

# Massive Open Online Course about Content Language Integrated Learning: A Methodological Approach for Content Language Integrated Learning Teachers

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**Abstract**—This paper focuses on the design of a Massive Open Online Course (MOOC) about Content Language Integrated Learning (CLIL) and more specifically about how teachers can use CLIL as an educational approach incorporating technology in their teaching as well. All the four weeks of the MOOC will be presented and a step-by-step analysis of each lesson will be offered. Additionally, the paper includes detailed lesson plans about CLIL lessons with proposed CLIL activities and games in which technology plays a central part. The MOOC is structured based on certain criteria, in order to ensure success, as well as a positive experience that the learners need to have after completing this MOOC. It addresses to all language teachers who would like to implement CLIL into their teaching. In other words, it presents the methodology that needs to be followed so as to successfully carry out a CLIL lesson and achieve the learning objectives set at the beginning of the course. Firstly, in this paper, it is very important to give the definitions of MOOCs and LMOOCs, as well as to explore the difference between a structure-based MOOC (xMOOC) and a connectivist MOOC (cMOOC) and present the criteria of a successful MOOC. Moreover, the notion of CLIL will be explored, as it is necessary to fully understand this concept before moving on to the design of the MOOC. Onwards, the four weeks of the MOOC will be introduced as well as lesson plans will be presented: The type of the activities, the aims of each activity and the methodology that teachers have to follow. Emphasis will be placed on the role of technology in foreign language learning and on the ways in which we can involve technology in teaching a foreign language. Final remarks will be made and a summary of the main points will be offered at the end.

**Keywords**—Content language integrated learning, connectivist massive open online course, lesson plan, language MOOC, massive open online course criteria, massive open online course, technology, structure-based massive open online course.

## I. INTRODUCTION

### A. What Is a MOOC?

THE problem with MOOCs is that it is very difficult to end up to a single definition. Their multidimensional nature prevents us from finding the precise meaning behind this concept. In fact, “the more we try to define the term, the less “open” it becomes and, conversely, the more open-ended we leave it, the harder it becomes to differentiate MOOCs from other Education 2.0 initiatives” [11]. Thus, it is necessary that we try to define the term, even though we might not cover all aspects of the term. According to Bárcena, et al. “MOOCs

refer to a new model of online education delivering content and proposing activities to meet learning goals for a large number of people with a shared interest, with no initial limits of access, attendance and credits offered at the end” [2]. They continue indicating that MOOCs “are learner-centred and socially oriented, placing the emphasis on the social interaction generated in study groups around flexible learning materials and related activities, which the students find both stimulating and rewarding” [2]. In other words, MOOCs tend to be adaptable to the learners’ needs and personal goals. They enhance learners’ autonomy and make them responsible of their own learning, as they determine the pace and the frequency of their studying. A study guide is offered to the learners to help them keep up with the learning process, but it is up to the learner to follow it or not.

Another important point that was mentioned above was the social interaction that MOOCs offer. Learners have the chance to be a part of an online community and discuss upon the topic with other learners in the forums. In that way they do not feel isolated as they can share their thoughts and get feedback from their peers. As Teixeira and Mota underline “the learning process combines autonomous self-study and reflection with interaction with other participants in an open social context. Participants are expected to take an active role and be responsible for their own learning, but also to actively engage in helping build a supporting learning community” [13]. Thus, it is clear that MOOCs have evolved through the years and they are now considered digital communities where people can interact in a meaningful way. Actually it is interesting to note that, “MOOCs are arguably the natural evolution of OERs (Open Educational Resources), which are freely accessible learning materials and media to be used for learning/teaching and assessment” [1].

### B. What Is a Language MOOC (LMOOC)?

After defining MOOCs in general, it is also necessary to provide the definition of LMOOCs. According to Bárcena & Martín-Monje “Language MOOCs (or LMOOCs) are dedicated Web-based online courses for second languages with unrestricted access and potentially unlimited participation” [1]. In other words, LMOOCs are MOOCs that focus on language learning and give learners the opportunity to not only learn a foreign language through a carefully designed syllabus, but also interact with each other and practice their communicative skills that they acquired through the module. As Bárcena & Martín-Monje observe, “open

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online courses can be effectively designed to facilitate the development of communicative language capabilities for potentially massive and highly heterogeneous groups, whose only common goal is their desire to learn a given language” [1]. Sokolik also successfully observes that “discussion is the heart of a Language MOOC” and that “the engagement and interaction take the form of authentic communication, primarily among students” [12]. There are many platforms that offer LMOOCs; Coursera, FutureLearn, EdX, Canvas and many others (40 in total) and they have made their first appearance in 2012 that is considered according to New York Times as “the Year of the MOOC”.

