

SUPPORTING IN-SERVICE LANGUAGE EDUCATORS IN LEARNING TO TELECOLLABORATE

Robert O'Dowd, Universidad de León

The importance of teachers' capacity to integrate and exploit computer mediated communication (CMC) in the foreign language classroom has been recognised by many of the leading publications in foreign language teacher education, including the European Profile for Language Teacher Education (2004) and the European portfolio for student teachers of foreign languages (EPOSTL) (2007). One of the essential CMC activities in foreign language education is undoubtedly telecollaboration. This is the application of online communication tools to connect classes of language learners in geographically distant locations with the aim of developing their foreign language skills and intercultural competence through collaborative tasks and project work (O'Dowd, 2007).

This paper begins by presenting a model of competences for the telecollaborative teacher, which has been developed and verified by this author (2013) using the Delphi technique. The paper then presents UNICollaboration (www.unicollaboration.eu), an online platform, which has been developed reflecting these competences and a sociocultural approach to teacher education. Following that, the findings of four qualitative case studies of novice telecollaborators are used to inform the design of tools and training courses for educators in this complex activity of online foreign language education.

Keywords: Collaborative Learning, Teacher Education, Telecollaboration

APA Citation: O'Dowd, R. (2015). Supporting in-service language educators in learning to telecollaborate. *Language Learning & Technology*, 19(1), 64–83. Retrieved from <http://llt.msu.edu/issues/february2015/odowd.pdf>

Received: November 11, 2013; **Accepted:** July 2, 2014; **Published:** February 1, 2015

Copyright: © Robert O'Dowd

INTRODUCTION

The educational activity of engaging foreign language learners in online intercultural collaboration with partners in distant locations has gone under many different terms including *Online Intercultural Exchange*, *Virtual Exchange*, *Collaborative Online International Learning* and *telecollaboration*. In the literature on CALL, the term telecollaboration has been prevalent since the publication of Mark Warschauer's "Telecollaboration and the language learner" almost two decades ago (1996). This term was further defined by Belz in a special edition of *Language Learning & Technology* (2003) when she outlined the main characteristics of foreign language telecollaboration as being "...institutionalized, electronically mediated intercultural communication under the guidance of a *languacultural* expert (i.e., teacher) for the purposes of foreign language learning and the development of intercultural competence" (p. 2).

Since its origins in the 1990's, telecollaboration has gone on to become one of key tools in the repertoire of CALL activities available to foreign language educators (Guth & Helm, 2010; O'Dowd, 2011). Telecollaboration has also received a great deal of attention in the academic literature and in research circles. For example, there have been several book publications exclusively on the theme (Belz & Thorne, 2006; Guth & Helm, 2010; O'Dowd, 2006, 2007; Warschauer, 1996), as well as two special editions of the journal *Language Learning & Technology*: 7(2) and 15(1). There has also been significant funding made available for research projects dedicated to the area as the European Commission and other organisations involved in educational reform and innovation have clearly recognised the potential of

virtual exchange projects for the development of foreign language skills, intercultural awareness and skills related to the global workplace (see examples of funded projects in Belz, 2003; Kohn & Warth, 2011; and O'Dowd, 2013). Telecollaborative learning is also considered as an important way of providing intercultural learning experiences to those students who are unable or unwilling to engage in physical mobility and as a manner of enhancing 'internationalisation at home' initiatives (High Level Expert Forum on Mobility, 2008).

However, telecollaboration is undoubtedly one of the most complex aspects of CALL for in-service teachers to master due to the combination of organisational and pedagogical competences and technological skills, which are required to successfully set up, run, and integrate a telecollaborative project (Dooly, 2010). While basic technological skills may be acquired in once-off training courses, Meskill, Anthony, Hilliker-Van Strander, Tseng and You (2006, p. 283) accurately reflect the challenges of training teachers in telecollaboration when they argue that:

it [a training course] does not prepare educators to integrate technology into everyday teaching and learning in ways that are supportive of learning. ... What educators need to know when it comes to effective integration is in large part developed experientially in real institutional contexts

With this in mind, this paper sets out to identify the challenges that in-service foreign language educators encounter when they undertake telecollaborative exchange projects with their learners. It also presents the elaboration of a series of telecollaboration training tools and resources for teachers and teacher trainers which reflect the context-specific nature of telecollaborative learning and the important role which peer- and mentor-based learning has to play in this area of CALL teacher education.

These aims will be achieved in the following way: first, the paper carries out a review of sociocultural approaches to CALL teacher education and presents a model of telecollaborative competence which has been developed by this author (O'Dowd, 2013) to outline which competences teachers need in order to carry out telecollaborative exchanges. Following that, the paper looks at how this model of telecollaborative competence has been reflected in the *UNICollaboration* platform—an online platform designed to support telecollaboration at university level. The paper then goes on to identify the principal challenges and problems which in-service foreign language educators face when they engage in telecollaboration for the first time. This is achieved by presenting the outcomes of online qualitative interviews with four novice telecollaborative practitioners from universities around the world. These case studies not only serve to illustrate the intricacies and challenges of setting up and running an online intercultural exchange, but they also provide insights into how online platforms such as *UNICollaboration* and future training initiatives for in-service teachers could be designed in order to provide more effective support for practitioners.

