

ATENCIÓN A LA DIVERSIDAD EN LA EDUCACIÓN SUPERIOR: UNA EXPERIENCIA DE CODOCENCIA

Attention to diversity in higher education: A Co-teaching experience

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RESUMEN

La investigación sugiere que la exposición a la coeducación por parte de profesores en formación puede ayudar a reducir la brecha entre teoría y práctica. Además, permite a los profesores una mejor atención a la diversidad en entornos inclusivos. Este estudio describe un proyecto de innovación de enseñanza en equipo (un modelo de codocencia) desarrollado en un curso de AICLE (aprendizaje integrado de contenido y lenguaje) en la Universidad Pontificia Comillas, donde 85 estudiantes de los grados de educación respondieron un cuestionario para evaluar el impacto que la enseñanza en equipo tiene sobre su experiencia de aprendizaje. Los resultados mostraron que la enseñanza en equipo contribuyó a su experiencia de aprendizaje al proporcionar un mayor grado de diferenciación, y que el aprendizaje fue apoyado de forma natural a través de la interacción de los dos profesores. Las ediciones futuras también intentarán medir el éxito relativo de otros modelos de enseñanza conjunta.

Palabras clave: *universidad, inclusión, codocencia, enseñanza en equipo, atención a la diversidad.*

ABSTRACT

Research suggests that exposure to co-teaching for trainee teachers may help to reduce the theory-practice gap. Furthermore, instructors are more likely to attend to diverse stu-

dent populations. This study describes an innovation project of team teaching (a model of co-teaching) developed on a CLIL (content and language integrated learning) course at Comillas Pontifical University, where 85 students of the Education degrees answered a questionnaire to assess the impact of team teaching on their learning experience. Results showed that team teaching contributed to their learning experience by providing a greater degree of differentiation, and that student learning was naturally scaffolded through the interaction of the two lecturers. Future editions will also attempt to measure the relative success of other models of co-teaching.

Keywords: *higher education, inclusion, co-teaching, team teaching, attention to diversity.*

INTRODUCTION

CO-TEACHING IS THE GENERAL TERM that refers to two or more teachers planning and teaching a class in a coordinated way. Friend (2015) defined several models through which co-teaching can be carried out between general educators and specialists in order to attend to a diverse student population. The innovative experience presented in this paper focuses on the model of team teaching, which allows two instructors to share the instruction simultaneously. In this model, educators may perform role plays and model interaction, take turns explaining concepts, or present different viewpoints on topics, among other dynamics.

Different models of co-teaching have been used to attend to students' individual needs in various settings. Co-teaching is used globally in order to address the needs of students with special needs or learning difficulties, usually between a general educator and a special needs educator (Friend, 2015; Schwab, et al., 2015). In fact, cooperation between the general educator and special needs educator is considered to be an indicator of quality in inclusive settings (European Agency for Development in Special Needs Education, 2010). Furthermore, this practice is often suggested in the United States to attend to the specific needs of English language learners (ELLs), recent immigrants who need scaffolded support to gradually reach the linguistic level of their peers. Content teachers and English as a second language teachers may team up to offer a more complete and coherent educational program that allows the earlier integration of these students (Honigfeld & Dove, 2015; Vatalaro, 2015).

Team teaching has been chosen as the preferred model for this innovation project for several reasons. First, it provides a collaborative model for students and potentially helps them develop their own collaborative competence, which is essential for these students as future teachers (Halbach, 2011; Pérez Cañado, 2017, 2018). Similarly, this model has been shown to increase cooperation among students and positively impact student achievement (McDuffie, et al., 2009). Also, instructors may present different perspectives in the classroom and ask students to draw conclusions, there-

fore encouraging critical thinking (Blanchard, 2012) and allowing the classroom to be more democratic (Murphy, Scantlebury & Milne, 2015).