### C. What Is the Difference between xMOOC and cMOOC?

A cMOOC or a connectivist MOOC is built upon SLA and constructivist theories and it is seen as a distributed network that places great emphasis on communicative interaction. As Sokolik points out “the advantages the cMOOC format is its emphasis on interaction and community building. In language learning, this seems to coincide neatly with the goals of most classroom pedagogy, especially that of the communicative language teaching (CLT) approach” [12]. Thus, a cMOOC seems to conform to the norms of the CLT approach and place the emphasis on the learner who is asked to use language in authentic contexts. Learners rely on the material they find online and they are engaged in collaborative projects during which they exchange ideas and share their knowledge. On the other hand, an xMOOC is more structure-based and it offers a syllabus that learners need to follow. As indicated by Sokolik once again “an instructor guides the course, often through a syllabus and a sequence of activities. xMOOCs are most often sponsored by universities, and thus, in some ways are seen to mimic the structure of university courses” [12]. Thus, xMOOCs are provided by well-known universities and thus their structure resembles that of the courses taught at these universities. In xMOOCs the instructor guides the learners through the syllabus, the learners are aware of every step they need to make to acquire the knowledge.

### D. What Is CLIL?

CLIL stands for Content and Language Integrated Learning and according to a well-known definition “CLIL is a dual-focused educational approach in which an additional language is used for the learning and teaching of both content and language” [4]. In other words, CLIL refers to the teaching of other subjects like geography or science using a foreign language; English for example. In this way, learning is contextualized and the students have the chance to learn a foreign language within a context and gain knowledge about the world around them. In other words, CLIL brings content and language together and students do not receive knowledge separately, but integratively.

### E. CLIL Characteristics

The role of CLIL goes far beyond foreign language acquisition. CLIL promotes multiculturalism and serves the idea of a United Europe in which citizens can collaborate with each other and have a better understanding of the different

cultures around the world. Students learn from an early age not only how to bring languages together through CLIL, but also they bring beliefs together and get closer to people from all around the world. As future European citizens, students should learn to effectively communicate in a foreign language, namely English, because they will find out that they will probably have to use this language in their workplace. In the 21st century, companies and businesses collaborate with each other and thus people need to have the necessary qualifications to stand up to the working demands of the time. This is why students must be prepared to confront the modern world in the future. CLIL will enable them to combine information and contextualize them, so as to have a clear picture of the real world.

### F. The 4Cs

It is vital to stress out that there are four basic principles upon which a CLIL lesson can be structured. These are often expressed as the ‘4Cs’ [7]-[9], as shown in Fig. 1.



Fig. 1 Improving the effectiveness of language learning: CLIL and computer assisted language learning [10]

- **Content** takes a whole new meaning, as the learners themselves are free to broaden their knowledge and try to create their own meaning of the content and develop their linguistic skills. In other words the lesson becomes student-centered and the learning process is personalized.
- Content is related to learning and thinking (**cognition**). In order for the learners to be able to create their own meaning of the content, it is necessary to use their creativity and logical thinking (cognition) to analyze the content. In other words, cognition will be based and analyzed in terms of its linguistic demands.
- Language is learned through **communication**, and during this process, the learners need to find the meaning of the content by using their cognitive abilities and end up communicating effectively. The interaction between the learners is vital and it is the ultimate goal of the learning process. The language of communication is the foreign language.
- The relationship between **culture** and languages is

complex. It is important however, that the learners develop cultural awareness, in order to connect with the language and consequently feel comfortable in using it [10].

It is, therefore, obvious that in order to conduct a CLIL lesson, it is important to take into account these four principles; content, cognition, communication and culture and be able to design activities based on them. In other words, the teachers should provide their learners with rich and authentic input, so that they can construct their own meaning of the content. In order to succeed in doing this though, they should use their imagination and critical thinking to analyze the input and be able to reflect upon it by communicating effectively. However, communication can take place if the teachers raise their students' cultural awareness so that they can use the language successfully. Thus, it is clear that these four elements are interconnected and interdependent. Only the combination of these principles can provide a complete, well-structured and constructive lesson.

### *G. Prerequisites of a Successful CLIL Lesson*

There are three major conditions [10] that need to set the stage for the implementation of a CLIL lesson (Fig. 2).

#### *1. Teacher Training and Support*

First and foremost, in order for the teachers to design a CLIL lesson, it is important that they are well-trained and fully aware of the basic principles of CLIL to be able to follow them. They have to implement the CLIL methodology, according to which they have to teach both content and language. Thus they aim at not only teaching the content of a particular subject, for example religious education, but also the foreign language that is used as the medium to teach the content. For that reason, the teachers need to be competent and knowledgeable enough to understand how CLIL works and be able to put theory into practice. Last but not least, the teachers need to have both the technical support, for example the appropriate equipment like computers, projectors that can be provided by the school, and the support from the head teacher and the other members of the staff. There should be an effective collaboration between them, so as to make the CLIL project possible. It is also vital however, to have the permission of the parents in order to implement these methods.