DEVELOPING TEACHERS' TELECOLLABORATIVE COMPETENCE

In general, the literature and tools related to teacher training and CALL have not paid great attention to the challenges of establishing and running telecollaborative exchange projects in the foreign language classroom. The European Profile for Language Teacher Education: A Frame of Reference (Kelly, Grenfell, Allan, Kriza, & McEvoy, 2004) proposes that foreign language teacher education should prepare trainee-teachers for "...[p]articipation in links with partners abroad, including visits, exchanges or ICT links" (p. 5) but no concrete suggestions are made as to how this should be done. Similarly, the European portfolio for student teachers of foreign languages (E-POSTL) (Newby, Allan, Fenner, Jones, Komorowska, & Soghikyan, 2007) also recognises that "...ICTs play an increasingly central role in foreign language learning and require teachers to be familiar with information systems and computer-mediated communication" (p. 44), but no explicit mention is made of telecollaborative exchange nor how

it should be carried out.

A review of the literature on telecollaborative language learning in particular, however, does reveal some insights into the complex array of skills, knowledge, and attitudes that teachers are expected to bring to online intercultural exchange projects. For example, Belz (2003) states that "...the importance (but not necessarily the prominence) of the teacher and, ultimately, teacher education programs ...increases rather than diminishes in Internet-mediated intercultural foreign language education precisely because of the electronic nature of the discourse" (p. 92). Similarly, Müller-Hartmann (2012) suggests that

...[t]he role of the teacher is crucial in initiating, developing and monitoring telecollaborative exchanges for language learning. ...They need to develop competences in the central areas of multiliteracy or multimodal competence...intercultural communicative competence and task-based language teaching...to effectively implement technology into their teaching. (p. 172)

Many authors have also emphasised the necessity to be able to design, implement, and assess tasks for their students' online intercultural interactions (Lewis, Chanier & Youngs, 2011; Dooly, 2010, p. 293), while Belz (2002, p.76) highlights another important aspect of teaching in telecollaborative exchange when she refers to the need for educators to find ways to integrate students' online interactions into classroom discussion and thereby sensitize their learners to the cultural and institutional differences which may lead to misunderstandings and the formation of stereotypes.

In order to develop such competences in using online technologies, various studies have highlighted the value of sociocultural approaches to foreign language teacher education. Sociocultural approaches are based on the principle that "...learning to teach is a long-term, complex developmental process that operates through participation in the social practices and contexts associated with learning and teaching" (Freeman & Johnson, 1998, p. 402). Such approaches reject transmission models of teacher training and propose that teachers learn by being actively engaged in educational activity, forming part of communities of practice and having opportunities to reflect and theorize based on their own learning (Johnson, 2006, 2009; Wright, 2010). When applied to CALL training, sociocultural approaches to teacher education have also put great emphasis on facilitating collaboration and interaction between the content of training periods at university and the realities of language classrooms.

Meskill et. al. (2006), for example, report on a project which brought together novice pre-service teachers in collaboration with veteran in-service educators and doctoral students in collaborative CALL project work. Both the new and experienced teachers worked together in classes, combining the practical up-to-date technology skills of the former with the pedagogical expertise of the latter in order to integrate innovative technology-enhanced activities into their classes. The doctoral students served as mentors to both these groups during the project work. In a similar project, also based on sociocultural approaches to teacher education, Schocker-von Ditfurth and Legutke (2002) strove to combine the work student-teachers do in their university classrooms with the work of real foreign language classrooms. While participating in their university course, student-teachers liaised with an in-service teacher to prepare online projects for their students and then accompanied the in-service teacher to class in order to carry out the projects. They then returned to the university to share and reflect on their experiences in their teacher training course.

Hanson-Smith (2006) underlines the importance of peer mentoring and teacher-to-teacher collaboration in CALL teacher education and laments the lack of networks and teacher-support programmes which have been able to "...create teacher-to-teacher collaborations that would serve as apprenticeships in the practice of new technological knowledge and skills" (p. 304). As a successful example of such an approach, she puts forward *Webheads in Action*, which acts as an online community of practice where educators learning to use new technologies in their classroom mentor each other, share information, reflect on their learning experiences through online presentations, and engage in technology-based

learning projects with colleagues and their students.

While these studies point to approaches for developing telecollaborative competences in CALL education and training initiatives, the question remains: What does telecollaborative activity actually involve for foreign language educators?

