

Teaching psychology at university using the content and language integrated learning (CLIL) approach

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ABSTRACT: A lesson in a psychology course given to university students is presented, using the Content and Language Integrated Learning (CLIL) approach. A total of 78 psychology freshmen college students participated in this experiment. All participants received four lessons in a regular university class. The lessons were about general concepts on psychological disorders. The lessons were taught in English. Different quantitative and qualitative aspects of content acquisition were assessed. In addition, attitudes about and motivation to participate in this bilingual learning practice at the university were evaluated. Results showed a high level of approval and motivation for this methodology, along with a significant assimilation of the content taught. In conclusion, intensifying interaction and diversifying of linguistic skills, as well as adjusting the lecturing time to match the students' learning capacity and the professor's second language proficiency, could potentially improve this CLIL experience.

Keywords: CLIL, teaching psychology, higher education, bilingual teaching

Aprendizaje integrado de contenidos y lenguas extranjeras (AICLE) para enseñar psicología en la universidad

RESUMEN: Se presenta una experiencia de enseñanza de contenidos de psicología en estudiantes universitarios, utilizando los planteamientos del enfoque Aprendizaje Integrado de Contenidos y Lenguas Extranjeras (AICLE). Un total de 78 estudiantes del primer curso participaron durante cuatro sesiones de clase reglada en una actividad de enseñanza de contenidos sobre Psicopatología en inglés. Se evaluaron diferentes aspectos cuantitativos y cualitativos de asimilación de contenidos y de variables motivacionales y actitudinales hacia la enseñanza bilingüe dentro de la formación universitaria. Los resultados mostraron un alto grado de satisfacción y motivación por este tipo de enfoque metodológico, además de una significativa asimilación de los contenidos objeto de aprendizaje. En conclusión, la intensificación de la interacción y la diversificación de las habilidades lingüísticas, así como el ajuste de la longitud de las lecciones, para que coincida con la capacidad de aprendizaje de los estudiantes y el dominio del segundo idioma del profesor, podrían mejorar esta experiencia CLIL.

Palabras clave: CLIL, enseñar psicología, docencia universitaria, enseñanza bilingüe

1. INTRODUCTION

The integration of content and language is a thriving process for learning languages and has become a relevant issue not only in Spain but in other countries (Lasagabaster & Beloqui, 2015). It is an innovative approach to language teaching in line with current research on learning and teaching a second language (Van de Craen, Mondt, Allain & Gao, 2007). The idea that learning a language could be accelerated if it is completed by integrating other academic content has aroused interest not only among specialists in teaching foreign languages (Sierra, 2011), but also among scholars of new teaching methodologies (Coyle, Hood & Marsh, 2010). The impact of Content and Language Integrated Learning (CLIL) on the linguistic competences of higher education students has been discussed in specialized literature (Gil-Serra & Nicolás-Román, 2012) and in graduate and postgraduate bilingual training programs in universities. European institutions have also stimulated a broad debate about the processes and results obtained (Fernández & González, 2015).

Despite the potential demonstrated by CLIL, there is limited research on good practices with this type of approach (Meyer, 2010), particularly in higher education. The methodological framework developed by Coyle (2006) established CLIL's theoretical foundations as including the following four principles: a) content: students must not only learn content, but also be active in their development (personalized learning); b) cognition: content and thought are closely related and thinking processes must be analysed in terms of their linguistic demands; c) communication: the language must be accessible, and interaction is essential for learning; d) culture: it is necessary to be aware of the close relationship between culture and language (contextualization). These principles, partially derived from Vygostky (1962), show that CLIL requires enriching the language input, making it meaningful; it needs a didactic approach based on scaffolding that will allow the learner to achieve their potential in the process of second language learning; it requires focusing teaching on the interaction; asserts the importance of the intercultural dimension in learning a foreign language. All these tasks are intended to stimulate higher order cognitive activities.

