An Experimental CLIL Course for Moroccan Students Preparing for the International Baccalaureate

Amine Bouhzam

Follow this and additional works at: https://digitalcollections.sit.edu/ipp_collection

Part of the Bilingual, Multilingual, and Multicultural Education Commons, Communication Technology and New Media Commons, and the Educational Methods Commons

Recommended Citation

This Thesis is brought to you for free and open access by the SIT Graduate Institute at SIT Digital Collections. It has been accepted for inclusion in MA TESOL Collection by an authorized administrator of SIT Digital Collections. For more information, please contact digitalcollections@sit.edu.
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

Amine Bouhzam
amine.bouhzam@mail.sit.edu
SIT Graduate Institute

Submitted in partial fulfillment of the requirements for the Master of Arts in TESOL degree at SIT Graduate Institute
Brattleboro, Vermont

July 1, 2020

IPP Advisor: Dr. Leslie Turpin
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

Consent to Use of MAT Thesis

I hereby grant permission for World Learning to publish my Thesis on its websites and in any of its digital/electronic collections, and to reproduce and transmit my IPP electronically. I understand that World Learning’s websites and digital collections are publicly available via the Internet. I agree that World Learning is NOT responsible for any unauthorized use of my Thesis by any third party who might access it on the Internet or otherwise.

Student name: Amine Bouhzam
Date: July 1, 2020
Acknowledgments

The completion of this paper would not have been possible without the solid support of Donald B. Watt Library & Information Commons, the British Council Library, DAR America Library and La Fondation du Roi Abdul-Aziz Al Saoud for Islamic Studies & Human Sciences.

I am especially indebted to Dr. Leslie Turpin, Chair, MATESOL Program, and Dr. Adam Davico, Associate Professor of the Practice, OPCD Director of Career Education and Training, who have been supportive of my career goals and who worked actively to provide me with the valuable study time to go after those goals.

I am owing indebted respect to everyone who have worked with on this academic project and other related ones. Everyone has contributed to the triumph of this Dissertation, provided me with considerable personal and professional guidance, and taught me a lot about academia and especially life. I would especially like to thank Dr. Elka Todeva, Professor of Applied Linguistics. As my teacher and IYTP (Interim Year Teaching Practicum) supervisor, she has taught me more than I could ever give her credit for here. She has given me a very good image about how a good teacher (a person) should look like.

In my pursuit of this project, there is nothing more important than the presence of my family. I would like to thank my aunt and brothers; whose love and guidance are with me in whatever I pursue. They are the ultimate role models. Most importantly, I wish to thank my loving and supportive wife, Khadija Zerzkhane, and my best friend, Oussama El Hammoumi, who provide unending inspiration during Covid-19 aftermath.
Abstract

The author of this thesis aims to investigate Content and Language Integrated Learning (CLIL) approach for seniors (grade 12) in the Moroccan EFL classroom. The field of science has been broken into range of specialisms which influence students’ choices for the international Baccalaureate in which the language of instruction is either French, English or Spanish. Being so, the approach acts as the backbone for the study of certain content through specific language use (Dalton-Puffer: 2007).

The intent of the thesis is to explore the instructor's thorough processes in starting the project, his desires, encounters and difficulties, and the long-term impact this experimentation with the approach has. It is a contextual case study materials development project which relies on key techniques. Namely, the author observed student presentations and took notes on them to use in the preparing of materials. Likewise, some informal interviews took place before the project began to gather input and perspectives from other practitioners.

The students were for the most part centered around the topics of lessons experimented with and not the way that they were utilizing English to find out about it. For instance, the utilization of movies and exercises identified with them were what they loved most, while giving oral presentations, reading and writing were fewer mainstream tasks. Communication involvement in classroom discussions was developed in the project. One of the areas where students developed their language is vocabulary connected to the topic, however, the greater part of them didn't feel that they had built up their language in different manners.
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

Education Resources Information Center (ERIC) Descriptors

Additional Language

Bilingual

ILTP: Intercultural Language Teaching and Learning in Practice

Partial Immersion

LAC: Language Across the Curriculum

Learners

Target Language

Language Showers
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

Table of Contents

Consent to Use of MAT Thesis 2
Acknowledgments 3
Abstract 4
Education Resources Information Center (ERIC) Descriptors 5
Table of Contents 6-7
1. Introduction 8-9
   Background of the study 10-12
   The intent and purview of the current study 12-14
   Thesis outline 14-15
2. The teaching of EFL in Moroccan school education 15
   Introduction 15-16
   An historical critique of English curricula in Morocco 16-20
   The Student-Driven Learning Approach in the Moroccan EFL classroom 21-26
   The tradition of textbooks in Morocco 26-28
   Teacher education and teacher roles 28-31
3. Theory and literature review 32
   Description of the CLIL approach / procedure / technique / material 33
   What is CLIL? 33
   The CLIL Approach 33-34
   The theoretical framework for CLIL 34
   The CLIL lesson 34-36
   Materials for CLIL lessons 36
   Teaching context and learners 36-37
   Some theories of language learning 37
   Socio-cultural, constructivist perspectives on language learning 37-38
   The ‘natural approach’ 38-39
   Krashen’s monitor theory 39-42
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

4. Project methodology

4.1. Introduction

4.2. Participants in the project

4.3. Observation

4.4. Surveys

4.5. Students’ survey before the project start

4.6. Students’ survey after the project start

5. Project findings

5.1. Observation summary and lessons feedback

5.2. International English Baccalaureate Option exam model

6. Discussion

6.1. Action plan for future professional development

7. Conclusion

7.1. Bibliography

7.2. Webliography

7.3. Workshop

7.4. Appendices

7.5. Other Appendices
Introduction

As the career of EFL teaching and training in Morocco emerges fast, new approaches appear to support advanced specialisms within the curricula. This thesis is a result of clear concern to try and experiment with CLIL for international Baccalaureate high-schoolers and; therefore, create a materials project that can be field tested and researched in the future. There is similarly a personal aim to develop content knowledge in students’ field of interest and English.

In academia, CLIL refers to a method in which various language-supporting methods are used, leading to a double-focused instructing format, in which both language and content are given attention (Marsh, 2011).

With respect to language education, education in a language that is not the learner’s mother tongue is as old as education itself. People from different language groups live together, and some of them receive education in another language. Ancient Rome is the same as the increasingly multilingual societies established in the 21st century through mobility and globalization, e.g. Morocco (Coyle et al., 2010).

Years ago, with the expansion of the Moroccan Kingdom and the absorption of Moroccan territory, language and culture, the idea of CLIL education course in another language was provided. Moroccan families educated their children in French to ensure that they could not only use the language, but also provide social and professional opportunities for their future lives (including living in a French-speaking educational community).
Due to the invasion of France, Morocco has made remarkable achievements over the years. In addition, the expansion of business between the two countries is a leading step in history. Hence, this has helped in the undertaking of the country’s government in making French a second official language after Arabic. This historical experience has been replicated throughout the world for hundreds of years, and it is especially true nowadays that English learning is widely used globally (Hammani, 2005).

Importantly, language learning is now open to a wide range of learners, especially when combined with content learning or knowledge building, not only from privileged or other background learners. In the distant past, learning content through an additional language was either limited to very specific social groups, or the school population was forced to use the language of instruction as a foreign language.
Background of the study

In 1994 (Marsh, Maljers and Hartiala, 2001), the term "Content and Language Integrated Learning" (CLIL) was adopted within Europe to describe and further design effective practices implemented in different languages in various types of school environments, where the main teaching usually takes place. Over the years, schools of different backgrounds around the world have been looking for their own ways to enrich learning. CLIL set out to show that not only are there high similarities in educational methods, but also the same high success rate in education. Determining success is a major driver of education. The other is mainly to provide an experience for the wider public (Simensen, 1998: 75).

Krashen's (1982: 10) acquisition learning hypothesis supports the dual attention and interweaving process in CLIL. Krashen distinguishes between "acquisition" as a subconscious process and "learning" as a conscious one. The definition of acquisition means that when students are immersed in the learning experience and purposefully use the language meaningfully, they will automatically acquire the language in a natural way. Therefore, focusing on meaning (content) rather than form (such as grammar teaching) can promote the development of language and allow the development of language and content too, regardless of where the main focus is in a given situation. The premise of the CLIL method is that students can develop their own language through direct language teaching without having to focus on learning vocabulary and grammar consciously.
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

The data gathered in the CLIL project conducted in the Moroccan context suggests that young peoples’ experience during the 21st century with the approach was appealing, acknowledging the effort of teachers to teach science and technology content using the target language which is English. Field testing my CLIL lessons, gathering perspectives informally from other teachers and eliciting feedback from students has led me to want to further research expectations, experiences, challenges and attitudes. In this paper I present my own expectations, experiences, challenges and the process by which I rigorously observed classes (my own and other's) to better understand the experience.

This materials development project belongs to the field of evaluation education. According to Borg and Gall (1989: 742): "Educational assessment is a process of judging the merits, value or value of educational curricula." The practice of Moroccan CLIL is mainly in high school (Alamri, 2008). In contrast, this paper focuses on a lower level of study, namely introducing CLIL to young students aged 14/15 and rigorously examining one teacher’s (the author's) experience making sense of and learning from the students' engagement (Coyle et al., 2010).

There is a strong tradition of using textbook methods in EFL teaching in Morocco (Drew 2004; Alemi 2013; Ait Bouzid 2016), that is, teaching is based mainly or entirely on a textbook. In contrast, this study investigates Moroccan methods of teaching foreign languages using unconventional methods, which provide students with the opportunity to acquire language by focusing on meaning and natural language usage, and similarly supply
them with a lot of material by using these methods in which communication plays an added key role. An annual report (2019: 26), released by the Ministry of National Education, shows that more research and more experimental and developmental work in teaching foreign languages are needed along with CLILing as a new paradigmatic model for International Baccalaureate students, incorporating the whole challenges encountered along the way. Therefore, this study also hopes to contribute to the limited study of Moroccan EFL practical experimental methods.

**The intent and purview of the current study**

For the last three years, Morocco has shown a noticeable juxtaposition of content and language in different branches promoted in high schools. Equally, the international Baccalaureate which started in 2016 has been introduced as a ‘trendy’ thing in the education system of the country and very few students were allowed to apply. There is always a fierce competition between the students who will get accepted into a selected program and only those with excellent grades in the language of instruction of the program are chosen. Back to the history, middle school and lower secondary science learners always study the content in their native language with very minor translations that come up sometimes in French for some specific jargons. By contrast, the methodology of teaching changes when it comes to the international Baccalaureate as learners use a foreign language to study the core content of the program; hence, mastery of the language is a must. In terms of the number of hours given to each subject, they are always higher if compared to regular school subjects studied by non-
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

international Baccalaureate students. Of course, English will take around 6 credits if compared to other language studies.

The material used with students is significantly challenging, and it aims to shoulder students with multiple responsibilities regarding assignments, various genres which indeed sound challenging for most of the students. As the specialism focus of the study is science and technology, students watch key documentaries and films, experiment in laboratories, and they usually complete pre and post tasks that go with the content of relevant material. Oftentimes teachers tend to give them the choice between written and oral tasks; however, this study will explore both. Having observed different classes, most teachers favor one task to another based on their learning aims of the years and personal academic endeavor. For instance, when it comes to writing, this can vary from producing a scientific article to writing reflection papers or a narrative sci-fi story to enhance creativity.

With the respect to the approach, there isn’t unfortunately a standardized approach to use for all the international Baccalaureate teachers and certain guided observations as the research will show later reveal that there is a big majority which uses various methods to teach the concerned subject while research shows that CLIL would be a very constructive one for such science subjects.

Some common core inquiries of the study are:

▪ What are the desires, encounters, advantages and difficulties of the students’ project?
▪ What are the intentions, desires, difficulties and encounters of the instructor?
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

It is usually very typical that the instructor would be a key variable, both for executing CLIL and for its adequacy. Also, by suggesting the English language to students through concentration on meaning and content, it was normal that the project would give them a characteristic and rousing setting for building up their language aptitudes. It was envisioned, in any case, that a few students may encounter difficulties, because of their low abilities in English, or as an absence of inspiration and enthusiasm for the content or the language. In any case, if the materials and assignments were very much adjusted to the individual understudy's level, and legitimate help from the educator was given, these students could likewise cope successfully with both language and subject knowledge.

**Thesis outline**

*Chapter 2 "The teaching of EFL in Moroccan school education"* provides an overview of English teaching in Morocco. First, it shows the practice of English teaching, the current status of English teaching and how English courses have changed over time. Secondly, from the current courses delivered, the objectives of the English curricula of the younger students and how Morocco usually teaches English, it introduces the current situation of English teaching in Moroccan education. This chapter also introduces teacher education and roles in Morocco.

*Chapter 3 "Theory and Literature Review"* introduces the CLIL method. It describes the origin of CLIL, explains the nature of CLIL, the language learning theory that supports this method, and study models on CLIL in Europe, including the CLIL study in Morocco.
In **Chapter 4**, "Project methodology", the methods used for materials development project and the process of collecting information, that is, course observations, and surveys along with related cases.

**Chapter 5**, "Project findings," provides a summary of informal feedback with selected students, presents the findings of the two questionnaires filled out by the students in a form of feedback about their CLIL experience, and provides observations during the project. A summary of some of the lessons, including examples and comments of several students’ oral presentations and work produced during the CLIL classroom experience.

**Chapter 6** discusses the findings of the project and reviews it based on CLIL theory and research.

**Chapter 7** presents the project results and provides suggestions for future research areas on CLIL in Morocco also highlights the limitations of this pilot project.

**The teaching of EFL in Moroccan school education**

**Introduction**

The linguistic situation in Morocco as well as the language policies in education have known a lot of critique from different practitioners, linguists and researchers in the field of education. The philosophy of learning in the Moroccan education curricula has taken different forms with regard to the country’s language policy and the politics of the language concerned. In other words, how do such policies affect education in general in the state of Morocco in particular? With respect to translinguaging, many scholars address the language policy of what we call Arabization which basically means Arab eyes in the syllabus or the curriculum and imposing Arabic as an exclusive instruction medium in the educational
system. Recently, there are equally the policies of introducing another language called Berber or tamaseel' in the system of education. Those policies deal mainly with certain attitudes of teaching as well as foreign languages’ use in Morocco and their roles in the MENA region (Miliani, 1991).

Language policy and planning in the country has never excluded the role of mother tongue including Berber and Moroccan Arabic vernacular. The latter, which has shown some public disagreements, has faced a noticeable tension in regard to the country’s language planning policy, especially the impact it has on linguistics.

**An historical critique of English curricula in Morocco**

Joshua Fishman (2014) defines language policy and planning as the organized pursuit of solutions to language problems. At the national level, language policy is generally believed to be the result of government intervention in the linguistic practices of people and their jurisdiction, oftentimes, it is a government agency with authority to affect change in a linguistic situation that intervenes to modify the corpus, the status and/or the use of a language or a variety of languages that is a dialect. This is in response to social political economic conditions and/or due to pressures either from inside or outside the government.