In order to have a more comprehensive and detailed overview of the competences of the telecollaborative teacher, I developed a model (see Tables 1–4) of the different competences which teachers need in order to organise and employ telecollaborative exchanges in their classrooms (O'Dowd, 2013). Using a version of the Delphi technique that combined a review of the literature and the insights and feedback of over 60 practitioners and experts in the area, I drew up a model which contained four sections described in more detail below. The competences were generally defined in terms of 'can-do' statements. However this was not possible in the cases of knowledge (e.g. "the telecollaborative teacher...has knowledge of the common causes of organisational and intercultural problems in online exchanges") and attitudes (e.g. "the telecollaborative teacher displays... openness to partner teachers' alternative pedagogical beliefs and aims").

The model attempts to capture the four characteristics of telecollaborative exchange which differentiates this activity from many other CALL activities. First, telecollaboration is, unlike many other online learning activities, innately intercultural, both in practice and in its underlying pedagogical principles. The purpose of telecollaboration is to use online technologies to engage students in intercultural exchange with members of other cultures. This implies that teachers are necessarily obliged to be open to intercultural approaches to foreign language education and to be interested in exploring in their own classes the beliefs and attitudes of their partner classes.

Second, the telecollaborative teacher is inevitably obliged to work in collaboration with one or more teachers or online collaborators who are located in different cultural and institutional contexts. This means that telecollaborative teachers are required to develop and hone their intercultural skills and attitudes in order to be able to successfully collaborate with their colleagues as well as to coordinate the exchange in a manner that is beneficial to all parties.

Third, while many online tasks can be relatively short in nature and isolated from other aspects of classwork, successful telecollaboration is ideally a long-term, complex activity, which permeates the whole course of study. It should also be closely integrated with the classroom's other themes, tasks, and day-to-day interaction. This was identified as one of the key characteristics of successful telecollaboration by one of its pioneers, Bruce Roberts (1994): "...when the email classroom connection processes are truly integrated into the ongoing structure of homework and student classroom interaction, then the results can be educationally transforming" (n.p.).

Finally, while in many online educational activities the teacher is required to play an active role in the interaction with his or her students, in many telecollaborative set-ups the active participation of the teacher is not essential as students usually interact online exclusively with their distant partners. It is the teachers' role to prepare students' for their online interaction, to debrief following contact with their partners and to integrate the themes of the interaction into their classes (Furstenberg & Levet, 2010).

The 40 descriptors developed for the model aim at reflecting these realities of telecollaborative exchange. They are divided into four sections: (a) organisational, (b) pedagogical, (c) digital competences, and (d) attitudes and beliefs. These are presented in Tables 1–4, below.

Table 1. *Organisational Competences of the Telecollaborative Teacher*

The Telecollaborative Teacher can...	
A1	use online networks and his/her own professional contacts to locate possible partner-teachers in distant locations
A2	explain clearly to possible partner-teachers his/her plans and expectations related to a possible exchange
A3	design the structure of an exchange (i.e. aims, minimum participation requirements, language use) which reflects the interests, L2 proficiency, and level of electronic literacy of his/her own students
A4	negotiate effectively with the partner-teacher the structure and organisational technicalities of the exchange which take into account both institutional contexts (calendars, etc.) as well as the needs and interests of both sets of participants
A5	employ various strategies to 'match' learners from the different institutions and to create effective partnerships and exchange groups
A6	maintain a good working relationship with the partner-teacher throughout the exchange, identifying problems as they arise
A7	alter the logistics of the exchange to adapt to developments and problems as they arise (e.g., low levels of participation, access to technology problems, etc.)
A8	articulate to his/her virtual partner teachers the learning objectives and pedagogical beliefs that lie behind his/her proposed tasks
A9	apply his/her experiences of previous online exchanges in order to avoid repeating mistakes and to innovate his/her practice
A10	apply his/her knowledge of the educational context in which the partner class is working in order to structure the exchange and avoid problems.
A11	use knowledge of the common causes of organisational and intercultural problems in online exchanges and can apply a series of techniques and strategies to deal with these problems
A12	evaluate the strengths and weaknesses of his/her online exchange based on awareness of action research methodology
A13	ensure that the exchange receives appropriate academic recognition within the home institution
A14	articulate the relevance and the added pedagogical value of telecollaborative exchanges to colleagues and superiors in order to support their use throughout the institution

Table 2. *Pedagogical Competences of the Telecollaborative Teacher*

The Telecollaborative Teacher can...	
B1	identify tasks for the online exchange which meet at least some of the objectives of the participating classes' curricula
B2	support students in discerning and reflecting upon culturally-contingent patterns of interaction in follow-up classroom discussions
B3	apply his/her knowledge of the culture and language of the partner class to organise culturally and linguistically rich tasks for the exchange

