M-LEARNING AND B-LEARNING IN THE CLIL COURSE IN THE PRIMARY AND PRE-PRIMARY EDUCATION DEGREES

APRENDIZAJE MÓVIL Y APRENDIZAJE COMBINADO EN LA ASIGNATURA DE AICLE EN LOS GRADOS DE EDUCACIÓN PRIMARIA Y EDUCACIÓN INFANTIL

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ABSTRACT

This paper presents a study carried out at the University of Alicante with third and fourth year students training to be future primary and pre-primary teachers. The Valencian Community has a plurilingual education policy; therefore, students on the education degrees can do a course on Content and Language Integrated Learning (CLIL). In 2018, these students were invited to participate on an experience using mobile learning and blended learning to focus on the cognitive development in CLIL as part of the 4-C wheel model (Coyle, 2007). Consequently, sixteen activities based on tasks previously designed by Wilden (2017), Dudley and Osvath (2016) and Kryszewska and Campbell (1992) were selected and adapted for the students to carry them out individually, in pairs, or in groups. To this end, additional ICT tools and virtual learning environments (VLEs) were incorporated to promote debates and discussion in class. In total 148 students, belonging to three groups, did M-learning and B-learning activities twice a week during a two-month period. Students primarily used their own devices, which included mobile phones, tablets and laptops. The activities focused on specific tasks future teachers will have to carry out professionally and required high order thinking skills such as creating, analyzing and evaluating. The overall results illustrate how M-learning and B-learning did provide the necessary framework for the development of the activities and objectives of the experience.

KEYWORDS

CLIL, M-learning, B-learning, ICTs, Teacher training.

RESUMEN

Este trabajo presenta un estudio realizado en la Universidad de Alicante con alumnos de tercer y cuarto año del Grado de Maestro en Educación Infantil y Primaria. Conforme a la política de educación plurilingüe de la Comunidad Valenciana los estudiantes de los grados de educación pueden cursar una asignatura de Aprendizaje Integrado de Contenido y Lenguas (AICLE). En 2018 a estos estudiantes se les invitó a participar en una experiencia del uso del aprendizaje móvil y del aprendizaje combinado prestando atención al desarrollo cognitivo como parte del modelo de las 4 ces (Coyle, 2007), de la metodología AICLE. En total, dieciséis actividades basadas en tareas diseñadas por Wilden (2017), Dudley y Osvath (2016) y Kryszewska y Campbell (1992) fueron seleccionadas y adaptadas para que los estudiantes las realizaran de forma individual, en parejas y en grupos. Con el fin de promover debates y discusiones en clase, fue necesario incorporar herramientas TICS y entornos de aprendizaje virtuales. Un total de 148 alumnos, pertenecientes a tres grupos, realizaron actividades móviles y actividades combinadas dos veces por semana durante un periodo de dos meses. Los estudiantes utilizaron principalmente sus propios dispositivos, incluyendo teléfonos móviles, tabletas, ordenadores portátiles. Las actividades se centraron en tareas específicas que como futuros docentes habrán de desarrollar profesionalmente, requiriendo capacidades mentales de orden superior como crear, analizar y evaluar. El aprendizaje móvil y combinado proporcionó el marco necesario para el desarrollo de las actividades y objetivos de la experiencia.

PALABRAS CLAVE

AICLE, Aprendizaje Móvil, Aprendizaje Combinado, TICs, Formación del Profesorado.

1. INTRODUCTION

The incorporation of the Common European Framework of Reference for Languages (Council of Europe, 2001) into the linguistic reality of the Valencian region, which shares a co-official language, has led to a *plurilingual* approach (Cenoz & Gorter, 2013; Cummins, 2007; Esteve, *et al.*, 2015; García & Sylvan, 2011) in the curriculum in recent years. The reality of the classroom includes the coexistence and use of the two official languages, as well as a foreign language. According to García and Sylvan (2011), 'we must learn to teach individuals within multilingual classrooms' (p. 386). In order to succeed in additional language teaching, in this case English, the most helpful resource has become the Content and Language Integrated Learning (CLIL) approach, in which one or more subjects or parts of a subject are taught in a different language to the student's language (Coyle, 2007; Marsh, *et al.*, 2012).