Teaching based on the integration of content and languages has been linked to improvements in motivation to learn a second language. CLIL can keep students more cognitively active (Jäppinen, 2005). This approach also requires less cognitive effort, according to the neuroimaging studies (Bialystok et al., 2005). The prolific research into the cognitive benefits of bilingualism is based on the fact that language is socially constructed (Vygotsky, 1962), but it also has a bio-cognitive and neuro-cognitive structure (Ullman, 2015). The cognitive executive functions that correlate with control of attention, capacity for planning and organization and the ability to inhibit irrelevant information, seem to be strengthened by bilingualism. It builds a cognitive system that is more durable, efficient and resilient (Bialystok, 2007). Specifically, when complex tasks were presented, bilingual participants seemed less distracted by irrelevant information (Colzarto et al., 2008). These advantages suggest to supporters of the CLIL approach that it is "something more than another language learning method. CLIL has implications for the learning process as a whole and is an innovative way of understanding language education" (Van de Craen, et al., 2007:75).

A study by the University of Oxford (UK) reported that "there is an accelerated movement around the world to move from teaching English as a foreign language to English

being a medium of instruction for academic content” (Dearden, 2014:5). The use of English in higher education is the most significant matter of university internationalization. Thus, for example, the Polytechnic Institute of Milan (Italy) began teaching all its master level classes in English in 2014; and French universities have recently been allowed to teach in English in a limited way (Chapple, 2015). In 2001 there were about 800 English Medium Instruction (EMI) programs in Europe (Doiz, Lasagabaster & Sierra, 2012). Today there are 6400 (ICEF Monitor, 2013). And the process seems to be growing.

There are a number of examples of psychology courses which employ CIL methodology. Salaberri, López & Sánchez (2012), conducted a study at the University of Almería (Spain) to teach psychometric content using an innovative procedure. Along with the acquisition of knowledge about concepts such as reliability, validity and test theory, they developed multimodal resources that facilitate the acquisition of knowledge and linguistic competences. The results were satisfactory. Students increased participation, and were motivated by the activity and the content in a significant way. In secondary education, other examples, other examples of teaching psychology courses with the CLIL method have been reported, such as at the Pau Vila School at Sabadell-Spain (Sanllehi, 2012). In this example, the course was part of the curriculum during the final year of upper secondary education. Sixteen psychology lessons were taught in English, with continuous assessment. Results were also adequate. All participants appropriately achieved satisfactory grades with an average score of 6.2 (range of 5 to 9). Positive results in terms of students’ motivation were also reported.

1.1. Research goals

Taking into account this previous research, we conducted a teaching experiment integrating psychology content with CLIL methodology through the medium of English. The students were first year students of the University of Cadiz (Spain) Psychology Program. This experiment was part of a general project using bilingual teaching at one of the University’s Colleges (Faculty of Educational Sciences). The project was developed over the last 6 years, although data analyses specified in this work were collected during the 2015-2016 academic year.

2. METHOD

2.1. Participants

A total of 78 students in the first year of the Psychology university program participated in this study. Students were enrolled in Introduction to Psychology (6 ECTS). Twelve were men (15.4%) and 66 were women (84.6%). The average age for women was 20.4 ($SD = 5.5$), and for men 23.4 ($SD = 10.6$). The mean of the total sample was 20.8 ($SD = 6.4$). Ages ranged from 18 to 52 years. A total of 3 participants were over 30 years old. Age is referenced because generational differences can be an essential factor in terms of language skills in English. Older generations in Spain would have had fewer opportunities to learn English as a second language in their secondary school program. The students were divided into two class groups of 38 and 40 respectively. Groups were established for organizational

reasons and were distributed in alphabetical order, with minimal exceptions. According to a survey of participants' proficiency in English: 8.97% (7 participants) were "very elementary, a few words" (below A1 level); 14.10% (11) were A1 level; 25.64% (20) were A2; 33.33% (26) were B1; 16.67% (13) were B2; 1.28% (1) were C1.

2.2. Material and procedure

Several weeks before starting the CLIL experiment, the course instructor, who speak English at the C1 level, informed the students that they would be participating in a teaching experiment of some content entirely in English (reading, media, assignments, lectures and assessment). The experiment was voluntary. Participants indicated their consent in an online questionnaire by responding to the following text in Spanish: "By clicking on YES, I give my informed consent to participate in this activity. Your data will be stored confidentially in accordance with the ethical norms of the University of Cadiz and the Spanish Psychologists Association. CLIL sessions can be recorded on video by the instructor or a collaborator".

