently use documents written in English for teaching purposes. This practice has a positive impact on my teaching, as it allows students to engage with up-to-date and high-quality materials. It also helps students improve their English language skills, which are essential for their academic and professional growth.

3. 1.2.11. The transition from French to English

Do you believe that English should replace French as the language of instruction in the computer science department? Please explain your reasoning.

All teachers think that English should completely replace French as the language of instruction in the computer science department due to the fact that English is important for accessing global resources and opportunities. Whereas the French language is still limited in terms of resources and richness of information, and For Computer Science, French is useless, and they mention that even teachers in France use English for their essays and their research.

3. 1.2.12. Obstacles in adopting English as a teaching tool

What do you see as the main obstacles to adopting English as a teaching tool in the classroom? Please mention up to three obstacles.

The main obstacles to adopting English as a teaching tool in the classroom:

One of the primary obstacles is the varying levels of English proficiency among students and faculty members. Not all students or teachers may be equally comfortable with English, which can hinder effective communication and comprehension in the classroom. Students who are not proficient in English may struggle to understand complex concepts or express themselves effectively, leading to gaps in learning and potential frustration. Adopting English as a teaching tool may require cultural adaptation for both students and faculty members. Language is deeply intertwined with culture, and learning in a language other than one's native language can pose challenges in terms of understanding cultural references, norms, and communication styles. Cultural differences in educational approaches, expectations, and classroom dynamics may also impact the effectiveness of English-language instruction.

Suggestions

Based on your experience, do you have any suggestions for making the English course more effective and more relevant to the students' needs in their field of study?

The suggestions given were:

T1: "Computer science students should enter a program where they learn English for computer science so they become familiar with domain-specific vocabulary."

T2: "Providing additional support for students with lower English proficiency through tutoring or supplementary classes".

T3: "Conduct a survey or hold discussions with students and faculty in the computer science department to understand their specific needs in English; also integrate English language learning with the computer science curriculum; and finely differentiate instruction to cater to students with varying levels of English proficiency."

3.2. Discussion

Both EMI and ENGLISHIZATION are praised for being drivers for numerous advantages that touch on many aspects of a person's academic and career path. A significant benefit is that they acquire subject-specific information and English language competency at the same time, giving them invaluable language and communication skills (Hu & Lei, 2014; Galloway et al., 2017).

Because English is increasingly used in academic settings, students can also access a wider selection of resources, such as scientific texts and materials. Additionally, the use of EMI and ENGLISHIZATION can enhance the English language proficiency of teachers, giving them a useful skill set for the globalized labor market. Graduates with competency in the English language can compete globally, take part in international research collaborations and academic conferences, and increase their employability (Benassou & Bournane, 2022). Adopting EMI is also thought to remove certain language challenges that limited and slowed their studies in the past.

3.2.1. Research Approaches

The research journey relies on a well-defined research approach to provide answers to the questions at hand. The chosen research approach determines the methods, data collection techniques, and analytical tools employed in the study. Common research approaches include quantitative and qualitative approaches.

Quantitative research entails collecting and analyzing numerical data, using statistical methods to identify patterns and correlations, and making generalizations about a target population (Dörnyei, 2007). This approach tests hypotheses, measures variables, and provides objective findings. It aims to explore complex phenomena, capture rich contextual information, and gain an in-depth understanding of participants' experiences and perspectives. In this research, a combination of descriptive and quantitative approaches has been used.

The quantitative approach was utilized through the administration of a questionnaire comprising both open-ended and closed-ended questions, which allowed for a systematic collection of numerical data that can be analyzed using statistical methods to identify trends and patterns. On the other hand, the descriptive approach was also employed through an online interview with teachers' that involved directly the participants' behaviors, interactions, and experiences. Integrating these two research approaches offers a comprehensive and multifaceted understanding of the research topic, allowing for data triangulation and enhancing the overall validity and credibility.