As part of teacher training in the Education degrees of the University of Alicante students can do a course on CLIL. In this course CLIL is not only defined and its core features are presented, but students are also provided with guidance in CLIL methodologies, pedagogies and practices. Once they graduate, they will be teaching pre-primary and primary pupils, hence, there lays the importance of correctly grasping the essentials of this new teaching paradigm. The focus of this study with our Education degree students was to work with the CLIL 4-C wheel model (Coyle, 2002) specifically on cognition as "CLIL should cognitively challenge learners - whatever their ability. It provides a setting rich for developing thinking skills in conjunction with both basic interpersonal communication skills (BICS) and cognitive-academic language proficiency (CALP)" (p.28). This importance of cognitive engagement and development is a key issue identified by many researchers such as Hakuta, Ferdman and Díaz (1986), Puchta and Williams (2011), and Shakkour, (2014) among others. The aim was for students to gain a deeper insight into the cognition domain related to critical, creative thinking, linked to the higher order thinking skills (HOTS) as opposed to lower order thinking skills (LOTS) according to Krathwohl's (2002) revision of Bloom's taxonomy.

As detailed by Meyer (2010), successful planning and teaching strategies are of paramount importance when aiming at achieving quality CLIL lessons. It is essential to make future teachers aware that language learning involves not only deliberate manipulation of language to improve learning but also being a better listener, multitasker, and less distractive. To this end, it is necessary to work on visualization, association, using clues in reading-comprehension, and mnemonics to have students with better abilities to problem solve and be more creative. This requires rich input, scaffolding techniques, and rich interaction and a pushed output formed our starting framework. Meyer (2010) considers HOTS to be the key to success in the information age. For this reason, our intention was to provide activities that encompassed these elements.

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Students were asked to participate on activities using M-learning and B-learning premises as both can provide cognitive challenges (Huffman & Hahn, 2015). Some of the additional grounds for choosing M-learning and B-learning tasks for our research are to be found in Wilden's introduction (2017). He states how difficult it is to disrupt our students' addiction to checking their devices, to keeping up with social media, even to just watch thoughtlessly and routinely an endless amount of videos and other alike online material. It is a fact that we live in a mobile world, that the tendency is to be more and more connected and thus, there is nothing we can do as teachers to halt this trend. Therefore, he poses the question of whether it would be not wise to take advantage of this resource we have at hand, which indeed encounters no resistance on the part of students, for our everyday teaching purposes.

Moreover, what was of interest for our aim from Dudley and Osvath (2017) and Kryszewska (1992) was their approach to the challenges of current education within the CLIL framework from their particular perspective. We intended that our activities accomplished effective classroom communication, overcoming mismatches between student's language proficiency and their ability to perform the tasks designed (Dudley & Osvath, 2017). It is a well-known issue that quite too frequently usual topics

within traditional EFL classes are either beyond the life experience of students or fall totally flat in the classroom. In many activities they had to share their results with their classmates once they had accomplished for example, their autonomous learning or the task-based learning (Carless, 2002; Ellis, 2003). Furthermore, with every presentation done, classmates were asked to provide feedback as a way of peer assessment. The activities were incorporated into the class dynamics either as warm-ups, as follow-ups or as a way to promote further debriefing.

2. METHODOLOGY

The activities the students performed were selected from the works and seminars of the authors Wilden (2017), Dudley and Osvath (2017) Kryszewska and Campbell (1992) and Hird (2018). Next, the description of the context and the participants is provided, in conjunction with a description of the activities carried out, and the student's performance. Kryszewska and Campbell's (1992) interest on the CLIL approach and methodology, as differentiated from English as a medium of instruction (EMI), was mirrored in our study in the principle of avoiding the tyranny of right or wrong. For them, a mistake is a gift to the class, since it is the starting point for discussion. The activities she recommends, developed in our research, do not have a single correct answer. She strongly believes that it is the people who have alternative solutions/options the ones who push the world forward. This concept was passed along to the students taking part in the study.

2.1. DESCRIPTION OF THE CONTEXT AND THE PARTICIPANTS

148 students belonging to the third and fourth year of the degrees of primary and pre-primary education were selected to participate in this experience. Despite the fact that the CLIL course is an optional course in the syllabus of primary and pre-primary education undergraduate degrees, passing the subject partially enables students to qualify for the minimum requirement (B1 according to the Common European Framework of Reference for Languages) of knowledge of a foreign language to graduate. Due to that, the students involved in this study are not only

those who will be English specialists in pre-primary and primary, but also future teachers in other specialties so, we encountered substantial differences in the English language level of the students.

The CLIL course is taught intensively in the first two months of the academic year, as a result, there are four sessions a week, which enables intensive work to be carried out. The subject encompasses both theory and practice and the M-learning and B-learning activities proposed were part of the tasks required in the course.

