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**The Role of Learning Strategies in
Implementing Content and Language
Integrated Learning (CLIL) Approach:
Teachers' and Students' Attitudes and
Perceptions**

*Dissertation Submitted to the Department of English in partial fulfillment of the Requirements
for the Degree of Master in Linguistics*

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Dedication

In loving memory of my father (may God have mercy on him)

To my mother

To all my sisters and brothers

To all my family

To all my friends

Acknowledgements

This work was done by me, but it is important to acknowledge those who contributed to this study. First and foremost, I extend my sincere thanks to my supervisor, Dr. Karima Ladjel, for her invaluable guidance and efforts in helping me complete this study. Secondly, I am grateful to Dr. Samir Akhrouf, a teacher in the MI department, for his crucial role in conducting this study and for his ongoing support. Lastly, I would like to thank all my past and present teachers who dedicated their efforts to teaching and instructing me throughout my career.

Abstract

The present study aims to examine the role of language learning strategies in the implementation of a Content and Language Integrated Learning (CLIL) approach. This descriptive study employs a mixed-methods design (triangulation), incorporating a questionnaire, interviews, and classroom observations, conducted at M'sila University during the academic year 2023-2024, which witnessed the implementation of the decision to replace French with English in Algerian universities. The study targeted a sample population of third-year students pursuing a degree in informatics systems within the MI department at M'sila University. The questionnaire was distributed to ninety-one students, while interviews were conducted with four teachers from various departments. Classroom observations were also carried out involving the same students sample and their respective teacher. The data collected from the questionnaire, which was adapted from Oxford's inventory, was analyzed quantitatively and presented in the form of tables. In contrast, the interview and observation data were analyzed qualitatively and presented in the form of paragraphs. The findings reveal that language learning strategies are present among CLIL students, aligning with CLIL features and potentially contributing positively to the implementation of the CLIL approach. However, the findings also highlight a lack of teacher involvement in the students' language learning process.

List of Abbreviations

%: Percentage

LS: Learning strategies

LLS: Language learning strategies

CLIL: Content and language integrated learning

CBI: Content based instruction

ESP: English for specific purposes

SPSS: Statistical Package for Social Sciences

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General introduction

1- Introduction

Content and Language Integrated Learning (CLIL) is a widely adopted approach globally for teaching foreign languages through the existing subject matter. This approach has been implemented for an extended period due to its efficacy in promoting language acquisition within an authentic learning context. Currently, CLIL is increasingly becomes associated with the English language, given its status as the prevailing lingua franca and its widespread use internationally. Language learning involves a set of strategies designed to enhance the effectiveness and quality of language acquisition. While language learning strategies in the CLIL context share similarities with those in other language learning approaches, strategies within the CLIL context must be aligned with its distinct features and principles to create an authentic learning environment. The significant interplay between the CLIL approach and the English language, particularly in university settings, highlights the importance of examining language learning strategies used for English language acquisition within the CLIL framework. This includes addressing the desire to learn English as a global lingua franca.

2- The statement of the problem

Widely adopted worldwide, particularly in university settings, the successful execution of the CLIL as a pedagogical approach for teaching languages hinges on several conditions. Among these conditions, the utilization of effective language learning strategies emerges as a fundamental component for achieving its intended objectives. In essence, the deliberate application of language learning strategies within CLIL becomes integral to fostering high-quality learning outcomes, particularly in language acquisition, which is the main purpose of this approach.

Analyzing the set of learning strategies in relation to the characteristics and features of the language and content integration approach highlights the most important strategies to prioritize for effective application. This ensures a strong implementation and maximizes the benefits of this widely embraced approach in language learning, while also offering an authentic context for English language acquisition which is the case of this study.

Over time, several studies has explored the role of learning strategies within the implementation of CLIL, specifically focusing on language learning strategies. Given that CLIL aims not only for content acquisition but also second language acquisition, these studies become particularly relevant. However, there remains a lack of research regarding the intersection of language learning strategies and CLIL with English in the Algerian context. This study addresses this gap, particularly as English was only introduced to Algerian universities instead of French language during the academic year 2023/2024, following a decision by the Minister of Higher Education and Scientific Research.

3- Research Questions

Main question:

1- Are the implemented language learning strategies by students align with CLIL features?

Sub questions:

a- What are teachers' perceptions towards those learning strategies?

b- What type of attitudes students and teachers has towards the use of English as the language of the content?

4- Research hypotheses

-Question 01 hypothesis:

1- Students' use of language learning strategies is closely aligned with CLIL features.

2- Students' use of language learning strategies is not closely aligned with CLIL features.

Hypotheses for sub questions:

a- It is anticipated that educators possess an awareness of language learning strategies.

b- Both teachers and students have positive attitudes towards the use of English as a medium of instruction.

5- Research objectives

The current research aims to investigate the role of language learning strategies used by students in implementing a Content and Language Integrated Approach (CLIL) within the context of Algerian universities, with a particular emphasis on M'sila University. This investigation centers around three primary objectives:

1- Exploring the language learning strategies employed by students to navigate the use of English as both the language of instruction and content, as well as to acquire proficiency in it.

2- Investigating the compatibility of these strategies with CLIL features.

3- The research aims to investigate teachers' perceptions regarding the strategies employed by students within the classroom.

4- The research aims to explore the attitudes of both students and teachers towards the use of English as the medium of instruction.

6- Research Methodology

The present study adopts the descriptive method as its research methodology, as it aims to explore an educational phenomenon and provide a detailed description of it. Additionally, the study utilizes a triangulation of methods, which will be analyzed both quantitatively and qualitatively. This triangulation is adopted to ensure the validity and reliability of the results, thus lending credibility to the research findings.

6.1- Research participants: In this study, the sample consists of third-year students pursuing a degree in informatics systems within the MI department at M'sila University. These students are being exposed to English as the language of instruction for the first time. The

sample also includes several teachers from various departments who are using English to teach their subjects, providing an opportunity to conduct interviews with them.

6.2- Research instruments

This research paper adopts a triangulation of methods, which is going to be as follows:

- A questionnaire was distributed to students to discover their implementation of learning strategies within the classroom, as well as their attitudes towards the use of English as a medium of instruction.
- The findings from the questionnaire are corroborated through classroom observations to assess students' attitudes towards the utilization of these strategies.
- An interview was carried out with teachers to explore their perceptions on the strategies and their attitudes towards employing English as the medium of instruction.

6.3- Data analysis: after conducting the research using three tools—questionnaires, interviews, and observations—the data will be analyzed. The questionnaire results will be analyzed using the SPSS program, and the findings will be presented in the form of tables. The interview responses will be analyzed thematically, collecting various perspectives from the teachers' answers and presenting them in paragraphs. The observation checklist will be analyzed to confirm the results obtained from the other tools.

7- Aim of the study

The present study aims to investigate the implementation of language learning strategies in CLIL settings, ensuring these strategies align with the content and language integrated approach

features. It also seeks to explore students' and teachers' perceptions of using CLIL, as it influences their motivation to learn English language as well as to employ LLS.

8- Significance of the study

It is believed that language learning strategies play a crucial role in the language learning process. In CLIL (Content and Language Integrated Learning) contexts, these strategies should align with the core features of the approach. Moreover, examining the use of these strategies in the Algerian CLIL setting is important for establishing an authentic implementation of the CLIL approach. This, in turn, can promote high-quality language learning, a key goal of the CLIL methodology.

9- Structure of the dissertation

This dissertation comprises three main sections. The initial part serves as a general introduction, providing an overview of the entire work. It outlines the problem, various research aspects such as questions, hypotheses, methodology, aim, and significance. The second part, Chapter One, delves into theoretical aspects. It is divided into two sections focusing on research variables. The first section explores learning strategies from diverse angles, while the second section examines the content and language integrated approach from various perspectives. Chapter Two constitutes the third part, dedicated to the practical fieldwork. It includes descriptions of data collection tools, data analyses, discussions of results, and a comprehensive conclusion summarizing the entire dissertation.

Chapter one: literature review

Section one: learning strategies

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3. Strategic competence VS Learning strategies
4. The effectiveness of learning strategies on academic performance
5. Learning strategies implemented in ESP classrooms
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 - 7.1. Oxford's taxonomy
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 - 9.1 Inside classroom
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Section one: learning strategies

1-Introduction

Examining the language learning strategies employed by both students and educators proves advantageous in enhancing the learning process. Before delving into specific language learning strategies (LLS), it is essential to understand learning strategies in general, then presenting LLS merely as a subset of LS. Hence, this section delves into various themes pertinent to learning strategies. It elucidates the notion of learning strategies from diverse perspectives. Additionally, it delineates the contrast between strategic competence and learning strategies, alongside their impact on both academic performance and language acquisition. Furthermore, it highlights certain learning strategies prevalent in English for Specific Purposes (ESP) classrooms. Concluding this section, it provides a definition of language learning strategies along with two taxonomies delineating types of language learning strategies.

2- Definition of learning strategies

Simply, learning strategies are methods used by students in order to be able to reach and process information. Oxford (as cited in Holec, 1996, p.42) defined learning strategies as the operations and steps used by students to assist them in acquiring, storing, retrieving, and utilizing knowledge, as well as improving their own learning. According to Wenden (1987), learning strategies are the various operations that learners apply to make sense of their learning (cited in Hardan, 2013). Through this definition, Wenden emphasizes the importance of LS in enhancing the learning process. Moredich and Moore (2007) claimed that active learning strategies serve as tool to promote high level of attention and interactive learning in the classroom (cited in Nabors

et al, 2012). In other words, LS provides more opportunities for learners to interact effectively and raise their attention.

According to Oxford (2013, p.12), there exists a potential confusion between learning strategies and skills. To differentiate between them, one must distinguish whether the action is automatic (skill) or consciously controlled (strategy). Furthermore, Demirel (2003), in defining learning strategies, associates them with the mind, describing them as intellectual methods employed by students to enhance the acquisition of both information and skills (cited in Yildirim, Cirak-Kurt & Sen, 2019, p.88). This suggests that learning strategies, as a mental process, are generated, regulated, and utilized by the mind.

Strategic competence VS learning strategies

Bachman (1990) defined strategic competence as the intellectual ability to integrate the portions of language competence in contextually communicative language use (cited in Holec & Little & Richterich, 1996, p. 43). According to Canale and Swan (1980) strategic competence is composed of verbal and non verbal communication strategies utilized in order to adjust insufficient communication competence (cited in Holec & Little & Richterich, 1996, p. 14).

Strategic competence and learning strategies are two concepts encompassed within the realm of language learning. In order to achieve effective communication, a range of learning strategies is used to develop the strategic competence which is a vital component of the communicative competence. Oxford (1990) delves the significant role of learning strategies as active and self directed instruments for enhancing the communicative competence. Additionally, she suggests various activities for the development of strategic competence (cited in Morón et al, 2009, p.52.53).

4- The effectiveness of learning strategies on academic performance

LS are extensively used by students in order to facilitate their learning process, potentially leading to improved academic performance. According to Cohen (2014, p.33), learning strategies are advantageous for fostering self-motivation and monitoring the successful acquisition of knowledge regarding what, when, and how to learn. In addition, Cohen stated that “the use of learning strategies can lead to enhance autonomy” (2014, p.10), underscoring their impact on students' independent learning apart from the teacher.

