# 6 Virtual exchange in teacher education: is there an impact in teacher practice?

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## Abstract

This text presents the results of surveys and interviews of Former Students (FSs) who have taken part in a teacher education course that began in 2004 (still on-going) and that includes Virtual Exchange (VE). The study aimed to look at the impact of two teacher education courses, imparted collaboratively between geographically-distanced universities for over a decade. The course design aims to introduce VE, both theoretically and empirically, as an approach to foreign language teaching in primary and secondary schools. The data are drawn from an online survey as well as in-depth interviews with FSs enrolled in the course between 2004 and 2015. The findings indicate that a significantly high percentage of the FSs who had been exposed to VE had been involved in or intended to implement VE in their own teaching and that the course had provided them with the knowledge and confidence to do so.

Keywords: virtual exchange, telecollaboration, teacher education, applied learning.

## 1.    Introduction

VE, (also widely known as telecollaboration or Collaborative Online International Learning, or COIL) has been extensively defined over the past decade (cf. O'Dowd & Dooly, 2020; O'Dowd & Lewis, 2016). In the barest of terms, VE

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aims to involve students in digitally-supported collaborative learning processes with transnational[2] partners from different geopolitical and sociocultural contexts through a series of sequenced activities (in or outside class), usually under the guidance of teachers or trained facilitators. While the practice is not new to educational contexts (see Cummins & Sayers, 1995; Warschauer, 1995), it has gained significant impulse in the past decade and is now increasingly common in different subject areas such as business, science, and social sciences (although admittedly it is still predominant in foreign language education, Dooly & O'Dowd, 2018).

Moreover, VE, while still not mainstream, is increasingly more evident in teacher education courses around the globe (Evaluate Group, 2019). In pre-service and in-service teacher education, this type of learning design, in which communication technology is used to create 'digital spaces' for collaborative learning, has been promoted as a means to ensure that teachers are introduced to cross-cultural peer reflection and dialogic learning, and to ensure they are empirically exposed to new approaches they might then apply to their own teaching (Dooly, 2013; Dooly & Sadler, 2013, 2020; Fuchs, 2019; Kurek & Müller-Hartmann, 2017). It should be noted that *collaborative learning* is the operative word as VE is understood here in this text (Dooly, 2018), in comparison to more self-directed or teacher-student interaction that often occurs in completely autonomous language learning sites or Massive Open Online Courses (MOOCs).

Following this brief definition of VE, the historical progression of the course which involved an uninterrupted years-long collaboration between two teacher educators, one in the USA and the other in Spain, is explained, finishing with an outline of the current telecollaborative program as it now stands. This is followed by a description of how data from the fourteen-year cohort of FSs were compiled then analyzed using an interpretive and qualitative approach. These sections are finally followed by a discussion of the main outcomes of the study.

2. I have chosen the term 'transnational' rather than 'international' because there are cases of VE that take place within national boundaries although most often exchanges are between different countries.

## 2.      Contextualization of the study

The data were collected from graduates from teacher education specializing in teaching foreign languages (French and English) in primary education, specifically graduates from the faculty of education, Universitat Autònoma de Barcelona (herein UAB). The survey aimed to draw as many samples as possible, starting with the first year that VE was introduced into the program (2004) until recent iterations (see Marjanovic, Dooly, & Sadler, forthcoming for a more detailed discussion of the study). Over the 16 years of continuous collaboration between the author (at UAB) and a colleague at the University of Illinois Urbana Champaign, the format of VE has changed, as have the courses in which the VE was implemented. In the first years, the courses at the UAB were more linguistics-focused (morphosyntax, semantics) rather than applied linguistics. The exchanges used relatively simple technology by today's standards (synchronous audio and text chat meetings via Yahoo messenger), and the activities were somewhat peripheral to the main course content (discussion of intercultural topics and general reflection on how this might be replicated to some extent in their own teaching). In the year 2009, a new teacher education program was introduced into the UAB and the courses the author taught were much more focused on applied linguistics (language teaching methodology). The aim of the VE increasingly focused on preparing the student teachers for telecollaborative teaching once they had graduated, and by 2013 the two partner courses held identical core course programs, with ten to 14 weeks of VE between groups of students each semester, depending on overlap in their academic calendars. The planning of the course was based on what the teachers call the FIT model, which emphasizes the interaction between the use of flipped materials, in-class activities, and telecollaboration (Dooly & Sadler, 2020; Sadler & Dooly, 2016). In this educational design, the knowledge and insight from individual (flipped) work and online meetings are activated in-class with their peers from their own university and vice-versa.