To clarify, this is usually referred to as language policy and planning from above or from the top down which is typically referred to as the de jure or legal type of policy which is often the more widely discussed type of language policy and planning; the other type of language policy is what is called language policy from the bottom up which is the fact that language policy is what's actually taking place in practice. However, in many cases, the underlying goal of language policy is simply symbolic in the sense that the goal of
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

recognizing a minority language or a variety of a language and instituting it as a national or official language can be nothing more than a symbolic act often seen as necessary politically or socially not because it's a human right or linguistic right, not necessarily for reasons of efficiency but for political pressures usually from inside or outside the government as stressed earlier. Therefore, it should come as no surprise that most language policies from the top down are primarily made on political and economic reasons and will reflect the values of those in power (Hassim, 2017), but the question is how do these remarks apply to the case of the Moroccan context to have an adequate understanding of the language policies in Morocco?

Equally important, it is essential to shed some light on the current linguistic landscape and the different languages and dialects or varieties that are in use in this multilingual sit studies and the first one to note is Arabic and the question is: Which Arabic are we talking about? Arabic is such a broad term especially in the Moroccan context because there are different types of Arabic in use in Morocco so there is what we call classical Arabic or what is typically referred to in Arabic as Allah reveals fossa or the eloquent Arabic language, which is basically the language of the Quran and the language of a great body of literature and poetry?

In fact, the second type of Arabic is the vernacular or the colloquial Arabic, which is typically referred to as daily job, that is the native language of most Moroccans including most Berbers or indigenous people of Morocco. The third type of Arabic is what is typically referred to as modern Standard Arabic (MSA), it's a type of adapted and modernized Arabic thought to be especially used in mass education and media and also as a sort of
communicative tool among the Arab world. Although the type of Arabic meant to be the 
*Shoal language*, which is not yet made precise in any document, it is assumed to be a hybrid 
of classical and modern Standard Arabic, the Moroccan vernacular *darisha*; on the other 
hand, is not acknowledged in the Constitution and only recently became a topic of debate 
when it was proposed as a potential medium of instruction in preschool and elementary 
education; therefore, it is understood that there are at least three varieties of Arabic in use in 
Moroccan and the Moroccan context (Meziani, 1991). This is basically a division that is 
typically made by researchers, and if you ask a Moroccan how many Arabic languages are 
spoken or used in Morocco, they will typically tell you there is fossa and daily Joe; As for 
Fatah, linguists don’t know whether it refers to classical Arabic or modern standard Arabic. 
Researchers namely tend to always make this division that consists of three types of Arabic 
but of all three varieties of Arabic in Morocco classical Arabic is obviously considered to be 
the most prestigious type because obviously of its association with the Quran and the great 
body of literature in Arabic, although Arabic itself predates Islam as a religion something that 
most Muslims or Arabs or Moroccans do not really pay too much attention to because of this 
close association that they try to create between Arabic and the holy book which is also 
viewed as the archetype of linguistic purity. According to most Arabic speakers, classical 
Arabic hasn't changed in so many centuries and as such it has undergone very little linguistic, 
lexical or syntactic change throughout the centuries.

The available evidence seems to suggest that *darisha* which is the colloquial 
vernacular in Morocco is marked by extensive code-switching which basically means dina 
code-switching. Code-switching is when you rely on two registers or when you sometimes go
between two languages, and in this case, they code switch between two languages e.g. French and Arabic (Ouakrime, 1999).

It is usually easier to go back to our French repertoire and find the right exact word that we are looking for instead of trying to struggle to find the equivalent in in Moroccan Arabic and sometimes it doesn't exist. Hence, we have to go and look at our classical Arabic or Modern Standard Arabic repertoire; hence, Moroccan Arabic is marked by this extensive use of borrowing and code-switching especially from French. Added to that, Moroccan Arabic is neither written nor a written form; it's rather an oral form only; thus, it is the official language, but although we don't really know which Arabic and as of 2011 there is a second official language called Berber, which is basically the language of the indigenous people of North Africa (Hassim, 2016: 68).

With respect to French, it is the most important second language in Morocco, although it has absolutely no official status, it's not mentioned in the Constitution and it's not recognized in any official documents, but it is still the most powerful language in the country, and it was the official language during the Protectorate or when Morocco was colonized by France from 1912 to 1956. It is indeed the most dominant language since it's the language of economics, technology, science and communication, with the outside world, it has no official status and it's very controversial because of its connection with colonialism.

The second most important foreign language is Spanish, it is a colonial language because northern Morocco used to be part of Spain, also in the early 20th century but it is still a very influential language especially in cities such as Tangiers and Tetuan, where most people would speak and understand Spanish because of the issue of proximity. Spain is only
eight or nine miles away from Morocco and obviously people in the northern part of Morocco listen to Spanish radio stations and Spanish television more than they do a mahogany radio and television, so it's a very alive in that part of the world. This language is similarly important in the southern part of Morocco, the so-called Sahara, Western Sahara or Moroccan Sahara.

Dissimilarly, English is sort of a language of the future and it's gaining more importance because there are a lot of people who are beginning to send their kids to learn English and they pay for them to learn this language because they know its importance; they also want their kids to continue their studies abroad. In recent times, English is replacing French and there have been many conferences taking place in Morocco latterly that talk about the importance of foreign languages as medium of instruction especially French and English and there are also camps advocating for the use of English at the expense of French because of the importance of English which is a global language. Yet, other camps have made mostly of powerful people with a French education background who opt for the use of French, and obviously those camps have won in the end because more recently the government has come to terms with the fact that we cannot do without French; we have to go back to bilingualism; we have to go back to an education that includes both French and an Arabic at the same time. One example is the emergency of the International English Baccalaureate which has two main majors: one in French and one in English. Spanish is also considered a major in some parts of the country (Ait Bouzid, 2014).
The Student-Driven Learning Approach in the Moroccan EFL classroom

The student-centered learning (learner-centered education) approach covers teaching methods that shift the focus of teaching from teacher-teacher to student. In the initial usage, student-centered learning aims to develop learner autonomy and independence by handing responsibility for the learning path to the students (Ball, 2015). In this connection, there has been a lot of progress in Morocco to enhance learner agency in both public and private sectors. One example is when British Council launches their new product entitled *Primary Plus*¹ and *Secondary Plus* which illustrate a new innovative way of teaching and values autonomy over heavy reliance on the teacher.

The student-centered teaching focuses on lifelong learning and independent problem-solving skills and practice. The student-centered learning theory and practice is based on the constructivist learning theory, which emphasizes the key role of learners and constructs meaning based on new information and previous experience. Student-centered learning puts students’ interests first and recognizes that students’ voices are centered on the learning experience (Chvala, 2012).

In a student-centered learning environment, students can decide on what to learn, how to learn, and how their own learning can be evaluated. This is in contrast to traditional education, which is also known as teacher-centered learning, which uses teachers as the main passive response, while students play a more passive role of receptive of knowledge.

¹ *Primary Plus* combines real-life themes related to children's personal experiences, which naturally improves their language skills and stimulates their interest in exploring the world in English. The British Council’s approach can develop students’ understanding of language, core life skills and communication skills. When children improve their English fluency, they will control their learning and become confident (Páli, 2019).
Typically, with respect to the approach, a Celebrity Talk project with the author of the thesis’s lower-secondary classes has proved notable experimentation with the approach. The idea is that each student should choose someone famous they want to be in the future, or they can create a famous character. The author was surprised when all his students chose people who directly relate to their fields, study or jobs they want or dream about having in the future. As an EFL teacher, he has been doing this for almost two years now and his class surprises him with the quality of their discussion and the content they share. For example, some of them talk about Maths problems and how some equations relate to science in the future, others talk about medical inventions, astronomy, biology, etc. Without doubt, this speaking project has improved their proficiency level and communication competence; therefore, CLILing with these learners was the right decision as all the indications align coherently with the big pillars of the approach and communication is a crucial element in the CLIL learning cycle.

In the teacher-centered classroom, the teacher chooses what the student will learn, how the student will learn and how to evaluate the student's learning. On the contrary, student-centered learning requires students to become active and responsible participants at their own pace in their learning process. The use of the term student-centered learning can simply refer to certain educational behaviorism, that is, teaching methods that can identify individual learner differences. In this sense, student-centered learning emphasizes each student’s interests, abilities, and learning styles, and the role of the teacher as a promoter of the individual (rather than the entire class) (Ball, 2015).
Theorists such as John Dewey, Jean Piaget, and Lev Vygotsky worked together on the way students learn, so they turned to student-centered learning. Carl Rogers' thoughts on individual formation also contribute to student-centered learning. Rogers (1961) writes that the only learning that significantly affects behavior is self-discovery. Maria Montessori (1969) is also a defender of student-centered learning, where preschoolers learn how to rely on themselves and guide interaction with previously proposed activities.

Self-determination theory focuses on the degree of self-motivation and self-determination of individual behavior. When students have the opportunity to evaluate their learning, learning becomes an incentive. Student-centered learning applies subverting traditional teachers' focal accumulation of the learning process and equally considering students as key elements of the learning process. In a teacher-centered classroom, teachers are the main source of knowledge. On the other hand, in a student-centered classroom, active learning is strongly recommended (Coyle, 2002).

In the context of this research, Armstrong (2012) put forward the claim that traditional learning overlooks or conceals the responsibility of learners. Another difference from a teacher-centered classroom to a student-centered classroom is when a teacher acts as a teacher's mentor. In essence, the teacher's appeal to the learning process is to guide students to a new interpretation of the learning materials. They experienced content and reiterated Roger's point of view, that is, to gain important learning through doing things and peer-to-peer interactions. Collaborative thinking can bring a wealth of knowledge. By placing teachers at the same level, learning and knowledge can be enhanced, benefiting students and
the classroom as a whole. This indeed mirrors clearly the philosophy of CLIL in science classes in the Moroccan curricula.

With respect to Lev Vygotsky's "Zone of Proximal Development (ZPD)" theory, students often learn from each other inadvertently, and scaffolding is a crucial aspect for developing independent thinking skills. Vygotsky (1978: 213) proclaims: "From the perspective of children's overall development, development-oriented learning has still effectively achieved this goal." It is not aimed at the new stage of the development process, but lags behind this process.

One of the most noticeable differences between student-centered learning and teacher-centered learning is assessment. Student-centered learning requires more formative assessment and less summative assessment than teacher-centered learning (Chvala, 2012).

In student-centered learning, students participate in their learning assessments, which means that students will participate in deciding how to prove their learning, developing motivation for assessment, which is critical to the success of student-centric approaches.

The student-centered learning environment has proven to be effective in higher education. They are specifically defined in higher education, considering both the way of thinking and the culture in educational institutions, and whether learning methods are broadly related to and supported by constructivist learning theories; they are characterized by innovative teaching methods; they are also designed to promote communication with teachers and other learners, treating students seriously, and get them actively participate in their own

---

2 ZPD is also called a potential development zone, and is a concept often used in classrooms to help students develop skills. The core idea of ZPD is that knowledgeable people can enhance their learning ability by guiding students to complete tasks slightly above their ability level (Bozhovich, 2009:15).
learning, and quickly transfer other skills, such as problem solving, critical thinking, and reflective thinking (Drew, 2009).

The revised *European Quality Assurance Standards and Guidelines (2005)* was approved by the European Minister of Higher Education and formulated in 2015 and included articles on student-centered learning. Institutions should not show that the implementation of the plan encourages students to play an active role in the process of creating learning, and the students’ assessment reflects this approach.

A research university in Hong Kong considers adopting innovative methods in the future to promote student-centered learning throughout the university: the analysis of good practices by award-winning teachers in all departments to show how they use active forms of student learning, followed by analysis to promote wide use of good practice (Cummins & Dalton, 2005).

A singular series compulsory teacher training courses for new junior teachers which encourages student-centered learning has brought a lot of discussion in the education sector in Morocco. Many projects funded by the *Teaching Development Grant* ignore significant problems related to the introduction of positive learning experiences. A plan-level quality enhancement uses student surveys to identify strengths and potential areas for improvement. In view of the improvement in general ability to provide interactive learning environments, a wide range of teaching environment models have been established to meet this purpose. In this regard, certain thoughtful feedback from staff at many educational levels has been received, especially from international teaching staff for international Baccalaureate. Hence, introducing a program review is a quality assurance measure; assessing the success of the
process of various programs by surveying students. Two years later, the assessment has proved that showing students’ views on the quality of the university’s or high-school teaching environment has greatly increased. This step of the research is one of the many processes for implementing student-centered pedagogy in large higher and senior high-school education institutions accordingly (Ouakrime, 1988).

**The tradition of textbooks in Morocco**

There has been a blooming appearance of the Standard-Based Approach in different parts of the world nowadays in terms of textbook evaluation. However, this has known a very little regard in Morocco. In 2007, the *Ministry of National Education* highlighted the theoretical principles of the Standards-Based Approach which define the teaching of English as a foreign language in the country.

A current study conducted by the ministry in Morocco (2018) aims to interrogate the literature of the Moroccan context through focus on three locally designed ELT textbooks (*Gateway to English 2, Ticket to English & Outlook*). Its purpose is to check whether and how these textbooks introduce content that helps learners to explore content standards in the following target areas: *Communication, culture, connection and comparison*.

Further, the study uses content analysis as a mixed data analysis strategy via a mixed method design to associate both *quantitative* and *qualitative* techniques. The data collected show a significant defect related to the representation of the content standards in that diverse standards are missing in the activities included in these textbooks.

In the long run, a few proposals are routed to policymakers, textbook planners and instructors to conquer the distinguished issues in current and future course books.
The investigation aims to enlighten ELT specialists about the viability of utilizing textbook evaluation in boosting both the quality of ELT textbook and the teaching learning results.

The examination of the academic content of ELT course books is turning into a focal issue in textbook evaluation lately as a few analysts have communicated their intriguing enthusiasm for this area. Cisar (2000) planned a standards-based textbook evaluation textbook as a guide that included 31 rules which line up with the five objective areas of the SBA to foreign language education. The approach comprised in for the most part perusing browsing parts of the textbook and its ancillaries for tasks that tackled every one of the eleven standards contained in the five objective areas of Communication, Cultures, Connections, Comparisons and Communities. Collected findings exhibited that the textbook contained more tasks that targeted the norms of the objective areas of Communication and Cultures than those targeting the principles of the objective areas of Connections and Comparisons. Tasks targeting the principles of the objective area of Communities were clearly allowed little room (Ait Bouzid, 2016).