Furthermore, brown stated that “To become more competent, or even expert, we must learn to recognize competence when we see it in others, become more accurate judges of what we ourselves know and don't know, adopt learning strategies that get results,...”.(Brown, McDaniel & Roediger, 2014, p. 105). Thus, the adoption of LS contributes to elevating students' competence levels and awareness of their performance. Moreover, Cohen supports the idea that LS streamline the learning process, making it easier, faster, and more enjoyable (Cohen, 2014, p.30). These favorable conditions contribute to improved and more effective student performance. Additionally, Yildirim, Cirak-Kurt & Sen (2019) asserted, "Metacognition strategies control deficiencies in learning through incorporating the determination of the learners' own learning objectives for any learning activity by themselves..." This implies that students identify their learning objectives through the use of learning strategies.

Learning strategies used in ESP classrooms

Similar to other educational settings, multiple learning strategies are utilized in ESP classes. Various scholars worldwide have conducted studies to investigate the use of learning strategies in ESP classes. For example, Gonzalez Ardeo (2016) conducted a study in Spain which

revealed that students in ESP primarily utilize metacognitive and cognitive strategies, with less emphasis on compensation, social, and memory strategies. Another study conducted by Abdulmuhsen Alkahtany and Safaa Mohammad (2010) at Kuwait University indicated that participants engage in interactions with peers to facilitate their learning, using strategies such as asking questions for clarification and collaborating with classmates, as the classroom provides a conducive environment for language practice.

Another study was conducted by Zakiya Alnaddabi (2006) at Carleton University (Canada), which provided the following ranking of learning strategies use by ESP students:

- 1) Compensation
- 2) Social
- 3) Cognitive
- 4) Metacognitive
- 5) Memory
- 6) Affective strategies

Based on the findings of the mentioned studies and others, a combination of learning strategies is likely to be present in ESP courses to facilitate the acquisition of new language-related skills. It is observed that these strategies predominantly revolve around language learning, given that ESP courses are tailored specifically for English language acquisition.

7- Definition language learning strategies

Simply, language learning strategies are a set of techniques and tools used by students in order to reach advanced level of certain language. According to Cohen (2014, p.07) LLS refer to thoughts and actions that are consciously chosen by language learners to help them

deal with advanced language learning tasks in order to achieve high level of the target language performance. Another definition was produced by Wenden (1987)), “language learning strategies can be defined from the aspect of language learning behaviour, such as learning and regulating the meeting of second or foreign language” (cited in Hardan, 2013, p.1715). This viewpoint suggests that language learners exercise self-direction in their use of LLS by selecting appropriate strategies for specific language tasks.

Oxford, R introduced a new perspective on LLS by introducing the concept of self-regulated L2 learning strategies. She defined it as “deliberate, goal-directed attempt to manage and control efforts to learn the L2” (2013, p.12). It is clearly clarified that the process of language learning is guided by specific targets, while the choice of language learning strategies is controlled through those goals. White (2003, 2005) claims that LLS is illustrated from the learner-context interface theory which results from the examination of the way students perceive, experience, and contextualize their learning in autonomous environment (cited in Hurd and Lewis 2008, p.07). In this clarification, White endeavors to emphasize the significance of LLS in establishing an environment conducive to independent learning.

7- Language learning strategies taxonomies

Numerous scholars in the field of linguistics have put forward taxonomies of language learning strategies, including Joan Rubin, Andrew Cohen, Rebecca L. Oxford, and O'Malley and Chamot. This research will primarily concentrate on the taxonomies developed by Oxford and O'Malley and Chamot.

7-1 Oxford's taxonomy: according to this classification, language learning strategies are classified into two categories as follows: direct strategies and indirect strategies;

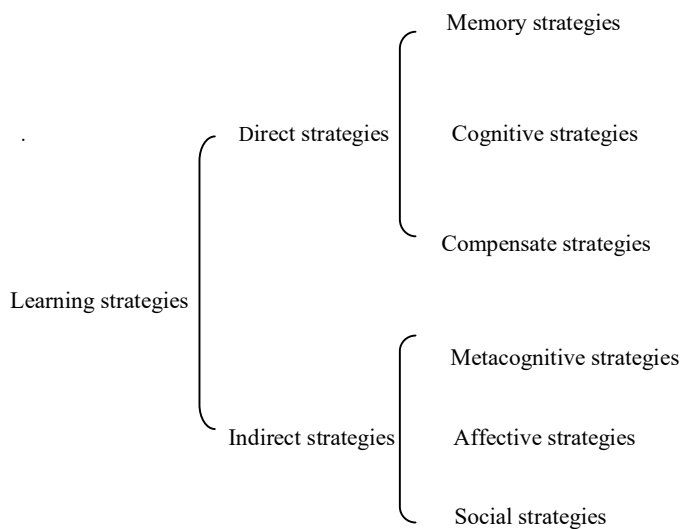


Figure 01: Diagram of strategy system (Oxford 1990), mentioned in Ellis (1994, p.540)

7.1.1- Direct strategies: this category is further subdivided into three main classes which are:

a- Cognitive strategies: is the intellectual process of treating the new input inside mind. For example:

- Practicing
- Revising and sending messages strategies
- Analyzing and reasoning
- Creating structure for input and output

1- b- Memory strategies: are the strategies used in order to store information in the mind. For example:

- Creating mental linkages
- Applying images and sounds
- Reviewing well

-Employing action

c- Compensation strategies: Are the strategies that are used in order to overcome the lack of information. For example:

-Guessing intelligently

-Overcoming limitations in speaking and writing

7.1.2- Indirect strategies: this category further subdivided into three classes which are:

a- Metacognitive strategies: they help learners in controlling the learning process.

For example:

-Centering learning

-Arranging and planning learning

-Evaluating learning

b- Affective strategies: strategies are used in order to control emotions. For example:

-Lowering the anxiety

-Encouraging self

-Taking the emotional temperature

c- Social strategies: are strategies based on collaboration with others. For example:

-Asking questions

-Cooperating with others

-Empathizing with others

7.2- O'Malley and Chamot's taxonomy: according to this classification language learning strategies are divided into three categories cognitive, metacognitive, and social/affective strategies;

a- Metacognitive strategies: by which the learners regulate their learning. These strategies are based on four phases;

- 1- Selective attention: paying attention to one particular aspect.
- 2- Planning: a provision to organize written or spoken discourse.
- 3- Monitoring: controlling attention to the task.
- 4- Evaluation: checking the understanding of the new output.

b- Cognitive strategies: the process of grasping knowledge at the level of the mind;

- 1- Rehearsal: the act of repeating in order to remember.
- 2- Organization: grouping and classifying.
- 3- Inferencing: using the existing items to guess meaning of new item.
- 4- Summarizing: synthesizing new information in order to assert what already has been retrieved.
- 5- Deducing: the application of rules.
- 6- Imagery: the use of pictures to comprehend and remember.
- 7- Transfer: using what is known to simplify the new items.
- 8- Elaboration: linking what is known with what is new.

c- Social/affective strategies: these strategies are based on contribution of and with others;

- 1- Cooperation: working with peers.
- 2- Questioning for clarification from teachers or other learners.
- 3- Self-talk:

TABLE 2.1. PRELIMINARY CLASSIFICATION OF LEARNING STRATEGIES

Generic strategy classification	Representative strategies	Definitions
Metacognitive strategies	Selective attention Planning Monitoring Evaluation	Focusing on special aspects of learning tasks, as in planning to listen for key words or phrases. Planning for the organization of either written or spoken discourse. Reviewing attention to a task, comprehension of information that should be remembered, or production while it is occurring.
Cognitive strategies	Rehearsal Organization Inferencing Summarizing Deducing Imagery Transfer Elaboration	Checking comprehension after completion of a receptive language activity, or evaluating language production after it has taken place. Repeating the names of items or objects to be remembered. Grouping and classifying words, terminology, or concepts according to their semantic or syntactic attributes. Using information in text to guess meanings of new linguistic items, predict outcomes, or complete missing parts. Intermittently synthesizing what one has heard to ensure the information has been retained. Applying rules to the understanding of language. Using visual images (either generated or actual) to understand and remember new verbal information.
Social/affective strategies	Cooperation Questioning for clarification Self-talk	Using known linguistic information to facilitate a new learning task. Linking ideas contained in new information, or integrating new ideas with known information. Working with peers to solve a problem, pool information, check notes, or get feedback on a learning activity. Eliciting from a teacher or peer additional explanation, rephrasing, or examples. Using mental redirection of thinking to assure oneself that a learning activity will be successful or to reduce anxiety about a task.

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Figure 02: The authentic table of O'Malley and Chamot classification (1990, p.46)

8- The impact of language learning strategies on language learning

Learning a foreign or second language is a process influenced by numerous factors, one of which is learning strategies that can enhance students' linguistic proficiency. O'Malley (1990, p.43) remarked that "learning strategies are attempts to develop linguistic and sociolinguistic competence in the target language." This suggests that LS plays a crucial role in enhancing language learning by fostering the development of linguistic competence. Furthermore, the objective of using LS is to learn the target language itself rather than merely learning to communicate through it (O'Malley, 1990, p.43).

There is widespread consensus that learning strategies improve language learning performance and its application in specific or general tasks (Cohen, 2010, p.10). Vocabulary, grammar, and all other facets of language acquisition are influenced by learning strategies. Language learning strategies are a subset of LS through which students achieve their goal of acquiring a new communication system. These strategies are heavily utilized in the realm of language learning as they can minimize errors and enhance levels of accuracy and fluency.

9- The role of language learning strategies

As methods employed to enhance knowledge acquisition, learning strategies play a significant role in the learning process. O'Malley (1987, p.17) emphasized the importance of learners developing strategies, as they aid in comprehending conveyed messages and in acquiring and recalling information. These strategies are applicable both inside and outside the classroom.

9.1- Inside the classroom

Referring to the clarification provided by Saskia Kistner et al, strategies employed by learners plays a crucial role in shaping self-regulation learner in the classroom (2015, p.176), where the learner independently controls his learning through the application of those strategies. As cited in Karen Nabors et al (2012, pp.33.34):

- Language Learning strategies are tools to improve attention and interaction in the class which play a crucial role in learning languages (Moredich and Moore, 2007).

-Applying LLS helps in increasing students' critical thinking and comprehension of ideas which are delivered by a second language at conceptual level (Krajcik and Blumenfeld, 2006).

-Learning strategies provides best assist to the learning process in general (Michael, 2007) in addition to the language learning.

9.2- Outside the classroom

In addition to its classroom application, language learning strategies also plays a significant role outside the classroom. For instance, activities such as extensive reading, lessoning to the radio are strategies aid in second language acquisition an enjoyable and pleasurable manner (Nigel Picard, 1996). In his study results about learning strategies, Nigel (1996) found that employing LLS beyond the classroom complements the inside classroom learning. Moreover, utilizing learning strategies outside the classroom likely assists learners in compensating for any deficiencies encountered within the classroom, while also facilitating smoother and quicker completion of assignments and research tasks.