The CLIL experiment was carried out in 3 sessions for each group, 90 minutes each, in successive weeks of November 2015. Session methodology was the same in all aspects of teaching (content, assignments, assessment, timing, etc.). One of the groups had the sessions on Mondays and the other on Tuesdays; both within the academic schedule, because this course was required by the academic program. The specific content taught during the sessions was "psychological disorders", corresponding to lesson 3 of the Introduction to Psychology course. The topic addressed three general features: historical aspects of psychopathology; the concept of normality-abnormality; a brief description and examples of the most prevalent Psychological Disorders. As experienced university instructors in this topic, we determined that the level of difficulty of the content was acceptable to integrate English for first year psychology students. The content was supported by audio-visual and PowerPoint presentations.

All sessions were conducted in a computer lab. Students were informed that they could bring their personal computers or, alternatively, they would be provided with one in order to ensure that each participant had a laptop. During all sessions, in addition to the usual instructor, there was an assistant professor video-recording the class using two cameras and other mobile devices. A foreign languages university professor, and expert in CLIL methodology, also participated as an observer in 50% of the sessions.

Session 1. Initially participants were notified that this was a psychology class, not an English class, to emphasize the importance of the content and to reduce the anxiety that usually arises from a lack of English proficiency. All students had to login to the virtual campus and access the CLIL contents. The course was designed in a MOODLE (2.8) environment. Students individually completed a questionnaire about the bilingual learning experience created ad-hoc for this study with 7 questions about their English proficiency, previous experiences of bilingual learning, subjective perceptions, motivation to participate in this new activity and expectations regarding the content. The questionnaire could be completed in about 5 minutes.

Immediately afterward, participants answered 10 ad-hoc multiple-choice questions about their previous knowledge of psychological disorders. The questionnaire's score was immediately provided. Questions could be answered without a time limit, although most participants

completed it in approximately 10 minutes ($Mean = 9.7$; $SD = 4.2$). Students were allowed to access online dictionaries and translators, or to ask the professor questions, preferably in English, about the meaning of the multiple-choice questions. All the sessions were delivered entirely in spoken English with media support. The professor began by communicating the objectives of the teaching experience in English and the topic “psychological disorders”, the methodology in these classes and the necessary documentation available to the students. Next, the content was explained and the classroom activities were carried out for 90 minutes of the first session.

Sessions 2 and 3. The two remaining sessions for each group proceeded in a similar way. At the end of session 3, the “Questionnaire on the experience of bilingual teaching (Post)” was administered, as well as a quiz on the content, equivalent in terms of the number of questions and difficulty (see CLIL-Quiz-Post in the results section).

2.2.1. Teaching Psychological Disorders with CLIL

The CLIL experiment was a section of a similar syllabus designed for the whole course, developed in Spanish. However, some features were specifically reinforced, such as the increase of the media aids in the classroom and the sequence of the teacher’s presentations. Within the communicative competences, listening and reading comprehension were prioritized, without neglecting the oral interaction that occurred in the group activities. All CLIL activities occurred in the classroom setting. We integrated the psychological disorders content and English in all classroom activities, assignments, teaching documents, and assessments provided to the students as described below.

2.2.1.1. Documents delivered to students

Several online technical documents were specifically distributed for this experiment. We highlighted a printable script that students could use in class. Then, several types of documents were provided: (a) A general English-Spanish dictionary consisting of 40 technical terms regarding psychological disorders; (b) Several practical tasks based on collaborative learning; (c) The follow-up diagrams of the professor’s PowerPoint presentations; (d) A 7-minute video clip about 4 real cases of psychological disorders. This video clip served as a source to explain some psychological disorders and to carry out one of the group activities. (e) Two anonymous questionnaires about diverse psychological disorders, for self-administration and self-correction.