Alemi and Mesbah (2013) examined the degree to which two universally circulated textbooks utilized in Iranian EFL setting were in amicability with the standards of the SBA utilizing Cisar's (2000) guide. The collected findings showed that the textbooks were effective in managing most of the content principles with the exception of the two principles under the objective area of networks. The analysts proclaimed that the textbook didn't give enough tasks that could make better autonomous learners and build up a feeling of deep-rooted learning.
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

The current materials development project means also to research the degree to which three Moroccan ELT course books as of now utilized in showing second year Baccalaureate students in state secondary schools how to adjust to the educational standards of SBA as outlined in authentic rules of MNE (2007) and the American Council on the Teaching of Foreign Languages [henceforth ACTFL] (1996).

The goal is to analyze the degree to which these course books present content that empower students to meet the prerequisites of the eleven content standards remembered for the five objective areas of Communications, Cultures, Connections, Comparisons and communities. At last, the study aims to draw the consideration of ELT specialists to the viability of utilizing textbook assessment as a way to improve the quality of textbooks and inevitably boost the quality of the teaching-learning outcomes.

Teacher education and teacher roles

In Morocco, the ministry of education has a distinct vision of what teaching should look like. To be a teacher is to transmit knowledge, to give the necessary tools to acquire it and to help students master methods and skills to learning a foreign language. It also means considering the needs and possibilities of each to increase the chances and arouse the interest of all students. The duties of a middle school and/or high-school teacher usually sound similar. The difference commonly lies in the type of commitment high-school teachers have in that they teach Baccalaureate students; hence, the responsibility is a bit heavier. A Moroccan teacher teaches a single subject or a single group of subjects. Thus, the contents of the programs dispensed in middle and high school are vast. But the mission always remains the same whatever the specialty is.
To clarify, the main role of the teacher in middle-school or high school consists in transmitting knowledge and know-how in its assigned discipline, in instructing the students, in contributing to their education and in preparing them to cope with critical citizenship issues. The teacher should also guide students, help them organize themselves in their personal work and assess the knowledge acquired. Corrections of exercises and homework, supervision, preparation of lessons, relations with parents are part of their daily routine and life. There are also other activities such as the organization of multidisciplinary activities or extracurricular projects (visits, trips, etc.).

In the Moroccan law, the official title of a teacher is *Classroom Teacher*, and according to the Moroccan education law, a teacher must perform a weekly service varying from 8:00 A.M. – 12 P.M. and/or 2:00 P.M. – 18:00 P.M., depending on the discipline taught. While respecting the national education curriculum, teachers can prepare and deliver lessons independently. They similarly ensure supervision during exams as well as the correction of students' papers (Ministry of National Education, 2007).

The teacher's working conditions are very diverse depending on the classes, the establishments and the populations concerned. Therefore, immense patience, physical and psychological solidity are strongly necessary to practice in this domain. In addition to these qualities, the job requires flexibility and authority from the teacher, taste for contact and youthfulness, enthusiasm and thoroughness, ease of expression and adaptation, availability and good balance.

With respect to the public sector employment requirements, middle-school teachers must have a Bac + 2 years at Centre Pédagogique Régional (CPR)\(^3\). For those who would like
to become high school teachers, they must have a license + 1 year at the École Normale Supérieure (ENS)⁴. With the new ministerial reform, 3 years ago, CPR and ENS don’t exist anymore and they have been replaced by Centre Régional de Métiers de l'Education et la Formation (CRMEF)⁵. This new teaching training center host both middle-school and high-school teachers.

The salary of a middle-school teacher varies between 4,000 and 6,000 MAD. As for that of the high school teacher, it fluctuates between 4,500 and 8,000 Dirhams. Obviously, this salary does not take into account the private lessons which can provide a source of additional income. For this, teachers can work in private institutions, but they need to get an authorization form the ministry of national education in order to do so because they are their main employee. Tutoring lessons are also interesting for teachers and they are free and many specialized advertising sites in Morocco like coursdesoutien.ma facilitates the connection between teachers and learners. Again, very recently, homeschooling has been increasingly important and COVID-19 changes the way lessons are delivered; however, not all families in Morocco have access to online courses and a training in the process is required in the upcoming months to make the business work.

On the other hand, for the private sector employment requirements, the process differs between private institutions that teach multiple subjects and the ones that teach only foreign languages like English. For the former, the process is almost similar to the ministry of education’s, although formal training is required. For the latter, a CELTA⁶ or

---

⁴ Les centres pédagogiques régionaux (CPR) sont des établissements de formation pédagogique publics sous la tutelle du ministère de l'enseignement supérieur, de la recherche scientifique et de la formation des cadres (Alaoui Marani, 2013:109).
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

TEFL\textsuperscript{7}/TESOL\textsuperscript{8} certificate is required. Unfortunately, many private schools and colleges do not know what the CELTA certificate is, they may stipulate their own teaching methods, especially if the boss himself is an English teacher.

Considering the possibility of cross-curricular, teachers seem to be able to establish links between the subjects they teach. Despite the lack of formal training in CLIL in Morocco, many teachers are still qualified to teach multiple subjects (usually interdisciplinary). Therefore, a large number of teachers "have formal qualifications to teach CLIL subjects" (Borg et al., 1989: 155).


\textsuperscript{5} CRMEF: Le Centre Régional de Métiers de l’Education et la Formation.

\textsuperscript{6} CELTA: Certificate in English Language Teaching to Adults (now known as Certificate in Teaching English to Speakers of Other Languages).

\textsuperscript{7} TEFL: Teaching English as a Foreign Language.

\textsuperscript{8} TESOL: Teaching of English to Speakers of Other Languages.
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

**Theory and literature review**

Years ago, as an EFL teacher majoring experimental science in high-school, there was always a full picture of complete content-based lesson in the teacher’s class. Indeed, until recently, this thesis author has been optimistic about CLIL because it relates directly to students’ inborn motivation for the subject and uses it in an efficient way.

With regards to his teaching experience, his classroom observations with Junior Achievement (USA, 06-14 years old, A2-C1) confirmed that CLIL is something that he should certainly do in the future. With his B1 JA class, aged 12, he conducted a case study which was followed by a class survey, this was done with international pupils basically from *Russia, China, India, and Latin America*. The survey shows that 92% of students went for personal content related lessons rather than general EFL lessons. The survey was in the form of a questionnaire which has questions about mini CLIL demos of different content curriculum; those learners were a very good source of data as they link directly to the CLIL context; the teacher was happy to discover that many of them voted for CLIL as a *very hard approach* rather than a non-CLIL one which is *very soft*, Moroccan context is the case.

His primary objective to conduct research and feedback was to see if there is a common motivation between Moroccan and non-Moroccan learners. He was really surprised to notice that CLIL-ing would be a great trial experience with his students, especially many of them come with different needs and want to integrate English in a more specialized field like medicine, ICT, and Mathematics, etc.
With his current lower-secondary, lower-intermediate class (12-14, B1), the whole class experience confirmed that CLIL will be a very good practice for those students as it links to their curriculum.

Professionally speaking, the teacher opts for expanding his expertise about CLIL through digging deeper into the links between theory and practice, incorporating his own practices. Another long-term objective would be to get qualified to teach CLIL at higher education level.

**Description of the CLIL approach / procedure / technique / material**

**What is CLIL?**

CLIL points out a foreign language which includes situations with subjects, or parts of subjects that are taught through that language. The foreign language usually has dual-focused aims: content learning, and a foreign language concurrent learning (Marsh, 1994). This approach is not a new phenomenon, although it came into being only recently (Pokrivčáková, 2015).

**The CLIL approach**

There is a rapidly growing literature on CLIL, which indicates that it doesn’t have a clear-cut methodology (Coyle, 2010). Yet, different countries feature some common aspects of the approach, namely functioning methods, collaborative classroom management, and a certain accent is put on all sorts of communication e.g. linguistic, visual, and kinesthetic (Pavesi et al., 2001). In this respect, to avoid problems encountered by the new language use, audio-visual aids and multimedia are encouraged. Hands-on, feasible experiences and some
holistic ways are all used to emphasize learning. The author of this paper also agrees with (Pavesi, 2001) who put forward the claim that target language (TL) should be implemented for authentic communication with no attempt to disturb learners when they make mistakes. Last two things to note is that languages scaffolding is an element which is highly required when we teach a second language combined with content at the same time. This will include reformulation, simplification and exemplification. The author similarly supports the claim that code switching to students’ school lingua franca as opposed to the target language should be our last choice for communication (Georgiou & Pavlou, 2011).

**The theoretical framework for CLIL**

The activity theory suggests that there is a conceptual continuing attempt for human development to sort out diverse tasks. The language learner should be supplied with instructional scaffolding by a skilled teacher who models the task so that students can achieve these tasks. Doing so, the scaffolding progressively diminishes, but the learner acquires more competence in return (Vygotsky, 1978).

**The CLIL lesson**

When planning a CLIL lesson, there are five things to consider: *Content, Communication, Competences, Community and Cognition* (Mehisto & Coyle, 2008).

*Content:*

The CLIL lesson designed by the teacher centers on a consistent development of the area students have been working on. This is like what teachers do with traditional teaching. This way of design allows students to construct their content knowledge like constructing a wall (Simensen, 1998: 100).
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

**Communication:**

Unlike CLIL, a lot of content was learnt by student in the past through listening to the teacher talk. Nowadays, a CLIL teacher talks less because students don’t have much of the new language to learn. In this connection, students collaborate and work in groups, interacting with each other and the teacher, using as much as they can of the new language (Navés & Marsh, 2009).

**Competences:**

An outcome of the lesson can be expressed in ‘can-do’ statements. E.g. ‘I can calculate the area of a cylinder’. Can-do statements are very critical to think about after the lesson to see if students were able to do something. They could relate either to lesson content and skills or new language (Navés, 2009: 17).

**Community:**

There is a strong connection between the world and what students learn in a CLIL lesson. The teacher should help students understand that their learning is not limited only to the school subjects, but it exceeds that to ‘real world’. Hence, the lesson should be related to the surroundings and the daily life of students, also their community or culture (Navés, 1999).

**Cognition:**

In addition to the Bloom’s Taxonomy as Lower Order Thinking Skills (LOTS), the CLIL approach adds key thinking skills through exploring more abstract, investigative, and complex questioning. A student who is CLILing will reflect on perceptive questions like as ‘why?’, ‘how?’ and ‘what evidence is there?’. Again, practicing Bloom’s thinking skills will

Materials for CLIL lessons

There is a range of material to be used with CLIL. There are textbooks that can make the life of a teacher easier because they will address homogeneous groups of students. There is also authentic material and realia which can maximize students’ motivation and involvement in tasks. There is also ICT and scaffolding collaborative material. E.g. weather charts and news boards for practicing routines.

Getting CLIL materials is a big concern in ELT. Many schools have different norms and philosophy of teaching. As a result, the material produced differs from one school to another. Students have different needs, ages, cultures, teaching hours. This means we can’t have uniformity at the level of the material. All these aspects contribute into the failure or success of the lesson (Antonio R., 2007).

Teaching context and learners

In the author’s teaching context, learners come from different backgrounds. Their choice of schools is inspired by the curriculum focus of the hosting institutions. The available evidence seems to suggest that parents send their children to schools which promote content that corresponds with their children’ specialty and field of study (Excelangue Language School, 2015). The author’s experience in teaching shows that the majority of students major either in science, medicine or engineering, but not art. Very few of them want to be language teachers. Their main purpose is to study a language to reach a higher level of proficiency and be able to use it in their field of study or future job after their graduation. On these grounds,
he can argue that students deserve to discover a new approach in the ELT classroom like CLIL, although the *Communicative Approach* holds an integral part in his teaching context.

For him, the idea of CLIL comes from his lower-intermediate students (B1, 12-14 years old), who love science and ICT and who excelled accordingly in a celebrity talk show used to take place regularly in his classes. Hence, the idea of the approach was inspired by the concept of the latter.

**Some theories of language learning**

The basic principles of CLIL were first discovered in the "Theory and Research of Second Language Acquisition" and in the sociocultural constructivist theory of second language learning (Crandall 2012: 151).

**Socio-cultural, constructivist perspectives on language learning**

Graddol’s findings (2006: 86), cited in Coyle et al. (2010: 5) lend support to the claim that CLIL is the "eventual communication method". However, CLIL is different from the communicative language teaching movement that occurred in the 1970s and 1980s which shows the importance of including "purpose" in CLIL. Therefore, people must not only learn language for the sake of learning, but they also learn it in order to achieve the purpose of communication in writing and speech. You can also develop knowledge about a subject and process it through language (language natural use).

Along similar lines, Coyle (2010: 5-6) believe that many activities in the CLIL environment can encourage learners to actively participate in their learning and acquisition process. CLIL practice often encourages students to participate in the development of their skills and to acquire knowledge through activities that can be explored and investigated, and
can use cognitive skills (reflection, processing information, forming opinions, reasoning, comparing, etc.), for example through "problem solving". Therefore, teachers cannot simply give knowledge to students (banking model) (Coyle et al., 2010: 28).

Instead, teachers can enable learners to acquire knowledge by actively using their own or group's "perception, communication, and reasoning" abilities (Coyle et al., 2010: 6). This can be seen as a transition from "learning through instruction" to "learning through development". In the socio-constructivist approach, the main focus is to provide students with opportunities to learn through experience and promote active learning (Cummins 2005: 108, cited in Coyle et al. 2010: 29).

The ‘natural approach’

This is a conducive teaching method which is also called the ‘direct method’. The direct approach to language learning is a form of immersion method, that is, learning a language by immersion. Ahead of time, it simply means that the person is taught a language only by hearing and a communication channel with the language they are trying to pick up (Krashen & Terrell 1988: 18).

The direct approach extends this idea into a few important points: This method focuses on language use instead of language structure and grammar rules; the focus is instead shifted to oral communication with target words. From a native language speaking perspective, the approach does not foster mechanical translations but only full immersion into the language being learned (Krashen, 1982: 13).

There are three main methods used in the direct approach to learn a language as naturally as possible. The first one to note is the osseous method. This method focuses on
listening and speaking over reading and writing, it indeed emphasizes the teacher using drama and creative actions to convey vocabulary words and target language.

The second method to note is TPR or Total Physical Response. The method involves modeling actions or using pictures for students to learn the vocabulary and target phrases. In fact, TPR props and body language helps the students to understand questions asked and activities involved. The third and last method to note is TPR storytelling. This method combines the previous methods mentioned in a connective context. It can also help make the teacher’s classes more interactive and engaging, while helping the students to create a meaningful connection to the target language of the lesson (Dale, 2012).

These are just a few examples of teaching using the direct approach; there are likewise countless ideas and activities that teachers can use with this method, not only does this method create an entertaining lesson for the students, it also has been proven by research to create a meaningful lasting memory of the language for the students and that is always the teacher’s ultimate goal.

**Krashen’s monitor theory**

Language is usually acquired in sort of a subconscious manner and in a manner meaningful to a particular person. One relevant example is the car. *A car is really meaningful to you and you use it a lot, you drive it, or you ride it. As a person introduced to this context, I am going to learn that word sooner than I would something like a plane because maybe I don't use planes now,* the only distinction here is that Krashen (1988) makes the point that acquiring language usually happens within a social context as people communicate and
interact with each other. On the other side, there is the learning of a language which can be compiled with certain scientific concepts.