3.2.2. Computer Science Students' Attitudes toward the Instructional Shift

Positive Attitudes:

- **Global Relevance:** English is the dominant language in the field of computer science and technology. Students often recognize that proficiency in English can give them access to a broader range of resources, research papers, documentation, and software. as it is clearly shown in the (section2) FIGURE 3 (section3) FIGURES (7 and 8) from the student's questionnaire.
- **Career Opportunities:** Many students see English as essential for career advancement. The ability to communicate in English can open up job opportunities in multinational companies and international collaborations.
- **Educational Resources:** A significant amount of high-quality educational material, including online courses, tutorials, and textbooks, is available primarily in English

Negative Attitudes:

- **Language Barrier:** Students who are not proficient in English may find the shift challenging. It can be particularly difficult for those who are more comfortable studying in their native language.
- **Cultural Identity:** For some students, the shift to English may feel like a loss of cultural identity and a move away from their linguistic heritage.
- **Learning Curve:** Adjusting to technical terminology in a new language can be steep and may initially hinder understanding and performance.

- **Mixed Attitudes:**

- **Adaptation and Support:** Students' attitudes can improve with sufficient support, such as language training programs, bilingual resources, and academic assistance. Over time, many students adapt and come to appreciate the benefits of English proficiency.
- **Resource Availability:** The availability of bilingual resources can ease the transition, making students more open to the shift.

3.2.3 The Instructional Shift Impact on Teaching and Learning

Particularly in fields like computer science, has significantly impacted teaching methods. Here are some of the key ways this transition has influenced pedagogical approaches.as it is clearly shown in the answers of the questions (3 and 5)from the teacher interview .

Curriculum Design and Content:

Course Material: Many courses now utilize textbooks, academic papers, and other resources that are primarily available in English. This shift necessitates the adaptation or complete overhaul of existing French-based curricula.

Syllabus Updates: Educators have had to update syllabi to include English-language resources and align course content with internationally recognized standards, often emphasizing more globally relevant content.

Teaching Techniques:

Language Support: Instructors incorporate additional language support within their teaching methods, such as providing glossaries of technical terms, offering language workshops, or integrating language learning tools into the curriculum.

Bilingual Instruction: In some cases, a transitional bilingual approach is used where instruction and materials are provided in both French and English to ease the transition for students.

Assessment Methods:

Examinations and Assignments: Tests, and assignments are increasingly being conducted in English, which requires adjustments in how questions are framed and how students are assessed.

Language Proficiency Consideration: Instructors might need to consider language proficiency when designing assessments to ensure they are testing subject knowledge rather than language skills alone.

Teacher Training and Development:

Professional Development: Teachers often require training to improve their own English proficiency and adapt their teaching methods to effectively deliver content in English.

Pedagogical Workshops: Workshops and training sessions focusing on best practices for teaching in English and integrating English-language resources are becoming more common.

3.2.4 Students' Challenging Adaptation to the New English-Mediated Instruction

The majority of Computer Science department students are adapting to learning in English quite successfully, as seen by their improved academic achievement, increased confidence, and enhanced language skills (FIGURE 3.5). They are improving their understanding of the course materials, adding more words to their technical vocabulary, and contributing actively to class discussions. This shift has been made easier by the use of internet tools, such as learning apps and educational websites. Additionally, their increased access to English-language resources has resulted in higher-caliber assignments and research projects. Their professional ability has also improved, as more students are obtaining opportunities for internships and jobs requiring fluency in English (FIGURE 3.7). All things considered, all the efforts of learners, teachers, and mitigating actions are making the transition to English-medium education easy and successful.

Challenges and Adaptations:

Initial Resistance: There can be resistance from both students and faculty accustomed to French, requiring strategies to manage change and encourage acceptance.

Resource Availability: Ensuring the availability of sufficient English-language teaching materials and resources is crucial, and often requires substantial investment and effort.

Overall, the shift from French to English in Algerian higher education has led to comprehensive changes in teaching methods, necessitating adaptation at multiple levels to ensure a smooth transition and maintain educational standards.

3.3 Recommendations

The faculty of science and technology is an appropriate environment to investigate language transition. The analysis of this section is based on the answers of twenty-five students and three teachers. First of all, we can see from the analysis of the questionnaires that students, and most importantly, teachers and researchers, are aware of the current scientific reality and the importance of English. English, as a lingua franca, is the key to accessing the vast scientific literature as well as global communication. The current Algerian policy promotes the use of English in academic settings. Therefore, it has a status and is given importance by participants. For instance, the majority of students prefer studying more modules in English. Additionally, in the course of conducting research, both students and teachers/researchers use the English-written materials, even if their research is done in French.