For example, in the 2018-2019 program, students were asked to view a list of recommended technology individually to then present to their online

partners. The groups chose one in order to develop an in-class tutorial. The telecollaborative groups then discussed, evaluated, and chose different content from the tutorials to integrate into the design of teaching projects. The groups also elaborated posters to present to 'external experts' (faculty members, teachers, graduate students), resulting in feedback that could be re-integrated into the digitally-collaborative group work.

Simply put, the shared course program aims to promote "tightly structured telecollaboration tasks and task sequences which are constructed to enable each task to build on the outcomes of the previous one" (Kurek & Müller-Hartmann, 2017, p. 7).

## 3.     The study: data compilation and data management

In order to gather input on the impact of the sustained VE, a 'master database' was created from an online student registration file of students who had been enrolled in the course from the years 2004 to 2015. This corpus contained 453 FSs' names and contact details (later, more recent graduates were added to the database from the years 2016-2018 for a grand total of 517). However, a majority of the contact information in the student registry from the earlier years was out of date, so other recruiting strategies were employed: student names were searched on common Internet media (Google, LinkedIn, Facebook, Twitter, YouTube channels, etc.). Results from this search were compared with the information from the master database whenever possible (e.g. comparison of photos or place of residence) in order to confirm identities before approaching any potential survey informants. After having culled the database to leave only individuals positively identified as having been enrolled in the course in question, the database was then more finely profiled to only include potential participants who appeared to be currently teaching, somehow involved in education, or had taught/been involved in education at some point after graduation, resulting in 164 potential data respondents.

These FSs were contacted with an initial online survey to confirm that they were indeed or had been involved in teaching and to request their interest and consent to participate in the study, following research ethical guidelines set out by the author's research group and submitted to the university research ethics board. A total of 65 FSs responded, all of whom gave their consent to participate in a first survey regarding any experiences they had had in VE after having graduated from the course. This general survey was followed by a more detailed online survey related to their experiences, to which 52 FSs responded. Of these 52, 14 of the FSs had studied abroad for part of their final year and therefore did not participate in the VE carried out in the course in question. Finally, after the second survey, 19 respondents agreed to participate in more in-depth interviews.

The data were stored and analyzed with an online qualitative data management platform called Dedoose. From the first and second surveys, each respondent was recorded as an individual entry with the answers as a binary descriptor (yes/no). For the open-ended responses, the affirmative multiple choice answers were recorded as 'yes' and any unselected alternative answer was marked as 'no', resulting in 53 descriptors.

The written and audio materials corresponding to the 19 respondents who took part in the more detailed interviews were thematically analyzed using the following broad categories: (1) attitudes and opinions toward telecollaboration and implementing it (again) in the future; (2) challenges and dealing with them; (3) project descriptions and telecollaboration materials; and (4) autonomous teacher behavior, a notion understood here as the teacher's capacity and willingness to be involved in and take ownership of a change process that leads to self-directed professional development and an ability to apply critical reflection and analysis on their own teaching process (Chylinski & Hanewald, 2009). This process of categorization resulted in 161 coded excerpts.

