

Breaking Down Barriers: Paving the Way for the Implementation of Content and Language Integrated Learning (CLIL) in the Algerian Higher Education Institutions

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ABSTRACT: *Content and Language Integrated Learning (CLIL) has gained considerable attention worldwide as an innovative pedagogical approach that integrates content knowledge with language learning. This study explores the potential benefits and challenges associated with the implementation of CLIL in the Algerian Higher Education Institutions. By conducting a comprehensive analysis of relevant literature and employing a qualitative research design, including a systematic review and synthesis of scholarly articles, books, reports, and other relevant sources, this research identifies the key barriers hindering the successful adoption of CLIL in the Algerian context. Furthermore, this research proposes a set of strategies as a roadmap to overcome these challenges and pave the way for effective CLIL implementation. Breaking down these barriers and fostering a more dynamic learning environment, Algerian Higher Education Institutions can better prepare students for the demands of a globalized world. This research provides valuable insights and practical recommendations to policymakers, educators, and researchers interested in promoting language education reform in higher education. By bridging the gap between research and practice, this study contributes to the ongoing discourse on CLIL implementation and its implications for educational reform, focusing on the need for further research.*

KEYWORDS: Algeria, Challenges, English-mediated CLIL, Higher Education, Roadmap

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1.Introduction

The educational landscape of English language teaching has gone through a massive change around the world. It can be noticed that English language teaching has evolved through different approaches ,starting from teaching English as a Foreign Language (EFL), then moving on teaching English for Specific Purposes (ESP), followed by Content and Language Integrated Learning (CLIL) , and ultimately using English as a Medium of Instruction (EMI).According to Carrió-Pastor (2021,p 13) , ESP, CLIL and EMI are all rooted in the umbrella term of Content-based Instruction (CBI), which refers to classrooms where “students are taught academic content in a language they are still learning”. However, this research focusses specifically on CLIL as an innovative pedagogical approach that has been recently endorsed by educational institutions such as primary education, secondary education, and universities. Internationalization and globalisation are two key aims of supporting this educational approach. CLIL can be interpreted as a set of localised educational responses to the growing influence of English as a global lingua franca (2017). Hence, the rise of English as a global lingua franca has had a profound impact on higher education systems throughout the world (Coyle et al., 2010).

The emergence of CLIL as an acronym for Content and Language Integrated Learning (CLIL/EMILE: Enseignement d'une Matière par l'Intégration d'une Langue Etrangère) in the mid-1990s has led to significant developments in a trans-European movement aimed at integrating foreign language and subject/thematic content across wide range of learning and teaching contexts (Coyle, 2010, p. 97).CLIL, an innovative pedagogical approach that integrates content knowledge with language learning, has gained considerable attention worldwide for its ability to enhance language proficiency and subject understanding simultaneously. Within the scope of the current research, CLIL is a dual-focused educational approach in which an *additional language*, generally English, is used for the learning and teaching of both content and language. Therefore, in this approach, English as a Foreign Language is used to convey the content of a determined non- linguistic subject such as, for instance, technology or natural sciences (Álvarez-Gil, 2021, p. 318).

The widespread adoption of CLIL across different parts of the world has prompted concerns regarding the psychological and pedagogical preparedness of teachers for effective CLIL instruction (Lo, 2020, p. 9). While CLIL has gained significant attention internationally, its implementation in the Algerian context can face various barriers. This scholarly investigation systematically analyzes existing literature and theoretical frameworks to identify these barriers, including CLIL teachers' beliefs, limited availability of qualified CLIL instructors, and lack of suitable instructional resources.

Though research on CLIL is relatively young, some studies in this field have already been conducted in different areas of the world (Nawrot-Lis, 2019).However, an Internet search for the available literature in academic databases and search engines such as the Social Sciences Citation Index (Web of Science), Scopus, Education Resources Information Center (ERIC), Google Scholar, Scientific and Technical Information Research Centre (CERIST), and electronic journals in the Algerian Scientific Journal Platform (ASJP) by using a combination of three keywords, e.g. 'CLIL' + 'Algeria' + 'Higher Education' shows that no theoretical and empirical studies pertaining to the implementation of CLIL in Algeria have been conducted .To the best of my knowledge , there has been only one recent Online International Conference solely devoted to CLIL in Algeria entitled “*Implementing Content and Language Integrated Learning (CLIL) in the Algerian Higher Education: Hopes and Challenges*” (<https://www.univ-chlef.dz/file/wp-content/uploads/2023/02/CALL-FOR-PAPER.pdf>) which was organized by the Department of English at Hassiba Benbouli University of Chlef on the 11th and 12th of May, 2023. It mainly focused on the foundational stage of the enhancement of CLIL approach at the level of Higher Education Institutions in Algeria.