Our study took place in the computer science department of the science and technology faculty. However, surprisingly, among the findings, only the MCS department symbolizes the English-French rivalry at Ibn Khaldoun University of Tiaret. Finally, one of the most important questions we asked was about the displacement of French by English. It was somewhat surprising that the total sample agreed with the change.

Conclusion

This chapter was devoted to the practical part of the research, in which the use of English was examined as well as the English-French switch at Ibn Khaldoun University. Our major finding is that the computer science department start working on the use of English as a medium of instruction. In addition to that, the results have shown that the university members who are our participant's value and favor English, while the government also promotes the Englishization of higher education.



GENERAL CONCLUSION

General Conclusion

The main objective of this study, which employs a descriptive, quantitative methodology, is to characterize the usage of the English language as a medium of instruction in higher education; the most important questions we asked was about the displacement of French by English. It was somewhat surprising that the total sample agreed with the change.

The findings revealed that while there is a moderate level of English language proficiency among teachers and students of the computer science department, there is room for improvement. The support for English implementation was divided, with the majority of the participants strongly supporting it and recognizing its potential benefits, while a small proportion expressed opposition. Language-related challenges, such as difficulties expressing complex ideas, grammar and syntax errors, pronunciation issues, and limited vocabulary, were identified as potential barriers to effective English delivery. To overcome these challenges, tailored language support strategies and resources are crucial. Teachers and students expressed a strong interest in receiving support, particularly in speaking, listening comprehension, pronunciation, and vocabulary. However, most of them suggest a need for improvement and more comprehensive language training programs

Based on the findings, a number of pedagogical recommendations and suggestions are made, such as creating a long-term strategic plan, involving participants in the implementation process, offering language support programs, training efforts. It is also important to work on improving pre-university pupils' English proficiency levels

While this study has provided valuable insights and laid a solid foundation, it also catalyzes future research endeavors that can push the boundaries of knowledge and unravel new possibilities. Firstly, future studies should adopt a comprehensive approach, examining language-related challenges and the pedagogical transformation required for successful English integration. Secondly, exploring disciplinary differences in attitudes towards English as a medium of instruction in the scientific department, particularly in the STEM fields, would provide valuable insights into context-specific strategies and outcomes. Additionally, investigating student and teachers perspectives on English would

General Conclusion

contribute to a more holistic understanding of its impact on learning experiences. Lastly, focusing on specific institutional contexts, such as the National Higher Schools of Artificial Intelligence and Mathematics, could uncover context-specific challenges and strategies that contribute to developing teaching and learning approaches. English language implementation as a medium of instruction is a critical topic to be researched, especially in a complex linguistic situation like Algeria.

Future studies on this topic are recommended. First, the scope of the research can be expanded to different departments (i.e., middle and high schools). It is also important to examine the Algerian educational system in terms of language use and the English language as a medium of instruction, especially in higher education.



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APPENDICES

Appendices

Appendix A. Students' Questionnaire

Students' Questionnaire

Dear Students,

This questionnaire was designed as part of a Master degree investigation to get Computer Science majors' perceptions and attitudes towards the implementation of English as a medium of instruction. You are kindly invited to take part in this research by answering these questions as accurately as possible. Please bear in mind that anonymity and confidentiality are highly considered, safeguarding the collected data. Thank you for your cooperation.