Storing and organizing the data in this manner allowed for navigation through each respondent's descriptor profile (yes/no answers), as well as the coded

excerpts (written/audio answers) linked to the 19 in-depth respondents and to cross-compare descriptor to descriptor, code to code, and descriptor to code, and thus look for potential correlations between variables (for a more complete description of the data management process, see Marjanovic, Dooly & Sadler, forthcoming).

The 52 participants who responded to the second more detailed survey all graduated with a teaching degree from the Universitat Autònoma de Barcelona in the following years in the order of the highest to lowest number of participants:

- 2015 (10)
- 2008 (10)
- 2010 (7)
- 2014 (5)
- 2012 (4)
- 2005 (4)
- 2007 (3)
- 2006 (2)
- 2013 (2)
- 2009 (2)
- 2004 (1)
- 2017 (1)
- 2016 (1)

There were no participants belonging to the years 2011 or 2018 in the more detailed survey. There were also three additional FSs who came forward voluntarily after the survey to share information, one from 2004, two from 2015. Many of the FSs from 2017 and 2018 indicated that they had not found teaching jobs yet and were pursuing further education or working in other professions on a temporary basis and therefore did not take part in the more detailed survey. Out of the 52 detailed survey respondents, 38 taught in primary schools, and 12 taught in kindergarten. One respondent was teaching adults, teens, and children in a private language school and one was involved in therapy and education and was

not teaching. On average, they had 7.14 years of teaching experience. The three 'informal' interviewees were all teaching in primary education.

## 4.    Results and discussion

First we will look at the number of respondents who answered affirmatively regarding VE experiences since graduating (these totals are based on the responses of the 52 respondents, plus the three additional informants).

- Out of the 55 respondents, 20 have used telecollaboration in their own teaching and on their own initiative.

- Of the 20 who have implemented telecollaboration, 11 have less than five years of teaching experience.

- Four FSs stated that they have helped other teachers set up telecollaboration programs but did not answer 'yes' to the question of whether they had implemented telecollaboration in their classrooms. One of them had less than five years teaching experience.

Now we consider these numbers more analytically. Twenty out of 55 FSs who have carried out VE since graduating from the teaching degree is far below 50% (it is an average of 36%), but if we add the four respondents who had indicated they had not participated in VE but then went on to explain experiences of helping out other teachers or having tried VE and failed, the total number rises to 44%. Additionally, if we exclude the 14 respondents who had been abroad and had not actually experienced VE while studying, the number of FSs who have demonstrable empirical knowledge (through the course) of VE before graduating and who then participated in some form of VE once teaching reaches 59%. Significantly from this total, half were teachers with less than five years' experience. It is worth parsing this statistic more thoroughly: these young teachers graduated from the course in its most recent configuration of

fully integrated, regular, and intensive use of VE. Finally, taking the cross-comparison of descriptor to code that allows for potential correlations between variables, the descriptor of 'yes I have participated in telecollaboration' was linked by 52% of the respondents to the code "feelings inspired by previous participation in telecollaboration as a student" and "based on own experience believed it would be beneficial for my students".

We now look at the numbers linked to participants who stated that they had not taken part in any form of VE after graduating from the faculty of education:

- sixteen of the respondents who said 'no' indicated that they plan to try VE in their teaching in the future (nine of these 16 have less than five years' experience);

- five indicated that they had tried to implement a telecollaborative project but could not do so for varying reasons (lack of resources, funding, or support). Of these five, three have less than five years teaching experience;

- two negative respondents said that their students were not interested in VE; and

- four indicated that they did not feel confident enough to try VE.

Again, we can deconstruct these numbers more closely. Removing the 14 who were abroad and did not take part in the course, we have 39% of the FSs from the course who have not taken part in any type of VE indicating that they plan to do so in the future; 56% of these teachers correspond to the more recent years of the course where VE plays a vital role in the program. The cross-comparison between the descriptor of 'no, I have not participated in VE' and the code "lack of confidence to try it" shows that less than ten percent of the teachers who have participated in VE stated that they did not feel sufficiently self-reliant to try it with their own students.