The implementation of CLIL approach in the Algerian Higher Education Institutions can offer numerous benefits, such as improving students' language proficiency, enhancing their subject knowledge and motivation to learn, promoting intercultural understanding, and improving learning outcomes and employability prospects for graduates. There are also several barriers that need to be overcome in order to successfully implement CLIL in Algerian Higher Education. However, it is worth noting that there remains a notable absence of research

focusing specifically on *English-mediated CLIL* within the environment of Higher Education in Algeria. This research gap highlights the need for further scholarly exploration and empirical investigations to enhance our understanding of the potential benefits and challenges associated with implementing CLIL in English instruction at university level.

Despite the growing interest and potential benefits of CLIL in the world in general and in Algeria in particular, there exists a significant gap in its implementation. The shortage of qualified teachers proficient in both English and subject-specific knowledge poses a major challenge. Additionally, limited resources and infrastructure further hinder the widespread adoption of CLIL in Algerian Higher Education Institutions. Recognizing the importance of addressing these gaps, this research aims to provide a roadmap consisting of a set of strategies for overcoming the barriers and successfully implementing *English-medium CLIL* in the Algerian context, with the ultimate goal of improving English language proficiency and enhancing the quality of Higher Education.

The discussion commences with a theoretical examination of what CLIL means and what it implies, followed by a section that elucidates its historical development and expounds upon the application process of this *English-mediated* teaching approach at the level of the Algerian Higher Education. The concluding section will shed some light on the advantages, challenges and suggested strategies for successful implementation of *English-mediated CLIL* within the Algerian Higher Education Institutions.

2.Theoretical Foundations of English-mediated CLIL

The current section aims to clarify what is meant by the term ‘CLIL’ and its history, and how this term is introduced as a promising Project in the Context of Higher Education in Algeria.

2.1 Defining Content and Language Integrated Learning (CLIL)

There are many definitions for Content and Language Integrated Learning (“CLIL” for short); however, broadly speaking, CLIL is defined succinctly by Coyle et al., (2010, p. 1) as “a dual-focused educational approach in which an additional language is used for the learning and teaching of both content and language. That is, in the teaching and learning process, there is a focus not only on content, and not only on language. Each is interwoven, even if the emphasis is greater on one or the other at a given time”. In CLIL, teachers have a dual objective, that is, teaching both language and the subject content. In other words, CLIL is “a generic umbrella term which would encompass any activity in which ... both language and the subject have a joint curricular role” (Marsh, 2002, p. 58). CLIL is than a combination of *subject learning* and *learning a language* that is not the mother tongue of the learners (DeBoer & Leontjev, 2021) and is linked to the processes of convergence. This is where CLIL breaks new ground (Coyle et al., 2010).

According to DeBoer & Leontjev (2021), the goals of CLIL are to promote (a) learners’ *academic competence*, (b) *proficiency in the L2* (second or foreign language; or additional language), and (c) L1 (first and/or strongest language) *competence*. Additionally, Carrió-Pastor (2019, p 77) points out, “CLIL means the integration of teaching based on *focus on form* and *focus on meaning*. Students are trained to know the content of words (*meaning*) and language (*form*), thus acquiring language rules and knowledge at the same time”. Hence, CLIL is an approach which is neither language learning nor subject learning, but an amalgam and a mixture of both and is linked to the processes of convergence.

2.2 A Brief Glance of the History of CLIL

Content and Language Integrated Learning (CLIL) is an approach that emerged in the 1990s (Carrió-Pastor & Bellés-Fortuño, 2021; Dalton-Puffer et al., 2022) as a product of a European multilingual policy with the original aim of enabling each citizen to use three European languages (L1 + 2 objective) (Hemmi & Banegas, 2021) to promote economic advances, cooperation within the European Union (EU), and the EU readjustment to migration flows and globalisation. However, the contemporary practice of integrating content and language learning dates back to bilingual and immersion programmes in the 1960s and 1970s in Canada as well as European settings such as the Netherlands, Finland, or Sweden which have usually favoured multilingual education (Hemmi & Banegas, 2021, p. 1).