10- Conclusion

In conclusion, based on the aforementioned discussion, it is crucial to recognize the pivotal role of learning strategies in the learning journey and their influence on various aspects of students' academic careers, including academic performance, learning structure, improvement, and language acquisition. The array of language learning strategies presented in this section offers students insights into the strategies they can employ according to different situations, thereby offering more flexibility, simplicity, and effectiveness in their learning efforts.

Section two: Content and language integrated approach CLIL

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2. Definition of CLIL
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13. Conclusion
14. The implementation of language learning strategies in CLIL classroom

1- Introduction

This section provides a comprehensive examination of Content and Language Integrated Learning (CLIL). Initially, it will provide a delineation of various definitions of CLIL from divergent perspectives, alongside an appraisal of its utilization within university settings and its existence in Algeria. Subsequently, a comparative analysis will be undertaken to contrast the CLIL approach with both Content-Based Instruction (CBI) and English for Specific Purposes (ESP). In order to foster a clear comprehension of CLIL, particular emphasis will be placed on elucidating the distinction between language and content, while also expounding upon the salient features, objectives, and inherent advantages associated with CLIL implementation. Furthermore, this section will explain the roles assumed by participants in the CLIL paradigm, including educators and students, and will explore the consequential impact of CLIL on the acquisition of a second language. In conclusion, the section will culminate in an examination of the synergistic relationship between learning strategies and Content and Language Integrated Learning.

2- Definition of CLIL

Content and language integrated learning is an approach of teaching a subject matter by means of foreign language which differs from the mother tongue. Content and language learning denotes educational environment in which the learning process goes through a language other than students' native tongue as the basic mode of teaching (Dalton-puffer, 2007, 2010, p.01). Students and teachers in CLIL classroom use a foreign language as a medium of instruction in order to deal with the content. Another definition provided by Volanda, de Z and Rosa, M (2009, XI) said that involves using a second language to engage with subject matter as a method for

foreign language acquisition. This claim emphasizes that the integral objective of CLIL is the second language learning through its practice inside classes.

According to Do Coyle (2010, p.01), he stated that CLIL is an educational method that centers on two aspects, utilizing an educational language for both subject matter instruction and language learning simultaneously. In contrast to the mentioned definitions, Coyle combined between two objectives of CLIL learning language and apprehend content concurrently within one lecture. David Marsh (1994) agrees with Coyle by which he stated that CLIL describes scenarios in which academic topics or segments are instructed using a foreign language, aiming to reach two basic objectives: learning subject matter knowledge and simultaneously mastering a foreign language (Cited in Diosl, 2014, p.318). To synthesis, CLIL is a method of teaching in which subject matter as well as a new language are taught.

3- CLIL in higher education

In the context of higher education, CLIL underscores the importance of internationalization, improving the job prospects of domestic students in an increasingly global economy, and attracting international students. Factors such as the increasing mobility of students and the rapid evolution of epistemology within university disciplines on a global scale have facilitated the implementation of CLIL (Psaltou-Joycey, A., Mattheoudakis, M., & Agathopoulou, E, 2014, p.367). This idea implies that global circumstances led to the integration of CLIL at universities in addition to developing new skills for both students and teachers.

Leppänen, Nikula, and Kääntä (2009) claimed that the adoption of the CLIL approach in higher education commenced in select European countries, such as Finland, as far back as 1980, beginning with the smallest university in certain European nations. The primary goal was to

enhance language proficiency within the Finnish educational system extending from schools to the university level. This clarification sheds light that the starting of CLIL at universities had not that much rust because it started at small universities.

The implementation of CLIL around the world used to be associated with the language of the coloniser especially in third world countries. However, over the past twenty years there was an observable increase in the availability of courses or programs delivered in the English language in particular universities (Hanesová, D, 2015, p.10). In addition, the English language is considered as a lingua franca which dominates all areas as well as the educational systems at universities.

4- CLIL in Algeria

In conducting a review of the implementation of the Content and Language Integrated Learning (CLIL) approach in Algeria, it is imperative to first provide an overview of the historical utilization of foreign languages for instructional purposes within the Algerian educational context. Beginning with the advent of French colonization in 1830, the French language became widely distributed throughout Algeria, permeating various societal spheres including the educational domain. Consequently, the educational framework was predominantly structured around the utilization of French as the primary medium of instruction, overseen by French authorities.

Following Algeria's attainment of independence, the Algerian government inherited the pre-existing French-centric educational system, wherein instructional content was delivered using French as a secondary language, particularly within scientific disciplines, reflecting a form of immersive language learning (e.i Immersion education: “language immersion education falls

within the more encompassing category of bilingual education when referred to from the international perspective” (Christian, D., Tedick, D. J., & Fortune, T. W, 2011, p.01).) This enduring presence of the French language in Algerian universities persists to the present day.

However, a notable development emerged in 2022, when the Minister of Higher Education and Scientific Research issued a directive stipulating the adoption of English as the medium of instruction commencing from the academic year 2023-2024, reflecting a form of CLIL approach. This directive represents an attempt to eliminate the French language as a legacy of colonialism and remain aligned with the ongoing global trend characterized by the extensive spread of the English language.

CLIL VS CBI

Content-based instruction is an approach to instruction and curriculum crafted to integrate language teaching within meaningful content that resonates with the students (Cammarata, L, 2016, p.12). This instructional approach is often juxtaposed with CLIL in scholarly discourse. Various researchers have stated disparities between CBI and CLIL. According to Devos, N (2016, P.15), stated that CBI and CLIL differ in their origins, with CBI having its roots in the United States and Canada, while CLIL originated in Europe.

Specifically, within CBI, language instructors frequently use English for teaching collaborating with content teachers to co-teach a course, or see content teachers develop and deliver courses tailored for ESL learners. On the other hand, CLIL typically entails a content teacher teaching subject matter through a second or foreign language. Moreover, it has been observed that The CLIL curriculum can begin within the language class, while CBI typically starts with the objectives of content-based classes (Richards & Rodgers, 2014, p. 116). This

underscores the fundamental divergence between CBI and CLIL in terms of instructors' quality and curriculum design. Referring to Richards (2015, p.80), claimed that there is only one difference between CBI and CLIL which is that content and language integrated learning approach is a vast concept than the content-based instruction. Further, he considered CBI as a version of CLIL though the last was developed after the first. This notion probably is because CBI is often associated to English, whereas CLIL is related to any foreign language.

On the other hand, various researchers have stated similarities between CBI and CLIL. Snow and Briton (2023, p.13), clarified that in both approaches, the integration of language and content objectives is paramount, with instructors entrusted to make the subject matter understandable to the intended students and to facilitate language acquisition. This highlights the shared objectives of the two approaches; learning content and acquiring language. According to Richards & Rodgers (2014, p.116), claimed that both approaches serve the implementation of English medium of instruction. In current, there is a growing recognition of English-Medium Instruction (EMI) as a prominent pedagogical trend, primarily attributable to the universal influence of the English language. One means for enhancing this phenomenon is through the utilization of Content and Language Integrated Learning (CLIL) or Content-Based Instruction (CBI).

6- CLIL VS ESP

English for specific purposes is an approach of teaching the English language according to learners' needs. It is English classes designed to meet particular learning needs (Hutchinson & Waters, 1987, p.07). This approach of teaching is often contrasted with CLIL. Several researchers have identified differences among CLIL and ESP. Accordingly, In CLIL lessons,

language structures, styles, and pronunciation are not targeted for correction and the teacher can handle more with the content topic, whereas in ESP, teachers address the language comprehensively, including grammar structures, pronunciation, and style and the teacher do not much deal with the content topic (Stojkovic & Chmelikova & Hurajova, 2019, p.162). Further, the basic of ESP classes is accurate and fluent language while in CLIL is not.

Moreover, transmitting and explaining a new content is the aim of CLIL whilst the language is the mean of exchanging ideas, in contradict, and within ESP classes a particular subject matter becomes the mean of transmitting a specific language (Canoon & Favaro & Menegale, 2017, p.70). This indicates that each approach prioritize either language (ESP) or content (CLIL) through the use of either language (CLIL) or content (ESP). Referring to Canoon (2017, p71), claimed that ESP curriculum is directed by needs analyses and language syllabus whereas CLIL curriculum is directed by subject matter without language syllabus.

In addition to highlighting differences, there is also an emphasis on commonalities. Referring to Stojkovic & Chmelikova & Hurajova (2019, p.162), CLIL and ESP share the authenticity of materials as a common feature. Thus, both approaches use authentic materials to extend lectures. Accordingly, CLIL and ESP share the use of the topic related vocabulary (Stojkovic & Chmelikova & Hurajova, 2019, p.162). Thus, each lecture has its associated language vocabulary either in ESP or CLIL. Moreover, both approaches are aligned in their objective of learners' acquisition of new language.

7- Language VS Content in CLIL

The integrated approach of content and language consists of two main components: language and content. Furthermore, according to Llinares & Morton & Whittaker (2012, p.08)

argued that extensive research on CLIL has emphasized the distinction between language and content, treating them as distinct entities. This notion states that content and language are two separated consists of CLIL. Moreover, Villabona & Cenoz (2022) said that achieving equilibrium between subject matter and language presents a significance challenge to fulfill the dual-objective of CLIL.

As per Hemmi & Banegas (2021, p. 64) highlighted that “the language is still the “vehicle” carrying the content” the quotation describes the language as a vehicle which monitors the transmission of the content. The language of CLIL can be generally categorized as the language utilized within the educational environment (Llinares & Morton & Whittaker, 2012, p.08). Additionally, this form of language might be characterised by scientific terminology, academic style, and formal language. It is imperative to acknowledge that the language employed in CLIL context typically constitutes a foreign tongue. Furthermore, within CLIL as on integrated approach, language learning is distinguished by a top-down orientation. This entails that the language acquisition process commences from the overarching classroom context and gradually delves into language dimensions such as grammar, vocabulary, and syllables. (Angel M.Y. Lin, 2016, p.36).

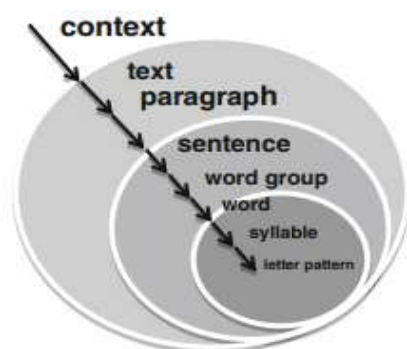


Figure 03: the description of language acquisition orientation in CLIL context. Rose (2013) mentioned in Angel (2016, p.35)

In CLIL (Content and Language Integrated Learning) classes, the instructional material frequently aligns with specialized subject matter, emphasizing that the primary focus within the classroom is the content. According to Dalton-puffer and other scholars, they stated that when analyzing the absence of language focus in CLIL classes, one prominent explanation is the perception among content instructors that prioritizing content is paramount (cited in Villabona & Cenoz, 2022). Moreover, a Sociocultural study have been conducted by Skinnari and Bovellan in 2016 about the integration of CLIL in Europe especially in Austria, Finland, and Spain, validated that teachers focus more on the content and that instructors see themselves as subject matter experts rather than language teachers (Skinnari & Bovellan, 2016, pp.145-167). The above perspectives confirm that CLIL teachers' attitudes control the orientation of the class.