Finally, there are some leitmotifs to highlight when returning to the FSs who specified in their survey answers that they had participated in some type of VE once working as teachers. Regarding the first question, it is encouraging to note that of the participants who had experienced VE as professionals, all 20 indicated that they were planning to do it again. Of the FSs who had carried out telecollaboration, slightly over half of them reported feeling inspired to carry out VE in their teaching due to their own experience in the course, because, as one respondent put it, "I learnt from it as a student so I felt that my students would too". At least one of the exchanges was set up between FSs who had been classmates.

None of them reported any difficulties with task design when asked about the implementation of their telecollaborative project and all of them indicated that they felt they had sufficient knowledge regarding telecollaboration: lack of know-how was not a challenge for them when carrying out the VE. However, they did report other challenges, most of which could be classified as external issues (e.g. technical problems, lack of administrative support, problems with teacher-to-teacher relationships), student-related issues (e.g. lack of interest, skills), or organizational issues (e.g. insufficient resources, scheduling, curriculum pressures, etc.). Nevertheless, the FSs demonstrated resourcefulness for finding creative ways to resolve their difficulties, particularly having a Plan B (e.g. the use of their cell phone when problems with the Internet emerged). Specifically, the key challenge mentioned by the younger, less experienced teachers was 'feeling alone' in their endeavors in VE, with little support from the school administration or other teachers (perhaps in part, due to their colleagues' lack of familiarity with VE in general). In their descriptions of the projects they had carried out, there was a wide array of configurations, from rather simple one-class to one-class exchanges of somewhat straightforward, practice-related language exchanges, to much more complex, year-long content and language integrated projects with longer, more spontaneous language use. Finally, the respondents conveyed their convictions that the telecollaborative experience had contributed positively to both their own teaching as well as their students' learning and, as previously mentioned, they felt confident they would carry out VE again in the future.

## 5.    Conclusions

As Lawrence and Spector-Cohen (2018) point out, there are many potential benefits stemming from the integration of telecollaboration into teacher education. There may be gains in digital literacies and 21st century skills (Dooly & Sadler, 2013; Hauck, 2019), increased teacher and learner autonomy (Kramsch, A'Ness, & Lam, 2000), and gains in intercultural awareness (Godwin-Jones, 2019; Müller-Hartmann, 2006; O'Dowd, 2018). Research indicates that teacher education which focuses on both the subject area taught and its pedagogy can have a positive impact on education outcomes as well as reduced anxiety in novice teachers (King Rice, 2003) and these results corroborate this argument. Moreover, the results of the study seem to indicate the course program provided "a viable pedagogical model [that] sensitizes [student-teachers] to those aspects of task design which are unique to online contexts" in an "integrated and holistic" manner (Kurek & Müller-Hartmann, 2017, p. 8). The VE in the course appears to have been more than mere exposure, it served as a platform for a full exploration of the learning potential of VE, culminating in the collaborative authorship of educational telecollaborative projects that eventually led to over half of the FSs implementing similar projects in their teaching. As Mammadova (2019) states,

> "[t]eachers are the individuals that prepare the future work-force. High caliber teachers that conduct high-quality teaching by integrating their skills and knowledge into instructional time are central to improving student outcomes. However, the key challenges start when teachers are asked to put theory and innovative ideas into practice without getting much guidance on how to do it. […] Without a well-prepared instruction process and strong support, quality teaching is impossible to achieve" (p. 25).

According to Schwartzman and Henry (2009), pedagogical learning can be enhanced through what they call 'applied learning', implying that student teachers should be empirically engaged in activities similar to how they might be expected to teach. This study, which tracks 14 years of student teachers who have been experientially engaged in VE during their teacher education period

(in increasing percentages as the program developed), implies that the teacher know-how gained through intensive immersion in the principles and practice of telecollaborative project design has made an impact on their teaching behavior, helping them gain the confidence and skills needed to carry out VE in their own practice.

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