According to Coyle et al., (2010), the term “CLIL” was first coined and officially adopted in 1994, and between 1995 and 2006 it appeared in plans and papers released by the European Commission which aimed to promote CLIL as a strategic approach to attain their multilingual policy (Hemmi & Banegas, 2021). CLIL has gained considerable popularity as a novel teaching approach implemented in secondary and primary schools, as well as in universities, and it was practised following different approaches: a content subject or a language subject, depending on the needs of the educational centre (Carrió-Pastor & Bellés-Fortuño, 2021). We call this approach as a new one, because despite its “29 years history”, CLIL remains in practice as “*capricious*” approach influenced much with the national context, including the specificity of an educational system and even country scaled goals (Sidorenko & Apresyan, 2019, p. 64). The rapid advancement of CLIL into its third decade is noticeable across various parts of the world (Lo, 2020; Carrió-Pastor & Bellés-Fortuño, 2021).

2.3 Research Landscape of CLIL

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 ongoing *new-born* project in the Algerian Education. As stated earlier in this paper, no empirical studies have been conducted on the implementation of CLIL. Only one International Conference has been organized recently by the University of Chlef on the theme of “*Implementing CLIL in the Algerian Higher Education: Hopes and Challenges*”

In recent years, the local academic landscape has witnessed a surge in research endeavors exploring the implementation of French-medium CLIL other than English, and for other levels of education (Ghezal & Lahoual, 2020), while there have been hardly any conducted studies into *English-mediated CLIL* in tertiary education. In this regard, Ghezal & Lahoual (2020) analyze CLIL-based instruction in the French language in Higher Education in Algeria, showing how French CLIL is realized in Algeria and opens important questions for CLIL instruction in general. They propose to check the feasibility (by the teachers) and the acceptability (by the students) of the CLIL approach in the technical and scientific specialties of three Faculties from of the University of Djelfa. The findings show that the teachers of the modules of the subject matters and the teachers of the French language module have to coordinate and collaborate in order to discuss the contents, the distributions and the teaching practices. The students of the three faculties have expressed their motivation to the application of this approach, which manifests itself at the level of the evaluation and proposed the addition of a weekly French language session to recapitulate their achievements of the week.

At the time of writing of this research paper in the third week of May 2022, there was a new call for papers for organizing an international Blended Conference on “*Integrating Content and English Language Blended Instruction in Algerian Higher Education: Paradigms, Issues and Perspectives*” which is going to take place in Oran on the 27th and 28th of November, 2023 (see https://www.ens-oran.dz/images/actualite/ICLHE_International_Blended_Conference.pdf). In this respect, organizing such international events paves the way forward to the implementation of *English-mediated CLIL* in Algeria, and it opens new doors for Algerian scientific community to collaborate more efficiently with researchers who have much expertise from all around the world.

In conclusion, it is worth noting that there has been a notable absence of localized investigations concerning the pedagogical principles that shape and direct teachers' instruction in Content and Language Integrated Learning (CLIL). Even after more than three years into this ongoing project, it is still unclear how the requirements of incorporating content and language have influenced practical decisions teachers have to make every day in the classroom. The small part of the current research attempted to tackle some of these issues as well. However, the primary focus lies in the practical implementation of *English-mediated CLIL* in the Algerian Higher Education Institutions.

3. Research Design

The research design employed in this foundational study is a literature review, which involves a comprehensive analysis of existing scholarly articles, books, reports, and relevant sources related to the implementation of CLIL in Algerian Higher Education Institutions. This research attempts to explore the potential benefits, challenges associated with the adoption of CLIL, and identify strategies for overcoming these challenges with the growing interest in the implementation of *English-mediated CLIL* in the Algerian educational system. To achieve this, the following research questions will be addressed.

1. *What are the potential benefits of implementing CLIL in the Algerian educational system?*
2. *What are the challenges that may be encountered when implementing CLIL in Algeria?*
3. *What are the effective strategies that can be proposed or identified to overcome the challenges of CLIL implementation in the Algerian Higher Education Institutions?*

To answer the three abovementioned research questions guiding this literature review, a systematic search was conducted in reputable academic databases and online libraries using keywords and search terms related to CLIL.