8- Features of CLIL

Due to its distinctiveness from other sections, the CLIL section possesses distinctive features that set it apart. The primary feature of CLIL is its dual-focused approach which involves teaching and learning methods that equally prioritize both content and language acquisition (Dack & Argudo & Abad, 2020, p.42). The same scholars claimed that” The nature of CLIL is interdisciplinary because it is not based on single evidence or a theory.” (Dack & Argudo & Abad, 2020, p.42). Due to its dual-objectivity (e.i learning subject matter and new language), CLIL is considered as dual-focused and interdisciplinary approach.

Urmeneta (2019, p.14) stated that the majority of educators often have a first language that differs from the foreign language they teach. Further, she claimed that CLIL lectures are typically categorized as "content" sessions on the schedule, whereas foreign language classes are distinctly programmed as language sessions, in addition to that the curriculum presented in CLIL

lessons is required to align with the national curriculum associated with a specific content domain (p.15). Moreover, evaluation primarily centers on the mastery of the content (Urmeneta, 2019, p.15). Despite adoption of new language, the content does not deviate from the national values and attitudes and the teachers have national roots.

According to Mehisto et al, (2008, pp.29-30), claimed that there are six essential features which the CLIL classroom should be characterised with: comprise multiple focuses (e.g. language, content), authenticity (e.g. authentic materials), active engagement in learning (e.g. students participate more than teacher), a secure learning environment (e.g. improving students' self-esteem), scaffolding (e.g. feedback), and fostering cooperation. All these characteristics entail shared responsibility between teachers and students and can be accomplished through their collaboration.

9- Objectives of CLIL

Every teaching approach has its own set of objectives and purposes, which are achieved through or for various means. Similarly, CLIL also has its specific objectives. As per Ball & Clegg & Kelly (2016), said:

“The activity teaches conceptual content, by means of procedural choices (cognitive skills), using specific language derived from the discourse context. All the words underlined here can be described as 'content', but it is the interplay between them that lies at the heart of CLIL practice.”

This quote outlines the mechanism of CLIL, describing it as the interaction between content, language, and cognitive skills.

According to Thurman (2000), stated that CLIL is applied to improve learners' language skills, and it's logical to infer that learners might need language assistance (cited in Hönig, I, 2009, p.14). This confirms that the first objective from implementing CLIL is language progress. Hönig (2009, p. 15) referenced Dalton-Puffer (2008), who stated that the purposes of CLIL are: increasing exposure, increasing practice, and increasing language competence. These goals are achieved due to excessive exposure to the language. Referring to deBoer & Leontjev (2020, p.62), one of the main objectives of CLIL is the development of students' critical thinking in addition to language and content learning in one single session, illustrating the added value of CLIL. Critical thinking stands out as a pivotal characteristic among successful students, and it can be enhanced through CLIL.

10- Advantages of CLIL

Tarnopolsky (2012, pp. 80-81) referenced Coyle (2007), who mentioned a set of CLIL advantages as following:

- 1) Increase students' language proficiency and self-esteem.
- 2) Increase the anticipation level of both teachers and learners
- 3) Foster the development of the learner's ability to take risks and solve problems.
- 4) Enhance vocabulary acquisition and grammar competence.
- 5) Support students' autonomy.
- 6) Extend students' understanding beyond oversimplified foreign language topics.
- 7) Support the linguistic fluency.
- 8) Improve learning skills such as concentration.
- 9) Create positive perspectives and attitudes, and introduce intercultural issues into syllabus.

Moreover, Utilizing CLIL methodology boosts collaboration and a sense of unity among the group, leading to an increase in student interactions (Granero-Gallegos & Baños & Baena-Extremera, 2021, p.44). Similarly, heightened students' interaction results in increased discourse, a greater exchange of information, a proliferation of ideas, and an expanded range of perspectives shared, all of which contribute to enhance students' knowledge. Additionally, implementing CLIL unlocks opportunities for language acquisition, knowledge acquisition, enhancement of critical thinking, and improvement of scientific research.

11- Participants' roles in CLIL classroom

In the CLIL classroom, there are two primary participants: the teachers and the students, each embodying specific roles.

11.1- Teachers' role

According to Dale & Tanner (2012, pp.19-20), the role of the teacher is centered on three phases. Firstly, developing the teacher's own vocabulary: during this phase, educators may excessively rely on their mother tongue. However, they come to understand that prioritizing students' use of the second language takes precedence over their own language proficiency. Secondly, developing learners' vocabulary: during this phase, the teacher supports learners to improve their own vocabulary by means of organizing various tasks. Thirdly, facilitating learners' language: during this phase, instructors evolve into CLIL experts and realize that language encompasses more than just vocabulary. They begin incorporating materials that enhance both linguistic proficiency and content comprehension. These stages have a paramount significance in developing CLIL teachers' personality and experience.

In accordance with the concept of language use within the classroom, Nawrot-Lis (2019, p.58) said that “it is the teachers' role to be always aware of the language use in the classroom). This means that the teacher controls the utilization of language. Moreover, Dale & Tanner (2012, p.20), claimed that the teachers' language skills is not that much important, it is sufficient for them to develop techniques to answer students' questions flexibly, and further to develop various methods of feedback.

11.2- Students' role

In the classroom, students, just like teachers, play a vital role. This role has become even more crucial as the global educational system has transitioned from teachers centered to learners centered approach. Referring to Gándara (2017, p.07) said that the student's role in the task incorporates both in the input phase and in the subsequent output phase in addition to participating in all classroom activities, posing queries, and responding other students and teachers' questions. Wolff (2007) highlighted the role of learners in content and language integrated paradigm as both foreign language learners and content learners converge (cited in Papaja, 2014, p.24). As stated, CLIL is characterized by its dual-focused approach, where learners must simultaneously engage in dual-focused learning (e.i. understanding the subject matter and acquiring the language).

According to Nawrot-Lis (2019, p.56) claimed that CLIL learners have to apply some techniques such as: reasoning, envisioning, perceiving, acknowledging, evaluating, and conceptualizing in order to foster their learning process and cognitive development. This sort of techniques encourages the cognitive abilities to perceive the dual knowledge (content and language). As per Chodkiewicz & Trepczyńska (2014, p.83), CLIL learners are supposed to

possess the skill of managing discourse and presentation by means of different techniques such as: “sequentially, chronologically, and thematically” (2014, p.83). This set of techniques provides more value and reliability to the lesson discourse.

12- The impact of CLIL on language acquisition

Undoubtedly, the CLIL paradigm is regarded as a language teaching approach. Furthermore, it is designed to achieve an advanced level of linguistic skills in a foreign language. The CLIL class differs from other language classes, it provides natural context for language acquisition in which learners have more contact with the daily life language (Llinares & Morton & Whittaker, 2012, p.08). This implies that CLIL classroom is differ from the traditional language classes which teach the academic form of the language. Furthermore, Brown & Bradford (2014, p.330), added that CLIL lessons engage learners' language skills reading, writing, listening, and speaking.

Additionally, according to Papaja (2014, p.25) subject matter in CLIL could potentially function as scaffolding for language learning, and further as content complexity increases, learners acquire more advanced language skills. Moreover, the extent of content sophistication determines the delivered language difficulty and further the list of used vocabulary and terminology.

With identical alignment, students engaged in content and language integrated learning tend to display a higher level of confidence in effectively conveying their intended ideas meanings in L2, even when they encounter momentary gaps in their linguistic recourses, and further they demonstrate increased proficiency in handling the demands of spontaneous interactions (Dalton-Puffer, Nikula & Smit, 2010, p.280). Due to the natural context and the

extensive exposure to language in CLIL classes, students are able to develop advanced level of communicative competence especially strategic competence which is significance in communication.

Undoubtedly, learning subject matter through foreign language elucidates more opportunities to encounter authentic culture through using authentic materials which have been structured in varied cultural customs and points of view (Coonan, Favaro & Menegale, 2017, p. 07). Furthermore, exposing students to real cultural materials supports them to acquire linguistic competence and everyday language usage.

13- Conclusion

In conclusion, Content and Language Integrated Learning (CLIL) is a methodology that involves teaching languages through subject matter, delivering content in a foreign language to aid students in acquiring a new language within a semi-authentic linguistic context. This approach plays a significant role in second language acquisition as students are deliberately exposed to the language. It is crucial to adopt English as the medium of instruction in implementing CLIL at universities, given that scientific research is an international endeavor in which ideas are exchanged using English as the lingua franca.

14- The implementation of learning strategies in CLIL classroom

Learning strategies presents in all classroom settings, including content and language integrated sessions. In CLIL paradigm, at least two languages might be produced in the class. As bilingual programs like CLIL contend with a more proficient first language (L1) and a less proficient second language (L2), this situation would impact both teaching methods as well as learning strategies (Klewitz, D. habil B, 2021, p.22). This dynamic of languages necessitates a diverse array of language learning strategies, consequently resulting in a variety of techniques employed by students.

Among scholars who did talk about LLS in CLIL is Nawrot-Lis. He stated a list of some techniques used by CLIL students such as: metacognitive strategies, discussion within class, task demands, language forms for scaffolding, high level of questioning, and writing texts. Further he claimed that cognitive strategies also presents in form of incorporating thinking skills (Nawrot-Lis, 2019, p.58). Nawrot's list of strategies illustrates the variety of techniques available to students, facilitating more effective learning outcomes.

Oxford (1990) said that language learning strategies implemented in CLIL significantly contributed to exploring methods for enhancing the relevance of the curriculum, boosting motivation, and engagement of learners in their educational pursuits (cited in Coyle, Hood & Marsh, 2010). This implies that learning strategies affects students' mentality and psychology which contributes in their progress to learn. Besides all, Pavón and Gaustad stated that “a second language advocates the use of methodological strategies to promote interaction and language use in the classroom as the means for students to access information” (Pavón

and Gaustad, 2013, p.84). Employing appropriate strategies to ensure understandable language aids in making content acquisition easier

Moreover, code switching is one of the strategies used by both teachers and learners (Massler, Ioannou-Georgiou & Steiert, 2011, p.76), as an outcome of co-existing of more than one language in content and language integrated learning. Moreover, utilizing ICT in the classroom offers authentic and realistic language practice, along with opportunities for collaboration and communication with fellow learners who speak the same language (Anderson, McDougald & Cuesta Medina, 2015, p.143). The new technologies open gates of connecting and communicating with language users and native speakers which help in acquiring correct and authentic language.

Scaffolding is identified as one of the most critical factors in the successful implementation of CLIL (Mehisto, 2008). This scaffolding, provided by teachers through mechanisms like feedback, assists students in applying self-regulation and self-evaluation strategies, which are crucial for enhancing students' motivation, attitudes, and awareness about the learning process. As outlined by Met (1998), social/affective strategies hold significant importance within the CLIL classroom. This is due to the necessity for students to engage in communication with instructors, peers, and language resources to effectively navigate the content (quoted in Coyle, Hood, & Marsh, 2010, p. 51). Classroom interactions may involve asking questions, seeking translations, engaging in debates, reading handouts, and collaborating with others.