To illustrate, a scientific concept is something to help us to categorize and put together certain Ideas, but the very abstract and the example that can be used is of transportation. This word includes many different spontaneous terms like a vehicle planning a train and most importantly the idea of conveyance of people and that's what transportation is. Thus, we can’t point out to something and say that is transportation in that it is not an object. An object can be found in a universe, and this is very likely to happen when trying to get into the same problem with learning language because there's no particular analogous object for a lot of things in language which is a grammatical and abstract portion of life (Krashen & Terrell 1988: 51).

Very differently, the monitor model’s questions model and/or the natural order hypothesis has received much regard too. This only applies to acquired knowledge, and in this case, it is acquired language base. This hypothesis states that language is usually learned in a certain order often in an order that is most important. Therefore, the idea is that maybe someone who is acquiring language will learn nouns first such as mom, dad, cookie, Andy or so on. In this case, four things that are important to them and then we are going to move on to verbs which will come up with words that are specific to how those nouns already learned, then there is a kind of move implemented from there on the sentence structure, this can be like more than one word or plurals or different sort of grammatical structure. Typically, the process demonstrates people’s understanding of language and as a sign of expression of thought on the side of the learner (Bamford, 1998).
Freeman (1985) put forward the claim that the agreement text approach is about the teacher’s focus on acquisition activities rather than trying to get students to learn certain thematic points; students usually acquire language in a natural order. Further, acquiring language is best done when putting things in a natural order. This is sort of important to how a classroom can be designed.

The classrooms monitor model and the monitor hypothesis play an integral part of the monitor model. This means the learning of a language provides us with rules for its use and that these rules can cause people to monitor their output. Clearly, those that are falling under this category are mindful of their output and this include being acutely aware of their pronunciation, the verb pence or other grammatical errors. Hence, according Freeman (1985), one must sacrifice meaning for accuracy; a person can't concentrate on the form and the meaning at the same time.

The rationale here is to have people better sharing what they are thinking and trying to filter it and make it sound the right way. A listener wants to hear what others are thinking and not how they are thinking it; the idea is that we mentally nudge them towards the idea later and maybe a better way when it’s more understandable (Gaies, 1977).

Another aspect of Krashen’s monitor model, the *input hypothesis*, is when people acquire language through receiving oral or written messages that they can understand. The input hypothesis is about comprehensible input; the acquisition of language does not happen if we don't receive input that we are able to cognitively grapple with, thus if it is not
something that's on our level we are not going to be able to grapple with it and certain support with language might be required.

One key further model of Krashen’s monitor theory is the *effective filter hypothesis*, this theory reveals that many language learners realize that the reason they have trouble is because they are nervous or embarrassed and simply can't concentrate; these learners may refrain from saying certain words or phrases because they feel they could say it wrong and perhaps they could be made of fun. As a result, it is important to be aware of that in a classroom setting; learners need to feel like they can express their thoughts without intensive mental effort within the process (Day & Bamford, 1998).

There are a few features that are very important to have in every classroom. The first one is creating an accepting and welcoming atmosphere if we want the aforementioned ideas to work. The second one is that an existence of a curriculum that introduces new material and new terms in a manner that is meaningful and takes the student up to their current language level. Unfortunately, this can be a bit harder to achieve because there is the issue of mixability and certain differentiation is urgently needed to make the learning experience enjoyable, especially when designing a CLIL lesson (Krashen, 1982).

**CLIL and ‘natural’ language learning**

Language teaching for young children is influenced by the following belief: When combining language learning with other types of learning in a naturalistic environment, young people will become more accustomed to learning languages (Coyle et al., 2010: 11). This natural learning is often conducted in elementary school.
In contrast, older learners mainly learn by using textbooks in language classrooms. Coyle et al (2010) argue that that learners are usually able to develop language successfully when they acquire real-life experience of language in a more natural way.

CLIL is a method that recognizes the importance of authenticity in the use of language for purposes. Language classrooms are usually used to teach students grammar, vocabulary, and other languages, and some people think that this is an important part of language learning. However, in this case, learners need time to practice using the language they deliberately learned: "CLIL can provide learners of any age with a natural language development environment with regards to further learning forms" (Coyle et al., 2010: 11).

When learners are provided with the possibility of using language in a natural way, the motivation and interest in language learning will increase. According to Marsh (2000), cited in Coyle et al (2010:12), one of the most important factors for the success of CLIL, which promotes the learning of content and language, is its naturalness. CLIL is a method to try to recreate the way people learn their native language (L1) by using the target language as a tool for teaching and learning non-verbal content (Alba 2009: 131).
Community Language Learning (CLL)

Based on this paper’s author analytical perspective to CLL\(^9\), the most useful idea regarding the approach is its primary focus on the members who constitute certain communities.

Based on the author's experience with CLL, there are several aspects that strike his attention about the approach. First, the way the teacher deals with students and how she attempts to setup a model for the approach. It looks like the teacher tries to play a very natural role of a counselor and receives students who act as important guests or clients in a way that will make them relaxed and secured to learn things. This motivational procedure impacts positively the whole learning experience as security is very momentous for learning to take place, and all what will come next will largely depends on what happened at first, and this can lead either to failure or success of the entire learning experience (Mehisto, 2017).

The author is not alone in his view that CLL carries a focal humanistic value in its whole practice (Charles, 1972). Going back to the author’s experience as a learner in his MAT program with other cohort members, the teacher was always there to help, but not to provide direct assistance to participants. She used noticeable humanistic techniques; for instance, going to the back of the person and repeating the sentences many times, while maintaining a good use of security, touching the person is also possible. She wanted to make sure that

\(^9\) Community Language Learning (CLL) is one of the "designer" language acquisition methods that emerged in the 1970s (together with "The Silent Way", "Suggestopedia " and TPR), and is part of the "Humanist" language learning method. The main feature of these methods is that they abandon orthodox language teaching, they have an expert (the devotees who are dedicated to the method have a sense of religious awe), and they are all developed from foreign language teaching. In addition, they are strict regulations and emphasize the learner's responsibility for their own learning (Richards & Rodgers, 2011:86).
things were running smoothly and there was not space for anxiety. Hence, her approach to
learners involves a lot of emotions and feelings which were also demonstrated in the
linguistic knowledge of the target language and certain behavioral skills were manifested
through the way learners coped with this knowledge in a very calm manner.

Counselling is an extremely important in teaching. One example from the author’s
teaching context is that, with his adults classes in Morocco, there is a mid-term counselling,
and it plays an integral part in the learning experience of learners and also teachers who
follow on from data collected to focal action points after the counselling session is over. This
counselling session is very confidential and takes the form of one-on-one.

With respect to his experience with adults, this feeling of ‘fear’ travels with students
even while they are taking a foreign language course. As the main counselling and security
are among the main theoretical premises behind CLL, he should try to deal carefully with the
spontaneous fear that arise when students encounter a foreign language for the first time; this
applies to CLIL content as well. Letting students feel that they will get more support from the
teacher and he/she is there to help them with learning is something very crucial to be
demonstrated at the very beginning seconds when both teacher and students meet. The risk is
when students are attacked by this fear, their confidence shakes, and they get very worried
and upset. The author has noticed this case in a Portuguese class he took with other MA
students.

A study draws on research conducted by Rogers (1955) shows that real counselling
happens when teachers play the role of language counselors and become skillful
understanders of the fear inside students when they try to internalize a new language and/or content. This applies to the author with Bosnian. He still clearly remembers how he felt when he had to pick the phone and record something in this language; he felt very nervous at first; however, when the teacher stood behind him, he felt well supported and his energy for learning went high.

The author agrees with the practice which enhances this idea of learning in groups and cooperation between the teacher and students and not competition. Yet, understanding people’s values and concerns about learning is an important stage to decide how teachers can help them achieve their goals in a very satisfactory and non-stressful way. Another thing is being aware of students needs and emotional obstacles, which can help further develop many skills as the teacher attempts to build a good relationship among students. This will help students combat the fear inside them towards the new language and feel secured throughout the different stage of the whole learning development process.

Especially, as students in the Bosnian lesson, they were free to choose the things they wanted to learn; they were not forced in any way to do something only the teacher wanted. This aspect of respecting students’ choice of learning was good. Of course, the six elements of CLL echoed by the author’s professor Marti Anderson (2018) are very substantial within the whole scale, namely security, aggression, attention, reflection, retention, and discrimination.

In a nutshell, the author thinks that there are many practices that he is likely happy to implement in his own teaching context including all what he has discussed before. The only thing that he is a bit worried about is Translation. He doesn’t think that the norms of his
cultural context and pedagogical principles will allow him to use L1 with translation in chunks of the teacher with recording and transcription. Therefore, this might hinder the approach as this was a technique involved in the implementation of the approach as I experienced it. Also, the language production context is a bit limited and lacks variety since students decide on the language content.

**Participatory Approach**

The author believes that the most important idea for him from the Participatory Approach\(^{10}\) is the learning experience learners have and/or bring to the classroom; this sharing of knowledge and ideas enrich the topic chosen for discussion and make emergent language a tool to communicate different thoughts and ideas with different groups in the classroom. This belief supports the pitfalls of CLIL as for the five key parts of the approach already mentioned.

The author has no doubt that this idea is important for number of reasons. First, it gives the teacher a great opportunity to approach learners’ needs and provide them with some freedom to choose what and how they learn. In his opinion, the teacher needs to have some expertise here and trust into the decisions they want to take for the topic chosen and the class level. Hence, these are major things to consider for learning to take place. Second, empowering learning is a crucial aspect in the approach as it gets them to value learning in groups and take full control of their own learning, exploring different perspectives and views.

---

\(^{10}\) *Participatory Approach*, also known as *Freirean Approach*, is a teaching strategy that combines the topics or content areas that learners are interested in. The teaching strategy can include various activities, aiming to develop all language fields in the learning process (Haines, 1989).
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

Therefore, this will help them develop many skills like negotiation rather than sticking only to one view or perspective. Last, he thinks this approach will impact positively his teaching, especially adults in the sense that he will respond to their needs through practicing a skill, namely speaking, which has a big concern for many ESL learners. Also, being able to bring local issues to the classroom is a valuable experience. This can be also explored through integrated tasks like reading and speaking using authentic material.

From his perspective, he thinks the approach is there to serve a momentous aspect of language. The development of language progresses when learners share ideas about issues and concerns that carry a certain importance in their lives. The teacher doesn’t control this language; it rather comes from the learners and they are the leaders in the process as they try to create opportunities for learning through talk. However, students can get stuck. In this case, the teacher should be available to help and provide learners with the language they need to be able to attain what they want to convey in groups and the conversation keeps going.

As a result, learning will take place as the teacher provides good scaffolding for the discourse, but not attempting to dominate something or ‘inputs’ the language (Freire, 1996). On the whole, the teacher is very confident with this practice, and he is very sure that it will help him achieve good results with his learners.

The author thinks that he will include all elements that will help his learners learn and have a good and pleasant experience with learning. For him, the most important element in the approach is the “learner”. For instance, making sure the learner’s voice is heard by providing a supportive environment where language can find a space to emerge. However, teachers should be aware that it should not ‘harm’ learning. Teachers need to find a way to
balance providing new language with giving learners the space to share the language they already have. This means finding a balance when providing new language should not be excessive as learners need to share and use the language they already know (Palmer, 1921).

Another thing is that some learners may have had very “traditional teaching experiences” and the type of collaboration enhanced by the approach may sound of a little value to them as they were not used to this. Thus, it might take time to make those learners comfortable and sometimes with teaching constraints and norms of schools, teachers don’t have this ‘important’ time to make learners comfortable. Similarly, others will not be used to being given a voice, they may have suffered from a lack of emancipation and feel that what they have to contribute is of little value (Thornbury, 2000). As a teacher, being aware of these challenges, implications and how to deal with them is the best teaching practice that the author who is also a teacher can bring to his classrooms.

**CLIL study models**

Day et al. (1998: 144) believe that by analyzing the research results more carefully, CLIL students seem to use reading strategies more proficiently, that is, they adjust reading according to their purpose. In addition, when faced with unfamiliar words, CLIL students were found to have a higher tolerance for ambiguity. With respect to Hellekjær (2005: 53-54), CLIL is an effective language learning method and an alternative or supplementary method for foreign language teaching. Part of the reason is that the widespread use of reading in CLIL and the focus on developing reading strategies constitute reading efficiency. Moreover, thanks to Moroccan students’ habit of students reading carefully and with a certain degree of focus, it is necessary to teach students how to use reading strategies such as
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

extensive reading, skimming, scanning and ignoring ambiguity to improve their reading ability.

Recently, many education institutions in Morocco have initiated and directed several major CLIL projects for lower secondary students so that they are already prepared to successfully pass the international Baccalaureate exam (Hispress, 2019). In the long run, the CLIL project shows a trend to improve students’ reading ability and provide Language and content development opportunities. Reading is the most important "Basic skills" in the Moroccan CLIL practice as well as reading procedures and appropriate reading materials. Also, most of the theory of the content students have is in a foreign language (Ouakrime, 1988).
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

**Project methodology**

**Introduction**

This chapter introduces the method used in this materials development case study project. The purpose of this project is to draw on qualitative project methodology in that the inquiry into CLIL is a normal process of teacher experimentation and evaluation on one's work that includes talking to other teachers, observing classes and gathering informal feedback from students. In this project that information informed the way that I think about CLIL and its relevance to teachers in Morocco.

**Participants in the project**

Participants in this material development case study consisted of three English classes with 29 mixed ability ones, i.e. 30 students and their English teacher. Participants were selected because they had the opportunity to study specific cases of the CLIL phenomenon. Those participants were also majoring science, preparing an English Baccalaureate high-school degree. Often CLIL and immersion are used to teach subjects such as history, geography, science and technology (which are normally taught in the native language) teaching content in a second and foreign language. In this study, CLIL was used to teach content in English lessons. In addition, CLIL research in Morocco focused on students and projects in upper secondary education. Thus, research into the use of CLIL in English lessons in 12th grade provides information on the underrated age group in this context.

**Observations**

Findings collected during observations are valuable because of their nature; this gives the author the opportunity to collect "live" data from a "live" situation (Cohen et al., 2000:
305). The author is able to observe the developing situations in front of him. Through observations, he can make his own description of what is clearly happening in the classroom.

Partially structured observation has a set purpose or subject, but the way the data is collected to provide information appears to be much less planned and structured than structured observation (Cohen et al., 2000: 305). The latter form is very high previously planned and is designed to test hypotheses made before observation. The observation carried out for this materials development project was partially structured or unstructured, adhering to the exempt project guidelines.

In these forms of observation, data is collected and analyzed before making any assumptions or possible explanations regarding the phenomena or human experiences in question (Cohen et al., 2000: 305). Borg et al. (2003: 267) state that qualitative observation is a developing process, which means that observers can freely change focus at any time when new questions arise. Qualitative research is holistic and naturalistic. Qualitative observations focus on a broad view of "behavior and its surroundings from a holistic perspective" (Borg et al., 2003: 267).