4. CLIL in the Context of Higher Education in Algeria

4.1 CLIL Initiatives in Algeria

In a remarkable collaboration between the US Embassy in Algeria and the Ministry of Higher Education and Scientific Research (MHESR) has resulted in a groundbreaking agreement to enhance the methods of English Language Learning at Algerian universities. This transformative partnership, undertaken in conjunction with Columbia University in New York, entails the allocation of a substantial financial investment amounting to \$500,000, which will be implemented over a duration of three years (Henache, 2021). This initiative represents a significant step forward in promoting cross-cultural exchange between the United States and Algeria, with the overarching goal of strengthening English language proficiency among Algerian university students. Specifically, the new agreement will put in place a long-term strategy for enhancing English in Algerian Higher Education Institutions that includes developing a training program on how to teach English in subjects such as science, technology, engineering, and mathematics (STEM) which are ideal candidates for CLIL implementation and also organizing joint workshops with Algerian English teaching experts. However, other subjects such as social sciences and humanities can also benefit from this English-mediated approach.

The Ministry has launched a Professional Development Program on Teaching Integrated Content and Language in Higher Educational context paving the way forward for implementing the *new-born* project of Integrating Content and Language in Higher Education (ICLHE). This program is targeted to Subject and Language Teachers from Higher Education Institutes from Algeria. Besides, this program is part of a larger initiative to strengthen English language instruction at Algerian Universities and ENSs: English as a Medium of Instruction (EMI).

As highlighted by Prof. Mohamed Miliani in 2021, on behalf of the Ministry of Higher Education and Scientific Research and of the Algerian Steering Committee, the Professional Development Training Course is the concretization of debates over a six-month period between both partners around teaching practices in the Algerian context developed after the LMD Reform in 2004. The Algerian context is characterized by a diverse landscape of English Language Teaching (ELT) providers, including universities, Ecoles Normales Supérieures(ENS), and Centres d'Enseignement Intensif des Langues(CEIL) within Higher Education Institutions. This program is part of a larger initiative that has commenced in 2016 with the introduction of induction training for teaching staff.

At the beginning of the academic Year 2022-2023, the Algerian Ministry of Higher Education made a decision about training content teachers from all the Faculties of Institutions. In October, the Ministry of Higher Education and Scientific Research had sent a correspondence to the presidents of regional conferences of universities, instructing them to initiate English language training for the benefits of university teachers. The Ministry stipulated that the teacher should obtain at least a B2 or C1 level of proficiency. Furthermore, the newly recruited doctoral students were concerned with training sessions in the English Language after testing their level at the end of April,2023 throughout all the Algerian Higher Education Institutions.

Today, English language is really getting the attention of the Algerian Government. It is a big project as it has been recently implemented in Primary Education and enhanced in Higher Education Institutions. Hence, the Government gives a great importance for the adoption of the English language. Thus, English becomes a priority by the Algerian Government and the modern world.

4.2 Enhancing CLIL Project in the Algerian Higher Education

As of 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*” (TESOL, 2021). This project is a four-way partnership between the Algerian Ministry of Higher Education and Scientific Research, the United States Department of State, the Columbia University Global Center in Tunis, and the Applied Linguistics & TESOL Program at Teachers College (TC), Columbia University. A schematic representation of the Four-way Partnership Program is depicted in Figure 1, illustrating the interconnectedness and collaborative nature of the endeavor.