Section 1: Language Use in Academic Settings

1. Rate the importance of English and French in your Computer Science studies. **(Please tick one option only for each language)**

	Critical	Very Important	Important	Less Important	Not Important
English					
French					

2. How often do your teachers recommend English-language materials (e.g., books, articles) for your courses? **(Please tick one option only)**

- Always
- Usually
- Sometimes
- Rarely
- Never

3. In your opinion, which language better supports your learning / understanding in Computer Science? **(Please tick one option only)**

- English
- French
- No Preference

Section 2: English as a Medium of Instruction

4. Would you support more modules taught in English within your Computer Science specialism?

- Yes No Unsure

5. How much difficult have you found the exams taken in English? **(Please tick one option only)**

- Easy Acceptable Challenging

Appendices

6. How do you perceive the availability of Computer Science resources (e.g., textbooks, research articles) in English compared to French? **(Please tick one option only)**

More available in English

More available in French

Equally available in English and French

Section 3: Impact on Learning and Career

7. Do you believe that studying more modules in English would enhance your career opportunities in the field of Computer Science? **(Please tick the level of agreement that fits your opinion)**

Strongly Agree Agree Neutral Disagree Strongly Disagree

8. Have you faced any difficulty in understanding Computer Science terminology in English?

Yes

No

9. If yes, what strategies do you suggest to improve your English vocabulary related to Computer Science?

.....

.....

.....

Section 4: Satisfaction and Suggestions

10. To what extent does the current English instruction meet your needs as a Computer Science student?

Completely

Partially

Not at all

11. How would you like your courses be taught to better meet your Computer Science needs?

.....

.....

.....

12. What are your suggestions regarding the use of English in your Computer Science education?

.....

.....

.....

Thank you for participating in this survey. Your feedback is invaluable in enhancing the educational experience for Computer Science majors.

Appendices

Appendix B. University Teachers' Interview

The Interview

Thank you for agreeing to participate in this interview. Your insights are valuable to our research on the perceptions of Computer Science teachers regarding the use of English as a medium of instruction, instead of French, at Ibn Khaldoun University. This conversation will help us understand the challenges, benefits, and overall opinions on this language transition in scientific content teaching. Please feel free to express your thoughts openly. Please bear in mind that the collected data will be safeguarded.

Q1. Could you please tell me about your professional and academic career, your degree, your specialism, teaching experience and the language of instruction?

Q2. How often do you use French and English resources when preparing your lectures? Could you give examples of when you prefer one language over the other?

Q3. In your opinion, how important is each language (French and English) to your teaching and to your students' learning? Why?

Q4. How frequently do you assign reading materials in English to your students? What influences your decision to use English-language books and scholarly papers?

Q5. How comfortable are you with designing , and correcting exams and exercises written in English? Can you share any experiences where language presented a challenge?

Q6. From your perspective, which language would be more suited for teaching your module and courses - French or English? Why do you believe so?

Q7. Have you participated in any training programme before embarking on using English as a medium of instruction?

Q8. Have teachers and students been informed or consulted before launching the project of teaching content in English instead of French?

Q9. Who has developed the English curriculum / canvas? Is it helpful and relevant to your modules?

Q10. Do you currently use documents written in English for teaching purposes? How does this impact your teaching?

Q11. Do you believe that English should replace French as the language of instruction in the computer science department? Please explain your reasoning.

Q12. What do you see as the main obstacles to adopting English as a teaching tool in the classroom? Please mention up to three obstacles.

Q13. Based on your experience, do you have any suggestions for making the English course more effective and more relevant to the students' needs in their field of study?

Appendices

Appendix C : Minister's directive in English taught subjects and teachers training

الجمهورية الجزائرية الديمقراطية الشعبية

وزارة التعليم العالي والبحث العلمي
الوزير

الجزائر، 27 أفريل 2018

رقم 1443/دع و 2018

إلى السادة رؤساء الندوات الجهوية للجامعات،
بالإتصال مع السيدات والسادة مديري مؤسسات
التعليم العالي.

الموضوع: بخصوص سير آراء الأسرة الجامعية حول تعزيز استعمال اللغة الإنجليزية في مجال التعليم
العالي والبحث العلمي