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2.2. DESCRIPTION OF THE GROUPINGS AND ACTIVITIES

The activities will be described in the same order they were performed in the course. Some of the activities could be done individually, others in pairs and others by means of group work. Next, we will describe the activities the students were asked to complete, and briefly how they were conducted.

To start with, the pair work activities will be discussed. The introductory activity consisted in selecting one picture from those stored in their devices, and then the students had to perform three tasks. The first one was to introduce themselves to classmates they did not know from previous courses. Next, they had to find a partner and, not showing their own pic, by means of oral interaction in English; they were to ask questions to find out what the other person's picture was about. Once some consensus had been reached about how the other student's picture look liked, then they were allowed to show each other their own picture. Lastly, they had to compare and contrast both pictures (Table 1).

Table 1. Warming up M-learning activities.

CLIL - M-LEARNING PAIR WORK	
Select one picture from your cell phone	Use it to **introduce yourself.**
	Ask questions: try to find out what your partner's picture is about: • Are there people? • Is it a place? • What is happening?
	Compare and contrast. • In my pic there are more… • My pic is not as … as

Source: the authors.

In the second set of activities students were asked to work individually. Furthermore, in the case of the second and third tasks, they also had to prepare a presentation to the rest of the class. For the audience, feedback and debriefing was expected. Table 2 shows the instructions as provided to the students for these activities.

Table 2. Individual M-learning activities.

CLIL - M-LEARNING WARM-UPS	
Photos of phrasal verbs	Take four photos of living **phrasal verbs.** Competition.
Alarm and selfies activity	Set the alarm at five random times and take a **selfie every time the alarm rings.** Create a collage, a ppt or a video and **explain what you were doing** when the selfies were taken.
Graffiti activity	Choose one and **record yourself commenting it**. Audio or video.
Emoji to the professor	Send an emoji to the professor indicating **how you feel about the subject**. Add comments.

Source: the authors.

Concerning the first activity, the students of the CLIL course were asked to take four pictures of phrasal verbs in action at home as a preparation for the next day's session. For example; a finger and a switch could mean turn on/off, switch on/off, their trainers and a finger on the shoelace meaning tie or untie, and so forth. Once in class, we went to the corridors of the faculty and arranging two

parallel lines they had to compete with the partner facing them by figuring out the other's phrasal verbs. The one who guessed correctly moved forward, and the one who guessed incorrectly went backwards. That was how the competition was arranged, taking part at the beginning of a session. Cognition as part of language learning (Coyle, 2007) emerged recurrently.

The second activity was theoretically meant for the students to take four selfies during the week, one per working day, at random times. First, they were asked to set the alarm, and then they were instructed in what to do. Although some cheating was expected to occur and indeed happened, such as some students wearing the same clothes in all pictures, the results were exceptional. All the students enjoyed talking about themselves very much, even if it was in English.

As for the graffiti activity, they were basically asked to choose either a graffiti they knew from their towns/cities of residence, famous ones they had encountered in London or elsewhere. The only "must do" was for them to record themselves either in video or audio commenting how the graffiti made them feel.

Lastly, at this stage of the course, students were encouraged to send an emoji to the professor stating how they were feeling so far regarding the CLIL course. The fact is that a WhatsApp group had been created to ease group communication at an earlier stage.

Table 3. M-learning activities in pairs.

CLIL – M-LEARNING PAIR WORK	
Pic Collage	Create a Pic Collage with six pics selected from your device to **introduce yourself** to new people.
Pic Collage	In a new Pic Collage, five pics must be related somehow. Try to guess the **ODD ONE OUT** in your partner's six pictures.
Text speak competition	From a list provided try to **decipher** what the group of letters stand for.
Meme competition	Create four different memes using **all four conditionals.**
Emoji proverbs	Write four **proverbs/sayings/idioms** using **emojis**. Competition.

Source: the authors.

With regard to the activities to be completed in pairs (Table 3), the first two required their getting acquainted with a pic collage creator app. Once they had downloaded the tool, for the first activity

they were expected to introduce themselves to other yet unknown classmates, getting out again of their comfort zone. By means of their pic collage performed with photos of their choosing they manage to be more talkative.

As for the second pic collage activity a degree of difficulty was introduced since five photos were meant to be related in a way and one had to be somehow different.

For the third task, students were provided with a list of letters, which were in fact frequently used text-speak for English speaking people, mostly young ones. The goal was to try to decipher the meaning of most of them. This activity was based on and adapted from a seminar by Hird (2018).