-
- B4 design tasks which are attractive and relevant for students and which develop culturally and linguistically rich interaction
 - B5 design tasks which support the activities of collaborative inquiry and the construction of knowledge
 - B6 integrate appropriate assessment procedures and rubrics which accurately reflect the activities which students carried out during their exchange
 - B7 explain clearly to students what is expected from them during an exchange: deadlines, performance objectives, learning outcomes, etc.
 - B8 integrate seamlessly and effectively the content and themes of the telecollaborative exchange into his/her contact classes (when they exist) before, during and after the exchange itself.
 - B9 provide learning support for learners either through scaffolded guidance (in the classroom or in online tutorials) or through the provision of reflective tools, such as learning logs or journals.
-

Table 3. *Digital Competences of the Telecollaborative Teacher*

The Telecollaborative Teacher can...	
C1	choose the appropriate online communication tools (e.g. email, blogs, wikis, skype) to fit both the everyday online practices of the students as well as the project's aims
C2	demonstrate a basic working knowledge of current (e.g. Web 2.0) communication tools and their pedagogic affordances and constraints
C3	explain the use of the chosen tools to his/her students or can provide them with online or third-party support for learning how to use them
C4	locate and run his/her online exchanges based on basic working knowledge of web management systems (e.g. Moodle) or exchange platforms (e.g. ePals, e-Twinning)
C5	organise and structure real-time student interaction taking into account the particular affordances and technicalities of synchronous tools such as videoconferencing, chat etc.
C6	interact appropriately online with his/her partner-teacher and, if necessary, with the participating students, attending to online communication norms (e.g. responding to emails in a timely manner, using appropriate register, etc.)
C7	organise the online exchange in a manner which protects students' safety and respects privacy issues related to students' work
C8	model social presence and online identity for his/her students and help to create an online community of trust and learning
C9	instruct learners on how to use online tools autonomously—tools which help them resolve language difficulties (e.g. online dictionaries, Google translator, multimedia authoring tools)
C10	develop in students a critical understanding of online tools such as the interests the tools serve, the type of communication they promote, etc.

Table 4. *Attitudes and Beliefs of the Telecollaborative Teacher*

The Telecollaborative Teacher has...	
D1	a belief that culture plays an intrinsic role in foreign language education and online communication
D2	an openness to partner teachers' alternative pedagogical beliefs and aims

-
- D3 a willingness to look for compromise with the partner-teacher in relation to task design, exchange structure, and other issues
 - D4 an interest in trying new telecollaborative tasks and new online tools which may be proposed by students or partner-teachers
 - D5 a willingness to deal with new messages, texts, and questions in contact classes or tutorials as they emerge during the online exchange
 - D6 a willingness to accept that the teacher is not the sole authority on the target culture and language
 - D7 an interest in learning with students about new aspects of L2 language use and cultural products and practices from their exchange partners
-

DEVELOPING A PLATFORM FOR UNIVERSITY TELECOLLABORATORS

In primary and secondary education (i.e. pre-university) contexts, organisations and platforms such as the European Commission's *e-Twinning* (www.etwinning.net) have contributed greatly to training teachers in telecollaborative exchange by providing workshops and conferences around Europe along with a platform containing partner-search tools, project scenarios and communication tools which enable students to engage in online interactions with their peers in the relative safety of a closed environment. Similarly, in the US, the *ePals* platform (www.epals.com) has provided educators with a similar set of tools and resources and the *Cultura* platform (<http://cultura.mit.edu/>) has provided a rich set of resources for one specific model of telecollaboration (Furstenberg, Levet, English & Maillet, 2001).

To date, however, there has been no organisation or platform that has specifically aimed at supporting and training university educators who are interested in engaging their learners in telecollaborative activity. In this context, the INTENT project (**I**ntegrating **T**elecollaborative **N**eTworks in University Foreign Language Education) received funding from the European Commission's Lifelong Learning Programme in 2011 to develop a platform, www.unicollaboration.eu, where university educators and student mobility coordinators can find the resources and training materials necessary to learn about and to set up telecollaborative exchanges. The platform includes a partner-finding tool, a task databank, an e-portfolio for evaluating telecollaborative projects, a databank of sample projects, a project-planning tool, as well as text- and video-based training materials. In addition, the project team organised an international conference on university telecollaboration and held training workshops in universities and at conferences around Europe to inform and support the teaching and learning community, related stakeholders, as well as decision makers.

The UNICollaboration platform is intended to reflect a sociocultural approach as it is non-prescriptivist in nature and does not aim to provide a comprehensive set of rules which are to guide all telecollaborative exchanges. Instead, the tools and resources on the platform reflect the realities and complexities of telecollaboration being carried out in real university classrooms and aim to acknowledge the uniqueness of each classroom context. Sociocultural approaches to teacher education argue that it is not plausible to imagine that all teachers can apply methodological content unproblematically to all teaching contexts in the same manner and UNICollaboration strives to reflect this belief by providing highly-contextualised examples of sample projects, tasks and good telecollaborative practice.