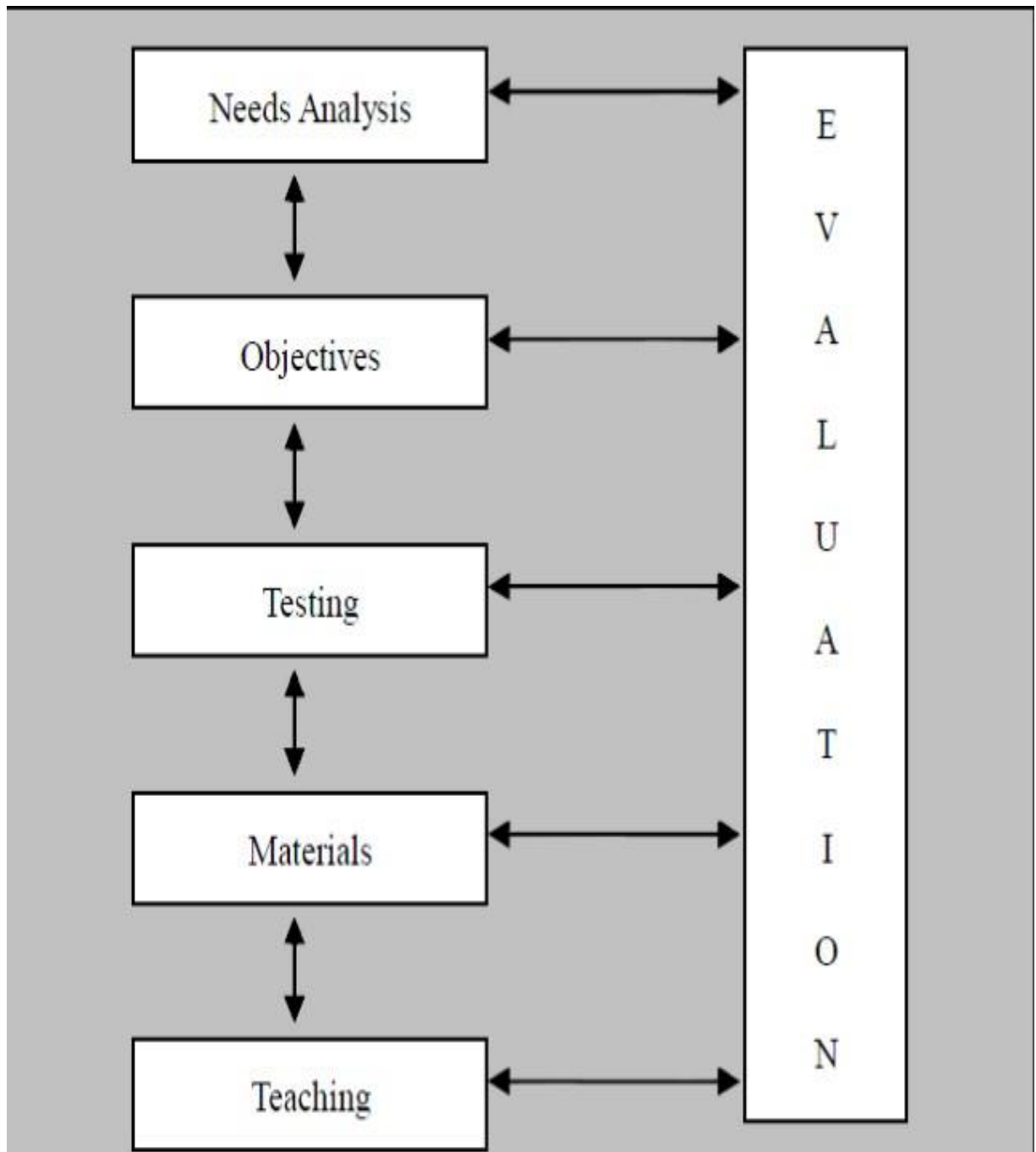
مثلما التزمت به عبر صفحتي الرسمية في الفيسبوك بخصوص استثناء آراء الأسرة الجامعية
حول مسعى تعزيز استعمال اللغة الإنجليزية في مجال التعليم العالي والبحث العلمي، وتحسباً لعرض
هذا الملف قريباً للدراسة والنقاش، أبلغكم أنه قد تم استحداث منصة رقمية توضع تحت تصرف
فاعلي القطاع للغرض المذكور.