The meme competition, which was met with enthusiasm in all three groups of the CLIL course, was simple. In pairs they had to create four memes with the sole requirement of using each and all of the four conditionals in English. Periodically, students were offered the opportunity to present their own creations to the class. The topic and issues treated were limitless, with just the boundary of the 'grandmother in class concept', that is, 'would you equally perform such presentation/activity if your grandmother was in the classroom?'

Lastly, the emoji proverb/idiom competition requires a distinct mention. The session aimed at making use of an alternative remote learning environment. The goal was to test whether an adequate cognitive load (Choi, Van Merriënboer & Paas, 2014) could be achieved in a learning environment other than the classroom. The group was told that the first twenty minutes of the following class would take place in the canteen of the faculty. They had to arrange themselves around the canteen randomly in pairs, with their cell phones on and the batteries charged. They received no further instruction then. Next day, at the agreed time, they were informed that it was again a competition and that they had to write in the WhatsApp group English proverbs, idioms or sayings making use of emojis. That is, a pair would write the emojis and the others had to find out what was written. At first, it took them time to get engaged but soon they all participated. It ended up being a very dynamic activity that lasted longer than expected.

Table 4. M-learning activities in groups.

CLIL – M-LEARNING IN GROUPS	
Rebus competition	**Decipher** what these each rebus sentence means.
M-collaborative story	**Each member of the group writes a sentence** in the device (five/six words) and passes it over.
Design an emoji	**Agree the meaning** of a list of emojis provided. Then create a new emoji for this CLIL course.
Design and ad for this course	Using the future tenses and e-devices **design an ad.**

Source: the authors.

The four activities in Table 4 were designed to be performed in groups, started with a Rebus competition. Making use of an online rebus generator, several sentences were printed and provided for them in groups. They just had to find out the hidden sentence. It resulted in a quite challenging activity that surprisingly developed in them their most competitive instincts.

Another easy to carry out activity was the writing of a collaborative story. This time, they had to make use of the device of one of the members of the group to write the story. Each person would write five to six words and pass it to the next person until the story was completed. At the end of the session all stories were shared aloud.

The last two activities of this set did require again a further presentation to the rest of the class. The third activity consisted in designing a new emoji describing as accurately as possible the course; whereas the fourth entailed designing an advertisement for the course for next year students. They were asked to use future tenses as well as an e-tool. Both activities required once again the use of HOTS such as creating, evaluating and analyzing.

Table 5. B-learning activities in groups.

CLIL – B-LEARNING	
Describe a picture	Ask five questions about the picture beginning with 'why'. Answer those questions.
Alphabet means of transport	In groups. Name fun, creative, existing means of transport.

Source: the authors.

The blended learning (Table 5) focused on two tasks based on activities developed by Kryszewska and Campbell (1992). As for the first one, students had to be in small groups, a picture would be provided on the board and they had to ask five questions about the picture. These questions had to begin with 'why', then, there was a debriefing in order to share the questions of all the groups. This debriefing allowed them to gain a deeper insight in the picture, to get in more detail as suggested by Howard Gardner when he refers to visual literacy.

The second activity required much lower effort, still demanding HOTS by students as judging and hypothesizing while combined with Lower Order Thinking Skills of listing, classifying and organizing. They had to provide existing, fun, creative means of transport. This activity can be adapted to any topic within the ESL class.

Throughout the experience, students uploaded their collection of activities on the virtual learning platform as a digital portfolio for this course. According to Paulson, Paulson and Meyer (1991) a portfolio allows the students to reveal a lot about themselves, becoming sort of a window into the students' heads. Albeit, particular emphasis was placed on the output during classes, mainly oral production in these activities, it was not our aim to simply assess the students' performance but to promote and enhance Higher Order Thinking Skills. Therefore, the digital portfolio was necessary for this purpose.

3. CONCLUSIONS

The main objective of this experience was to make future pre-primary and primary teachers that M-learning and B-learning activities can lead to higher cognitive development while enhancing students' knowledge of an additional language in a multilingual classroom. Students should be aware that there are other ways of teaching English (CLIL methodology) and that cognition is essential in student's language learning. When they teach pre-primary and primary students in the future, they will be able to use M-learning and B-learning in their classes to develop high order thinking skills such as creating, analyzing and evaluating and obtain the best possible results. Moreover, it should

be noted that M-learning and B-learning led to increased students' enthusiasm, self-confidence and group cohesion. This may be due to the fact that translanguaging (García & Sylvan, 2011) and positive group dynamics were encouraged during the activities (Clément, Dornyei & Noels, 1994; Dornyei, 2003) however, this needs to be studied further.

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