The UNICollaboration platform also aims to follow an inquiry-based model of professional development, which has become widespread in sociocultural teacher education in the form of practices such as *critical friend groups* and *peer coaching* as described by Johnson (2009). According to the author, these practices reflect a sociocultural perspective "...in that they define professional development as learning systematically in, from and for practice. They recognize that participation and context are essential to teacher learning" (p. 112). In the platform, this approach has been put into practice in several ways. First,

practitioners are allowed to add their own sample projects and tasks to the different databases of the platform, thereby sharing their own experiences and examples of good practice. These contributions can then be commented on and rated by fellow practitioners. Second, the design of the sample project database is deliberately context-rich in nature, encouraging users through a list of question prompts to add as much detail as possible to their descriptions of their projects. Third, the platform also includes an online community of forums where telecollaborative practitioners can post problems and receive help and feedback from experienced peers. Finally, the training section of the platform offers practitioners a collection of videos where experienced practitioners speak of their own experiences and opinions related to issues such as finding a good telecollaborative teaching partner, developing effective tasks, etc. The emphasis here, as elsewhere, is on sharing experiences and contextualised examples as opposed to providing simplistic rules to be followed in all cases (see Figures 1–4).

The screenshot shows the UNICollaboration homepage. At the top, there is a search bar and a navigation menu with items: Home, Partners, Tasks, Evaluation, Training, Community, Sample projects, About Uni-Collaboration, and Log in. The main content area is divided into two sections. On the left, there is a world map with orange location pins indicating university locations across various continents (North America, South America, Africa, Europe, Asia, Australia). Below the map is the text: "Supporting online intercultural exchange between university classrooms around the globe". On the right, there is a blue "Member login" box with input fields for "Username or email" and "Password", and links for "Create new account", "Request new password", and "Login via other accounts". Below the map and login box, there are tabs for "Welcome" and "Get to know Unicolaboration".

Figure 1. The homepage of the UNICollaboration platform includes an interactive map of universities looking for telecollaborative exchange projects.

Dominant language production		British and...			
- Any -		Stereotypes	Università del Salento Italy	English	7 Nov 2013
Keyword in title/description		testddd	dldfd	University of Groningen Netherlands	4 Nov 2013
Start date		Applied Spanish: Interpretation and Community Outreach Focus on Healthcare Translation & Interpretation	This is an upper level Spanish class that teaches basic translation and interpretation skills with a focus on applications in the broad spectrum...	East Tennessee State University United States	Spanish 29 Oct 2013
E.g., 2013-11		future primary school teachers-cross cultural	I am looking for partner groups to collaborate on a	ESPE Lille Nord de France France	English A2, B1, B2 24 Oct 2013

Figure 2. The Class databank provides detailed profiles of the classes looking for partner classes for their telecollaborative exchanges.

Training materials: how to organize an exchange?

The process of organizing a telecollaborative exchange is as important as the exchange itself. The materials below will help you get through this preparatory stage.

1. Read **Frequently Asked Questions** to learn the organizational basics.
2. Watch a video about **what practitioners say** about finding a good partner. Please allow a few moments for the clip to load.



Figure 3. The Training modules contain a large collection of texts and video resources for teachers who wish to learn more about telecollaboration.

Training › Sample projects list › Sample project

Soliya Connect Program

SUBMITTED BY SARAH_GUTH ON TUE, 08/05/2012 - 5:31PM

Project Details	Design	Evaluation
<p>The objectives of the Soliya Connect Program telecollaboration project are for participants to develop a deeper understanding of the perspectives of others around the world on important socio-political issues, and also to develop critical thinking, intercultural communication and media literacy skills. Each iteration of the project connects over 200 students from over 30 different universities in the US, Europe and the predominantly Arab and/or Muslim worlds, who are placed into small groups of 8-10 students and guided through a 9-week, English language dialogue program by pairs of trained facilitators.</p> <p>The project was not developed for learning English, but rather for students of Political Science, Conflict Resolution, Media Studies in 2003. As it has expanded, groups of students have participated as part of their English language courses. This is a form of 'outsourced' telecollaboration project whereby universities can enrol students for the Connect Program which is managed by the NGO Soliya.</p>		
<p>Main focus: Intercultural Exchange</p> <p>Exchange institution(s): University of Padova</p> <p>Project website: The Soliya Connect Program</p> <p>Language configuration: Lingua franca</p> <p>Language(s) used: English</p> <p>Dominant form of language production: Speaking/listening synchronous</p>		




Figure 4. The database of sample projects provides examples of how different models of telecollaborative exchanges are being integrated into university education.