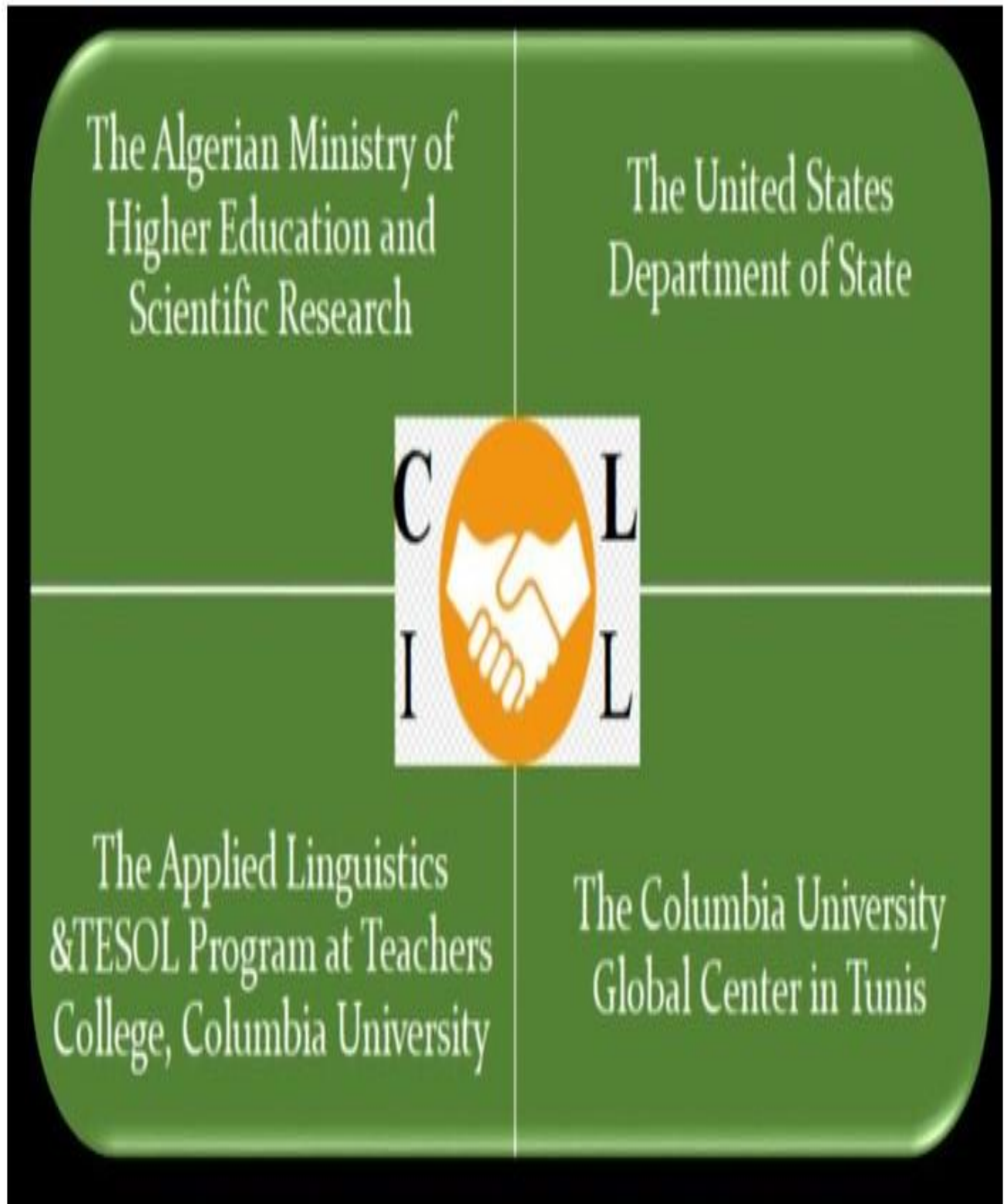
تبعاً لذلك، وحتى يتسنى لأكبر عدد ممكن من أعضاء الأسرة الجامعية التعبير عن رأيهم
بخصوص الموضوع، أطلب منكم نشر الرابط <https://www.mesrs.dz/poll> على كافة المواقع
الإلكترونية وحسابات التواصل الاجتماعي الرسمية لمؤسساتكم، وأخاذ كافة التدابير التقنية
والتحسيسية اللازمة لضمان إنجاح هذه العملية.