In this project, the spontaneous observation of different age categories showed that 12th grade was the right choice for the CLIL lessons to take place; the decision was made based on the serious content students study in Morocco and also the commitment level of students; there was a total of three CLIL lessons with different classes. The original purpose of the observation was to learn and understand the CLIL project. Continuous notes were written getting information about what the participants did and the dialogues in the classroom; careful attention was given to what was happening during the CLIL lesson.
The observation did not focus on any predefined variables in the initial phase. As part of the CLIL project, students planned and conducted oral presentations and different integrated skills during the lesson. The author observed 12 of these presentations that took place in class in pairs. In addition, notes were made. All presentations have been phonetically transcribed to illustrate the pronunciation of students, including self-correction. A detailed lesson plan was provided for the CLIL experience (see Appendix#1).

At a later stage, the author tried to choose and focus on the statements and behaviors that seemed most relevant, namely by observing what individual students chose when they were given optional writing and reading assignments, and by making a record of the duration of the various events in the classroom. During observation, it is usually unlikely to record everything that happens in the classroom (Borg et al., 2003: 259). During quick conversations, observational notes differed between the narrative protocol with full sentences and keywords related to the content of the statement.

During the observation, the author wrote descriptive and reflective field notes. Descriptive notes included the physical arrangement of the classroom dialogues and statements of participants, specific events and behaviors (Borg et al., 2003: 272). Short notes were made regarding the material; how students reacted to it and the amount of materials. For example, during the observation, it was clear that observing and/or monitoring participants while doing quiet reading was a problem in studying student learning processes. What's more, it confirmed the need for a multi-method approach in examining effect and experience.

The author assumed the role of an observer-participant (the teacher). Therefore, he primarily observed interaction with the class and participants took place only indirectly and
randomly (Borg et al., 2003: 268). Initially, he sought to act as a full and quiet observer and teacher at the same time, which proved difficult. Therefore, a certain level of flexibility and multitasking was required during the process.

With respect to some observations that the author conducted in other CLIL teachers’ classes, as an observer, he usually took notes from behind while standing, and another time a chair was provided. When students were working on individual tasks or working in pairs, notes were made about what students were doing wandered around the class, shifting attention from participant to participant.

Surveys

The advantage of surveys is that the process takes quite little time. However, using questionnaires it is not possible to "deeply examine the beliefs, attitudes and internal experiences of the subjects" (Borg et al., 2003: 222), which is different from the situation in which the interviewer may seek a deeper understanding of the statements.

Questionnaire design is structured and more standardized than other methods. Questions can be closed or opened in the form. Closed questions allow the participant to respond by choosing between pre-defined options, similar to the multiple-choice test (Borg et al., 2003: 227). Open elements are questions to which the answer is written freely and, in the participant's, own words. Collecting information via the latter form requires more time-consuming analysis and requires more recording. In addition, closed questions are easier to analyze and quantify (Borg et al., 2003: 228). They generate numerical data, making it easier to compare participants' responses.
**Students’ survey before the project start**

Students received a questionnaire at the beginning of the project in the last week of December and a second questionnaire in March after the end of the project. The questionnaire was in English.

The attitude scale consisted of five options ranging from 'I strongly agree' to 'I strongly disagree', a joint scale project. The number of elements was significant, including 12 items and one element in which participants were to order six activities on a scale of 1 to 6 depending that is how well they study using them. This item proved to be misleading for students to answer as intended and was excluded therefore excluded.

The items in the pre-project questionnaire were selected in relation to research questions and were designed to cover a number of thematic areas, namely 'expectations', perceived 'benefits' and 'enjoyment', in addition to 'interest', 'beliefs' and 'attitudes.' Some examples of items are:

- *I think it will be hard to work on this project.*
- *I am looking forward to English to learn the science of technology.*
- *I like reading English texts.*

**Students’ survey after the project start**

The second questionnaire was designed to be comparable to the first one and was also in English. It consisted of closed on scale items and some open questions, requiring students to write one sentence for each question (see Appendix#2B). The questions concerned students' experiences, attitudes and beliefs about content-based learning in a second language compared to learning in Arabic or MSA. Of course, questions were related to the CLIL lesson
experience they had. The survey asked students on how they liked the various tasks. In addition, elements were added as a result of the knowledge acquired during observations, for example: The project took too long, the texts were too difficult, there were too many texts to read and we encountered tech issues while working on the classroom PCs.

From the researcher’s perspective, the questions designed and/or statements were constructed to provide answers in five categories, namely 'enjoyment', 'interest', 'motivation', 'perceived benefits' and 'challenges'. The feedback provided by students was very significant in that it helps the teacher reflect well on the CLIL experience and think about it as a course to implement in the future in the Moroccan teaching context and curriculum.

**Project findings**

**Observation summary and lessons feedback**

There are a lot of strengths and weaknesses regarding the experiment objectives designed. As for the strengths of the experiment, most of the author’s students considered it important as they were very engaged in all the activities even the weaker and tongue-tied ones. Students found a lot of useful opportunities to deal with situations in which they used the foreign language. Oral addressing to class was a moment in which everyone wanted to shout out answers and share views to demonstrate that they could share their previous knowledge about computers in English. Oral interchanging takes two forms, one with the teacher and another one with peers and groups. They were also very enthusiastic with a high energy level, especially when they were working on computers and solving the vocabulary code exercise, every group wanted to finish first and be the winner. Of course, during all the stages of the lesson, students felt comfortable and asked a lot of questions.
On the other hand, there was an issue with code-switching. In a moment, students were a bit lost with the meaning of some words, and I was encouraging them to use only English and try to deduce the meaning from the explanation I provided. I think, it was a bit hard to do the lesson directly without any reference to their mother tongue and this was ineffective as they sometimes needed help to hear the word in French or Arabic to check their understanding. Especially when a new concept in ICT is introduced, it is necessary to understand what the concept is and to learn the new vocabulary efficiently, in part through direct translation. As a result, some students rejected learning because they felt frustrated and confused even if they did the task properly, and they kept complaining about the difficulties of learning the subject via another language.

**International English Baccalaureate Option exam model**

In Morocco, the English and/or French international Baccalaureate has been a dream for many young learners. This Baccalaureate is not only a qualification, but it is a measure of success in basic academic subjects; in particular *English, Mathematics, History* or *Geography*, mainly *sciences* and *language*.

These are the subjects that will most likely be required or preferred for entering the studies and those that will keep the most doors open. English Bac aims to reverse long-term drift from students who know History, Geography, French, Spanish and other modern languages. The nature of the exam though is not that easy if compared to other branches and specialisms in the country. The level of challenge is high, and expectations are much higher (see Appendix#4).
Discussion

The aim of this CLIL experimentation is to create material projects that fits the needs of Moroccan learners majoring science and/or technology for the international English Baccalaureate. The CLIL project and lessons help the researcher to learn about the expectations, experiences, benefits and challenges of the CLIL project for students. There was also another opportunity to learn the motives, expectations, challenges and experiences of the teacher.

Action plan for future professional development

This CLIL experience proved successful and students asked the teacher to include these lessons in non CLIL class too. One way a teacher can make it work efficiently is to include it in the school curriculum at least once a week. This way students will get used to the characteristics of the CLIL lesson and the pace of the tasks included. The author can’t deny that the experience has provided good results both in English and ICT; the observer stated the same thing based on what students demonstrated and produced in class (see Appendix#3D). The topic was sometimes was hard for students to understand, especially the hardware material. The use of English, with the support of multimedia and realia has made it more attractive for students who approached it with curiosity and interest. Thus, students felt satisfied with what they could understand, and they were able to complete the tasks with the teacher’s support, especially with Microsoft Excel. With reference to language, the results were very good; students approached English not only as a foreign language but also as a means of communication, trying to improve both their speaking skills and grammar, as well as to expand their vocabulary with correct use and usage.
With a focus on language, the four skills and guided understanding (see Appendices#1A-4A), students enjoyed this interactive, cooperative learning style; they were also enhancing their IT skills while working on computers.

From a teaching perspective, CLIL has brought a new intercultural model of teaching which marries non-native language with content. Moroccan learners follow a monochronic pattern of learning. This means they psychologically stick to certain levels of orderliness and don’t appreciate interruptions as this tends to break down immediately concentration. The author agrees with Ait Bouzid’s claim (2016) that moving from monochronicity to polychronicity requires a lot of needs analysis in advance so that students can be prepared to cope successfully with a new culture in which multitasking plays an elemental role. Hence, the challenges of the approach that could suddenly occur.
Conclusion

This thesis is based on CLIL research, in which science and English were combined in the 12th grade English class in Morocco. The focus was on ICT, in particular on the computer’s hardware and software. Many materials were used, for example extracts from authentic books, other school textbooks and IT tools.

Class activities included listening to audio recordings, individual reading, class discussions on texts and speaking, peer oral presentations on a topic of their choice, and a writing task. The goal was to examine the expectations, experiences and challenges for students and the teacher, the motives of the teacher to initiate the project, and the benefits of the project for students. It was materials development project using a variety of methods: student questionnaires and lesson observation.

This project reveals clearly the momentous role of the teacher played and his initiative and interest in the subject. It was an alternative to the normal use of the textbook and gave it the opportunity to provide students with in-depth study of the topic the teacher considered important. His emphasis was on meaning as opposed to language forms. However, he was dealing with a number of challenges, such as finding and evaluating relevant materials, given that there were big differences in the level of students’ ability to be alone with responsibility for the project. The teacher generally experienced the project as motivational and satisfying for himself and students. Unfortunately, he fell ill during the project, which caused him to lose momentum and to prolong the duration.
As for students, their expectations and experiences were generally positive towards the project. They were more focused on the topic they were learning about than on the fact that they used English to find out. Several students did not experience to learn science in English as difficult. However, some texts were more difficult for some than others because it was a mixed ability class. Without doubt, the audio files and short video clips used attracted almost the entire classroom as a form of language and content input. The teacher tried to differentiate material to meet the learning styles in class and the needs of different learners.

In nutshell, they became more communicative and engaged when they talked about the topic in class, but many did not like to give oral presentations to other class members, which was also the case before the project. According to the teacher, some, but not all, students developed their writing skills and became more enthusiastic about writing due to a longer task. The vocabulary related to this topic was one area where students developed their language, but most of them did not feel that they developed their language in other ways. On the other hand, they felt that they had learned a lot about computers, especially from the perspective of young people. Most were open to having more CLIL projects because they felt happy to use computers in class and developed other skills.

The limitation of the current study is that it is a materials development project and therefore generalizations can’t be made in a valid way. However, the project tends to look at high-school students in Morocco where CLIL practices have been implemented in many classes as opposed to middle school students. In addition, following the current project from beginning to end, which depended on the teacher's approval and openness, the project has provided a number of impressions on how it works for both students and the teacher.
Bibliography


An experimental CLIL course for Moroccan students preparing for the International Baccalaureate


An experimental CLIL course for Moroccan students preparing for the International Baccalaureate


An experimental CLIL course for Moroccan students preparing for the International Baccalaureate


An experimental CLIL course for Moroccan students preparing for the International Baccalaureate


Roldán Tapia, A. R (2007). *Converting to CLIL*. English Teaching Professional, 52, 8-10


An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

Webliography


Workshop

An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

Appendices

Appendix#1

Lesson Outline

Experiment Objectives

1. To find out how students consider their experience of learning in the CLIL module
2. To find out in which situations they will use the foreign language and how often
3. To find out how safe/comfortable they feel in these situations
4. To find out which strategies they will find more useful to accomplish the tasks

Methods of Evaluation

To evaluate this experimental approach, procedure / technique / material, and its effectiveness, I attempt to use a “student questionnaire.” The first part of it relates directly to my pre-defined objectives of the lesson and the rest deals with further aspects of the experiment that will give me some insights on how to design a measurable action plan for future use and follow-up from the lesson (Appendix#1). I’m also using a “checklist: How ‘CLIL’ are you?” (From CLIL Activities © Cambridge University Press 2012), which was completed by me after the lesson, but I also gave it to a CLIL teacher who came to my class and observed in the lesson. After the lesson, we discussed the checklist, and most answers came to an agreement. (Appendix#2)

This method of evaluation supports an assessment as learning strategy which aims at increasing learning processes awareness. As a teacher, I want to share learning aims and success criteria and assess learning alternative and measurable assessment forms like ones previously mentioned Akyildiz (2012).

Lesson Aims

Aim: By the end of the lesson, students will be better able to understand the definition of a computer and form a general understanding about its ‘hardware’ and ‘software’ parts. They will be doing this through reading definitions of components of each part and learn about their functions.

Objective: This will be achieved through predicting content in reading along with one while-reading task. There is also one while listening task with a speaking task which concludes with a pronunciation practice of some useful phrases. A vocabulary builder exercise will follow this step to consolidate meaning of specialized words in the reading. The lesson will conclude with a writing collaborative project in which students will work in groups on real computers and learn some effective editing and writing strategies used by computers.

Outcome:

A) HARDWARE:
1. To identify the parts of a computer
2. Explain the basics about parts and peripherals
3. Define some terms related to computers
4. Differentiate hardware from software

B) SOFTWARE:
1. Differentiate types of information, files, and applications.
2. Draw charts for a given computer program (Microsoft Word and Excel)
3. Communicate what they have learnt

By the end of the lesson, students will have experimented with a CLIL lesson on the area of ICT, namely computers: hardware and software. They will then reflect on their first experience with a CLIL lesson. Their reflection will help them think about the CLIL and how useful it was. Based on their reflection, I should be able to measure how the experience was successful or not and referring back to the experiment objectives (not the lesson objective) and design appropriately an action plan for future professional development.