Finally, and what most concerns the description of this experience, there is increased and more personalized attention to the diverse population of students in the classroom. It is easier for two instructors to give more immediate and individual attention in order to address any difficulties students may experience. Learning is also naturally scaffolded through cogenerative dialogue and clarifying questions, among other techniques (Graziano & Navarrete, 2012; Murphy & Martin, 2015). By collaborating in the planning stages, instructors are more likely to provide a greater variety of classroom activities and instructional techniques (Ferguson & Wilson, 2011; Graziano & Navarrete, 2012), which is positive for differentiation.

INNOVATION PROJECT

CRITICAL ANALYSIS OF THE CONTEXT AND JUSTIFICATION

At the university level team teaching is less common, and the experiences that are described mainly centre on teacher trainees doing some form of co-teaching (Baeten, et al., 2018; Pettit, 2017), or university lecturers carrying out co-teaching between specialists of different fields (Murphy et al., 2015).

The present experience has been carried out as part of an innovation project at the Comillas Pontifical University in Madrid, Spain, in the Infant and Primary Education degrees. At this university, all students who study education complete the *mención* in English (an English teaching specialization) that allows them to teach English in the corresponding education stage upon graduation. While students enter the university setting with a wide range of linguistic ability (A2-C1, according to the Common European Framework for Reference), the aim is to develop their level to B2 or higher so that they may certify the level and be able to teach English in schools. All students take a number of courses, including two English language courses (English for Education I and II) and three that focus on pedagogy (Teaching English as a Foreign Language I and II, CLIL).

This project is focused on the CLIL course, taught through a team-teaching approach which aims to attend to the needs of all students through more personalized attention, constructive dialogue and learner-centred activities.

INNOVATION PROJECT

Within the courses of the English *mención* at this university, the groups of students are normally divided into two sub-groups in order to provide a more

intimate setting that foments oral communication and collaboration. However, this innovation project maintains the group of students studying the same degree as a whole in order to allow both assigned lecturers to be present in the classroom. Three lecturers worked together closely to jointly plan the syllabus, then each planned two of the six modules of the course, always taking into consideration the role of each of the instructors in the classroom. Occasionally the groups were divided for one class period in order to work on activities that lent themselves to smaller groups, but the vast majority of the classes were taught by two instructors simultaneously.

TARGET GROUP DESCRIPTION

The innovation project affected 50 students attending the CLIL course in year 4 of their degree in Education. Table 1 describes the target group according to the degree.

Table 1.
Distribution of the target group according to their degree

Degree	Frequency	Percent	Cumulative percent
Infant Education	17	20.0	20.0
Primary Education	13	15.3	35.3
Infant and Primary Education	26	30.6	65.9
Primary and Infant Education	29	34.1	100.0
Total	85	100.0	

Figure 1 shows the distribution of the target group according to their English level at the time of the CLIL course.

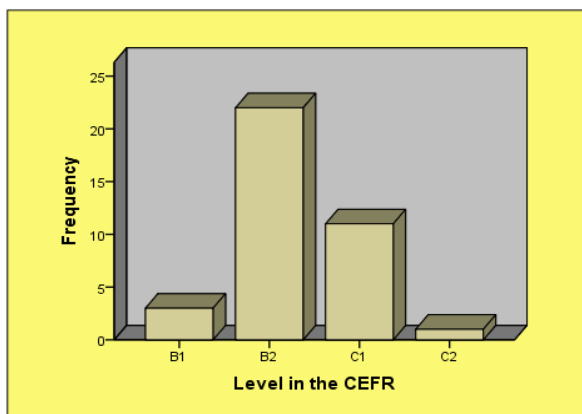


Figure 1.

Distribution of the target group according to their English level (CEFR)

OBJECTIVES

The main objective of this innovation project is to offer greater attention to diversity in the EMI (English medium instruction) classroom. Through team teaching, instructors aim to increase individual attention to students by sharing responsibility for instruction and management, providing differentiation through a variety of activities, promoting greater social integration among student sub-groups, and improving student academic achievement overall.