2.2.1.2. CLIL teaching approach

The CLIL approach has a non-linear design, and contains student-centred participation (Bligh and Coyle, 2013). Consequently, the didactic approach was established based on 4 general principles: (a) Short theoretical lectures, approximately 7-10 minutes each, with media support. (b) Encouraging oral participation mainly through comprehension questions on specific issues that appeared in the PowerPoint presentations; Sometimes, students were also asked to read aloud two or three sentence-long definitions, and their pronunciation was not corrected, except in very exceptional cases. (c) Nine (5-15 minutes each) collaborative

learning activities, carried out in small groups of 2 to 4 students, which would allow the negotiation of the meaning and the necessary scaffolding to adequately understand the contents. (d) Continuous formative assessment, basically through some of the activities carried out in an online document. These were instantaneously assessed, and other tasks that were collectively corrected in oral review consultations. Some of the classroom tasks were:

(1) *Rosenhan's Experiment group activity*. This activity consisted of watching a 5-minute video in English about the well-known clinician Rosenhan's experiment about errors in the diagnosis of psychological disorders. After this, a brief document was provided with three questions regarding the content: (a) A summary of the experiment by Rosenhan (about 20-40 words); (b) Your criticisms of the experiment (about 20 words); and (c) Do you think we would obtain same results if we repeat the experience now? Why? (about 20 words). The answers were given in a small group of 2-3 students in a collaborative way. Finally, a random oral survey was given to discuss the answers in a large group. With this activity it was assumed that students knew historical data about mental disorders. Linguistically speaking, it could demonstrate written and oral expression skills. This activity was about 10 minutes long.

(2) *5th Group Discussion Forum*. After the professor explained the animal models of mental disorders in historical studies, participants were asked to deliberate on the following issues in a small group: (a) why is it possible to make conclusions from animal models? (b) what is your opinion about researching human abnormal behaviour using animals? and (c) add some historical examples (submit your answers online after the oral discussion). This activity was about 10 minutes long.

(3) *Video analysis "Four Patients with Schizophrenia"*. Four real cases of patients with schizophrenia (approximately 2 minutes long each) who presented different characteristic symptoms of this mental disorder (hallucinations, delusions, etc.). Then, participants collaboratively responded in small groups to different questions about the 4 cases. For example, in the case of patient # 3, questions were asked such as "What kind of hallucinations did she have?" This activity was about 15 minutes long.

2.2.2. *Experimental design and measures*

A quasi-experimental design with repeated measures of the dependent variables was used for the two groups of participants. The CLIL approach was the independent variable. It was applied in three phases: (a) Pre-intervention phase: Two ad-hoc questionnaires were used in this phase: one of motivation for experience (Questionnaire about experiences of bilingual teaching, Pre-), and one ad-hoc quiz about content (CLIL, Psychopathology, Quiz-Pre-); (b) Intervention phase: Exposure and development of the CLIL lesson on psychological disorders; and (c) Evaluation phase: new versions of the two previous questionnaires (Questionnaire about experiences of bilingual-post teaching and CLIL, Psychopathology, Quiz-Post) were used.

This quasi-experimental design allowed us to take several quantitative and qualitative measures in 7 out of 9 different tasks. Specifically, the pre and post results of the Content Quiz, the Questionnaires on the CLIL experience, three assignments carried out collaboratively online (a), "Rosenhan's Experiment group activity"; (b) "Group Discussion Forum: Is It Possible to Make Conclusions from Animal Models?"; and (c), a quiz about the video "Four patients with schizophrenia"). The video recordings made of all sessions with a

double camera also allowed us to analyse the dynamics of the students in the classroom, the instructor’s linguistic and methodological skills and the assessment of the students’ involvement throughout the sessions.

3. RESULTS

The analysis of results had two differentiated aspects: on the one hand, the quantitative and qualitative description of the results obtained from both the pre- and post- questionnaires administered to the participants; and then, the statistical comparisons of the Pre-intervention and Evaluation phases of this experiment.

Frequencies and percentages resulting from the motivation questionnaires before and after the CLIL experience are shown in Table 1. In addition to the quantitative data, students were asked to share their expectations before the experience. Although student’ responses were very heterogeneous, we clustered them into several categories described in Table 2. Some comments such as the following were included: (a) clearly negative attitudes toward the CLIL experience: “I do not think that only few English classes helps my training. Another reason is that I’m not in a bilingual university program.” (b) Ambivalent attitudes: “I consider it positive to have classes in English, although I am worried that this may affect my course grade, since I got my B1 long time ago and my English proficiency is declining”. (c) Positive expectations for language learning and professional improvement: “This type of training is significantly positive considering the current relevance of the handling of English in general and also applied to Psychology studies, with vision to our future employment opportunities”. (d) Positive expectations for language learning: “Because I believe that having a good level of English is essential for our education, this bilingual classes can be a good way to get specific English vocabulary and fluency”.