#### *2. Teaching Approaches*

It is also necessary that the teaching approaches are taken into account prior and during the lesson. The teachers have to choose appropriate and meaningful materials that would trigger students' imagination and critical thinking. The input should be authentic and challenging for them. Furthermore, the teachers should guide the students step by step during the learning procedure, and lighten the cognitive and linguistic burden that the content entails. In order to be successful, they also should combine the content, cognition and language and present it to the learners in an effective way. Then the teachers should urge students to start interacting upon the input, so as to improve their listening as well as speaking skills. The role

of the teacher at this point is to provide feedback and correct the students when necessary. Finally, the teachers should design tasks that encourage students to collaborate and introduce topics that are interesting enough, so that the students can reflect upon them.

#### *3. Learning Processes*

Another important fact that the teachers have to take into consideration is the learning processes. Firstly, they should cater for the development of the students' cognitive language proficiency and cognitive skills. Secondly, they should concentrate on the learning process itself and not worry about the result, as it might not be positive at first. In other words, it is important to remember that in a CLIL lesson the results are not always obvious at first, as the learners might need some time to work on their cognitive abilities, construct the meaning and break down the notions that are introduced by the teacher. Thus the teachers will probably get long-term results and notice their students' progress day by day. Furthermore, it is vital that the learners work in small groups of three or four, so as to collaborate easily and effectively. In that way, the students will be given the chance to communicate, using authentic input provided by the teacher. The teacher has to offer meaningful content and rich input, in order for the students to produce comprehensible linguistic output. The ideal outcome is to end up building the concepts introduced together, negotiate their meaning and express different thoughts and opinions. This could mean that the lesson has taken a step further and that the students have started becoming autonomous learners [10].

## *II. CRITERIA THAT DEFINE A SUCCESSFUL MOOC*

Before attempting to design a MOOC it is necessary to consider its effectiveness. In order for a MOOC to be successful, it needs to meet certain criteria. In this section, these criteria will be explored and will be taken into consideration for the design of the MOOC about CLIL afterwards. This critical approach follows the line of thought of Sokolik [12].

### *A. Engagement and Interaction*

Social interaction is the heart of a MOOC and thus it is really important that the learners feel confident and competent enough to take part in online discussions and express their personal thoughts and considerations. In order to make this possible, it would be a good idea to form several forums, each one with a specific topic, in order to better organize the comments and help the learners keep up more easily.

### *B. Student Self-Organization*

In some cases, the learners have self-organized discussions using other social media like Facebook. In that way, they do not only solve any queries they might have concerning the modules in the MOOC or the tasks they have to carry out but also, they unofficially discuss any issues that may arise and they feel comfortable elaborating on them outside the MOOC's forum.

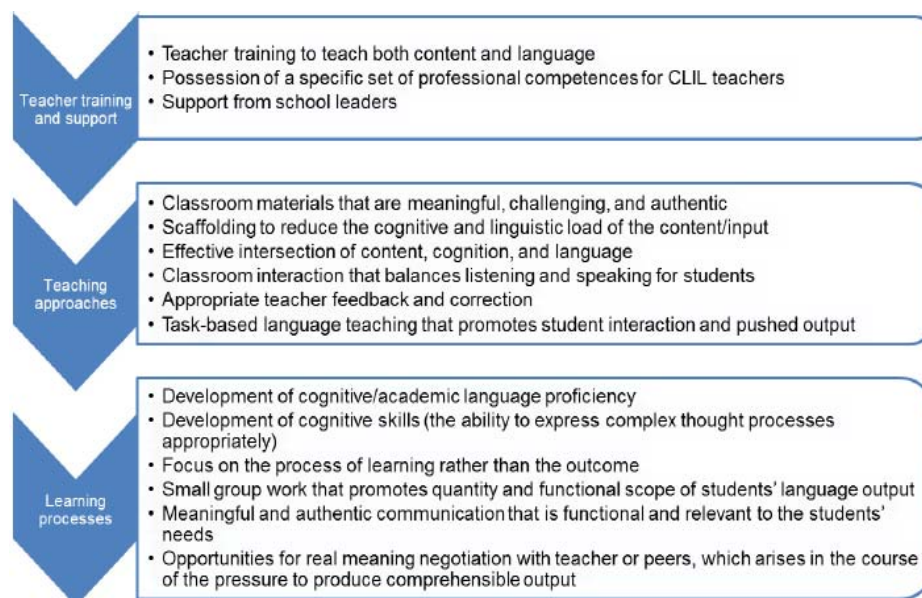


Fig. 2 Improving the effectiveness of language learning: CLIL and computer assisted language learning [10]

### C. Instructor Presence

The instructor plays a key part in the course development, although his/her presence is not always apparent. He/she can guide the students leaving comments in the forums, or not participate at all; just he/she can send emails to encourage the students to continue with their work. It is encouraging to know that you have the instructor or any other member of the team to help you in case you need it, but of course they have to have a supportive role and not a central one. The learners need to develop a learning autonomy, be able to communicate with their peers and benefit through this interaction. Thus, the instructor should give learners some space to interact with each other in a productive way.