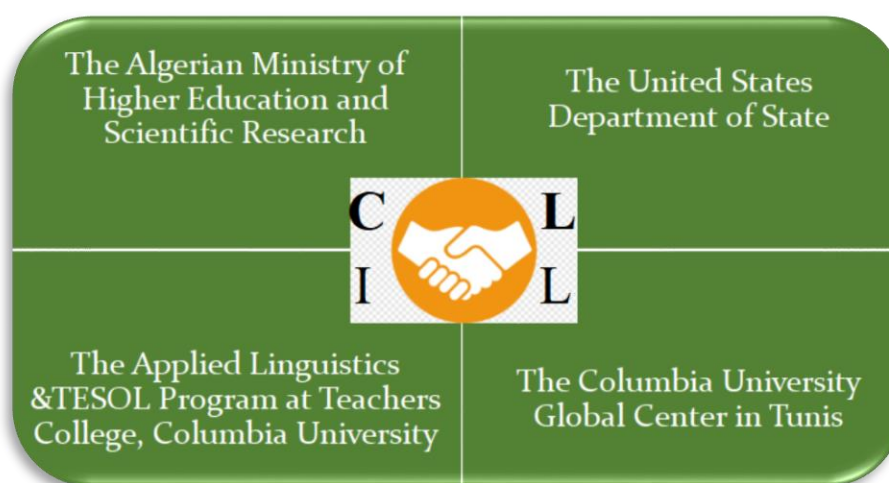


Figure 1. A Four-way Partnership Program (adapted from Makhlof & Hanifi, 2022)

The project is structured into three interconnected phases. Currently, in the ongoing initial phase, a research team from TC collaborates with Algerian counterparts to establish a conceptual framework for the project and conduct a domain analysis of instructional practices among educators in Algerian Higher Education. The conceptual framework will delineate the project's theoretical foundations and practical components, documenting the activities throughout the project's three-year duration. Simultaneously, the domain analysis aims to examine the competencies required by Algerian educators in their professional lives compared to those they impart in their courses. It will gather data on specific instructional and assessment practices and also assess the use of English in these contexts. Ultimately, the insights derived from the domain analysis will inform the development of professional development courses tailored for English language instructors at Algerian Higher Education Institutions (TESOL, 2021, p. 6).

During the final two phases of the project, Professors Purpura and Voss from TC, along with Donna Brinton from University of California, Los Angeles, will deliver courses on integrated language and content instruction for English language instructors throughout Algeria. Consequently, the Foreign Language Teaching Center of Hassiba Ben Bouali University of Chlef and on behalf of CEILs of Algerian Universities attended a meeting in Algiers that brought together Algerian experts in English language teaching and the aforementioned American experts from Teachers College Columbia University and the first cohort of teacher participants in ILCT project on Saturday, May 28th to Sunday, May 29th 2022 (UHBC CEIL, 2022). The CEIL of Hassiba Benbouali University of Chlef, member of the steering committee, presented perspectives about the successful implementation of this project in Algerian Universities. Hence, the three-year, \$500,000 project will increase and improve the quality of English instruction in the fields of education, technology, and scientific cooperation at Algerian Universities (Henache, 2021).

The aims the Ministry states in the agenda for the implementation of English-medium project of Integrated Content and Language Teaching in Higher Education are: development of a robust dual language teaching system; fostering of plurilingualism within the education system ; modernization and internationalization of education by adopting new innovative pedagogical approaches; and the establishment of horizontal and vertical connections among subjects in the curriculum. Additionally, the Ministry wants to see a closer coordination and collaboration both within Higher Education Institutions with international universities and an increase in the linguistic competence of both students and teachers.

To put the ILCT project into practice, careful, efficient and strategic management and planning are highly needed. The project aims to offer ambitious opportunities to promote the position of English in Higher Education; yet, it can also meet unexpected challenges that could hinder its effective implementation. But the question to be posed here: “*Why the implementation of CLIL!*” in the Algerian Higher Education Institutions? To answer such a bewildering question, the next section presents related literature from different perspectives of scholar researchers concerning this topic.

4.3 Why the Implementation of English-medium CLIL in Algeria?

With the growing interest in the implementation of CLIL throughout the world, there are some reflections circulating on doubts and limitations regarding foreign language benefits in CLIL education. As stated by Sidorenko & Apresyan (2019), any benefits are attributable as much to: a) student selection (incoming level), b) subject complexity and other curriculum-based factors, and c) teacher awareness in methodology and their readiness to implement it. In the same vein, Pérez-Vidal (2009 cited in Nawrot-Lis, 2019) highlighted that those benefits can be grouped in the three different categories: *Linguistic, Educational and pedagogical*, and *Social benefits* (see an in-depth analysis of these benefits in Nawrot-Lis, 2019, pp. 21–23).