Lesson Procedure

<table>
<thead>
<tr>
<th>Time</th>
<th>Stage Number and Name</th>
<th>Procedure</th>
<th>Interaction Pattern</th>
<th>Aids and Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>6’</td>
<td>(1) Before reading (predicting language)</td>
<td>Teacher distributes four colored papers for four groups, asks Ss to work in small groups and write as many words as they know in English related to computers</td>
<td>SS-SS</td>
<td>Colored papers</td>
</tr>
<tr>
<td></td>
<td>To predict some of the words SS might find before reading a specialist text. This will help them understand when they read.</td>
<td>Ss do the task</td>
<td>Whole class</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Group check</td>
<td>Whole class feedback</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8’</td>
<td>(2) While-reading: reading for the gist</td>
<td>Teacher asks Ss to read a specialist text and label the photo of a computer in English Ss do the task</td>
<td>Individual</td>
<td>Worksheet#1 (Appendix#1A)</td>
</tr>
</tbody>
</table>
### An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Description</th>
<th>Method</th>
<th>Worksheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>To get the gist in reading comprehension.</td>
<td>Pair check</td>
<td></td>
<td>S-S</td>
<td></td>
</tr>
<tr>
<td><strong>6’</strong></td>
<td>(3) While-reading: reading for details</td>
<td>Teacher asks to read the text individually and answer true/false questions Ss do the task</td>
<td>Individual</td>
<td>Worksheet#1 (Appendix#1A)</td>
</tr>
<tr>
<td>To scan the text and look for specific information</td>
<td>Pair check</td>
<td></td>
<td>S-S</td>
<td></td>
</tr>
<tr>
<td><strong>7’</strong></td>
<td>(4) Listening</td>
<td>Teacher asks Ss to listen to a text and answer true/false questions Ss do the task</td>
<td>Individual</td>
<td>Worksheet#2 (Appendix#2A)</td>
</tr>
<tr>
<td>To listen for details, paying attention to keywords to answer true/false questions</td>
<td>Pair check</td>
<td></td>
<td>S-S</td>
<td></td>
</tr>
<tr>
<td><strong>8’</strong></td>
<td>(5) Speaking</td>
<td>Teacher asks Ss to read a dialogue and complete it with words in the box Ss do the task Ss listen and check Ss repeat useful phrases from the dialogue</td>
<td>Individual</td>
<td>Worksheet#2 (Appendix#2A)</td>
</tr>
<tr>
<td>To familiarize learners with computer science language and instruction in a computer</td>
<td></td>
<td></td>
<td>S-S</td>
<td></td>
</tr>
<tr>
<td>T-SS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>8’</strong></td>
<td>(6) Vocabulary builder</td>
<td>Teacher gives Ss a code and ask them to solve it Ss do the task</td>
<td>Individual</td>
<td>Worksheet#3 (Appendix#3A)</td>
</tr>
<tr>
<td>11’ (7)</td>
<td>Writing project</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>-----------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To find keywords by solving a code and use some of them in meaningful context</td>
<td>Pair check Ss complete sentences with some of the words from the exercise Pair check</td>
<td>S-S Individual S-S</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STAGE 1: Teacher divides Ss into 2/3 and asks them to turn on their computers, then open Microsoft word Ss look at a short piece of writing and put the sentences into three groups: “getting new software”, “problems with installing” and “Jason”.</td>
<td>SS Worksheet#4 (Appendix#4A) Laptops</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| To look at ways of effective writing using computers and learn some IT tools using software/hardware knowledge | Ss do the task  
Now, Ss arrange the sentences in each of the three paragraphs into the best order. Finally, choose a title.  
Ss do the task  
Groups check  
STAGE 2:  
Ss copy the text on the first page of their reading worksheet “The Parts of a Computer” into the computer, typing it in Word.  
Ss do the task  
Teacher tells Ss that there are ten spelling and grammar mistakes in the text: Ss should find them, make a list of all the mistakes then correct them using Microsoft Excel  
Ss do the task  
Teacher asks Ss to work together to arrange the text in Word so that it looks like the original. Check the margins, fonts, bold and italic text, and justification.  
Ss do the task  
Teacher asks Ss to turn on the automatic spelling and grammar check options. Count the grammar mistakes (green) and the spelling mistakes (red). Right click on each one and decide with the help of the computer how to correct them.  
Ss do the task  
Teachers asks Ss to use the thesaurus and translate features to understand and learn any words they do not know. |
<table>
<thead>
<tr>
<th>6’</th>
<th>Follow-up</th>
<th>Teacher asks Ss to use a search engine on the internet to find advice about buying a computer. Choose an appropriate text in English, copy it into Word, and prepare a second document like the first. Again, use the automatic features to correct any mistakes.</th>
<th>SS-SS</th>
<th>Laptops</th>
</tr>
</thead>
<tbody>
<tr>
<td>To connect the lesson topic with internet using the target language to work on content</td>
<td>SS-SS</td>
<td>Laptops</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Extension (optional) | Teacher asks Ss to work in groups of four. (In Excel) make a list of all the different mistakes they found, and the corrections they used. Ss do the task Teacher asks if they can find any other ways to improve the text. Also, look for different kinds of mistakes there. Classify the list. (Find the total number of mistakes each group corrected, and use Excel to calculate the average number). | SS-SS | Laptops |
|---|---|---|---|---|
| To use knowledge of computers and connect it with a software used like Excel | SS-SS | Laptops |
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

<table>
<thead>
<tr>
<th>Language Learning</th>
<th>Thinking Skills</th>
<th>Assessment</th>
<th>Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HARDWARE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Technical vocabulary about computer hardware</td>
<td>• Finding relevant information</td>
<td>WHAT?</td>
<td>Concepts / description</td>
</tr>
<tr>
<td>• Reading texts - Audio listening and writing</td>
<td>• Classifying Sequencing</td>
<td>• What they know</td>
<td>Recognize (words, pictures)</td>
</tr>
<tr>
<td>• Using language frames, word banks and a glossary</td>
<td>• Comparing and contrasting</td>
<td>• What they are able to do</td>
<td>Underline</td>
</tr>
<tr>
<td>• Asking questions</td>
<td>• Identifying and analyzing relationships</td>
<td>• Interest and effort in using L2</td>
<td>Filling tables</td>
</tr>
<tr>
<td>• Answering these questions</td>
<td>• Representing information</td>
<td></td>
<td>True/false</td>
</tr>
<tr>
<td>• Making questions</td>
<td>• Making deductions - Explaining a point of view</td>
<td></td>
<td>Completion of sentences</td>
</tr>
<tr>
<td>• Answering these questions</td>
<td>• - Asking questions Applying imagination - Applying evaluation criteria</td>
<td></td>
<td>Labelling</td>
</tr>
<tr>
<td></td>
<td>• Predicting</td>
<td>• Giving reasons for opinions</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>SOFTWARE</strong></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Technical vocabulary about programming e.g. CPU, hard drive, graphics card</td>
<td>• Finding relevant information</td>
<td>WHAT?</td>
<td>Principles / processes / sequences</td>
</tr>
<tr>
<td>• Reading texts - Using language frames to talk and write</td>
<td>• Classifying Sequencing</td>
<td>• What they know</td>
<td>Solve problems</td>
</tr>
<tr>
<td>• Using word banks and a glossary</td>
<td>• Comparing and contrasting</td>
<td>• What they are able to do</td>
<td>Put sentences in correct order</td>
</tr>
<tr>
<td></td>
<td>• Representing information</td>
<td>• Interest and effort in using L2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Giving reasons for opinions</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Explaining a point of view</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Asking questions Developing ideas Applying imagination Applying evaluation criteria</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Predicting</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

Appendix#1A

Lesson Materials

THE PARTS OF A COMPUTER

WARNING: THERE ARE DELIBERATE SPELLING AND GRAMMAR MISTAKES IN THIS TEXT!

CD-ROM Drive: This device reads data from a disc. These CDs look like a music CD, but hold data instead of music.

CPU: The CPU, or central processing unit, is the ‘brain’ of the computer.

Graphics Card: The graphics card is the part of the computer that sends the images to the monitor.

Hard Drive: The hard drive is also called the hard disk. Perhaps you’ll never see it because it is inside your computer. The computer keeps files, programs and documents there.

Keyboard: This device is the most important way of inputting data into many programs.

Memory: This is the device that holds information in an electrical or magnetic form. There are two basic types. Read-only memory (ROM) contains program data that never change, and random-access memory (RAM) contains program data that often change and are often accessed by the CPU. ROM and RAM are typically measured in megabytes (MB).

Modem: This device connects a computer to a phone so that the user can access the Internet.

Monitor: An output device that shows you what you are doing.

Motherboard: The motherboard is the circuit board that everything in the computer plugs into.

Mouse: The mouse is another input device. It is good for moving and pointing to objects on the screen.

Printer: A printer is an essential part of the computer if you want to see your work on paper.

Scanner: A scanner is useful if you are working with lots of pictures or photos. It can copy written documents, pictures or photos into your computer.

Sound Card: Your computer uses this device to play music, sounds and voices. Make sure you have a sound card if you’re planning to play multimedia games.

While you read

3 Label the photo of a computer in English.

keyboard CD-ROM drive monitor

mouse printer

While you read

4 Write True or False.

1 A CD-ROM contains music.

2 The hard drive is located on the inside of the computer.

3 The computer has two different types of memory.

4 A scanner can make a hard copy of our work on paper.

5 You can’t listen to music if you haven’t got a sound card.

Appendix#2A

LISTENING

5. Write True or False.

1. The first calculator worked with six numbers.
2. The first modern calculator was invented by a German.
3. In the 1960s a minicomputer cost around £12,000.
5. By 1989, Microsoft were making 10 billion dollars.

An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

Appendix#2A

SPEAKING

9 Complete the dialogue with the words.
in the box.

Click on it with the mouse - they're always
underlined How do we do that?

Archie How do we find out more about these campsites?
Robert This page is too general - let's see if any of them have their own web pages.
Archie OK. (1) ____________
Robert Look. This one's called Portmeirion
Camping Type that name into the search engine.
Archie Like this?
Robert No, you have to put the cursor in that box first. (2) ____________.
Archie Oh yes, of course. OK, I've got another list of web pages.
Robert Look at the URLs.
Archie The what?
Robert The addresses of the web pages. Look, (3) ____________.
Archie This one says
Robert Click on that.
Archie This is great! It tells me all about the beach, the price and everything! It even shows you what the weather's like there now, look!

Listen and check. Now repeat.

USEFUL PHRASES

Click on that.
Like this?
Type ... into the search engine.

An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

Appendix#3A

**VOCABULARY BUILDER**

1. Find the words related to computers and solve the code.

   | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |
   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |

   - **M**
     - 10 21 7 3 4
     - 10 15 6
   - **R**
     - 21 7 16 10 14
   - **E**
     - 16 2 8 14 7 2 14 8
   - **E**
     - 16 2 8 14 7 2 14 8

2. Now complete the sentences with some of the words from exercise 1.

   1. Use the ________ to click on the left.
   2. There isn’t any paper in the ________.
   3. I can’t save that file, it’s too big! I haven’t got enough ________ on my computer.
   4. Something’s wrong with her computer. The ________ has gone black. She can’t see anything.
   5. You can use the ________ to get information for the school project.
   6. If we had a ________, we could copy these documents directly into our computer. We wouldn’t need to type them.

Appendix#4A

**WRITING**

**6 Look at Effective writing.**

**Writing three drafts**

On a computer, it's much easier to change what you've written. Look at your writing three times. First, quickly write down your ideas. Then go back and organise them into logical paragraphs. Finally go back again and check the spelling, grammar, and punctuation.

**7 Look at this piece of writing. Put the sentences into three groups: “getting new software”, “problems with installing” and “Jason”**.

1. When I first install new software, there are often problems.
2. Sometimes the new program won't run because of a program that is already installed on my computer.
3. I usually ask my friend Jason to help.
4. I love getting new software for my computer.
5. I really love it if it's a new game.
6. Jason can always sort out my computer problems!

**8 Now arrange the sentences in each of the three paragraphs into the best order. Finally, choose a title.**

An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

*Other Appendices*

Appendix#2B

*Students’ questionnaire*

You are asked to fill this questionnaire so that we can know your opinion on the CLIL experience carried out this year. Indicate your responses with a "√". Thank you for your cooperation.

1. How do you consider your experience of learning in the CLIL module?
   - √ Very important
   - □ Important
   - □ Partially important
   - □ Not important

2. In which of these situations have you used the foreign language and how often?

<table>
<thead>
<tr>
<th>Situation</th>
<th>Always or very often</th>
<th>Often</th>
<th>Sometimes</th>
<th>Seldom/never</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. oral addressing to the class</td>
<td>×</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. discussion</td>
<td>×</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. interview</td>
<td>×</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. oral interchange with teachers</td>
<td>×</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. oral interchange with mates</td>
<td>×</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. group work</td>
<td>×</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. others:</td>
<td>×</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

### 2.1 How safe/comfortable did you feel in the following situations:

<table>
<thead>
<tr>
<th></th>
<th>Very comfortable</th>
<th>Comfortable</th>
<th>Partially comfortable</th>
<th>Not comfortable</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. oral addressing to the class</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. discussion</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. interview</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. oral interchange with teachers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. oral interchange with mates</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. group work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. others:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 3. Which strategies did you find more useful to accomplish the tasks?

<table>
<thead>
<tr>
<th></th>
<th>Useful</th>
<th>Quite useful</th>
<th>Not so useful</th>
<th>Not useful</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. listening to the teacher’s explanations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. answering the teacher’s questions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. answering my mates’ questions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. using the examples presented by the teacher</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. repeating verbally what I had previously heard, read or written</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. trying to express orally, in my own words, what I had heard, read or written</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. using images, grids or graphs as stimulus to speak</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>h. others:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. others:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>j. others:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

<table>
<thead>
<tr>
<th>4. When you spoke in a foreign language in this module (in a subject) you consider important...</th>
<th>Very important</th>
<th>Important</th>
<th>Partially important</th>
<th>Not important</th>
<th>Promoted in the module</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. the correct pronunciation of words</td>
<td>✗</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. the ability to improvise</td>
<td>✗</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. knowledge of vocabulary</td>
<td></td>
<td></td>
<td></td>
<td>✗</td>
<td></td>
</tr>
<tr>
<td>d. knowledge of the contents</td>
<td></td>
<td></td>
<td></td>
<td>✗</td>
<td></td>
</tr>
<tr>
<td>e. the use of facial expressions, gestures and body movements</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✗</td>
</tr>
<tr>
<td>f. grammatical correctness</td>
<td>✗</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. clarity of exposition</td>
<td></td>
<td></td>
<td></td>
<td>✗</td>
<td></td>
</tr>
<tr>
<td>h. the ability to reformulate</td>
<td></td>
<td></td>
<td></td>
<td>✗</td>
<td></td>
</tr>
<tr>
<td>i. check that the others understand me when I speak</td>
<td></td>
<td></td>
<td></td>
<td>✗</td>
<td></td>
</tr>
<tr>
<td>j. others:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. Did this module help you improve your ability to express yourself in the foreign language?

☑ A lot ☐ Enough ☐ A little ☐ None

6. How do you evaluate your learning of the subject studied in the foreign language?

☑ Very positive ☐ Positive ☐ Partially positive ☐ Negative
7. What problems did you have?

<table>
<thead>
<tr>
<th></th>
<th>Always or very often</th>
<th>Often</th>
<th>Sometimes</th>
<th>Seldom/never</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>The language of the materials is too difficult.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td>The teacher’s questions and explanations were too difficult.</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>c.</td>
<td>I don’t like the topic of the module.</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>d.</td>
<td>The pace of the lesson was too high.</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>e.</td>
<td>I don’t like how the module was presented.</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>f.</td>
<td>Others:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8. Which tools used by teachers have been more helpful?