### D. Structure for Engagement

Sokolik proposes that learners should have the opportunity to create groups and add discussion topics so as to set the stage for further elaboration. In this way, they will have the opportunity to have their questions answered by other learners or by the instructors. Consequently, this structure will enable learners “to build stronger bonds, and create a sense of instructor presence” [12]. Lastly, the various learning platforms “should allow for users to see when instructors and facilitators are online and available for contact”. As a result, the learners would feel secure and certain that they are supported all the way through the learning procedure.

### E. Use of Media in MOOCs

“Instructional style in most xMOOCs rely on video lectures, typically short ones” [12]. In some cases, there are short video lectures in which the professors explicitly introduce certain definitions or explain difficult notions. The lectures are usually presented as a Microsoft PowerPoint presentation and there are bullet points for the most important issues raised. Furthermore, there may be short videos with interviews or videos showing real-time settings. The combination of

interviews, PowerPoint presentations and videos showing real-time settings is necessary for a MOOC to be successful and it can give the learners who participate in it an insight of how theory can be put into practice and then take it a step further and start reflecting and discussing about a particular issue.

### F. Forms of Assessment

According to Maggie Sokolik there are “three models for assessment that are commonly used: self-assessment, peer-assessment, and machine-assessment (for written work)” [12]. The latter is a new type of assessment, so it will not be discussed here.

#### 1. Peer-Assessment

Peer-assessment “often entails training participants, using a rubric developed by the instructor, to read each other’s work and assess it on a number of points” [12]. Peer evaluation can be realized by providing feedback via email upon certain projects assigned by the instructor. This is very important for the learners, as they have the chance to receive genuine feedback from their peers as well as give feedback themselves.

However, this form of assessment presents a set of challenges as Maggie Sokolik observes as “even with training, some students are not prepared or willing to provide useful feedback to others” [12]. Other students think that “peer-feedback as unhelpful, and sometimes hurtful” [12], because the evaluation may involve negative comments about someone’s work. That is why she suggests an alternative way of peer-assessment indicating that “informal peer-feedback, that is, seeking feedback through discussion, can offer more meaningful commentary, since it is voluntary, and not part of a larger, mandatory assessment scheme. In a voluntary system, students choose which items to give feedback one, presumably based on their interest and level of expertise they feel in giving feedback” [12]. Nevertheless, there are also some people who claim that peer assessment seems quite suitable; “as MOOCs

become more widespread, the need for reliable grading and feedback for open ended assignments becomes ever more critical. The most scalable solution that has been shown to be effective is peer grading” [8].

## 2. Self-Assessment

Self-assessment can be made through quizzes, multiple choice questions, and short answer questions; namely close-ended or open-ended questions. These quizzes are there for the students to take at the end of each week of the MOOC, in order to ensure that they have acquired some basic knowledge on the subject and that they have covered the study material. They usually have to get a total score of 50% or 80% in order to continue to the next module (week).

## G. Certification

All learning platforms offer the possibility of purchasing a certificate at the end of the course, after the successful completion of all the quizzes and assignments. As it was already mentioned, in order to pass the quizzes and assignments you need a passing mark and you need to attempt all test questions. The price is more or less fixed; 44 euros and you can buy it whenever you require it. The certificate enriches someone’s CV, as it proves that you have followed a course online that helped you develop your knowledge, thus I believe that it is necessary that the platforms offer this opportunity, regardless of whether learners will eventually buy it or not.

## H. Success Depends on Learners’ Goals

The success of a MOOC is tightly bound to learners’ personal objectives. If learners are highly motivated then they will complete the course and there will be no drop-outs. Also, the learners will be dedicated to their studying and they will be driven by the fact that they consciously selected a particular course for personal development or future career opportunities for example. Their motivation influences their performance and their performance influences the successful progress of a MOOC.

## III. DESIGN OF THE MOOC

The design of this particular MOOC, entitled "CLIL and technology in foreign language learning" is an LMOOC that addresses to all language teachers, who would like not only to learn some more things about CLIL, but also to implement the CLIL methodology in their teaching, by using technology at the same time. Thus, the course will offer an insight on how teachers can effectively use CLIL and technology together, in order to trigger learners' imagination and make them understand the world around them.

The course includes 4 modules (weeks) and in each module, there is a set of “lessons” consisting of lecture videos, reading, written assignments and activities in the form of a quiz to help learners ensure that they have effectively covered the learning material and acquired some basic knowledge on the subject. Afterwards, a detailed description of how the modules in the MOOC look like will be provided, lesson plans in which the

CLIL methodology will be implemented, and last but not least authentic materials will be presented about proposed CLIL activities.

An overview of the content of the four modules is offered below. The full description of the modules is provided afterwards.