Besides all, in order to have an effective language learning, students are recommended to apply some effective strategies to deal with the language for skills reading, writing, speaking, and listening:

1. Effective reading strategies: such as thinking aloud, taking notes, generalizing the text, mapping concepts, summarizing in one sentence, making prediction about the text, connecting with real life experiences, and others (Iobidze, M, 2019).
2. Effective writing strategies: such as reading resources, extensive reading, imitating models of writing, drafting an outline, paying attention to grammar and vocabulary, and revising (Mu & Carrington, 2007).
3. Effective speaking strategies: such as repeating and imitating sounds, listen to native speakers, interacting with the target language, and memorizing vocabulary and grammar patterns (Gani, Fajrina & Hanifa, 2015), in addition to strategic competence enhancement.
4. Effective listening strategies: such as asking for confirmation, appealing for help, managing emotions, interpreting, drawing images, and not taking (Bao, & Guan, 2019).

In her examination of CLIL, Dana Hanesová has explored the content and language integrated approach through the lens of three primary learning theories: behaviorism, cognitivism, and constructivism. Firstly, behaviorism posits that language learning relies on repetitive drilling. However, as CLIL emphasizes content, language learning strategies should not align with this theory, as it contradicts CLIL principles. Secondly, cognitivism emphasizes that language learning at the neurological level occurs through meaningful communication,

aligning with CLIL principles that advocate for language acquisition within authentic communication contexts. Therefore, employing learning strategies should align with this theory. Thirdly, Constructivism posits that learning occurs through interaction and the construction of knowledge based on existing information, mirroring the principles of CLIL, which emphasize active learner participation, interaction, and cooperative learning as core elements. Therefore, learning strategies should be aligned with the principles of constructivism (Hanesová, D, 2014, pp.36.37). To synthesis, learning strategies within CLIL classroom should be controlled by the principles of cognitivism and constructivism in the classroom, while acknowledging the relevance of behaviourism outside the classroom as additional efforts in order to have high-quality learning.

What distinguishes the use of learning strategies in CLIL is the dual-focused approach of the instruction, where students are immersed in both content and language simultaneously. According to Dalton-Puffer, Nikula & Smit (2010, p.192), in their discussing on the dimensions of implementing CLIL, it was asserted that learning strategies are one of the most crucial aspects of the learning dimension in CLIL, particularly for enhancing students' motivation. Through this explanation, they acknowledged not only the presence of language learning strategies but also other strategies associated with content learning.

Chapter two

The field of work

1. Introduction
2. Research Methodology
3. Research design
 - 3.1. The sample population
 - 3.2. Research instruments
 - 3.3. Research settings
4. Data analyses
 - 4.1. Students' questionnaire
 - 4.1.1. Description and objectives of students' questionnaire
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 - 4.1.2.1. Validity
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 - 4.2.1. Description and objectives of teachers' interview
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 - 4.3.2. Data analyses
5. Discussion of results
6. Conclusion
7. Implementations and Recommendations
8. Limitations of the study

1- Introduction

The second chapter constitutes the most crucial section of this research paper. It addresses the empirical framework wherein the primary procedures of the study are conducted and described. Initially, it outlines the research methodology, characterizing it as descriptive, followed by a detailed presentation of the research design, which includes the sample, research instruments, and research settings. Subsequently, this chapter provides a comprehensive analysis of the data, with each research tool being analyzed in separate sections using various methods. The chapter concludes with a discussion of the results, offering recommendations and highlighting the study's limitations, and culminates in a general conclusion.

2- Research Methodology

To investigate language learning strategies in the context of content and language integrated learning, this research study applies a descriptive method. This approach is considered the most suitable for outlining the presented issues and providing a thorough examination of LLS in a CLIL context for successful implementation. The use of a descriptive method is justified as it aligns with students' attitudes and their application of these strategies. Oxford (2013, p.71) notes that L2 learners' attitudes can influence their language learning, making these strategies integral to students' attitudes. Dulock (1993, p.154) supports this approach in investigating attitudes by saying it is used to “describe systematically and accurately the facts and characteristics of a given population or area of interest”.

3- Research design

In order to reach the main objective of this research paper, a specific research design is followed in order to collect the targeted data. This research design includes the following process:

3.1- The sample population

The sample comprises 91 third-year students pursuing a degree in informatics systems within the MI department at M'sila University. This selection is deliberate as it marks their initial exposure to English-medium instruction. They were chosen randomly from various classes newly incorporating English into their curriculum this year. This random selection ensures an equitable opportunity, consistent with the principle outlined by Naval Bajpai (2009, p.260): "In random sampling, the chance factor plays a role in the process of sample selection." This chosen sample represents all scientific disciplines adopting English as the language of instruction at M'sila University. SPSS software confirmed the validity of 91 student responses.

Case Processing Summary

		N	%
Cases	Valid	91	100.0
	Excluded ^a	0	.0
	Total	91	100.0

Table 01: case processing summary

3.2- Research instruments

To validate the findings of the current study, a triangulation of methods is employed, involving the use of questionnaires, interviews, and classroom observations. Describing Denzin's perspective, Uwe.F (2018, P.530) highlights that "Denzin views triangulation as a strategy for gaining a deeper understanding of the subject under investigation." This perspective underscores the significance of utilizing mixed methods, such as triangulation, to enhance research comprehensiveness. Initially, a questionnaire is tailored for students to explore their attitudes towards the utilization of language learning strategies in the CLIL context. Subsequently, the

study employs interviews with teachers to delve into their perceptions regarding these strategies within their classrooms. Lastly, classroom observations are conducted to corroborate the data gathered from both the questionnaire and the interviews.

3.3- Research settings

The research was carried out at the MI department of M'sila University, situated in M'sila city, Algeria. The study took place during the academic year 2023-2024.

4- Data analyses

This section encompasses the analyses of gathered data through questionnaires, interviews, and classroom observations post-conduction. Each tool's outcomes will undergo separate analysis in dedicated sections. The questionnaire responses from students will be showcased numerically through tables. The thematic analysis of teacher interviews will involve extracting main themes from their responses and presenting them in paragraphs form. Lastly, classroom observation findings will be presented through descriptive paragraphs.

4.1- Students' questionnaire

The questionnaire holds significant importance as a data collection tool in the realm of human sciences. In this research paper, the questionnaire is derived from the Oxford Inventory of Language Learning Strategies (adapted), with modifications made to certain items to align with the research objective of investigating Language Learning Strategies (LLS) within the CLIL context.

4.1.1- Description and objectives of the students' questionnaire

The primary aim of this questionnaire is to explore the language learning strategies utilized by CLIL students, who engage with subject matter through the medium of English, along with their perceptions regarding English as a medium of instruction in the classroom. The questionnaire is semi-structured, comprising 24 questions, a mix of closed-ended and open-ended, divided into three main sections.

The initial section focuses on students' profiles, comprising three inquiries: gender, age, and the duration of exposure to English as a medium of instruction. The second segment features 19 statements regarding learning strategies, with response options limited to "often," "sometimes," and "never," following a semi-structured format. The third section, titled "Students' Perceptions," consists of two questions. The first addresses potential challenges students may encounter when using English, while the second explores students' perspectives on English as a medium of instruction.

The questionnaire was originally drafted in English, the language of the research, and was subsequently translated into Arabic for the convenience of the students. This bilingual approach aimed to ensure that students could easily comprehend the content. The questionnaire was administered online via a website link shared with the students through their Telegram group.

4.1.2- validity and reliability

4.1.2.1- Validity

Content validity was assessed by subjecting the questionnaire to scrutiny. Initially, the questionnaire underwent adaptation under the supervision of the supervisor. Subsequently, it was

evaluated by a panel of doctors from the English department at M'sila University, acknowledged experts in the field. This process is crucial to ensure the validity of the instrument employed and thus the reliability of the ensuing results.

4.1.2.2- Reliability

The data's reliability was assessed using the Cronbach's alpha coefficient computed with the SPSS software. The resulting coefficient, $\alpha = 0.8$, is indicative of strong reliability, as this value is considered quite favorable for assessing internal consistency.

Reliability Statistics	
Cronbach's Alpha	N of Items
.801	19

Table 02: Reliability

4.1.3 Data analyses

Section one: students' profile

Based on students' feedback, out of a total sample of 91, 51 are female, constituting 56% of the total, while 40 are male, making up 44%. Of these, 83 students fall within the age range of 19 to 23 years, representing 91.2% of the total, while 8 students are older than 23, representing 8.8%. Moreover, 48 students reported studying English for more than a year across various contexts, while 43 stated they had only studied it for their first year.

Section two: learning strategies

1- I use new English words in sentence so I can remember them.

Options	Number of students	Percentage%
Often	29	31.9%
Sometimes	57	62.6%
Never	5	5.5%
Total	91	100%

Table 03: students' responses about strategy 01

The proposed strategy relies on the cognitive acumen of students to integrate newly acquired English vocabulary into contextualized sentences, facilitating deliberate and purposeful utilization of language proficiency. Based on the provided table, it suggests that a significant portion of students (62.6%) utilize the strategy of incorporating new vocabulary into sentences occasionally to aid in retention. Meanwhile, a smaller portion (31%) heavily depends on this method, while a minority (5.5%) stated they never rely on it. This result indicates that most students rely on contextualizing the new English words within new sentences in order to remember them.

2- I remember new English words by making mental pictures of a situation in which the word might be used.

Option	Number of students	Percentage
Often	32	35.2%
Sometimes	46	50.5%

Never	13	14.3%
Total	91	100%

Table 04: students' responses about strategy 02

The second strategy presented involves associating new English vocabulary with mental imagery on an intellectual level which helps in memorizing them. According to the presented data, it states that a significant portion of students (50.5%) sometimes employ the strategy of imagining situations in order to remember new words. Meanwhile, (35.2%) of them heavily rely on it while minority (14.3%) claimed that they never rely on it. The highest percentage indicates that most students rely on their imagination to remember new words, which helps them to remember and learn more vocabulary.

3- I remember new words or phrases by remembering their location on the page.

Option	Number of students	Percentage%
Often	22	24.2%
Sometimes	50	54.9%
Never	19	20.9%
Total	91	100%

Table 05: students' responses about strategy 03

Certain students, particularly visual learners, often depend on recalling the spatial arrangement of words on the page, a beneficial strategy aiding them in memory retention. The findings regarding this strategy underscore a significant pattern among students. The majority (54.9%) reported occasionally recalling new English words by associating them with their position on the page, while a notable portion (24.2%) heavily depends on this method.

Conversely, a minority (20.9%) stated that they never rely on it. So it is important to highlight that most students rely on their visual ability in remembering words.

4- I review English lessons often.

Options	Number of students	Percentage%
Often	13	14.3%
Sometimes	61	67%
Never	17	18.7%
Total	91	100%

Table 06: students' responses about strategy 04

Regularly reviewing English lessons serves to refresh the stored language in the mind and provides additional opportunities for language practice. The table above indicates that most students, by varying percentages, engage in reviewing English lessons. Specifically, 67% mentioned doing so occasionally, 14.3% reported doing it often, while 18.7% stated they never engage in this practice.

5- I use the dictionary to translate.