As discussed above, the Algerian Ministry of Higher Education and Scientific Research has also recognized the importance of *English-medium CLIL* and accordingly has launched initiatives to support its implementation in universities throughout the country. One of the main reasons for the interest in CLIL in Algeria is the need to improve the English language proficiency of students and enhance their subject knowledge and motivation to learn, as English is an important language for global communication and commerce. In this

regard, CLIL is seen as a way to enhance the quality of education in Algeria by integrating language and content learning in a way that promotes students' critical thinking and problem-solving skills. Also, the implementation of CLIL promotes *bilingualism*, *multilingualism*, and *intercultural understanding* (with English as the preferred language and lingua franca). To be brief, the implementation of CLIL in the Algerian Higher Education Institutions has been driven in part by the country's desire to improve the English proficiency of its students and better prepare them for the global economy. However, there are also challenges to implementing CLIL in Algeria. In the next section, we will explore the challenges that may impede the successful implementation of CLIL in Algeria.

4.4 The Challenges to the Implementation of CLIL in Algeria

Reviewing the extent literature, a plethora of research studies have revealed some challenges that CLIL teachers face, including both “*psychological*” and “*pedagogical*” challenges. “Psychological” challenges are mainly concerned with CLIL teachers' beliefs while “Pedagogical” challenges relate to how CLIL teachers plan and deliver content and language integrated lessons (see a detailed analysis of these challenges in Lo, 2020, pp21-23). Accordingly, the implementation of CLIL in Algeria may face several challenges. One of the main challenges is the limited availability of qualified CLIL instructors who have both subject matter expertise and language teaching skills. There is a need for more resources, teacher training and support for institutions to develop and implement effective CLIL programs. Additionally, there are concerns about the potential impact of CLIL on the teaching of Arabic, which is the official language of Algeria.

Another challenge identified by CLIL research pertains to the dichotomy between *teaching the content subject* and *teaching the language*, with teachers still finding the curriculum content objectives as the most important in their classes. CLIL teachers regard the subject matter as their principal duty: considering it their main vocation and language learning as an additional objective that they may leave to language teachers (Lazarević, 2022). Hence, one widely recognized challenge for teachers is how to pedagogically “*integrate*” content and language teaching in CLIL lessons (Lo, 2020, p. 96). CLIL also brings with it one more complex challenge – the professional development of teachers who should understand how to organize their teaching, experiment with new approaches and put these into classroom practice (Lo, 2020; Sidorenko & Apresyan, 2019). Thus, CLIL can act as a professional development catalyst within faculties of higher education institutions (Coyle et al., 2010).

Despite these challenges, there is a growing interest in CLIL in Algeria, and there are efforts underway to promote the development of CLIL programs and resources, and many institutions are working to incorporate it into their curriculum. With continued support and investment, CLIL has the potential to play a significant role in improving the quality of education and preparing Algerian students for success in a globalized world.

The transmission to CLIL-based teaching environment is not so an easy process. The primary reason for it is that the CLIL approach has not yet been well-defined for the Algerian context and has the lack of practice base. Therefore, the implementation of CLIL in Algerian Higher Education can be a challenging task, but with a well-designed roadmap, it can be accomplished successfully.

4.5 A Roadmap for the Implementation of CLIL in Algerian Higher Education

In view of the different challenges facing CLIL teachers discussed above, there is an urgent need to equip them with strategies to integrate content and L2 teaching for successful implementation of *English-mediated CLIL* in the Algerian Higher Education Institutions. Hence, the following proposed roadmap can be followed:

- **Raising Awareness**

The first step towards implementing CLIL in Algerian Higher Education is to raise awareness among all stakeholders, including teachers, students, parents, and policymakers. This can be done through seminars, workshops, and other outreach programs. These activities should highlight the benefits of CLIL and how it can improve language proficiency, subject knowledge, and employability prospects for graduates. In this regard, a growing number of researchers have called for the need to raise CLIL teachers' linguistic awareness, introduce them to theories related to L2 teaching and learning, and equip them with strategies to integrate content and L2 teaching, particularly more explicit language instruction or scaffolding (Lo, 2020).

- **Conducting Needs Analysis**

The second step is to conduct a needs analysis to identify the areas where CLIL is most needed in Algerian Higher Education. This will involve assessing the language proficiency levels of students and faculty members mainly teachers, as well as the availability of teaching materials and resources. Thus, this analysis will help identify the needs and challenges of implementing CLIL and evaluate the readiness of institutions, teachers, and students to embrace this approach

- **Curriculum Development**

Once the needs analysis is completed, the next step is to develop a curriculum that integrates language learning with subject matter learning. This curriculum should be designed to meet the needs of both language learners and subject matter experts.