The secondary objectives of the innovation are:

1. Encourage critical thinking by offering different perspectives of the contents.
2. Improve the academic results and student satisfaction in the subject.
3. Enrich the teaching experience for lecturers.

METHODOLOGY, ACTIVITIES AND RESOURCES

In line with other *mención* courses, Content and Language Integrated Learning (CLIL) is taught following a hands-on, student-centred methodology. There is a heavy emphasis on Task-Based Learning, as students are expected not only to develop a strong command of CLIL's theoretical underpinnings and teaching principles, but to put them into practice through a lesson planning project. Many in-class activities are done online to promote cooperative learning and to allow for both instructors to give both immediate and delayed feedback. Formative and summative assessment are also

carried out in a coordinated manner as the instructors collaborate in the design of the tools and agree on the processes and criteria for correction and evaluation.

TEMPORALIZATION

The full project calendar is shown in Table 2.

Table 2.
Calendar of the innovation project

Date	Action
December 2017-January 2018	Planning and coordination of contents and methodology of course
February-May 2018	Teaching the course for the first time through team teaching
May 2018-February 2019	Personal reflection about the experience and adjustment of contents and methodology Questionnaire design and validation by experts
February-May 2019	Questionnaire application (pre-test/post-test)
June-December 2019	Reliability and validity analysis of the questionnaire Informal interviews with students Empirical study to assess the team-teaching innovation project
December-February 2019	Writing of conclusions of study Personal reflection about the experience and adjustment of contents and methodology

EVALUATION

The innovation project involved different strategies to evaluate the results. After teaching the course for the first time (2017-18) and receiving informal feedback from students, the instructors conducted separate and joint reflective self-evaluation. After this process, it was concluded that it was necessary to further explore the following aspects of innovation:

1. Analyse the factors of this teaching model that have a greater impact on student learning.
2. Explore the potential of co-teaching and determine its suitability to achieve the learning objectives of the subject.
3. Investigate the transfer capacity of this model in students, both academically and professionally.

As a result, systematic data collection was carried out through a survey on teacher trainees' perceptions of co-teaching during the 2018-19 academic year through an empirical study with a pre/post-test quasi-experimental design.

Table 3.
Instrument reliability

Reliability		Cronbach α		Result*
		Pre-test	Post-test	
Global scale	Collaborative competence (33 items)	0.93	0.91	Excellent
Dimension 1	Foundations of Co-Teaching (16 items)	0.89	0.91	Excellent
Dimension 2	Learning through Co-Teaching (9 items)	0.71	0.81	Acceptable-Good
Dimension 3	Transferability (8 items)	0.83	0.83	Good

* George & Mallery (2003)

The questionnaire, created *ad hoc*, was validated by four experts, using a Likert 1-6 scale. As a result of this validation process, the questionnaire consisted of 43 items: 7 identification variables, 1 study variable to measure the efficacy of different co-teaching models, and 33 study variables distributed in three dimensions. Two criterion items were also included. The reliability of the instrument was analysed, and the results are shown in Table 3.

The questionnaire was applied to a sample of 85 students distributed in two groups: the experimental group, including 50 students attending the CLIL course in year 4, and the control group, 35 students who were in year 3.

RESULTS

This paper focused on the analyses of the second dimension of the questionnaire (items 25-33) which measured the learning experience of students and the potential of team teaching to attend diversity. Students' perceived effectiveness of the two instructors in the classroom (item 7) was also analysed. Results are shown in Table 4 (paired samples).

Table 4.