Table 1. Descriptive data of the answers to the Questionnaire on the experience of bilingual teaching in Psychology, before beginning the CLIL experience.

Bilingual teaching experience Questionnaire (PRE)			
Questions	Answers	Frequency	%
How did you feel before the CLIL experience?	Concern	53	67.9
	Curiosity	46	58.9
	Interest	30	38.4
	Confusion	26	33.3
	Fear	22	28.21
	Enthusiasm	16	20.5
	Irritation	8	10.2
	Indifference	1	1.2

Do you consider the CLIL experience positive for your training?	Almost nothing	2	2.5
	Some	5	6.4
	Quite (positive)	23	33.3
	Considerable	26	33.3
	Excellent	19	24.3
Do you think your English proficiency will improve?	Almost nothing	1	1.2
	Some	20	25.6
	Quite (positive)	36	46.1
	Considerable	16	20.5
	Excellent	5	6.4
Level of English proficiency (self-perceived)	lower than A1	7	8.9
	A1	11	14.1
	A2	20	25.6
	B1	26	33.3
	B2	13	16.6
	C1	1	1.2
	C2	0	0
English skills that you have better mastered (self-perceived)	Oral comprehension	24	30.7
	Written comprehension	64	82.0
	Oral expression	8	10.2
	Written expression	27	34.6
	Conversation	6	7.6

Table 2. Students' qualitative response classification regarding the reasons for participating in the CLIL experience in the psychology course

Categories by type of answers	Frequency	%
Clearly negative attitude to CLIL experience	5	9.2
Ambivalent attitude	9	16.6
Positive expectations for language learning and professional improvement	18	33.2
Positive expectations for language learning	22	40.7

Other questions asked of the students at the beginning of the experience were to explain their expectations regarding learning English in a reasonable way (see 3rd question, Table 1). Again, we made a qualitative clustering of the multiple answers in 4 categories (Table 3): (a) Improved listening comprehension. An example of this category could be: *“Because we will expand our vocabulary and this will be more specific, focused on Psychology”*; (b) It will improve my speaking: *“Since being continuously doing the practices in English, I will be able to improve my pronunciation and extend my vocabulary”*; (c) Negative expectations. My English will not improve: *“I think my level is already quite high and will not improve much with just few classes”*; (d) Ambiguous response. He/she does not know what English aspects they think will improve: *“I think I will focus more on understanding the content than in learning English”*.

Table 3. Clusters for participants’ qualitative responses about improvement expectations regarding their English proficiency after the CLIL experience in the psychology course

Categories of answers	Frequency	%
Ambiguous answer	6	6.0
My English will not improve	9	9.0
Speaking	39	39.3
Listening comprehension	45	45.4

In the last session, students were asked to answer the “Questionnaire on the experience of bilingual education (POST)”. This contained 19 questions about the CLIL experience. Multiple choice and open answers were available in order to explore their opinions and rationale (table 4).

Table 4. Descriptive data from students’ responses after the CLIL experience.

Bilingual teaching experience Questionnaire (POST)”			
Questions	Answers	Frequency	%
1. After the experience: What did you find easier about teaching the classes in English?	Following the topic despite its complexity	43	58.9
	Carry out the students’ tasks in the classroom	33	45.2
	Working with the student’s autonomous work materials	16	22.8
	Understanding the specific terminology	24	32.8
	Following the class in English	48	65.7
	The speed of speaking during the lecture	14	19.1
	The teaching support materials in English	34	46.5