- **Developing a CLIL Policy Framework**

Based on the needs analysis, a policy framework for CLIL implementation should be developed in Algerian Higher Education. This framework should outline the objectives, expected outcomes, and the teaching and assessment methods to be used across various faculties and departments.

- **Developing CLIL Teaching Materials**

After the establishment of a policy framework for CLIL implementation in Algerian Higher Education, Teaching materials should be developed or adapted to suit the needs of CLIL teachers. Identify suitable teaching materials, including textbooks, supplementary materials, and online resources that are appropriate for the level of the students and the content areas. In this regard, teachers can use authentic materials such as newspaper articles, videos, and podcasts to supplement course materials. Ensure that the materials are available in the target language or can be adapted for use in the target language.

- **Teacher Training**

Teachers need to be trained in the principles and practices of CLIL that should cover topics such as lesson planning, assessment techniques, and materials development. They should be familiar with the curriculum, teaching materials, and assessment tools. Teachers should also receive training in the target language to ensure they have the necessary language skills to teach in that language. (As what we are witnessing in the enhancement of English by the Ministry this academic year). Hence, there is a more urgent need to provide training for the benefits of CLIL in-service teachers.

• Continuous Professional Development

Teachers and administrators should engage in Continuous Professional Development (CPD) to keep up-to-date with CLIL practices and developments. In this regard, Professional Development Program on Teaching Integrated Content and Language in the Algerian Higher Educational context was launched in 2021. For CPD purposes, researchers have proposed several frameworks for the adoption of CLIL approach (Lo, 2020). According to Lo (2020, p.151), there are three key questions to bear in mind when researching CLIL teacher professional development: 1. “What” do effective PD programmes for CLIL teachers include (i.e., their content)? 2. “How” are effective PD programmes implemented (i.e., their format)? 3. “What impact” may PD programmes have on teachers (i.e., effectiveness in changing teachers’ beliefs and practices)? Thus, the CLIL teachers’ professional development is an on-going and long-term process.

• Collaboration between Language Teachers and Content Teachers

Teachers from different Faculties need to collaborate and coordinate with teachers of English language from the Departments of English at the level of Higher Education Institutions in Algeria. Accordingly, the organization of the International Blended Conference, which takes place next November on the “*Integration of Content and English Language Blended Instruction in Algerian Higher Education: Paradigms, Issues and Perspectives*”, is itself the fruitful outcome of collaboration between language and content faculties from ENS of Oran, the Higher School of Electrical and Energetic Engineering of Oran (Ecole Supérieure en Génie Electrique et Energétique d'Oran (ESGEE)), Polytechnic National School (Ecole Nationale Polytechnique d'Oran (ENPO)), Oran Graduate School of Economics (Ecole Supérieure d'Economie d'Oran (ESE)), and Higher School of Biological Sciences of Oran (Ecole Supérieure en Sciences Biologiques d'Oran (ESSB)). This proves the high interest of the Algerian scientific community in the development of this new English-mediated CLIL direction at all levels of the educational system. Therefore, a number of researchers have demonstrated the important role played by “*collaboration*” and “*coordination*” between language teachers and content teachers (Carrió-Pastor, 2021; Lo, 2020) to design materials; both teachers can even collaborate in the same classroom. As highlighted by Pastor & Perry (2010), teachers play a pivotal role in obtaining positive results:

We believe that CLIL should be taught as a single subject being based on close cooperation between content teachers and language teachers. Some researchers into this approach consider that the role of the language teacher is merely that of ‘assistant’ to the content teacher. In our view, both content and language are of equal importance and both the content and language teachers collaborate to produce specific materials which allow different aspects to be focused on (Pastor & Perry, 2010, p. 72).

As stated by Lo (2020) collaboration among teachers, or simply known as “*teacher collaboration*”, plays an important role for implementing educational innovations, enhancing school effectiveness, facilitating student learning and promoting professional development. In this regard, a growing number of researchers suggest that content subject teachers and second language (L2) teachers can collaborate with each other to diagnose the students’ needs in terms of both language and content aspects so as to develop a school-based content and language integrated curriculum to facilitate the implementation of CLIL (Lo, 2020, p. 10).