The platform also attends to the different competences of the telecollaborative teacher as have been outlined in the model in the previous section. In the training section, materials are divided into organizational, pedagogical, and digital competencies as in the model, and the different sections of the platform attempt to bring a practitioner through the different stages of setting up and running a telecollaborative exchange which are identified in the model (Figures 2 & 3). The platform moves from the opening tasks of finding a partner and negotiating an exchange (in the *class finding* database and *collaboration* tools), to the development of tasks and in-class integration of the exchange (in the *task*, *task sequence* and *sample projects* databases) (Figure 4) and finally to the evaluation of the exchange (in the *e-portfolio* tool).

Having now established the competences which teachers need to run telecollaborative exchanges and having seen how an online platform has been developed to reflect these competences and a sociocultural approach to teacher education in this area, it is useful at this stage to look at specific cases of practitioners who are relatively new to telecollaboration. These case studies will make it possible to identify the competences which may be particularly difficult to develop and which therefore require most attention in future training initiatives and also the areas which need to receive most attention in the UNICollaboration platform.

THE PERSPECTIVES OF NOVICE TELECOLLABORATORS

Method

In order to identify the aspects of telecollaboration that novice practitioners find most challenging, various teachers were e-mailed using the contact tool in the UNICollaboration database. In order to establish the group for study, purposeful sampling (Nunan & Bailey, 2009) was used (i.e. participants in the study were chosen because they met predetermined criteria). In this case, the participants had to be teachers of foreign languages who had recently begun to use telecollaboration in their classes or who were in the process of planning and carrying out their first exchanges.

E-mail requests were sent to 15 practitioners who appeared to reflect this profile on their

UNICollaboration platform presentations or who were known to the author through his own professional network. A total of four practitioners responded positively and agreed to be interviewed in English via e-mail in regard to their first experiences of setting up and running an exchange and, in particular, the challenges they encountered during this process. Each of the teachers exchanged between six and ten e-mails with the author. The author initially sent a list of open questions to identify the practitioners' experiences of telecollaboration and the problems they had encountered (see [Appendix](#)). The teachers' responses to these questions were then categorised in relation to the competences of the telecollaborative teacher and a series of follow-up e-mails asked the teachers to go into more detail and expand on certain responses. Following this exchange of e-mails, the author drew up a list of possible findings and conclusions relating the teachers' responses to the categories of telecollaborative competences. These initial conclusions and a list of possible "contradictions" were presented to the interviewees via e-mail and they were asked to react to and elaborate on these data and findings. This form of "member checking" allowed the author to confirm findings and to look for alternative interpretations (Cowie, 2011, p. 238). In a later round of correspondence, the informants were also asked to provide their reactions to the model of telecollaborative competences.

Participant Background

The four novice practitioners were foreign language teachers at public universities. The first informant, Melina, (all names used are pseudonyms) was a teacher of English as a Foreign Language at an institution which she herself describes as "...a prestigious, state, access-for-all university" in Argentina. Her students were enrolled in their second years of an undergraduate programme to either become teachers or translators of English. Melina had been teaching this course in English since 1994, first as an assistant teacher and most recently as the teacher in charge. According to Melina, she was consequently in a position to make the decision to engage in a telecollaboration project of this kind for the first time in 2012. She also reported holding a position at a prestigious national research institution in Argentina, and because of this, she had also taken a research perspective to her work on telecollaboration. She explained: "This means that I've planned the projects with a research perspective in mind, looking at options for data collection and analysis, and how the projects can be improved from this perspective as well."

The second informant, Marta, was a 50-year-old teacher of French at a public research university in the US in Southern California. Although she was born in France, she had been living in the US for 28 years and teaching French at her institution for 15 years as a professor. Before that, she taught French as a teaching assistant when in graduate school. At the time of the interviews she was also the academic coordinator for the French language program at her institution. There, she trained teaching assistants where all new teachers also played an important role in curriculum development. The students involved in her first exchanges were low intermediate students who had three to four years of high school French and ranged from college freshmen to seniors. Most of them had a foreign language requirement as part of the university's general education requirement but Marta believed they chose French because they enjoyed the language and the culture. She reported that "...all were very open to the idea of an online intercultural exchange".

The third informant, Barbara, taught German at two different Italian public universities and had been working at university level for a little more than six years. She felt that the advanced training on the job, the constant exchanges with other teachers' experiences, and a growing awareness of students' needs had influenced her teaching methodology which she described as "...still not really 'defined' but a kind of 'work in progress' on the basis of what I realize the students need". Barbara had discovered telecollaboration at two different workshops and believed that

...it could be an interesting and useful experience for the students (and for me as a teacher as well). Many students cannot participate in traditional exchanges, but also the students who are going to take part in an exchange would benefit from a telecollaboration exchange. I just think it

could be a great opportunity

The final informant, Francesca, taught English as a foreign language and courses in Translation Studies at another Italian university. She had been lecturing at university since 1998 and her research interests had always revolved around the use of new technologies in language teaching and linguistic research. Before engaging in telecollaboration, she had explored areas of CALL such as hypertexts and corpora and online platforms such as Moodle. She therefore reported being a competent user of computers in the classroom.