3. What has presented a challenge (the most difficult) when carrying out the teaching experience in English?	Following the topic despite its complexity	12	16.6
	Carry out the students' tasks in the classroom	19	27.5
	Working with the student's autonomous work materials	8	11.5
	Understanding the specific terminology	27	37.5
	Following the class in English	22	30.5
	The speed speaking during the lecture	25	34.7
	The teaching support materials in English	12	16.6
5. "I understood the teacher's instructions."	Other	5	6.9
	Almost nothing	0	0
	Around 50%	12	16.4
	More than half	23	31.5
6. "I understood the content of the materials."	Everything	38	52.0
	Almost nothing	2	2.7
	Around 50%	12	16.4
	More than a half	35	47.9
7. "I actively participated in the activities"	Everything	24	32.8
	Almost nothing	20	27.4
	Some	35	47.9
12. Have your expectations been met?	Totally	18	24.6
	They have not been fulfilled at all	1	1.3
	Half fulfilled	10	13.7
	My expectations have been adequately met	38	52.0
	They have been completely fulfilled	17	23.2
14. How do you feel after participating in the experience compared to your feelings before doing it?	They have been met above my expectations	7	9.5
	Satisfied	46	63.0
	Motivated	38	52.0
	Cheerful	14	19.8
	Insecure	11	15.0
	Frustrated	3	4.1
Bored	3	4.1	

15. Which of the following linguistic skills do you think have improved after the experience?	Oral comprehension	58	78.3
	Written comprehension	25	33.7
	Oral expression	11	14.8
	Written expression	13	17.5
	Conversational interaction	14	18.9
	My English has not improved at all	6	8.1
16. Now, generally evaluate the teacher who taught this CLIL experience	Very bad	0	0
	Bad	0	0
	Poor	1	1.3
	Adequate	10	13.5
	Good	27	36.4
	Very good	25	33.7
17. Would you be willing to participate in another teaching experience in English with other course content?	Excellent	11	14.8
	Yes	59	81.9
	No	13	18.0

Academic achievements were considered in the pre- and post- quizzes, as well as in three assignments that were collaboratively developed during the three sessions. Specifically: (1) Rosenhan’s Experiment group activity; (2) 5th Group Discussion Forum; and (3) Video analysis “Four Patients with Schizophrenia” (table 5)

Table 5. Results of the four measures of academic achievement for the psychological disorder content in the CLIL experience.

Academic achievements	Minimum	Maximum	Mean (sd)	t (df)
1° Quiz CLIL Pre-experience (0-10 points)	0	9.0	5.0 (2.0)	-10.2* (63)
2° Quiz CLIL Post-experience (0-10 points)	5	10	8.0 (1.2)	
3° Rosenhan’s Experiment group activity. Total score (0 a 10)	5	9	7.8 (1.0)	
3.1. Number of responses (0-3)	3	3	3 (.0)	
3.2. Quality of Responses (0-4)	.1	4	2,6 (.9)	

3.3. Quality of the English text (0-3)	1.5	3	2,1 (4)
4° Group Discussion Forum (0-10)	2	8	5.7 (1.0)
5° Video analysis "4 Patients with Schizophrenia" (0-10)	5	10	8.3 (1.2)

(*) $p < .001$

Different statistical comparisons were made in relation to the results obtained by the students in the evaluation after the CLIL experience. The first comparison was made between grade obtained in the equivalent knowledge tests of psychological disorder content (Quiz Pre-experience CLIL and Quiz Post-experience CLIL, table 5). This comparison shows a significant increase in content comprehension after the experience ($t_{63} = -10.2$; $p < .001$). Similarly, we tried to find out if self-perceived English proficiency influenced the results in the "Quiz Post-experience CLIL". A non-parametric Kruskal-Wallis test was performed and found to be significant ($X^2_{2gl} = 6.27$; $p < .04$). Finally, a linear regression analysis among the variables evaluated during the experience was calculated. The "Quiz Post-experience CLIL" was considered as the dependent variable. The resulting model did not find that any of the three variables explained a significant amount of the variance.

4. DISCUSSION AND CONCLUSIONS

In this article we have described an experience of teaching psychology content in English with university students according to the CLIL approach, recording content learned, acquisition of English, as well as participants' motivation and expectations.

It is worth mentioning that students with a lower level of English proficiency (e.g., "I know some English, but it is very elementary, a few words and that's it," $n = 7$), had a very positive attitude in all cases towards the CLIL experience (e.g., "English is very important", "it is good for academic training at European level", etc.), and satisfactory expectations about improving their competence in the English (e.g., "Because it forces you in a certain way to a greater involvement and consequently learning," "Taking into account that my level of English is almost zero, it is a challenge that must be faced," etc.).