Options	Number of students	Percentage%
Often	45	49.5%
Sometimes	29	31.9%
Never	17	18.7%
Total	91	100%

Table 07: students' responses about strategy 05

The majority of novice language learners depend on dictionaries to translate new terminologies, aiming to enhance their comprehension and learning clarity. For this strategy, it is stated that the majority of students depend on a dictionary to translate new terms as a cognitive strategy, with 49.5% of them reporting overusing it, while 31.9% use it occasionally. However, a minority declared that they never use it. The presented results confirm the excessive use of dictionaries among students as an important tool for translating unknown words.

06- I try to ask questions in English.

Option	Number of students	Percentage%
Often	32	35.2%
Sometimes	51	56%
Never	08	8.8%
Total	91	100%

Table 08: students' responses about strategy 06

Engaging in language practice through questioning in English as a cognitive strategy is highly significant in the language learning process, representing a proactive effort towards honing linguistic skills. The findings of this statement state that most of students have attempts to use the English language to ask questions. The students claimed that (56%) sometimes do, and (35.2%) often do. Meanwhile, few students (8.8%) do not ask questions in English. Therefore, most students try to practice the English language by asking questions.

07- I take notes in English

Option	Number of students	Percentage %
Often	18	19.8%
Sometimes	51	56%
Never	22	24.2%
Total	91	100%

Table 09: students' responses about strategy 07

Taking notes during sessions proves crucial for learning overall, especially in the realm of language acquisition, where it significantly aids in grasping and retaining new language. The practice of taking notes in English varies among students as a cognitive strategy. A considerable proportion of students (56%) sometimes attempt to take notes in English, while a smaller percentage (19.8%) reported heavily relying on this method. On the other hand, (24.2%) of students do not employ this strategy. What is remarkable is that around 70% of students try to take their notes in English, which helps them improve their writing skills and learn spelling.

08- I guess meaning from the context

Option	Number of students	Percentage %
Often	56	61.5%
Sometimes	31	34.1%
Never	04	4.4%
Total	91	100%

Table 10: students' responses about strategy 08

The table above indicates that students tend to rely heavily on guessing the meaning of a word or sentence from the general context, with varying percentages. The highest proportion (61.5%) reported doing so often, followed by (34.5%) who do it sometimes. However, a small minority (4.4%) stated that they do not rely on this strategy. The highest percentages indicate students' relevance and ability to understand meaning directly without translating or using dictionaries.

09- I look for words in my own language that are similar to new words in English.

Option	Number of students	Percentage %
Often	40	44%
Sometimes	35	38.5%
Never	16	17.6%
Total	91	100%

Table 11: students' responses about strategy 09

Associating new vocabulary with pre-existing knowledge in the mind is a cognitive strategy wherein the learner explores similarities between their native language and the new one. The outcomes of this strategy yield varying percentages across the three options. 44% of students stated that they heavily associate new terms with what they already know about their own language, while 38.5% mentioned they sometimes do. Conversely, 17.6% claimed they do not rely on this strategy. The highest percentage for this strategy indicates that students use their existing knowledge about other languages to learn the English language.

. 10- I try to plan before I come to class (goals, activities, and materials)

Option	Number of students	Percentage %
Often	23	25.3%
Sometimes	49	53.8%
Never	19	20.9%
Total	91	100%

Table 12: students' responses about strategy 10

As a metacognitive strategy, certain learners aim to plan ahead of classroom sessions by establishing goals or preparing materials like dictionaries or English lectures. This table highlights that most students engage in pre-classroom planning by setting goals, preparing activities, and bringing materials. However, the utilization of this strategy varies among students. 53.8% mentioned that they sometimes plan, while 25.3% reported often doing so. Conversely, 20.9% of students stated that they do not plan. As an important learning strategy, it is remarkable from the scored data that students try to plan before coming to the classroom.

11- I try to control my learning process (if any adjustment is needed while on task)

Option	Number of students	Percentage %
Often	30	33 %
Sometimes	52	57.1%
Never	09	9.9%
Total	91	100%

Table 13: students' responses about strategy 11

The second metacognitive strategy involves managing the learning process by adjusting tasks as necessary. It is evident that the majority of students tend to monitor their learning process

during tasks. The percentage of students implementing this strategy ranges from 57.1% who sometimes rely on it to 33% who heavily rely on it. Meanwhile, a small percentage of students 9.9% claim that they do not engage in this practice. As mentioned, students possess the capability to oversee their learning process, resulting in organized, focused, and independent learning.

12- I try to evaluate my undertaking of the subject content after I attend the session.

Option	Number of students	Percentage %
Often	46	50.5 %
Sometimes	42	46.2%
Never	03	3.3%
Total	91	100%

Table 14: students' responses about strategy 12

The third metacognitive strategy is evaluating the undertaking of the language after attending each session. According to the provided table, metacognitive strategy evaluation plays a role in students' learning processes with varying percentages. 50.5 percent of students stated that they consistently evaluate their progress after each session, while 46.2% claimed to sometimes engage in evaluation. However, only 3.3% of students reported that they do not evaluate their progress. The scored results indicate that students consistently try to evaluate their learning process, which helps them develop self-awareness, motivation, and goal-setting skills.

13- I always try to get motivated to learn English.

Option	Number of students	Percentage %
Often	72	79.1%
Sometimes	15	16.5%
Never	04	4.4 %
Total	91	100%

Table 15: students' responses about strategy 13

Motivation stands as a paramount factor influencing the language learning process, as a high level of motivation fosters a greater willingness to learn. Based on the data provided in the table above, it is evident that 95.6% of the participating students are motivated to learn English. This motivation is distributed with 79.1% often feeling motivated and 16.5% feeling motivated sometimes. Conversely, only 4.4% of students expressed no motivation to learn English. The results indicate that the majority of students are highly motivated to acquire the English language.

14- I push myself to use English even when I am nervous about errors, aiming to stay calm and composed

Option	Number of students	Percentage %
Often	44	48.4 %
Sometimes	31	34.1 %
Never	16	17.6%
Total	91	100%

Table 16: students' responses about strategy 14

Krashen suggests that morals play a crucial role in language learning, and by minimizing negative emotions, individuals create more opportunities to engage in discussions using English. The findings suggest that the majority of participating students attempt to use the English language despite feeling nervous or afraid of making mistakes. Forty-eight-point-four percent of students believe they often do so, while 34.1% believe they sometimes do. However, 17.5% of students try to avoid using English in such situations. It is evident from the above results that students consistently strive to remain relaxed and are unafraid of making mistakes.

15- I practice English with other students

Option	Number of students	Percentage %
Often	14	15.4 %
Sometimes	57	62.6 %
Never	20	22%
Total	91	100%

Table 17: students' responses about strategy 15

Engaging in English practice with fellow students offers more opportunities to refine language skills. The table presents different percentages reflecting students' utilization of English in interactions with their peers. The highest percentage (62.6%) represents students who occasionally use English with each other, while 15.4% is the proportion of students who frequently use English in such interactions. Conversely, 22% of students prefer to avoid using English in their interactions. The highest percentage for this statement suggests that students

endeavor to practice the English language with each other, providing them with more exposure to the language.

16- I ask for clarification about words meaning and pronunciation

Option	Number of students	Percentage %
Often	50	54.9%
Sometimes	39	42.9%
Never	02	2.2 %
Total	91	100%

Table 18: students' responses about strategy 16

According to the presented data, it is evident that the majority of students endeavor to seek clarification about meaning and pronunciation. This majority is divided into two categories: 54.9% often ask for clarification, while 42.9% sometimes do. However, a small proportion of students (2.2%) avoid seeking clarification. The result indicates that most students strive to learn the correct and accurate language by inquiring about the meaning and pronunciation.

17- I collaborate with other students

Option	Number of students	Percentage %
Often	20	22%
Sometimes	52	57.1%
Never	19	20.9%
Total	91	100%

Table 19: students' responses about strategy 17

Student collaboration creates avenues for sharing information, language use, and language correction. The data presented in the table highlights the significant prevalence of collaboration among students, with a notable portion often preferring to collaborate (22%) and a majority sometimes engaging in collaboration with others (57.1%). However, a noteworthy percentage of participating students (20.9%) do not prefer collaborating with others. As mentioned, the majority of students collaborate with each other, thereby creating a genuine context for practicing the English language and assisting each other in finding solutions to the problems they encounter.

18- I try to learn about the culture of English speakers

Option	Number of students	Percentage %
Often	35	38.5%
Sometimes	34	37.4%
Never	22	24.2%
Total	91	100%

Table 20: students' responses about strategy 18

The English culture presents abundant opportunities for English language learning, given the language's paramount connection to culture. This result reflects students' motivation levels regarding exposure to English culture. Thirty-eight-point-five percent of students actively seek to learn about English culture, while 37.4% occasionally attempt to do so. Conversely, 24.2% of

participating students do not prefer to learn about it. The collected data suggests that students are interested in the English culture which helps in learning the language.

19- I participate in the classroom

Option	Number of students	Percentage %
Often	17	18.7%
Sometimes	63	69.2 %
Never	11	12.1%
Total	91	100%

Table 21: students' responses about strategy 19

The data presented clearly indicates variations in the percentage of each option. Eighteen-point-seven percent of students frequently participate in the classroom, whereas 69.2% participate occasionally. Meanwhile, 12.1% never participate. The highest percentage for this strategy suggests that the majority of students prefer participating in the classroom, as it gives them the opportunity to practice the language.

Section three: students' perception

1- What problems you most face when using English?

Bar chart keys:

- a- Problems related to vocabulary
- b- Pronunciation
- c- Technical terms
- d- Strategies of learning
- e- Writing skill problems
- f- Reading skills problems
- g- Unavailability of resources

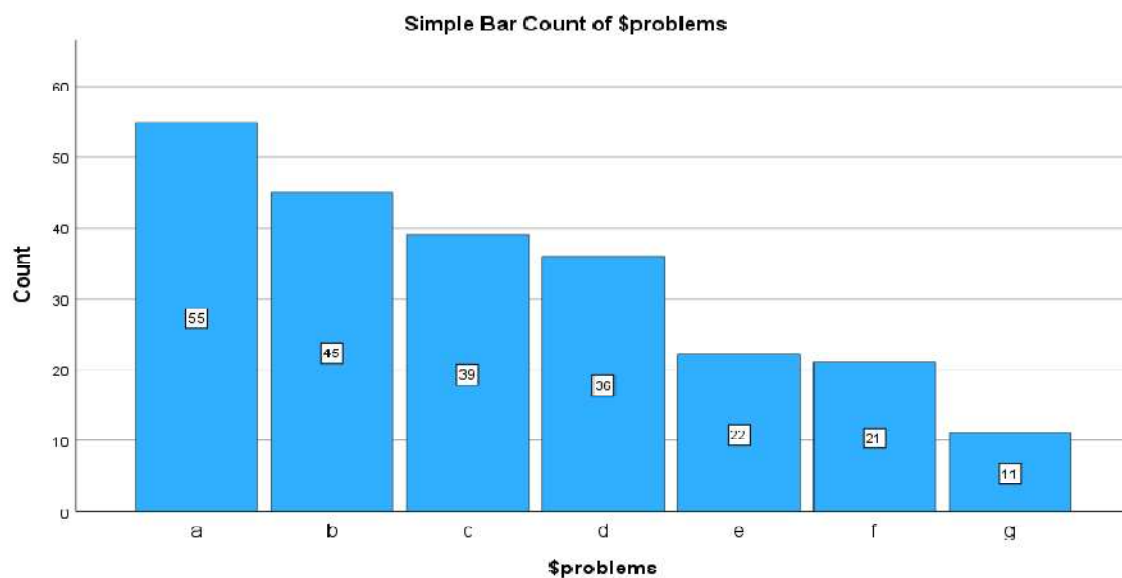


Figure 04: Problems faced by students when using English

The bar chart above illustrates students' responses regarding common challenges encountered when using English. According to the gathered data, 55 responses were directed towards issues related to vocabulary, followed by 45 responses concerning pronunciation, 39 addressing problems with technical terms, 36 relating to difficulties with learning strategies, 22 pertaining to writing, and 21 to reading skills, with an additional 11 responses citing resource unavailability. This distribution highlights the prevalence of various challenges among students, each with its corresponding percentage.