## 3.10 Module 1 (week 1st): Familiarization with CLIL

- 3.10.a. Module Introduction
- 3.10.b. What is CLIL?
- 3.10.c. History of CLIL
- 3.10.d. CLIL methodology
- 3.10.e. How to integrate technology in CLIL
- 3.10.f. CLIL activities
- 3.10.g. Your task
- 3.10.h. Quiz: Module 1

## 3.11. Module 2 (week 2nd): Factors to consider

- 3.11.a. Module Introduction
- 3.11.b. Age and gender factors
- 3.11.c. Level of English of the students (gradation in exercises-strong vs weak students) and level of general knowledge
- 3.11.d. Type of learners (tactile, kinesthetic, visual and auditory) and level of their metalinguistic awareness
- 3.11.e. Familiarity of students with technology
- 3.11.f. The 4 Cs
- 3.11.g. Your task
- 3.11.h. Quiz: Module 2

## 3.12. Module 3 (week 3rd): Various CLIL lessons

- 3.12.a. Module Introduction
- 3.12.b. CLIL in religious education
- 3.12.c. CLIL in environmental studies
- 3.12.d. CLIL in physical education
- 3.12.f. Quiz: Module 3
- 3.12.e. Your task (design your own lesson plan-involve technology)

## 3.13. Module 4 (week 4th): More CLIL lessons

- 3.13.a. Module Introduction
- 3.13.b. CLIL in geography
- 3.13.c. CLIL in history
- 3.13.d. CLIL in science
- 3.13.e. Your task (design your own lesson plan-involve technology)
- 3.13.f. Quiz: Module

## IV. FULL DESCRIPTION OF THE FOUR MODULES

### A. Module 1 (week 1<sup>st</sup>): Familiarization with CLIL

**3.10.a. Module Introduction:** In this first part of module 1, there will be an introduction about what is going to be presented to the learners, in which form (video, PowerPoint presentation etc.) and also a small description of the lessons that follow along with the main aims of each of the specific lessons. The learners will be acquainted with the notion of CLIL, as well as its history and methodology. They will also find out how they can implement technology in their teaching

and how they can design CLIL activities with the contribution of technological tools and applications.

**3.10.b What is CLIL?** In the second part, the notion of CLIL is introduced and learners have the opportunity to create a first impression of what are the characteristics of CLIL. The definition along with a detailed description of CLIL methodology is presented through a PowerPoint presentation. Some “food for thought” questions follow and of course there is a forum at the end of the page, where learners can post their comments and reflect upon the things that they have encountered in the video lecture. It is important to note that there is a pdf file that learners can download, which contains a related bibliography, in case the learners want to conduct further research in the field. A second pdf is also provided, with the written transcription of the video.

**3.10.c. History of CLIL:** In the third unit of the module, a pdf file is provided with the history of CLIL, as well as some additional bibliography about when and where was CLIL first introduced and which countries are promoting it nowadays. Thus, this part aims at giving a broader picture of CLIL and helps learners deduce better conclusions about the nature of this innovative educational approach.

**3.10.d. CLIL Methodology:** In the fourth lesson, there is a video, in which CLIL teachers explain the CLIL methodology and give some practical tips for teachers in a form of an interview. In this video, CLIL classrooms are also presented in real-time, so as the learners can observe how a CLIL lesson is conducted and generally how theory is put into practice. Once again, some questions are posed at the end, in order to give the opportunity to the learners to reflect upon the points introduced in the video.

**3.10.e. How to Integrate Technology in CLIL:** In the fifth lesson learners become aware of the methods they can follow in order to integrate technology in a CLIL lesson. More specifically, they learn how to use programs to present their materials in an interesting and attractive way. Furthermore, they learn how to use various tools, so as to facilitate the teaching as well as the learning process. Their goal is to make lessons as appealing as possible for the learners and more up-to-date, as nowadays students are exposed to technological advancements from an early age and it is impossible to isolate them from technology. Teachers must find a way to incorporate technology in their teaching, because in this way they will gain the attention of their students. Technology is an inextricable part of our lives and especially of the children's lives, so teachers must acknowledge the necessity to make it a central part of the CLIL lesson.

**3.10.f. CLIL Activities:** In the sixth unit of the module, there is again a video in which teachers present certain tasks and activities that teachers can carry out in their CLIL classrooms. After the learners have been shown how the activities can be incorporated in a CLIL lesson using technology, some questions are posed to them in order to trigger their imagination and creativity. More specifically, the learners are asked to take the activities a step further and consider how beneficial they can be for their future students and if they find them educational and helpful. A discussion is

likely to take place afterwards in the forum, where ideas can be expressed and opinions can be exchanged among the learners.

**3.10.g. Your Task:** In this seventh part of the module, learners are asked to develop their own CLIL task. After the learners have created an idea about the notion of CLIL, its methodology and how they can implement the methods in a real-time classroom using interesting activities for the students, they have the chance to express their own thoughts and use their imagination. They have to think about which activities might be helpful for their future students and according to their field of expertise, they can design different tasks (using technology of course). For example, a science teacher that follows this specific MOOC course, can design CLIL activities that have to do with certain scientific facts and find a way to incorporate technology in his/her teaching. After the learners have created their tasks, they are asked to send them to one of their peers in order to receive feedback. Similarly, they will have to provide feedback to one of their peers and exchange thoughts and opinions.