All four informants reported having chosen to engage in telecollaboration due to its potential for authentic communication in their classrooms and for raising awareness of the cultural aspects of language learning. For example, Francesca explained that she saw telecollaboration exchanges as: "...a great opportunity to make the students understand that language is first and foremost a means to communicate and to discover foreign worlds and habits" while Marta wrote "I am interested in telecollaboration as a way for students to apply what they learn in the classroom to a 'real life' situation in which they have to use French." Melina highlighted her association between telecollaboration and prestige, explaining "...I've always been interested in offering the students the best quality in their education and so for example we have made changes not only in this front but also in others such as writing for instance."

The practitioners had come across telecollaboration in different ways. Francesca, a university lecturer with over 15 years' experience, had recently been invited by a colleague to take part in a telecollaborative project. Marta had discovered the activity while carrying out research for a qualification in Educational Technology. Barbara had attended workshops at her university on the topic. And, Melina had encountered the activity when taking part in an international project on intercultural citizenship.

Interview Analysis

An analysis of the common problems that emerged as the four practitioners planned and/or ran their first exchanges can help to identify the different competences which telecollaborative teachers need to develop as quickly as possible. For example, Barbara and Francesca's experiences highlight the importance of organisational competences (Table 1) in the initial stage of organising an exchange. Barbara wrote the following about the obstacles that were holding her back in setting up her first telecollaborative exchange:

...I feel kind of puzzled about how to organize it. The most important problem is TIME (sounds as an excuse, I know). Another problem is that up to a few days before lessons start I don't know how many students will attend my courses, how many students will be in every single class and - a part from the complete beginners - what level of knowledge they have, etc...

Here the importance of organisational competence A7 is evident—the ability to *alter the logistics of the exchange to adapt to developments and problems as they arise (e.g. low levels of participation, access to technology problems, etc.)*. Similarly, Francesca spoke of the problems of

...finding partner institutions in English speaking countries that have classes of Italian as a Foreign Language. Once the partner institution is found, it is not always easy to find time slots which fit the timetables of both institutions. The result is that the exchange eventually only goes on for a limited number of weeks.

This is a clear reference to A1, the ability to *use online networks and his/her own professional contacts to locate possible partner-teachers in distant locations* as well as A4, the ability to *negotiate effectively with the partner-teacher the structure and organisational technicalities of the exchange, which take into account both institutional contexts (calendars, etc.) ...of both sets of participants*. Francesca also described how she developed one of the competencies as she strove to integrate the exchange and make it a success in her own institution. She explained:

...it is difficult to get the students seriously engaged in telecollaborative activities, at least at the beginning: in fact, in order to find the students for the project we had to 'offer' extra credits for taking part in the TeleTandem session. This method actually worked, and our students participated in a very devoted way. On the other hand, the students in our partner's institution – who had not been promised any specific reward for the project – were less diligent and frequently missed the appointments, thus creating a lot of confusion.

Here, Francesca is clearly learning from initial problems to develop competence [A13](#), the ability *to ensure that the exchange receives appropriate academic recognition within the home institution*.

While Barbara and Francesca reported mainly organisational problems, both Marta and Melina mainly mentioned issues related to the digital competences of the telecollaborative teacher ([Table 3](#)). Marta wrote:

I am planning an exchange for the fall quarter... My questions and doubts have to do with technology at this point. I am still debating what platform is best for the asynchronous exchange. I am not familiar with blogs so I am nervous about using it.

This is a clear reference to competence [C2](#), the ability *to demonstrate a basic working knowledge of current (e.g., Web 2.0) communication tools and their pedagogic affordances and constraints*. The following anecdote by Melina also reflects this competence as well as [C7](#), the ability *to organise the online exchange in a manner which...respects privacy issues related to students' work*. Melina wrote:

We had a case of plagiarism and we couldn't in the end figure out how we could attest that the student had uploaded somebody else's task. The help from **[the online platform administrator]** was fine, but we couldn't really solve the doubt.

However, as the practitioners continued their accounts, it becomes clear how competences from the different sections of the model often blur together in the day-to-day challenges of telecollaborative exchange. In this extract from her online interviews, it becomes evident how technical competencies are intertwined with organisational competences as Marta strove to find ways of dealing with the issue of grading while taking into account the technical limitations of the synchronous communication tool she was using in the exchange. She wrote:

...The other difficulty for me is to keep track of the synchronous communication since there is no log. My students get an oral participation grade for this part of the exchange and I am still trying to figure out how to do that. Integrating the exchange in my curriculum was difficult. I had to make sure that students were not getting a lot more work than they would have with the existing curriculum and that I would still have time to cover other aspects of foreign language teaching such as grammar and reading.