- ☑ audio/visual aids (films, graphs, images...)
- ☑ practical examples
- ☑ web links
- ☑ reallia

9. Do you think this CLIL experience will be useful for you?

- ☑ Very useful
- ☐ Useful
- ☐ Partially useful
- ☐ Not useful

10. Why?

   It is very useful because I learned a lot of things that I’ve never knew before.

11. Did you like the experience?

   - ☑ Yes
   - ☐ No
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

Why?
I like this experience because we use new things to learn (computer).

12. If given the choice between CLIL and non CLIL experiences, which would you prefer?

Why?
CLIL because it's very interesting and very useful and it's a different way to learn.

F. Quartapelle (a cura di) Assessment and evaluation in CLIL. ©AECLIL- EACEA 2012 - © Ibis 2012
**STUDENT QUESTIONNAIRE**

You are asked to fill this questionnaire so that we can know your opinion on the CLIL experience carried out this year. Indicate your responses with a "✓". Thank you for your cooperation.

1. **How do you consider your experience of learning in the CLIL module?**
   - [ ] Very important  
   - [ ] Important  
   - [ ] Partially important  
   - [ ] Not important  

2. **In which of these situations have you used the foreign language and how often?**

<table>
<thead>
<tr>
<th></th>
<th>Always or very often</th>
<th>Often</th>
<th>Sometimes</th>
<th>Seldom / never</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>oral addressing to the class</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td>discussion</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c.</td>
<td>interview</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>d.</td>
<td>oral interchange with teachers</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e.</td>
<td>oral interchange with mates</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f.</td>
<td>group work</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g.</td>
<td>others: writing exercises</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Page | 86
2.1 How safe/comfortable did you feel in the following situations:

<table>
<thead>
<tr>
<th></th>
<th>Very comfortable</th>
<th>Comfortable</th>
<th>Partially comfortable</th>
<th>Not comfortable</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. oral addressing to the class</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. discussion</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. interview</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. oral interchange with teachers</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. oral interchange with mates</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. group work</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. others:</td>
<td>writing, exercising</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Which strategies did you find more useful to accomplish the tasks?

<table>
<thead>
<tr>
<th></th>
<th>Useful</th>
<th>Quite useful</th>
<th>Not so useful</th>
<th>Not useful</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. listening to the teacher's explanations</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. answering the teacher's questions</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. answering my mates' questions</td>
<td></td>
<td></td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td>d. using the examples presented by the teacher</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. repeating verbally what I had previously heard, read or written</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. trying to express orally, in my own words, what I had heard, read or written</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. using images, grids or graphs as stimulus to speak</td>
<td></td>
<td></td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td>h. others:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. others:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>j. others:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4. When you spoke in a foreign language in this module (in a subject) you consider important...

<table>
<thead>
<tr>
<th></th>
<th>Very important</th>
<th>Important</th>
<th>Partially important</th>
<th>Not important</th>
<th>Promoted in the module</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c.</td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d.</td>
<td></td>
<td></td>
<td>✔️</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e.</td>
<td></td>
<td></td>
<td>✔️</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f.</td>
<td></td>
<td>✔️</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g.</td>
<td></td>
<td></td>
<td>✔️</td>
<td></td>
<td></td>
</tr>
<tr>
<td>h.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i.</td>
<td></td>
<td></td>
<td></td>
<td>✔️</td>
<td></td>
</tr>
<tr>
<td>j.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. Did this module help you improve your ability to express yourself in the foreign language?

☐ A lot  ☑ Enough  ☐ A little  ☐ None

6. How do you evaluate your learning of the subject studied in the foreign language?

☐ Very positive  ☑ Positive  ☐ Partially positive  ☐ Negative
7. What problems did you have?

<table>
<thead>
<tr>
<th></th>
<th>Always or very often</th>
<th>Often</th>
<th>Sometimes</th>
<th>Seldom / never</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>The language of the materials is too difficult.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td>The teacher's questions and explanations were too difficult.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c.</td>
<td>I don't like the topic of the module.</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d.</td>
<td>The pace of the lesson was too high.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e.</td>
<td>I don't like how the module was presented.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f.</td>
<td>Others:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8. Which tools used by teachers have been more helpful?

- audio/visual aids (films, graphs, images...)
- practical examples
- web links
- realia

9. Do you think this CLIL experience will be useful for you?

- Very useful
- Useful
- Partially useful
- Not useful

10. Why?

CLIL experience is useful because it shows us the computer components and how to use them efficiently.

11. Did you like the experience?

- Yes
- No
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

Why?
I think that is a really useful lesson and funny in the same time by using computers.

12. If given the choice between CLIL and non CLIL experiences, which would you prefer?
Why?
I choose CLIL experience because it is really interesting to work with the help of the computer.
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

Appendix#2C

*Teacher’s self-reflection /peer observation form*

## Checklist: How ‘CLIL’ are you?

<table>
<thead>
<tr>
<th>Statements</th>
<th>Always</th>
<th>Often</th>
<th>Occasionally</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACTIVATING</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. At the start of a lesson or topic, I find out what learners know about the topic.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. At the start of a lesson or topic, I find out what language related to the topic learners already know.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. I use visuals (photos, video, drawings, etc.) to introduce new topics.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. I use hands-on activities (experiments, objects, etc.) to introduce new topics.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I use graphic organisers (mind maps, tables, charts, diagrams), which learners complete, to find out and organise what learners know about a topic.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. I ask learners to talk to each other when I am activating their prior knowledge.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>GUIDING UNDERSTANDING</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. I provide different sorts of input (multimodal input) – texts, pictures, real objects, videos, models – to help my learners understand the topic.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. I formulate and use different kinds of questions – some related to LOTS (lower-order thinking skills) and others related to HOTS (higher-order thinking skills) to help learners understand input and process information actively.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. I encourage my learners to interact in my classes and use a lot of pair and group work.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. I use graphic organisers or other forms of support to help my learners understand input.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. I use a number of strategies or activities to help learners improve their reading and listening skills.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. I work actively with my learners on developing their thinking skills.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>FOCUS ON LANGUAGE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. I use a variety of activities to help my learners to recycle vocabulary related to my subject.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. I help learners notice how language is used in my subject, for example we look together at the grammar or we work on the vocabulary of the subject.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. I help learners notice the similarities and differences between English and their first language.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From CLIL Activities © Cambridge University Press 2012  PHOTOCOPIABLE
### Checklist: How ‘CLIL’ are you? (cont.)

16. In my classes, learners use a personal vocabulary file actively.  
17. I help my learners learn and use subject-specific terminology.  
18. I discuss ways of learning words with my classes.

#### FOCUS ON SPEAKING

19. Learners often speak in English during my classes, i.e. I encourage spoken output.  
20. I use speaking frames or graphic organisers to support learners’ speaking.  
21. I use a varied repertoire of speaking activities.  
22. I use a lot of pair and group work.  
23. My learners learn to speak about my subject for different audiences, informally and formally.  
24. I create speaking activities with information gaps so learners need to communicate.

#### FOCUS ON WRITING

25. Learners often write in English for me, i.e. I encourage written output.  
26. My learners learn to write different types of texts in my subject.  
27. I use writing frames or graphic organisers (e.g. diagrams, tables, model texts) to help my learners organise their writing.  
28. I help learners with the different stages in writing (brainstorming, organising ideas, drafting, editing)  
29. When learners write for me, they know what the aim is, who their audience is and the text-type they are writing.  
30. I help learners move from concrete to abstract language in their writing.

#### ASSESSMENT, REVIEW AND FEEDBACK

31. I use a variety of ways to assess my learners on both content and language.  
32. My learners give each other feedback on their spoken/written language.  
33. I give feedback to my learners on their language.  
34. I give marks for my learners’ use of language as well as for my own subject.  
35. I provide clear assessment criteria when learners present or write for me.  
36. I know how to design and use a rubric.
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

**Checklist: How ‘CLIL’ are you? (cont.)**

16. In my classes, learners use a personal vocabulary file actively.
17. I help my learners learn and use subject-specific terminology.
18. I discuss ways of learning words with my classes.

**FOCUS ON SPEAKING**

19. Learners often speak in English during my classes, i.e. I encourage spoken output.
20. I use speaking frames or graphic organizers to support learners’ speaking.
21. I use a varied repertoire of speaking activities.
22. I use a lot of pair and group work.
23. My learners learn to speak about my subject for different audiences, informally and formally.
24. I create speaking activities with information gaps so learners need to communicate.

**FOCUS ON WRITING**

25. Learners often write in English for me, i.e. I encourage written output.
26. My learners learn to write different types of texts in my subject.
27. I use writing frames or graphic organizers (e.g. diagrams, tables, model texts) to help my learners organise their writing.
28. I help learners with the different stages in writing (brainstorming, organising ideas, drafting, editing).
29. When learners write for me, they know what the aim is, who their audience is and the text-type they are writing.
30. I help learners move from concrete to abstract language in their writing.

**ASSESSMENT, REVIEW AND FEEDBACK**

31. I use a variety of ways to assess my learners on both content and language.
32. My learners give each other feedback on their spoken/written language.
33. I give feedback to my learners on their language.
34. I give marks for my learners’ use of language as well as for my own subject.
35. I provide clear assessment criteria when learners present or write for me.
36. I know how to design and use a rubric.
Appendix#3D

SAMPLES OF STUDENTS’ WORK IN CLASS (Group#1)

Writing

Getting new software

I love getting new software for my computer.
I really love it if it a new game.

problems with installing

When I first install new software, there are often problems.
Sometimes the new program won’t run because of a program that is already installed on my computer.

Jason

I usually ask my friend Jason to help.
Jason can always sort out my computer problems!

Jason helps me with software problems

I love getting new software for my computer because I really love it if it’s a new game. But when I first install it there are often problems, And Sometimes the new program won’t run because of a program that is already installed on my computer, so I usually ask my friend Jason to help because he can always sort out my computer problems!
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>false words</td>
<td>true words</td>
<td>how to correct it</td>
</tr>
<tr>
<td>brian</td>
<td>brain</td>
<td>system</td>
</tr>
<tr>
<td>CD ,but</td>
<td>CD but</td>
<td>dvd</td>
</tr>
<tr>
<td>musics</td>
<td>music</td>
<td></td>
</tr>
<tr>
<td>music</td>
<td>musics</td>
<td></td>
</tr>
<tr>
<td>imadge</td>
<td>images</td>
<td></td>
</tr>
<tr>
<td>is</td>
<td>are</td>
<td></td>
</tr>
<tr>
<td>measured</td>
<td>measured</td>
<td></td>
</tr>
<tr>
<td>connect's</td>
<td>connects</td>
<td></td>
</tr>
<tr>
<td>circuit</td>
<td>circuit</td>
<td></td>
</tr>
<tr>
<td>essenzial</td>
<td>essential</td>
<td></td>
</tr>
<tr>
<td>picture</td>
<td>picture,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SAMPLES OF STUDENTS’ WORK IN CLASS (Group#2)

1- When I first install new software, there are often problems. ‘problem with installing’
2- Sometimes the new program won’t run because of a program that is already installed on my computer. ‘problem with installing’
3- I usually ask my friend Jason to help. ‘jason’
4- I love getting new software for my computer. ‘getting new software’
5- I really love it if it is a new game. ‘getting new software’
6- Jason can always sort out my computer problems! ‘Jason’

A computer’s hero, Jason

I usually get new software for my computer and I really love it if it is a new game. When I first install new software, there are often problems because sometimes the new program won’t run due to a program that is already installed on my computer. Jason can always sort out my computer problems, that’s why I usually ask him to help.
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

Mehdi: How can I install a game in my computer?

Nouhaila: I have no idea!

Rayan: It’s really simple, but which game are you talking about?

Mehdi: It’s named Fortnite: Battle Royale!

Nouhaila: Oh I know this game, I’ve heard about it. It’s a really successful game.

Rayan: Oh! You just have to create an account on the official Epic Game’s website then sign in. When it’s done, you will see a green block named ‘INSTALL’. That’s it!

Nouhaila: What a genius Rayan!
CD-ROM Drive: This device reads data from a disk. These CDs look like a music CD, but hold data instead of music.

CPU: The CPU, or central processing unit, is the ‘brain’ of the computer.

Graphics Card: The graphics card is the part of the computer that sends the images to the monitor.

Hard Drive: The hard drive is also called the hard disk. Perhaps you’ll never see it because it is inside your computer. The computer keeps files, programs and documents there.

Keyboard: This device, is the most important way of inputting data into many programs.

THE PARTS OF A COMPUTER

Predicting language Before you read a specialist text try to predict some of the words you might find. This can help you to understand when you read.

Memory: This is the device that holds information in an electrical or magnetic form. There is two basic types. Read-only memory (ROM) contains program data that never change, and random-access memory (RAM) contains program data that often change and are often accessed by the CPU. ROM and RAM are typically measured in megabytes (MB).

Modem: This device connects a computer to a phone so that the user can access the Internet.

Monitor: An output device that shows you what you are doing.

Motherboard: The motherboard is the circuit board that everything in the computer plugs into.

Mouse: The mouse is another input device. It is good for moving and pointing to objects on the screen.

Printer: A printer is an essential part of the computer if you want to see your work on paper.

Scanner: A scanner is useful if you are working with lots of pictures or photos. It can copy written documents, pictures or photos into your computer.

Sound Card: Your computer uses this device to play music, sounds and voices. Make sure you have a sound card if you’re planning to play multimedia games.
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate
I love getting new software for my computer. I really love it if it’s a new game. But when I first install new software, there are often problems, sometimes the new program won’t run because of a program that is already installed on my computer so I usually ask my friend Jason to help me. Hopefully he can always sort out my computer problems.
CD-ROM Drive: This device reads data from a disc. These CDs look like a music CD, but hold data instead of music. CPU: The CPU, or central processing unit, is the ‘brain’ of the computer. Graphics Card: The graphics card is the part of the computer that sends the images to the monitor. Hard Drive: The hard drive is also called the hard disk. Perhaps you’ll never see it because it is inside your computer. The computer keeps files, programs and documents there. Keyboard: This device, is the most important way of inputting data into many programs.

THE PARTS OF A COMPUTER

EffectivE REading

Predicting language Before you read a specialist text try to predict some of the words you might find. This can help you to understand when you read.

Memory: This is the device that holds information in an electrical or magnetic form. There is two basic types. Read-only memory (ROM) contains program data that never change, and random-access memory (RAM) contains program data that often change and are often accessed by the CPU. ROM and RAM are typically measured in megabytes (MB).

Modem: This device connects a computer to a phone so that the user can access the Internet. Monitor: An output device that shows you what you are doing. Motherboard: The motherboard is the circuit board that everything in the computer plugs into. Mouse: The mouse is another input device. It is good for moving and pointing to objects on the screen. Printer: A printer is an essential part of the computer if you want to see your work on paper. Scanner: A scanner is useful if you are working with lots of pictures or photos. It can copy written documents, pictures or photos into your computer. Sound Card: Your computer uses this device to play music, sounds and voices. Make sure you have a sound card if you’re planning to play multimedia.
CD-ROM Drive: This device reads data from a disc. These CDs look like a music CD, but hold data instead of music. CPU: The CPU, or central processing unit, is the ‘brain’ of the computer. Graphics Card: The graphics card is the part of the computer that sends the images to the monitor. Hard Drive: The hard drive is also called the hard disk. Perhaps you’ll never see it because it is inside your computer. The computer keeps files, programs and documents there. Keyboard: This device, is the most important way of inputting data into many programs.