**3.10.h. Quiz: Module 1:** This is the eighth and final lesson of module 1, in which the learners have to take a quick quiz, in order to test their knowledge. This quiz is mandatory, so as to continue to the next module (week) and its aim is to ensure that the learners have acquired some basic knowledge during their experience in module 1. The questions of the quiz are not too difficult, as the learners are asked to answer 10 multiple choice questions, from which they have to answer at least 7 of them correctly. In case they fail, they have the opportunity to retake the test the following day and that goes on until they pass the quiz. It is important to note that after the completion of all the quizzes of all 4 modules, the learners can purchase a certificate which they can include into their CV.

#### *B. Module 2 (Week 2nd): Factors to Consider*

**3.11.a. Module Introduction:** In this first part of module 2, there will be an introduction about what is going to be presented to the learners, in which form (video, PowerPoint presentation etc.) and also a small description of the lessons that follow along with the main aims of each of the specific lessons. More specifically the learners will be offered the chance to examine the factors that the teachers of CLIL should take into account when they intend to teach any school subject; namely physics, geography, history etc. to their students.

**3.11.b. Age and Gender Factors:** In the second part, the age and gender factors are presented to the learners. A detailed explanation of how these factors influence the teaching as well as the learning procedure in CLIL is offered to the learners through a PowerPoint presentation. It becomes clear that they are crucial in not only designing CLIL activities, but also in putting them into practice. Thus, the learners who take part in this MOOC can start thinking about the different types of CLIL activities that would be suitable for their students in terms of both their age and gender. Some “food for thought” questions follow and of course there is a forum at the end of the page, where learners can post their comments and reflect

upon the things that they have encountered in the video lecture. It is important to note that there is a pdf file that the learners can download, which contains a related bibliography, in case the learners want to conduct further research in the field. A second pdf is also provided, with the written transcription of the video.

**3.11.c. Level of English of the Students (Gradation in Exercises-Strong vs. Weak Students) and Level of General Knowledge:** In the third unit of the module, some other factors are presented to the learners; the level of English of the students and the level of their general knowledge. These are also important factors that should be taken into account by CLIL teachers, as they have to design activities that are appropriate for both strong and weak students. At the same time, they should take into account the level of their general knowledge and adapt the exercises according to their students' needs. This piece of information is provided to the learners through a video in which teachers propose certain types of activities and discuss upon the methodology that needs to be followed in order to design these tasks. Sample activities are presented to the learners, as well as methods to create appropriate materials for all types of students (strong and weak). Some "food for thought" questions follow and the learners can reflect once again upon the things that they have encountered in the video. There is also a pdf file that the learners can download, which contains a related bibliography, in case the learners want to conduct further research in the field. A second pdf is also provided, with the written transcription of the video.

**3.11.d. Type of Learners (Tactile, Kinesthetic, Visual and Auditory) and Level of Their Metalinguistic Awareness:** In the fourth unit of the module, the learners have the chance to elaborate on some other factors that lead to the creation of a successful CLIL lesson. Thus, the learners, namely the teachers that follow these modules will discover that in order to design a CLIL lesson, they will have to take into consideration the way their students learn. For example, in case they have kinesthetic or tactile learners, the teachers will have to design total physical response (TPR) activities, in order for their students to acquire knowledge through the sense of touch (tactile) or through the use of their whole body (kinesthetic), [3]. It is important to note that TPR "is a language teaching method built around the coordination of speech and actions which attempts to teach language through physical activity" [5]-[6]. In other words, the teachers have to focus on the needs of each individual student and try to adapt their methods in order to satisfy these needs. At the same time though, they have to bear in mind the level of metalinguistic awareness of the students and contribute in raising it with authentic input. A detailed explanation of how these factors influence the teaching as well as the learning procedure in CLIL is offered to the learners through a PowerPoint presentation. Certain definitions, explanations and examples are introduced and the learners start getting familiar with these factors too.

**3.11.e. Familiarity of Students with Technology:** During the fifth unit of the module the learners (teachers) are

presented with a very important factor; the familiarity of students with technology. The teachers have to discover the relationship of their students with technology and try to enhance it. Nevertheless, in order for the teachers to familiarize the students with technology, it is vital that they themselves are acquainted with technology. Once they have acquired the necessary knowledge and they have selected the appropriate tools they can incorporate technology in their teaching. Thus, the learners of the MOOC that have already been aware of the significance of technology in both the teaching and the learning process and they have understood the necessity of incorporating it in their lesson in the previous module, they are now ready to get this message across to their students. A detailed video is presented to them, in which they observe CLIL lessons being conducted with the use of technology, they see how the students respond to the various applications and technological environments and whether they can efficiently use the tools offered. Then, the learners can reflect upon the things that they have encountered in the video in the forum and pose their questions. There is also a pdf file that the learners can download, which contains a related bibliography and a second pdf with the written transcription of the video.

**3.11.f. The 4 Cs:** In the sixth part of the module, the learners are introduced with the 4 C's. It becomes clear, that the four principles; content, cognition, communication and culture are the basis upon which the CLIL lesson is structured. The learners (teachers) should understand that these are key concepts when aiming at constructing a CLIL lesson. A PowerPoint presentation is offered to the learners, with a 4 C's diagram and specific explanations and examples. Some "food for thought" questions follow and the learners are encouraged to start commenting in the forum and express their own thoughts. It is vital that the learners become aware of these concepts, as they will have to design their own activities for the next module of the MOOC.