Students seemed very motivated by the development of these classes in English, they appreciated it and, despite their language limitations, they accepted the effort of participation. This statement is remarkable, given that criticism of bilingual teaching is sometimes made based on the level of student's proficiency in the second language. This indicates that the intrinsic motivation for learning can counteract the difficulties. On the other hand, participation in the experience has been mostly satisfactory and motivating, because 82.6% of the students showed willingness to repeat the experience. The difficulties have mainly been based on the speed of the professor's teaching and the students' inhibitions about using spoken English. This was, perhaps, accentuated by the sessions' video recording. Participants with higher difficulties need to overcome the fear of ridicule or the subjective feeling of failure, which are a common part of the process of learning foreign languages.

We also analyzed the English proficiency of students with clearly negative attitudes to

the CLIL experience (e.g., “We are not in a bilingual program”; “I consider it unnecessary, since by requiring a certain level of English in order to obtain my degree, I do not find it necessary to show up in class,” etc., $n = 5$). And those who had negative expectations about improving their English level (e.g., “I think I need to consolidate my language skills first, not in a university Psychology course”; “In a few hours you cannot acquire skills in the use of English”, etc., $n = 9$). All the cases with these negative attitudes show a less advanced level of English proficiency (A1, B1 and in one case B2). Twelve out of 13 students with B2 level showed high motivation and expectations of improving English during the experience. It also seems that the language level was not a critical variable for the CLIL experience, because the intrinsic motivation should be enough to accept it in a satisfactory way. Motivation issues were also reported in the previously mentioned studies on teaching experiences of psychology in universities (Salaberri, et al., 2012) and high schools (Sanllehí, 2012).

Similarly, in terms of content, changes were very satisfactory from the point of view of learning elementary psychological disorder content. The increase in improvement between initial knowledge achievement and that demonstrated at the end of the experience was higher than 30%. This increase was higher in those students that started at a lower level. Improvements in learning were influenced by two variables at the end of the test: (a) self-perceived English level proficiency; and (b) previous knowledge demonstrated in psychological disorders positively influenced the final grade. This has an obvious internal rationale, but we argue that it shows the importance of learning from previous knowledge on a specific topic, one of the principles for CLIL experiences (Meyer, 2010). And then, building, the necessary scaffolding for learning improvement through the content and teaching strategies (Bialystok, 2007). Likewise, the continuous evaluation carried out during the CLIL experience was positive and well-received by the students, both in the individual tasks and in the collaborative ones. This statement, established from the data (see Table 4), was also indicated by the participants’ opinions in the final questionnaire. They emphasized familiarization with scientific psychological disorder terminology, the historical background, the classification systems of the most prevalent psychological disorders and their symptoms, or experimental research in this field.

As mentioned above, the CLIL approach has a non-linear design and this strengthens its implementation in the university classroom (Van de Craen, et al., 2007). We also believe that it generates certain weaknesses that must be counteracted. Among them, we would highlight the limited proficiency of professors in the oral use of English. These limitations might prove to be an obstacle for the development of this type of teaching as the contents require a diversity of examples and counterexamples to clarify fundamental concepts in the process of knowledge building (Scardamalia & Bereiter, 2006). While teachers possess an intuitive linguistic arsenal in the mother tongue to reformulate different ways of explaining content, this subtlety diminishes if fluency in the second language is not high enough. Another constraint is the excessive amount of content material, which requires a necessarily different rhythm when teaching in other languages since students have different second-language proficiency levels. In the experience described here, teaching the psychological disorder content took approximately 1.5 times as long as the estimated time in the native language.

In conclusion, intensifying interaction and the diversification of linguistic skills, as well as adjusting the lecturing length to match the students’ learning capacity and the professor’s second language proficiency could potentially improve this CLIL experience