• Collaboration with International Partners

Algerian Higher Education Institutions should collaborate with international partners who have experience and expertise in CLIL implementation. This collaboration can help to share best practices and enhance the quality of CLIL implementation. In this regard, the ongoing project of Professional Development Program on Teaching Integrated Content and Language in the Algerian Higher Educational context was launched in 2021. Besides, there are other strategies for enhancing the successful implementation of CLIL approach, such as the development of assessment tools, establishment of quality assurance mechanisms, and engaging stakeholders, which are critical components that need further research.

In a nutshell, the implementation of CLIL in Algerian Higher Education can offer numerous benefits. The roadmap outlined above can serve as a guide to successfully introduce and sustain the CLIL approach in Algerian Higher Education.

5. Conclusions and Recommendations

Based on the comprehensive literature review conducted on the ongoing project on the implementation of *English-medium CLIL* in the Algerian Higher Education Institutions, this study has yielded valuable insights to teachers, policymakers, and researchers. The findings highlight the potential benefits and challenges associated with CLIL implementation in the Algerian context, shedding light on the specific needs and considerations of Higher Education Institutions. These insights provide a foundation for designing effective strategies to promote the successful integration of content knowledge and language learning in Algerian classrooms. Teachers can leverage these findings to enhance teaching practices, while policymakers can use them to develop supportive policies and frameworks. Furthermore, researchers can build upon this knowledge to further investigate and address the identified gaps in the implementation of CLIL approach in Algeria. By leveraging these insights, stakeholders can work collaboratively to foster effective CLIL practices and promote academic achievement in multilingual settings.

Implementing Content and Language Integrated Learning (CLIL) in Algerian Higher Education requires a coordinated effort from all stakeholders. The roadmap outlined above provides a framework for building awareness, conducting a needs analysis, curriculum development, developing a CLIL Policy Framework and teaching materials, training teachers, enhancing continuous professional development, coordination between language teachers and content teachers, and collaboration with international partners. By following this roadmap, Algeria can further enhance its Higher Education System and provide students with the skills they need to succeed in today's globalized economy.

It is hoped from policy-makers to create a resource hub CLIL@ Algeria that provides information, training, and support for educators interested in implementing CLIL in Algeria. Also, Algerian steering committee who are in charge of the training of teachers in the Algerian Universities are highly recommended to create an Integrated Language and Content Teaching (ILCT) resource website for teachers, oversee the organization of ILCT professional events in Algeria, and identify joint research opportunities between Teachers College from the University of Columbia and the Algerian Ministry of Higher Education (TESOL, 2021, p 6).

6. Implications and Future Directions

In the Arab World in general and in Algeria in particular, CLIL studies are very limited. This research represents an initial attempt to explore information about the suggested roadmap for the success of implementing CLIL in Algerian Higher Education environment. The information presented in the current paper can serve as a benchmark or reference point for researchers in Algeria who are interested in conducting empirical research studies in the *English-mediated CLIL* field to investigate specific areas of interest that have emerged from the analysis of literature review. Hence, many more research studies on CLIL are needed so that robust conclusions can be reached and CLIL programs underpinned will undoubtedly have a bearing on its spread at the level of Higher Education Institutions in the short run.

Future research can focus on exploring the influence of CLIL on student academic achievement, examining effective pedagogical strategies, and evaluating the long-term outcomes of CLIL programs in the Algerian Higher Education Institutions.

The implementation of CLIL might take several future directions. These may be related to the use of the CLIL approach in Primary, Middle, and Secondary Education by subject teachers when teaching in English. Also, the language proficiency of students concerned in CLIL approach should be supervised to be sure they acquire content knowledge. Additionally, language and content teachers should collaborate and coordinate in teaching CLIL subjects, including language and content methodologies and teaching strategies. Another possible direction for future research is related to the “*what*” and “*how*” of Professional Development programs is to explore if there is any way to synthesize the various proposed frameworks for implementing CLIL.

As a conclusion, many efforts have been made by educational institutions, content teachers and language teachers to implement *English-mediated CLIL*, but its implementation should be supervised, controlled, and planned by policy-and decision-makers in Algeria to obtain the best benefits from this new emerging and transformative teaching approach where students study subjects in the English language.

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