**3.11.g. Your Task:** In this seventh part of the module, the learners are asked to develop their own CLIL task. After the learners have been aware of the different factors that affect the successful implementation of CLIL and they have been introduced to the four key concepts that they have to consider when designing CLIL activities, they have the chance to express their own thoughts and use their imagination once more. They have to think about which activities might be helpful for their future students and according to their field of expertise, they can design different tasks (using technology of course) bearing in mind all the things that they have learnt in this module. After the learners have created their tasks, they are asked to send them to one of their peers in order to receive feedback. Similarly, they will have to provide feedback to one of their peers and exchange thoughts and opinions.

**3.11.h. Quiz: Module 2:** This is the eighth and final lesson of module 2, in which the learners have to take a quick quiz, in order to test their knowledge. This quiz is mandatory, so as to continue to the next module (week) and its aim is to ensure that the learners have acquired some basic knowledge during their experience in module 2. The questions of the quiz are not

too difficult, as the learners are asked to answer 10 multiple choice questions, from which they have to answer at least 7 of them correctly. In case they fail, they have the opportunity to retake the test the following day and that goes on until they pass the quiz. It is important to note that after the completion of all the quizzes of all 4 modules, the learners can purchase a certificate which they can include into their CV.

*C. Module 3 (Week 3rd): Various CLIL lessons*

**3.12.a. Module Introduction:** In this first part of module 3, there will be an introduction about what is going to be presented to the learners, in which form (video, PowerPoint presentation etc.) and also a small description of the lessons that follow along with the main aims of each of the specific lessons. More specifically, the learners will become aware of the different fields that the CLIL methodology can be implemented. Thus, they will have the chance to learn about CLIL in religious education, in environmental studies and in physical education. They will be presented with CLIL activities for each of these subjects, as well as lesson plans that will guide them step by step during the teaching process.

**3.12.b. CLIL in Religious Education:** In the second part of this module, the learners (teachers) will be introduced with CLIL in religious education. They will be shown a video in which a CLIL lesson in religious education is taking place and they will have the chance to observe how such a lesson is being conducted and how the students respond to the input provided by the teacher. In other words, they will become aware of the methodology that the teachers in the video use and the strategies that they follow in order to conduct the lesson. Theory is finally put into practice and the learners start realizing the multidimensional nature of CLIL methodology that can be implemented in different kinds of school subjects like religious education. Some “food for thought” questions follow and the learners have the chance to reflect upon the lesson in the forum and express their views and impressions.

**3.12.c. CLIL in Environmental Studies:** In this part of this module, the learners (teachers) will be introduced with CLIL in environmental studies. They will be shown a video in which a CLIL lesson in environmental studies is taking place and they will have the chance to observe how such a lesson is being conducted and how the students respond to the input provided by the teacher. In other words, they will become aware of the methodology that the teachers in the video use and the strategies that they follow in order to conduct the lesson. Some “food for thought” questions follow and the learners have the chance to reflect upon the lesson in the forum and express their views and impressions.

**3.12.d. CLIL in Physical Education:** In this part of this module, the learners (teachers) will be introduced with CLIL in physical education. They will be shown a video in which a CLIL lesson in physical education is taking place and they will have the chance to observe how such a lesson is being conducted and how the students respond to the input provided by the teacher. In other words, they will become aware of the methodology that the teachers in the video use and the strategies that they follow in order to conduct the lesson. Some

“food for thought” questions follow and the learners have the chance to reflect upon the lesson in the forum and express their views and impressions.

**3.12.e. Your Task (Design Your Own Lesson Plan-Involve Technology):** In this part of the module, the learners are asked to design their own lesson plan on any subject of the three they desire. Thus, they can design activities for a lesson in religious education, environmental studies or physical education. This task aims at not only putting all the theory they have learnt in the previous lessons this week into practice, but also all the theory they have learnt about the CLIL methodology and the prerequisites of a successful CLIL lesson. Simultaneously, they are urged to use technology in their teaching as well, as it is very important to draw their students’ attention by using tools and applications that are fascinating and user-friendly. After they design the lesson plan, they are asked to send it to one of their peers and receive feedback. At the same time, they will have to provide feedback themselves to one of their peers. There are guidelines for the learners, as well as a “lesson plan” template that they can download and fill in all the required fields.

**3.12.f. Quiz: Module 3:** This is the ninth and final lesson of module 3, in which the learners have to take a quick quiz, in order to test their knowledge. This quiz is mandatory, so as to continue to the next module (week) and its aim is to ensure that the learners have acquired some basic knowledge during their experience in module 3. The questions of the quiz are not too difficult, as the learners are asked to answer 10 multiple choice questions, from which they have to answer at least 7 of them correctly. In case they fail, they have the opportunity to retake the test the following day and that goes on until they pass the quiz. It is important to note that after the completion of all the quizzes of all 4 modules, the learners can purchase a certificate which they can include into their CV.