5. REFERENCES

- Bialystok, E. (2007). Cognitive effects of bilingualism: How linguistic experience leads to cognitive change. *International Journal of Bilingual Education and Bilingualism*, 10, 210-223.
- Bialystok, E., Craik, F.I., Grady, C., Chau, W., Ishii, R., Gunji, A., & Pantev, C. (2005). Effect of bilingualism on cognitive control in the Simon task: evidence from MEG. *Neuroimage*, 24, 40-49.
- Bligh, B., & Coyle, D. (2013). Re-mediating classroom activity with a non-linear, multi-display presentation tool. *Computers and Education*, 63, 337-357.
- Chapple, J. (2015). Teaching in English is not necessarily the teaching of English. *International Education Studies*, 8, 1-13.
- Colzarto, L.S., Bajo, M.T., van den Wildenberg, W., Paolieri, D., Nieuwenhuis, S., La Heij, W., & Hommel, B. (2008). How does bilingualism improve executive control? A comparison of active and reactive inhibition mechanisms. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 34, 302-312.
- Coyle, D. (2006). Developing CLIL: Towards a theory of practice, in D. Coyle et al., (Eds.) *CLIL in Catalonia-from Theory to Practice. Monograph 6* (pp. 5-29). Wolters Kluwer.
- Coyle, D., Hood, P., & Marsh, D. (2010). *CLIL (Content and Language Integrated Learning)*. Cambridge University Press.
- Dearden, J. (2014). *English as a medium of instruction—a growing global phenomenon: Phase I*. British Council.
- Doiz, A., Lasagabaster, D., & Sierra, J.M. (Eds.). (2012). *English-medium instruction at universities: Global challenges*. Multilingual Matters.
- Fernández, A., & González, X.A. (2015). Teacher satisfaction concerning the implementation of bilingual programs in a Spanish university. *Porta Linguarum*, 23, 93-108.
- Gil-Serra, A.F., & Nicolás-Román, S. (2012). Metodología AICLE en el entorno universitario: aprendizaje autónomo y desarrollo de competencias profesionales, in N. Evnitskaya et al., (Eds.) *TRICLIL proceedings: Better CLIL: more opportunities in primary, secondary and higher education* (pp. 65-69). Bellaterra: Universidad Autónoma de Barcelona.
- ICEF Monitor (2013). Study finds more European universities offering graduate programs in English. Available from: <http://monitor.icef.com/2013/10/study-finds-more-european-universities-offering-graduateprogrammes-in-english/>, accessed 28 May, 2018.
- Jäppinen, A.K. (2005). Thinking and content learning of mathematics and science as cognitive development in content and language integrated learning (CLIL): teaching through a foreign language in Finland. *Language and Education*, 19, 148-169.
- Lasagabaster, D., & Beloqui, R.L. (2015). The impact of type of approach (CLIL Versus EFL) and methodology (book-based versus project work) on motivation. *Porta Linguarum*, 23, 41-57.
- Meyer, O. (2010). Introducing the CLIL-pyramid: key strategies and principles for quality CLIL planning and teaching, in M. Eisenmann, & Th. Summer (Eds.), *Basic issues in EFL-teaching and learning* (pp. 311-329). Winter.
- Sanllehí, J. (2012). Psychology in English language in Catalan. Batxillerat, in N. Evnitskaya et al., (Eds.) *TRICLIL proceedings: Better CLIL: more opportunities in primary, secondary and higher education* (pp. 270-274). Universidad Autónoma de Barcelona.
- Salaberri, S., López, J., & Sánchez, M.D.M. (2012). CLIL experiences in higher education: an innovative practice in the psychology classroom, in N. Evnitskaya et al., (Eds.) *TRICLIL*

- proceedings: Better CLIL: more opportunities in primary, secondary and higher education* (pp. 120-126). Bellaterra: Universidad Autónoma de Barcelona.
- Scardamalia, M., & Bereiter, C. (2006). Knowledge building: Theory, pedagogy, and technology, in K. Sawyer (Ed.), *Cambridge Handbook of the learning sciences* (pp. 97-118). Cambridge University Press,
- Sierra, J.M. (2011). CLIL and project work: Contributions from the classroom, in Y. Ruiz de Zarobe, J.M. Sierra, & F. Gallardo del Puerto (Eds.), *Content and foreign language integrated learning* (pp. 211-240). Peter Lang.
- Ullman, M.T. (2015). The declarative/procedural model: A neurobiologically motivated theory of first and second language, in B. Van Patten, & J. Williams (Eds.) *Theories in second language acquisition: An introduction* (2nd Ed.) (pp. 135-158). Routledge.
- Van de Craen, P., Mondt, K., Allain, L., & Gao, Y. (2007). Why and how CLIL works. An outline for a CLIL theory. *VIEWS*, 16(3), 70-78.
- Vygotsky, L. (1962). *Thought and Language*. MIT Press.