أولى أهمية قصوى لتطبيق هذه المذكرة التي سيكون مدى تطبيقها محل تقييم من طرف مصالح
إدارتي المركزية المختصة.

وزير التعليم العالي والبحث العلمي
المرشد : إدريس الطيب

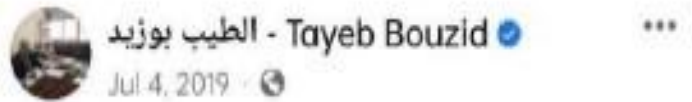


Appendices**Appendix D : Brown's (1995) model of curriculum design**

Appendices**Appendix E : . A Four-way Partnership Program (adapted from Makhoulf & Hanifi, 2022)**

Appendices

Appendix F :tayeb bouzid's first post on his official page



بسم الله الرحمن الرحيم

تحسبًا لفتح ملف تعزيز استعمال #اللغة #الإنجليزية في
#الوسط #الجامعي والبحثي، #للدراسة والنقاش، تم إعداد
منصة رقمية ستوضع تحت تصرف #الأسرة #الجامعية
خصوصًا والمواطنين عمومًا من أجل الإدلاء بأرائهم مباشرة.

في هذا الصدد، قدمنا اليوم توجيهات إلى زملائي مديري
المؤسسات الجامعية من أجل اتخاذ كافة التدابير
التحسبسية والتقنية اللازمة لإنجاح العملية.

للتنويه، ستناخ عملية سبر الآراء بدءًا من تاريخ 05 جويلية
إلى 5 أوت 2019 عبر الموقع الإلكتروني للوزارة ومواقع
مؤسسات التعليم العالي كلها وصفحاتها على شبكات التواصل
الاجتماعي، وذلك عبر الرابط الآتي:

www.mesrs.dz/poll

رأيكم مهم للغاية!

الطيب بوزيد
وزير التعليم العالي والبحث العلمي
#الجزائر

Appendices

Appendix G : MINISTRY TRAINING TARGET FOR ENGLISH PROFECIANCY AMONG PROFESSORS



الجمهورية الجزائرية الديمقراطية الشعبية
وزارة التعليم العالي والبحث العلمي
People's Democratic Republic of Algeria
Ministry of Higher Education and Scientific Research



الجزائر، 6 نوفمبر 2022

الديوان
كلية الاعلام والاتصال

مؤشرات وإجراءات عملية لتكوين الأساتذة الباحثين في اللغة الإنجليزية

في إطار تعزيز مكانة اللغة الإنجليزية في التعليم والتكوين بمؤسسات التعليم العالي، ومتابعة لتقييم مسعى تكوين الأساتذة في اللغة الإنجليزية، ووجهت مراسلة في هذا الصدد إلى رؤساء الندوات الجهوية للجامعات، بالاتصال بالسيدات والسادة مديري مؤسسات التعليم العالي، تتضمن أهم التوجيهات والمؤشرات التي حددها السيد الوزير، بخصوص عدد الأساتذة المستهدف تكوينهم، من طرف مؤسسات التعليم العالي، مع نهاية الموسم الجامعي الحالي 2023/2022:

1. بالنسبة للعلوم والتكنولوجيا تكوين 80 بالمائة على الأقل منهم.
2. بالنسبة للأساتذة في ميدان العلوم الاجتماعية والإنسانية وميدان العلوم الطبية، تكوين 100 بالمائة من الأساتذة الذين يدرسون الوحدات الأفقية.
3. أما بالنسبة للمؤسسات الجامعية التي تتوفر على مراكز للتعليم المكثف للغات أو أقسام تكوين في اللغة الإنجليزية، فعليها التكفل باستغلالها في تكوين أساتذتها.
4. بالنسبة للمؤسسات الأخرى سيوضع تحت تصرفها منصة رقمية من طرف اللجنة الوطنية المكلفة بالتعليم عن بعد ، بدءا من 1 ديسمبر 2022 ، مخصصة لتكوين الأساتذة في اللغة الإنجليزية.
5. بالنسبة للمؤسسات الجامعية التي تتوفر على مكونين متحكمين في اللغة الإنجليزية، فبتعين عليها الشروع في تدريس المواد التي يشرف عليها هؤلاء الأساتذة باللغة الإنجليزية، بدءا من السنة الجامعية الجارية.