2- What do you think towards the use of English as the language of the content and instruction?

This inquiry aimed to assess students' attitudes regarding the adoption of English as a medium of instruction. The gathered data reveals that 99% of students exhibit positive attitudes

towards this transition, expressing positive sentiments about the English language. However, some students who endorsed this change also acknowledged challenges associated with the adjustment, citing its novelty and inherent difficulty despite their overall agreement.

Some of these responses:

- *Considering English is the most popular and one of the most used languages in our world spaciouly in computer science, I think we need to use it more in our lives.*
- *Learning English is very useful as it opens up several opportunities for learners. It enhances a person's culture and helps them in their studies, among other things.*
- *Good, it's necessary to organize language learning and practice courses to facilitate their use in various fields.*
- *Definitely looking forward to the use of English as the language of the content and instructions.*

4.2- Teachers' interview

The second method of data collection utilized in this study involves conducting interviews with teachers who employ English as the primary medium of instruction in their classrooms. These interviews consist of a series of questions designed to

4.2.1- Description and objectives of the teachers' interview

The main aim of the interview is to delve into teachers' viewpoints regarding their students' utilization and acquisition of the English language, alongside their personal experiences and professional paths with the language. It also aims to investigate their awareness of language

learning strategies. The interview comprises eight open-ended questions, facilitating teachers to freely articulate their perspectives and insights on each topic addressed.

The interview questions were formulated in advance to ensure the interview's structure and organization, thereby enhancing the validity of the gathered data and the precision of the inquiry. These questions underwent review by a supervisor to ensure their content aligns with the study's objectives and standards.

The interview content is segmented into three primary thematic areas. The initial focus, comprised of a single question, aims to delve into teachers' perspectives on utilizing English as a medium of instruction. The second focus, encompassing five questions, delves into the teachers' personal journey with the English language, exploring their initiation into this method, including their experiences and training. The third focus, consisting of three questions, examines teachers' viewpoints on their students' employment of language learning strategies based on their classroom observations.

4.2.2- Interview data analyses

The interview included four teachers from various departments at M'sila University (ST-MI), all of whom answered the nine questions. Their responses will be analyzed thematically, with each question being examined separately.

1- How do you view the use of English as the language for content?

The second question aims to explore teachers' perspectives on using English as a medium of instruction. All teachers expressed gratitude for this initiative, considering it an excellent step forward. They noted that English, being the global lingua franca, is particularly crucial for

scientific research, especially in technical terminology. Moreover, they believe that this approach enhances learning quality and improves language skills for both teachers and students.

2- How many years of experience do you have in teaching your content in English?

For the first question, the responses varied significantly. Some teachers were teaching content in English for the first time. In contrast, others had previously adopted this method due to the necessity of English in computer sciences, having utilized it for 2 to 5 years based on their individual experiences and personal efforts.

3- Have you received training in teaching the content in English?

This question was designed to assess the presence of training prior to implementing the content and language integrated approach in English. All teachers reported the absence of any formal pedagogical training. However, some mentioned undertaking personal efforts to enhance their English teaching methods by attending specialized courses or reading pedagogical literature.

4- If YES, where and when, and what was the content of the program training?

All teachers reported a lack of pedagogical training regarding the use of English as a medium of instruction, leaving them without any insight into the potential content of such training programs.

5- If NO, why?

This question was posed to investigate the reasons behind the absence of training. Teachers reported that they had not been invited to participate in such training. Some mentioned relying on personal efforts, while others indicated that they depended on their prior experience.

6- Do you have any information about teaching and learning strategies in a CLIL classroom?

The question was designed to assess teachers' awareness of teaching strategies within the content and language integrated approach, as well as their understanding of the language learning strategies employed by students. Responses indicated a positive outlook towards teaching strategies, as the teachers were accustomed to instructing content in French. However, most teachers admitted to a lack of knowledge regarding the language learning strategies used by students. One teacher mentioned having some familiarity with these strategies due to personal reading on the subject.

7- How effective do you think those learning strategies are?

Most teachers were unable to address this question due to a lack of knowledge about language learning strategies. However, one teacher remarked that these strategies are practical and beneficial for learners.

8. Do you teach students these strategies to apply in their CLIL classroom? Why?

Teachers articulated that they refrain from incorporating these strategies within the classroom setting due to constraints such as limited time allocation and the imperative to adhere to a predefined curriculum focused on specific subject matter.

4.3- Classroom observation

To enhance the credibility of this study, a classroom observation was conducted to validate the findings from both the questionnaire and interviews, and to address any discrepancies in the data. Employing observation allowed for the collection of real-time data within the authentic context of the classroom, involving observations of both teachers and students.

4.3.1- Description and objectives of the classroom observation

To facilitate the classroom observation, a checklist comprising twelve statements was utilized, aiming to focus observations on specific elements while remaining open to any additional insights beyond the checklist. These statements were overseen by a supervisor to ensure the inclusion of pertinent elements beneficial to the study. The observation sought to deepen understanding of both teacher and student behaviors regarding language learning strategies within the CLIL context, striving for closer alignment with real-world scenarios. Four observation sessions were conducted, corresponding to the four sessions completed by students in the targeted module during the second semester of the academic year 2203-2024. The sessions took place on the following dates: 06-03-2024// 13-03-2024// 20-03-2024// 24-04-2024.

4.3.2- Classroom observation analyses

As anticipated, the classroom observation proved highly valuable in obtaining clearer and more accurate data. It not only corroborated the findings from both student questionnaires and teacher interviews but also unveiled new dimensions that are pertinent to and enrich the study at hand.

In this classroom, students encountered a particular subject taught in English by a teacher using the language for the first time. The observation highlighted that students employed language learning strategies outlined in the distributed questionnaire, alongside other techniques like code-switching, reading from handouts, active listening, and the utilization of ICTs.

The observation indicated that students exhibit a preference for using the English language in their interactions, particularly with the teacher. Advanced students tend to overuse it, while those with weaker proficiency make efforts to produce even single words. Code-switching emerged as one of the most commonly employed strategies during lessons and interactions, used to compensate for language gaps or to enhance communication. Additionally, students practiced reading English through handouts and honed their writing skills via note-taking strategies.

As part of the teaching approach, the instructor incorporated authentic materials like photos and English handouts to provide genuine contexts for English practice. Code-switching between English, French, and Arabic was utilized to ensure clear explanations and enhance student comprehension, especially considering English is a new language for them. Additionally, the teacher prioritized content over language instruction, as they deemed the limited time insufficient for comprehensive language learning.

The classroom served as an excellent authentic environment for English language acquisition, fostering ample input and output of the language in natural, barrier-free settings. The presence of authentic materials such as lessons and pictures further immersed students in correct and precise language usage, enhancing their learning experience.

In conclusion, the classroom observation proved highly beneficial, not only affirming the data collected through other research tools but also providing new insights into the learning process within Content and Language Integrated Learning (CLIL) settings.

5- Discussion of the results

Following the collection and analysis of data from three research instruments, it is imperative to engage in a discussion concerning the observed results. This discussion aims to validate one of the proposed hypotheses while rejecting the alternative. Through the synergy of the three research instruments, comprehensive insights have been gleaned regarding the utilization of language learning strategies within the content and language integrated approach.

The results gathered from the questionnaire indicate varying degrees of reliance on language learning strategies among students, with disparities noted between heavy and occasional reliance. To substantiate one of the proposed hypotheses, it is imperative to juxtapose the features of Language Learning Strategies (LLS) and Content and Language Integrated Learning (CLIL), thus offering clarity within this context. This comparative analysis will be anchored on the following criteria: 1- integration of content and language 2- focus on communication 3- authentic materials 4- language support 5- active learning 6- language proficiency goals (both receptive and productive skills) 7- teaching training and collaboration 8- motivation and engagement 9- cultural awareness.

Upon analyzing the data, a distinct correlation emerges between the existing strategies and the CLIL approach. The ensuing discussion delves into these findings as follows:

CLIL features	Learning strategies examples
Integration of language and content	1- They study the content with English (according to observation)
Focus on communication	1- I practice English with other students 2- I participate in the classroom 3- I try to ask questions in English (according to questionnaire)
Authentic materials	1- The use of English handouts and original pictures (according to observation)
Language support	1- I ask for clarification about words meaning and pronunciation 2- I use English words in a sentence so I can remember them 3- I often review English lessons (according to questionnaire)
Active learning	1- I collaborate with other students 2- I participate in the classroom (according to questionnaire)
Language proficiency goals (both receptive and productive skills)	1- I try to use English with other students (speaking) 2- Active listening strategies (listening) (taken from the observation) 3- Reading English handouts (reading)

	4- English note taking (writing) (according to both questionnaire and observation)
Teaching training and collaboration	The absence of teachers' role in language support (according to observation) The absence of training (according to interview)
Motivation and engagement	1- I always try to get motivated to learn English 2- I push myself to use English even when I am nervous about errors. (according to questionnaire)
Raising cultural awareness	-I try to learn about the culture of English speakers. (according to questionnaire)

Table 22: comparison of learning strategies with CLIL features

In summary, the data collected from the questionnaire indicates that CLIL students employ language learning strategies. Classroom observations further validate the questionnaire results and identify additional strategies such as code switching, active listening strategies, and the use of ICTs. Moreover, the table above clearly demonstrates that the language learning strategies employed by students closely resemble the characteristics of CLIL. Therefore, we confirm the first hypothesis, suggesting that students' use of language learning strategies aligns closely with CLIL features, while rejecting the second hypothesis, which suggests otherwise.

The second objective of this study, which aimed to investigate teachers' perceptions regarding language learning strategies, was addressed through interviews with teachers. A significant finding emerged from these interviews: teachers expressed a lack of awareness regarding these strategies and indicated that they do not integrate them into their classroom practices due to time constraints and the specificity of the subject matter they teach. Therefore, based on the interview and classroom observation results, we reject the proposed hypothesis for the second question, which suggested that teachers are aware of language learning strategies.

In terms of the third aim of this study, which investigates the attitudes of both teachers and students towards using English as a medium of instruction, a specific question was included in both the questionnaire and interviews to inquire about their opinions. The data collected from both methods indicates a significant level of positive sentiment. Both teachers and students view this approach favorably, considering it to be a commendable step forward. Therefore, based on the interview and questionnaire results, we accept the hypothesis proposed for the third question, which suggested that both teachers and students have positive attitudes towards the use of English as a medium of instruction.