*D. Module 4 (Week 4th): More CLIL Lessons*

**3.13.a. Module Introduction:** In this first part of module 4, there will be an introduction about what is going to be presented to the learners, in which form (video, PowerPoint presentation etc.) and also a small description of the lessons that follow along with the main aims of each of the specific lessons. More specifically, the learners will become aware of the different fields that CLIL methodology can be implemented. Thus, they will have the chance to learn about CLIL in geography, in history and in science. They will be presented with CLIL activities for each of these subjects as well as lesson plans that will guide them step by step during the teaching process.

**3.13.b. CLIL in Geography:** In this part of this module, the learners (teachers) will be introduced with CLIL in geography. They will be shown a video in which a CLIL lesson in geography is taking place and they will have the chance to observe how such a lesson is being conducted and how the students respond to the input provided by the teacher. In other words, they will become aware of the methodology that the teachers in the video use and the strategies that they follow in order to conduct the lesson. Some “food for thought”



questions follow and the learners have the chance to reflect upon the lesson in the forum and express their views and impressions.

**3.13.c. CLIL in history:** In this part of this module, the learners (teachers) will be introduced with CLIL in history. They will be shown a video in which a CLIL lesson in history is taking place and they will have the chance to observe how such a lesson is being conducted and how the students respond to the input provided by the teacher. In other words, they will become aware of the methodology that the teachers in the video use and the strategies that they follow in order to conduct the lesson. Some “food for thought” questions follow and the learners have the chance to reflect upon the lesson in the forum and express their views and impressions.

**3.13.d. CLIL in science:** In this part of this module, the learners (teachers) will be introduced with CLIL in science. They will be shown a video in which a CLIL lesson in science is taking place and they will have the chance to observe how such a lesson is being conducted and how the students respond to the input provided by the teacher. In other words, they will become aware of the methodology that the teachers in the video use and the strategies that they follow in order to conduct the lesson. Some “food for thought” questions follow and the learners have the chance to reflect upon the lesson in the forum and express their views and impressions.

**3.13.e. Your task (design your own lesson plan-involve technology):** In this part of the module, the learners are asked to design their own lesson plan on any subject of the three they desire. Thus, they can design activities for a lesson in geography, history or science. This task aims at not only putting all the theory they have learnt in the previous lessons this week into practice, but also all the theory they have learnt about the CLIL methodology and the prerequisites of a successful CLIL lesson. Simultaneously, they are urged to use technology in their teaching as well, as it is very important to draw their students’ attention by using tools and applications that are fascinating and user-friendly. After they design the lesson plan, they are asked to send it to one of their peers and receive feedback. At the same time, they will have to provide feedback themselves to one of their peers. There are guidelines for the learners, as well as a “lesson plan” template that they can download and fill in all the required fields.

**3.13.f. Quiz: Module 4:** This is the ninth and final lesson of module 4, in which the learners have to take a quick quiz, in order to test their knowledge. This quiz is mandatory, so as to continue to the next module (week) and its aim is to ensure that the learners have acquired some basic knowledge during their experience in module 4. The questions of the quiz are not too difficult, as the learners are asked to answer 10 multiple choice questions, from which they have to answer at least 7 of them correctly. In case they fail, they have the opportunity to retake the test the following day and that goes on until they pass the quiz. It is important to note that after the completion of all the quizzes of all 4 modules, the learners can purchase a certificate which they can include into their CV.

## V. CONCLUSION

In this paper, we have tried to design a full MOOC about CLIL, entitled “CLIL and technology in foreign language learning”, which addresses teachers of all subjects that desire to learn more things about the CLIL methodology and how to incorporate technology in their teaching. At the beginning, we covered some basic concepts like what is a MOOC and what is CLIL and then an attempt was made to set the basis for a MOOC that would train teachers at how they can use CLIL methodology along with technological tools, to teach their students in an innovative and creative way. The learners became aware of the four basic principles upon which a CLIL lesson can be structured and they got familiar with the prerequisites of a successful CLIL lesson. Afterwards, the learners were introduced to the factors that they have to take into account in order to design appropriate activities for their students.

Finally, having acquired all the necessary knowledge of how a CLIL lesson is constructed, they observed CLIL classrooms in which different subjects were taught and they were asked to create their own lesson plans. Prior to this of course, they were presented with detailed lesson plans so as to observe how CLIL lessons can be conducted by using some open and free technological tools at the same time. We have seen that CLIL provides the opportunity to the learners to learn a foreign language and at the same time acquire knowledge about different subjects, like history or geography through the use of technology. In other words, they are learning an L2 not only in content-based environments, but also in technology-based ones. For further research, it would be ideal to launch this MOOC and then analyze the data. Only if it is launched and data are collected can we know that the MOOC was successful. The driving force of the MOOC is the learners and they are the hearting beat of a MOOC. Without their participation and engagement with the tasks the MOOC cannot be brought to life.

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