Memory: This is the device that holds information in an electrical or magnetic form. There are two basic types. Read-only memory (ROM) contains program data that never change, and random-access memory (RAM) contains program data that often change and are often accessed by the CPU. ROM and RAM are typically measured in megabytes (MB). Modem: This device connects a computer to a phone so that the user can access the Internet. Monitor: An output device that shows you what you are doing. Motherboard: The motherboard is the circuit board that everything in the computer plugs into. Mouse: The mouse is another input device. It is good for moving and pointing to objects on the screen. Printer: A printer is an essential part of the computer if you want to see your work on paper. Scanner: A scanner is useful if you are working with lots of pictures or photos. It can copy written documents, pictures or photos into your computer. Sound Card: Your computer uses this device to play music, sounds and voices. Make sure you have a sound card if you’re planning to play multimedia games.
<table>
<thead>
<tr>
<th></th>
<th>Mistakes</th>
<th>Correction</th>
<th>New correction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>musics</td>
<td>music</td>
<td>sound</td>
</tr>
<tr>
<td>2</td>
<td>brian</td>
<td>brain</td>
<td>master</td>
</tr>
<tr>
<td>3</td>
<td>imadges</td>
<td>images</td>
<td>pictures</td>
</tr>
<tr>
<td>4</td>
<td>there is</td>
<td>there are</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>measured</td>
<td>measured</td>
<td>calculated</td>
</tr>
<tr>
<td>6</td>
<td>connect’s</td>
<td>connects</td>
<td>links</td>
</tr>
<tr>
<td>7</td>
<td>circuit</td>
<td>circuit</td>
<td>road</td>
</tr>
<tr>
<td>8</td>
<td>essenzial</td>
<td>essential</td>
<td>necessary</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SAMPLES OF STUDENTS’ WORK IN CLASS (Group#4)

Getting new software
I love getting new software on my computer.
I really love it if it’s a new game.

Problem with installing
When I first install new software, there are often problems.
Sometimes the new program won’t run because of a program that is already installed on my computer.

Jason
I usually ask my friend Jason to help me.
Jason can always sort out my computer problems!

A new software
I love getting new software on my computer and I really love it if it’s a new game but when I first install it, there are often problems, sometimes the new program won’t run because of another one that is already installed on my computer, for that, I usually ask my friend Jason to help me because he can always sort out my computer problems!
**Blackbeard:** Hey, Lion. I want to buy a new computer because the old one isn’t working.

**Maestro:** I recommend you this computer, it’s called ASUS.

**Blackbeard:** I don’t like it, it’s too big and I want a small one.

**Maestro:** So choose this one! It’s called ALIENWARE and it is the smallest one in this shop.

**Blackbeard:** I don’t fancy that one.

**Maestro:** Oh look at that one! It’s better than Asus or Alienware.

**Blackbeard:** Oh, yeah. This one is very interesting. I want to buy it.

**Maestro:** It costs 24,000€.

**Blackbeard:** Oh no, it’s too expensive.
WARNING: THERE ARE DELIBERATE SPELLING AND GRAMMAR MISTAKES IN THIS TEXT! CD-ROM Drive: This device reads data from a disc. These CDs look like a music CD, but hold data instead of music. CPU: The CPU, or central processing unit, is the ‘brain’ of the computer. Graphics Card: The graphics card is the part of the computer that sends the images to the monitor. Hard Drive: The hard drive is also called the hard disk. Perhaps you’ll never see it because it is inside your computer. The computer keeps files, programs and documents there. Keyboard: This device, is the most important way of inputting data into many programs.

THE PARTS OF A COMPUTER

Memory: This is the device that holds information in an electrical or magnetic form. There are two basic types. Read-only memory (ROM) contains program data that never change, and random-access memory (RAM) contains program data that often change and are often accessed by the CPU. ROM and RAM are typically measured in megabytes (MB). Modem: This device connects a computer to a phone so that the user can access the Internet. Monitor: An output device that shows you what you are doing. Motherboard: The motherboard is the circuit board that everything in the computer plugs into. Mouse: The mouse is another input device. It is good for moving and pointing to objects on the screen. Printer: A printer is an essential part of the computer if you want to see your work on paper. Scanner: A scanner is useful if you are working with lots of pictures or photos. It can copy written documents, pictures or photos into your computer. Sound Card: Your computer uses this device to play music, sounds and voices. Make sure you have a sound card if you’re planning to play multimedia games.
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Mistakes</strong></td>
<td><strong>Corrections</strong></td>
<td><strong>New way to improve the text</strong></td>
</tr>
<tr>
<td>2</td>
<td>musics</td>
<td>music</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>brian</td>
<td>brain</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>imadges</td>
<td>images</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>measured</td>
<td>measured</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>connect’s</td>
<td>connects</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>circuit</td>
<td>circuit</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>essenzial</td>
<td>essential</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>There is two basic types</td>
<td>There are two basic types</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix#4E

International Baccalaureate Exam, English Option (Experimental Sciences and Science of Physics)

Page#1/6
IV. Match each recorded myogram (Group 1) to the corresponding state of stimulations applied on the muscles (Group 2). Copy down these pairs (1: - ), (2: - ), (3: - ), (4: - ), and match each number to its corresponding letter. (1 pt)

**Group 1: Recorded myogram.**
1. Complete fusion of two muscle switches.
2. Incomplete fusion of two muscle switches.
3. Two isolated muscle twitches.
4. One isolated muscle twitch.

**Group 2: Application of 2 effective stimulations on the muscle.**

- a. The second stimulation is applied after completion of the first muscle twitch.
- b. The second stimulation is applied during the latent period of the first muscle twitch.
- c. The second stimulation is applied during the contraction period of the first muscle twitch.
- d. The second stimulation is applied during the relaxation period of the first muscle twitch.

**Section II: Scientific reasoning and communication in graphic and written modes (15 pts)**

**Exercise 1 (2.5 pts)**

Mody-2 diabetes (Maturity Onset Diabetes of the Young) affects some people before the age of 20. People with this disease suffer from permanent hyperglycemia. In order to highlight the genetic origin of this disease, we suggest the following data:

- The glucose is stored in the liver as glycogen (glycogenesis) by the intervention of a set of enzymes. Gluocokinase is one of such enzymes. Document 1 shows the level of intervention of glucokinase in the chain of reactions of glycogenesis.

```
Glucokinase  Enzyme 1  Enzyme 2  Enzyme 3
Glucose → Glucose-6P → Glucose-1P → UDP-Glucose → Glycogen
```

Document 1

- The measurement of glucokinase activity in the liver in a healthy individual and in another individual affected by Mody-2 has given the results presented in Document 2.

1. Based on documents 1 and 2:
   a. Describe the glucokinase activity variations in the healthy individual and in the individual affected by Mody-2. (0.5 pt)
   b. Explain the permanent hyperglycemia in the individual affected by Mody-2. (0.5 pt)
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

Page#3/6

To know the origin of this disease, we suggest documents 3 and 4.

Document 3 presents part of a transcribed strand of the gene coding for glucokinase in a healthy individual and in another individual affected by Mody-2, and document 4 gives an extract of the genetic code.

Reading direction

<table>
<thead>
<tr>
<th>Number of nucleotide triplets:</th>
<th>277</th>
<th>278</th>
<th>279</th>
<th>280</th>
<th>281</th>
<th>282</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthy individual:</td>
<td>...CAC</td>
<td>CTG</td>
<td>CTC</td>
<td>TCG</td>
<td>AGA</td>
<td>CGT...</td>
</tr>
<tr>
<td>Individual affected by Mody-2:</td>
<td>...CAC</td>
<td>CTG</td>
<td>ATC</td>
<td>TCG</td>
<td>AGA</td>
<td>CGT...</td>
</tr>
</tbody>
</table>

Document 3

<table>
<thead>
<tr>
<th>Amino acids</th>
<th>Glu</th>
<th>Met</th>
<th>Val</th>
<th>Trp</th>
<th>Lys</th>
<th>Sec</th>
<th>Asp</th>
<th>Gly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Codons</td>
<td>GAA</td>
<td>GAG</td>
<td>AUG</td>
<td>GGU</td>
<td>UUG</td>
<td>AAA</td>
<td>AGU</td>
<td>GGU</td>
</tr>
<tr>
<td></td>
<td>GAC</td>
<td>GCU</td>
<td>GUC</td>
<td>UAG</td>
<td>UGA</td>
<td>AAG</td>
<td>AGC</td>
<td>GCA</td>
</tr>
<tr>
<td></td>
<td>GAG</td>
<td>GCA</td>
<td>UAA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Document 4

2. Based on documents 3 and 4, determine the amino acid sequence corresponding to each part of the gene coding for glucokinase in a healthy individual and in an individual affected by Mody-2. (0.5 pt)

3. Based on your previous answers, explain the genetic origin of Mody-2 disease. (1 pt)

Exercise 2 (2.5 pts)

In order to study the mode of transmission of the two hereditary characteristics (traits) in rabbits, we suggest the exploitation of the results of the two following crosses:

- First cross between two pure lineages of rabbits: one lineage has long hair (angora) and a uniform colour, and the other has short hair and variegated white colour.

  The first generation obtained (F1) is composed of individuals with short hair and variegated white colour.

- Second cross between females of F1 and males with long hair (angora) and uniform colour.

  This cross has given a generation F2 composed of:

  - 138 rabbits with short hair and variegated white colour;
  - 341 rabbits with long hair and uniform colour;
  - 12 rabbits with long hair and variegated white colour;
  - 9 rabbits with short hair and uniform colour.

1. Based on the results of the two crosses, determine the mode of transmission of the two hereditary traits studied. (0.75 pt)

2. Interpret and use a Punnett square to explain the results obtained in the second cross. (0.75 pt)

   *NB. Use the symbols L and l for 'hair length' trait and the symbols P and p for 'hair colour' trait.*

3. Determine the phenomenon responsible for the appearance of rabbits with long hair and variegated white colour and rabbits with short hair and uniform colour in generation F2. Explain this phenomenon by drawing a scheme. (1 pt)
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

Exercise 3 (5 pts)

In Taourirt - Zaio region, the Moulouya River is polluted by household waste and industrial activity. To highlight the impact of these activities on waters of the Moulouya River, we suggest the study of the following data:

- Za River and its streams, like Al-Karayane and Et-Tynur, is one of the principal tributaries of the Moulouya River in Taourirt region. The growing demography and continuous development of the industrial sector have a direct impact on Za river waters. In order to evaluate the quality of these waters, a study was conducted in 2010 at level of three water sampling stations.

Document 1 shows the location of Za River and its streams, and the three water sampling stations (Station 1 is considered as reference). Document 2 presents the measurement results of water quality parameters of the three stations. And document 3 gives information about the types of industrial activities in Taourirt region and the conditions of its waste water treatment plant.

![Water sampling stations map](Diagram)

**Document 1**

<table>
<thead>
<tr>
<th>Parameters</th>
<th>BOD5 (mg/L)</th>
<th>O2 (mg/L)</th>
<th>Suspended matters (mg/L)</th>
<th>NH4⁺ (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Station 1</td>
<td>1</td>
<td>8.46</td>
<td>125</td>
<td>0.109</td>
</tr>
<tr>
<td>(station of reference)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Station 2</td>
<td>881.6</td>
<td>0.1</td>
<td>3530</td>
<td>7.852</td>
</tr>
<tr>
<td>Station 3</td>
<td>8</td>
<td>7.13</td>
<td>212</td>
<td>0.133</td>
</tr>
</tbody>
</table>

**Document 2**

- The industrial sector in Taourirt includes 75 industrial units. 67 of those units are olive canneries. The sector generates 2321 m³ of wastewaters every year, which is dumped without prior treatment into Al-Karayane River. The wastewaters of Taourirt city have been dumped in Et-Tynur River since 2003. Only 0.5% of these wastewaters are treated in the wastewater treatment plant, but the station’s effectiveness and water yield have decreased due to the growth in the volume of industrial waste, particularly the olive industry and the residual waters of canning industry (fish, olives, apricots...).

**Document 3**

1. By exploiting documents 1, 2 and 3:
   - Compare the values recorded in stations 2 and 3 with the values recorded in the station of reference 1. (1 pt)
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

Page#5/6

b- Explain the results recorded in station 2 by specifying its impact on the water of Moulaya River (1.5 pts)

- The industrial zone of Zaio city has a sugar factory that dumps its industrial wastes (mainly organic waste and chemical products) directly in Sebra river, (tributary of Moulaya River). Sebra river also receives household waste of Zaio city. In 2011, tons of dead fishes were thrown on the banks of Moulaya River. To determine the cause of those death fishes, an analysis of water samples, in July 2011, was carried out in three stations S1, S2 and S3 as represented on the map in document 4. The obtained results are presented in document 5.

2. By exploiting data in documents 4 et 5, explain the death of the fishes in Moulaya River. (1.75 pts)

3. Based on the previous data, suggest three appropriate ways to reduce water pollution of Moulaya River. (0.75 pt)

Exercise 4 (5 pts)

The European Alps form a mountain range extending over 1200 km between the Mediterranean in the South and the Danube River in the East. Occidental Alps show most of the range units of this mountain along 150 km. Currently, we consider that the Alps are the result of the closure of an old ocean, following a convergence and a confrontation of the European Plate and the African Plate. To determine the conditions and stages of this mountain chain formation, we suggest the following documents:

- Document 1 presents a simple geological map of internal zones of Occidental Alps.
- Document 2 shows a geological cross section in the studied region according the (AB) axis. (See document 1)
An experimental CLIL course for Moroccan students preparing for the International Baccalaureate

1. From documents 1 and 2, extract the tectonic deformations that the internal zones of the Aples have witnessed, and the clues that show that the zone is the result of the closure of an old ocean. (1.5 pts)

Among the rocks outcropping in Chenailllet, Queyras and Mont Viso, we find metamorphic rocks. Document 3 presents three thin-section microscopies of three metagabbros belonging to the studied region, and a thin section microscopy of gabbro. Document 4 presents the areas of stability of certain index minerals according to geothermic variables (pressure and temperature).

2. Taking into account that the actinolite and the chlorite result from the hornblende transformation (rock MG1), and based on documents 3 and 4, show that the rocks MG1, MG2 and MG3 are clues of a subduction that preceded confrontation of the European Plate and the African Plate, specifying the type of metamorphism that led to the formation of the studied rocks. (2 pts)

3. Based on your previous answers and your knowledge, draw three explanatory schemes that show the stages of the formation of the Alpine mountain range. (1.5 pts)