In addition to documenting students' positive attitudes towards English, the questionnaire also identified several challenges that students encounter in learning and using the English language. These challenges include difficulties with vocabulary acquisition, writing skills, reading skills, pronunciation, and understanding technical terms. Such issues are deemed typical for individuals learning a foreign language for the first time.

6- Conclusion

The section presented herein focuses on the specialized field of data collection and analysis using research instruments such as student questionnaires, teacher interviews, and classroom observations. It encompasses a discussion of the results, affirming the first hypothesis that underscores the effective utilization of language learning strategies within the CLIL context, thereby facilitating positive outcomes from this significant approach. Furthermore, it sheds light on various perspectives pertinent to the other research objectives.

7- Implementations and Recommendations

Based on the findings stemming from this pedagogical research study, which uncovered teachers' lack of familiarity with language learning strategies, it is advisable to provide training sessions for educators. These sessions aim to enhance their capacity to seamlessly integrate subject matter instruction, which is paramount, with language proficiency support from teacher to students—a component notably absent in the studied sample. The implementation of such training endeavors serves to heighten teachers' awareness of the language learning strategies employed by students, potentially catalyzing their utilization in the classroom and consequently improving their frequency of use.

For further research, it is recommended:

-The role of teachers training in the implementation of content and language integrated learning approach.

8- Limitations of the study

- 1- The constraints of time lead to a reduced number of classroom observations.
- 2- The scarcity of teachers who utilize English for instruction, coupled with their professional commitments, hindered their participation in this study.
- 3- The findings of this study are not applicable to all universities due to variations in settings.

General conclusion

The implementation of the Content and Language Integrated Learning (CLIL) approach with English in Algeria raises several questions about the factors contributing to its successful execution. One of the most critical factors is the use of language learning strategies, as the primary goal of this approach is language acquisition. This consideration necessitates an examination of the awareness and application of these strategies to ensure positive outcomes.

This study aimed to investigate the use of language learning strategies within the CLIL context, following a systematic procedure. Initially, a comprehensive review of existing literature on language learning strategies and the CLIL approach from various perspectives was conducted, which constitutes the first chapter of this study. The research was guided by specific objectives and employed various research instruments to address the central problem.

The primary aim of the research was to evaluate the compatibility of existing language learning strategies used by CLIL students with the distinctive features of the CLIL approach. To achieve this objective, a mixed-methods descriptive study was conducted to gather sufficient data and generate meaningful results. The research tools included a students' questionnaire, teachers' interviews, and classroom observations. Each method provided unique insights, complementing each other to ensure a thorough data collection process.

Upon analyzing the collected data from each method individually, a comprehensive discussion of the results was conducted, offering clear explanations of the findings. The study confirmed the initial hypothesis: students' use of language learning strategies is closely aligned

with CLIL features, though it also highlighted absence of the significant role of teachers in enhancing students' language proficiency.

Finally, this research paper presents findings that support the implementation of CLIL with English at M'sila University, offering valuable insights for future educational practices. It provides pedagogical implications for advancing the process of CLIL and includes recommendations for further research.

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Appendices

Appendix one: students' questionnaire.

Dear student, you are kindly invited to answer the questionnaire below which is designed in order to understand the implementation of learning strategies by students in the context of using the English language as a medium of instruction.

عزيزي الطالب، أنت مدعو بلطف للإجابة على الاستبيان أدناه، والذي تم تصميمه لفهم تنفيذ استراتيجيات التعلم من قبل الطلاب في سياق استخدام اللغة الإنجليزية كلغة تدريس.

Oxford's strategy inventory language learning: (adapted)

Section one: students' profile.

1- Gender: الجنس Male: ذكر female: أنثى

2- How old are you? كم عمرك؟ 18-23 أكثر من 23

3- How long have you been studying the content in English?

منذ متى تدرس المحتوى باستعمال اللغة الانجليزية؟

One year سنة أكثر من سنة

Section two: strategies

Strategies	Often	Sometimes	Never
Memory strategies			
1-I use new English words in a sentence so I can remember them أضع الكلمات الانجليزية الجديدة في جمل لكي أتذكرها			
2-I remember new English words by making mental pictures of a situation in which the word might be used أتذكر الكلمات الإنجليزية الجديدة عن طريق صنع صور عقلية لموقف قد يتم استخدام الكلمة فيه			
3-I remember new words or phrases by remembering their location on the page			

أتذكر الكلمات الانجليزية الجديدة بتذكر موقعها في الصفحة			
4-I often review English lessons أستعرض دروس الانجليزية بانتظام			
5- I use the dictionary to translate أستعمل القاموس للترجمة			
7- I try to ask questions in English أحاول طرح الأسئلة بالانجليزية			
8- I take notes in English أدون ملاحظات بالانجليزية			
9- I guess meaning from the context أتوقع المعنى من السياق			
10-I look for similar words in my own language to those in English أبحث عن كلمات في اللغات التي أعرفها والتي تشابه الكلمات الانجليزية الجديدة			
Metacognitive strategies			
11- I try to plan before I come to class (goals, activities, and materials) أحاول التخطيط قبل المجيء إلى القسم – أهداف, أنشطة, أدوات-			
12- I try to control my learning process(if any adjustment is needed while on task) أحاول التحكم في عملية تعلمي- في حال وجود أي حاجة للتعديل خلال النشاط.			
13- I try to evaluate my undertaking of the subject content after I attend the session أحاول تقييم فهمي للموضوع بعد حضور الدرس			
Social/Affective strategies			
14-I always try to get motivated to learn English أحاول دائما الحصول على دافع لتعلم الانجليزية			
15- I push myself to use English even when I'm nervous about errors, aiming to stay calm and composed أدفع نفسي لاستخدام اللغة الإنجليزية حتى عندما أشعر بالتوتر بسبب الأخطاء، و البقاء هادئا ومنتزعا			
16-I practice English with other students أمارس الانجليزية مع طلاب آخرين			
17- I ask for clarification about words meaning and pronunciation أطلب توضيحا حول معنى الكلمات و نطقها			

18-I collaborate with other students أتعاون مع طلاب آخرين			
19-I try to learn about the culture of English speakers أحاول تعلم ثقافة الانجليزيين			
20-I participate in the classroom أشارك في القسم			

Section three: students' perception تصور الطالب

01-What problems you most face when using English (you can pick more than one choice): ما هي المشاكل التي تواجهها عندما تستعمل الانجليزية؟- تستطيع الإشارة إلى أكثر من اختيار -

- a- Problems related to vocabulary مشاكل متعلقة بالمفردات
- b- Pronunciation النطق
- c- Technical terms المصطلحات التقنية
- d- Strategies of learning استراتيجيات التعلم
- e- Writing skill problems مشاكل في الكتابة
- f- Reading skills problems مشاكل في القراءة
- g- Unavailability of Resources عدم توفر المصادر

02 - What do you think towards the implementation of English as the language of the content and instruction? ما رأيك في استخدام الإنجليزية كلغة للتعليم و المحتوى؟

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Thank you for your participation.

Appendix two: teachers' interview

1- How do you view the use of English as the language for content?

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2- How many years of experience do you have in teaching your content in English?

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3- Have you received training in teaching the content in English?

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4- If YES, where and when, and what was the content of the program training?

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5- If NO, why?

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6- Do you have any information about teaching and learning strategies in a CLIL classroom?

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7- How effective do you think those strategies are?

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8. Do you teach students these strategies to apply in their CLIL classroom? Why?

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Thank you for your participation.

Appendix three: classroom observation checklist

Learning strategies	YES	NO
1- Students use dictionaries		
2- Students ask for translation		
3- Students take notes with the target language		
4- Students practice the language via interaction		
5- students use the authentic materials		
6- Students cooperate with each other		
7- Students self correction		
8- students use active listening strategies(asking for repetition – eye contact)		
9- students use the code switching		
10- students practice reading through reading handouts		
11- The use of ICTs		
12- The use of pictures and audios		

Résumé

La présente étude vise à examiner le rôle des stratégies d'apprentissage des langues dans la mise en œuvre d'une approche d'Apprentissage Intégré de Contenus et de Langues (AICL). Cette étude descriptive utilise un design à méthodes mixtes (triangulation), incorporant un questionnaire, des entretiens et des observations en classe, menée à l'Université de M'sila pendant l'année académique 2023-2024, qui a vu la mise en œuvre de la décision de remplacer le français par l'anglais dans les universités algériennes. L'étude a ciblé un échantillon de population composé d'étudiants de troisième année poursuivant un diplôme en systèmes informatiques au sein du département MI de l'Université de M'sila. Le questionnaire a été distribué à quatre-vingt-onze étudiants, tandis que des entretiens ont été menés avec quatre enseignants de divers départements. Des observations en classe ont également été effectuées impliquant le même échantillon d'étudiants et leur enseignant respectif. Les données recueillies à partir du questionnaire, qui a été adapté de l'inventaire d'Oxford, ont été analysées quantitativement et présentées sous forme de tableaux. En revanche, les données des entretiens et des observations ont été analysées qualitativement et présentées sous forme de paragraphes. Les résultats révèlent que les stratégies d'apprentissage des langues sont présentes parmi les étudiants en AICL, s'alignant avec les caractéristiques de l'AICL et contribuant potentiellement de manière positive à la mise en œuvre de l'approche AICL. Cependant, les résultats soulignent également un manque d'implication des enseignants dans le processus d'apprentissage des langues des étudiants.

ملخص

يهدف البحث المقدم إلى دراسة دور استراتيجيات التعلم في تطبيق منهج التعلم المتكامل للغة و المحتوى. وتستخدم هذه الدراسة الوصفية تصميمًا متعدد الأساليب، حيث تتضمن استبانة و مقابلات و ملاحظات في الأقسام التعليمية. وقد تم إجراء هذه الدراسة على مستوى جامعة محمد بوضياف بالمسيلة خلال السنة الأكاديمية 2023-2024، والتي شهدت تنفيذ قرار استبدال اللغة الفرنسية باللغة الانجليزية في الجامعات الجزائرية. حيث استهدفت الدراسة عينة من طلبة السنة الثالثة الذين يدرسون السنة الثالثة في تخصص المعلوماتية في كلية الرياضيات و الإعلام الآلي في جامعة المسيلة. إذ تم توزيع الاستبانة على واحد وتسعين (91) طالبًا، بينما تم إجراء مقابلات مع أربع أساتذة من مختلف الكليات كما تم إجراء ملاحظات في القسم الدراسي الذي شمل نفس عينة الطلبة و أستاذهم المعني. تم تحليل البيانات التي تم جمعها من الاستبيان- معدل من استبانة أكسفورد- كميًا و عرضها في شكل جداول. في المقابل تم تحليل بيانات المقابلات و الملاحظات نوعيًا و عرضها في شكل فقرات. كشفت النتائج أن استراتيجيات تعلم اللغة موجودة بين طلبة منهج التعلم المتكامل للغة و المحتوى مما يتماشى مع خصائص المنهج المذكور. ومع ذلك، تسلط النتائج الضوء أيضًا على نقص مشاركة الأساتذة في عملية تعلم الطالب للغة الانجليزية.