Differences in the learning experience and the perceived effectiveness of two teachers after the CLIL course (paired samples)

Null hypothesis (means are equal)	Post-test Mean	Pre-test Mean	Difference in means	Student t	Sig.*	Statistical decision and conclusion
Differences in the degree of collaborative competence in Dimension 2 between pre/post-test.	42.16	37.47	4.67	4.03	0.000	H0 is rejected. Differences in favour of post-test. The CLIL course improves significantly the scoring in Dimension 2.
Differences in the perceived 'effectiveness of two teachers together' between pre/post-test.	5.04	4.30	0.741	2.92	0.007	H0 is rejected. Differences in favour of post-test. The CLIL course improves significantly the degree of perceived 'effectiveness of two teachers together'.

*the differences in the means are significant at 0.05 level

These analyses were also studied in comparison with the control group (Table 5).

Table 5.

Differences in the learning experience and the perceived effectiveness of two instructors together according to the type of course (independent samples)

Null hypothesis (means are equal)	Homogeneity of variances (Levene)	Mean Exp.	Mean Cont.	Student t	Sig.*	Statistical decision and conclusion
Differences in the level of collaborative competence in D2 according to the type of course.	Yes	42.35	38.26	2.66	0.010	H0 is rejected. Differences in favour of the Experimental group. The CLIL course improves significantly the scoring in this variable.
Differences in the perceived 'effectiveness of two teachers together' between the control and experimental groups.	Yes	5.06	3.19	6.43	0.000	H0 is rejected. Differences in favour of the Experimental group. The CLIL course improves significantly the scoring in this variable.

*the differences in the means are significant at 0.05 level

DISCUSSION

The teacher trainees highly valued their experience of learning through co-teaching (Dimension 2) in such aspects as the quality of instructor explanations, feedback to projects and tasks and the ability of two instructors to better attend to multi-ability groups. These results are consistent with those of similar studies (Ferguson & Wilson, 2011; Graziano & Navarrete, 2012; ;Murphy et al., 2015,). Moreover, the differences in favour of the post-test means show that students perceived the specific model applied, team teaching, as positive and effective in a statistically significant way. In addition, while both the experimental and control groups saw value in team teaching, the experimental group's positive perceptions show statistically significant differences with the control group.

The evidence provided by the quantitative analysis is corroborated by the answers given to the open-ended questions in the questionnaire. In the pre-test, several students expressed preconceived notions that co-teaching would be «more individualized» (S1), «allow for more personalized attention» (S37), and even permit «fairer and more efficient evaluation» (S17). And in the post-test, students confirmed that co-teaching did indeed allow for «richer feedback» (S1), «more dynamic classes and clearer explanations (S37), and «more personalized education» (S17).

Of course, students did not enter the experience without concern. Some students suggested in the pre-test that «if there is not effective communication, there may be negative results and a chaotic process» (S43). Others thought that the presence of two instructors may cause confusion among students (S14, S17) or that there might be contradictory information given (S37). Even after the experience, students warned that a lack of communication or coordination could cause a negative experience for students, though Student 14 added that this was not the case here. Some students also considered the experience to be a bit taxing as they were forced to «be active all the time» (S17) since there were few pauses during the class.

CONCLUSIONS

The perceptions of the students in this group seem to support previous research findings that team teaching contributes to the learning experience by providing a greater degree of differentiation, and that student learning is naturally scaffolded through the interaction of the two lecturers between them and with the class (Ferguson & Wilson, 2011; Graziano & Navarrete, 2012; Murphy & Martin, 2015).

Overall, both students and teachers have benefited from this team-teaching experience, and, despite the heavy demand on time and resources, the authors find

it worthwhile to continue improving the innovation project. The experience has been very rewarding in terms of student achievement and engagement as well as continued professional development for instructors.

Going forward, the authors plan to maximize transfer and the development of collaborative competence through more transparent practices and reflection on team teaching practices during the course. Students will be asked to recognize the role of each instructor and analyse the effectiveness of this practice. Future editions will also attempt to measure the relative success of different models of co-teaching, i.e. team teaching as opposed to the parallel and station models of co-teaching (Friend, 2015).

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