Contact us:

Fax:
023228043
023228049

Email:

Website:

colabier@univ-dz

www.univ-dz

البريد الإلكتروني:

الموقع الإلكتروني:

التواصل معنا:

التلفون:
023228043
023228049

Appendices

AppendixH :FINAL EXAM FROM DEPARTMENT OF COMPUTER SCIENCE

Ibn Khaldoun Tiaret University
 Faculty of Mathematics and Computer Science
 Department of Computer Science
 Module: Structure of Machines 1

2023/2024

Duration: 1h30

FINAL EXAM

UNAUTHORIZED Mobiles, CALCULATORS and Smartwatches

EXO1 (6pts)

- 1) (a) Convert to hexadecimal: $(1457.11)_{10}$. Round to two digits past the hexadecimal point.
 (b) Devise a scheme for converting hexadecimal directly to base 4 and convert your answer to base 4.
- 2) Represent the following number in the IEEE standard floating-point format:
 $-(10100111.1001)_2$

EXO2 (4pts)

Simplify the following expression using only the consensus theorem:

$$BC'D' + ABC' + AC'D + AB'D + A'BD' \quad (\text{reduce to three terms})$$

(Consensus theorem : $XY + X'Z + YZ = XY + X'Z$)

EXO3 (4 pts)

Draw the logic circuit with only NOR gates of the following function:

$$F = \overline{A}\overline{B}\overline{C} + \overline{C}D$$

Show all the steps

EXO4 6pts)

Given that function:

$$F(A, B, C, D, E) = \sum m(0,1,2,3,7,9,11,13,14,21,23,24,25,26,27,29,31) \text{ using a}$$

Karnaugh map,

- (a) Find the prime implicants.
- (b) Find all of the essential prime implicants.
- (c) Find the minimum sum-of-products expression for F.

الملخص

تهدف هذه الدراسة إلى معالجة الفجوة البحثية في اعتماد وفعالية التعليم باللغة الإنجليزية في التعليم العالي الجزائري في بعض الأقسام العلمية بجامعة ابن خلدون. ويستكشف العوامل المؤثرة على دعم المعلمين والطلاب الإنجليزية، والتحديات المتوقعة في تقديم المحتوى باللغة الإنجليزية، واحتياجات التدريب والدعم للمعلمين والطلاب للتدريس والتعلم بشكل فعال في فصول EMI، والآثار الأوسع لاعتماد هذا النهج. وتوصي الدراسة باستراتيجيات وموارد دعم لغوي مخصصة، بالإضافة إلى التدريب والدعم التربوي المناسب.

الكلمات المفتاحية: التعليم باللغة الانجليزية , موارد دعم مخصصة

Summary

This study aims to address the research gap in the adoption and effectiveness of English-medium instruction (EMI) in Algerian higher education in some of Ibn Khaldoun University's scientific departments. It explores the factors influencing teachers' and students support for EMI, the anticipated challenges in delivering content in English, the training and support needs of teachers and students to effectively teach and learn in EMI classes, and the broader implications of adopting this approach. The study recommends tailored language support strategies and resources, as well as adequate pedagogical training and support.

Keywords: EMI , delivering content in English

RESUME

Cette étude vise à combler le déficit de recherche en matière d'adoption et d'efficacité de l'enseignement en anglais (EMI) dans l'enseignement supérieur algérien dans certains départements scientifiques de l'Université Ibn Khaldoun. Il explore les facteurs qui influencent le soutien des enseignants et des étudiants à l'EMI, les défis anticipés dans la fourniture de contenu en anglais, les besoins de formation et de soutien des enseignants et des étudiants pour enseigner et apprendre efficacement dans les classes EMI, et les implications plus larges de l'adoption de cette approche. L'étude recommande des stratégies et des ressources de soutien linguistique adaptées, ainsi qu'une formation et un soutien pédagogiques adéquats.

Mots-cles : L'enseignement en anglais (EMI) , Soutien linguistique, Soutien pédagogiques .