For Marta, the challenge of finding tools which would effectively allow her to record and check and grade her students' online interactions was evidently connected to how well she would be able to integrate the telecollaborative exchange into her study programme.

The interviews also reveal that teachers are quick to learn from previous experiences in other telecollaborative exchanges. Melina is now on her second year of telecollaborative practice and she confirmed that

...we (the teachers involved) have learned many things. For instance, that it is hard for students to get familiar with the wiki, skype and Elluminate Live!; that they need some extra time to

become familiar (so now we will allow an extra week before we ask them to communicate online)...

When the four teachers were asked to comment on how novice telecollaborators can best be prepared for this activity, the practitioners highlighted the need for two principal factors: preparation and collaboration with more-experienced peers. Marta suggested that having time to prepare the exchange was key and that she

...was able to overcome many of the potential problems and plan a rather successful exchange because this is part of a study and I did extensive research before planning the exchange. Without research or training, I don't think it is possible to plan and implement a successful exchange.

Similarly, Melina warned: "...telecollaboration...is also incredibly time-consuming. So perhaps an additional element has to be the willingness to devote a long time to preparing the exchange, channelling students' difficulties, etc".

Other practitioners emphasised the benefit of having partner-teachers who had organised exchanges before or who were more comfortable working with online tools. Marta reported that she had not needed to use the UNICollaboration platform to prepare the exchange because "...the project had already been sketched out by my colleague, based on her previous years' experience", while Francesca explained that

my partner teacher for the exchange has been a great resource for technology. She has set up the blog for our classes and I've been learning how to use it. So technology has become a lesser issue for me... It would have been a big issue had my teacher not been familiar with blogs.

Member-Checking Analysis

Finally, the interviewees were asked to review and offer their comments on the model of telecollaborative competence presented in the digital competences section. I was particularly interested in establishing what aspects of the model they considered to be most important for novice telecollaborators and also the aspects which would be the most difficult to develop. Melina considered the last section of the model on attitudes and beliefs (Table 4) as "crucial", especially, it would appear, competence D7: *an interest in learning with students about new aspects of L2 language use and cultural products and practices from their exchange partners*. She wrote:

...I've worked with other teachers [in telecollaborative exchanges], ...and it's really so hard for them to see what the aims of telecollaboration really are. I can say that their preconceptions are so strong that they have remained in a fixed place. For instance, I worked this year with a group of university students, who had to interact with another group of secondary school students. Both the university students and their teachers held the strong preconception that the secondary school students were immature, irresponsible, uncommitted, etc. This project failed because of these resistances...

Marta, on the other hand, suggested that it was other areas of the model that were likely to prove most challenging to new practitioners. She told me that "...[f]rom my experience as a novice in telecollaboration, I found that the organizational and pedagogical aspects of the exchange were the most challenging." She went on to explain:

... [t]he planning phase is the most difficult in my opinion for a novice teacher. You really have to understand all aspects of the exchange including potential problems. Personally, I couldn't have done it without doing extensive research first.

Significantly, she also highlighted the pedagogical competence B7, the ability to *explain to students what is expected from them during an exchange – deadlines, performance objectives, learning outcomes, etc.* as being particularly difficult for novice telecollaborators. She justified this in the following way:

This is very difficult when you are a novice because you don't know what to expect yourself. You have to convey to students that they have to be flexible and open-minded because you cannot control every detail of the exchange. I found it very difficult to answer questions on details... I found that it was best to not give too many details at once and adapt as we went on with the exchange. This is not always easy to do for novice teachers.

Finally, she underlined the importance of organisational competence A10, the ability to *apply his/her knowledge of the educational context in which the partner class is working in order to structure the exchange and avoid problems.* She warned:

...[t]his can be difficult if the teacher is not completely familiar with the culture/educational system of the partner country. ...For example, it was very helpful for me to know the French educational system and the fact, for example, that French students and teachers take their weekends and vacation time seriously, and don't work 24/7 like the Americans. Therefore I didn't expect French students to be doing the exchange during their time off.

In summary, it would appear that each of the interviewees identified different competences from the four parts of the model to be the most important and challenging for novice telecollaborators. However, when referring to their own experiences in telecollaboration, the four informants clearly referenced mostly the organisational and the digital competences as having been the most demanding. With this in mind, it would appear that teachers need opportunities to develop as many of the different aspects of the model as possible in their training courses. This should happen in an integrated manner which provides teachers with authentic experiences of telecollaborative practice. Based on the insights of these novice telecollaborators, in the following section I propose how workshops and training programmes could be designed for in-service teachers interested in preparing to enter the world of telecollaboration.

APPLICATION OF FINDINGS: STRUCTURING TRAINING FOR NOVICE TELECOLLABORATORS

It is clear from the model of telecollaborative competences presented earlier in this paper and from the experiences and perspectives of the novice telecollaborators that it is unrealistic to attempt to train educators in the intricacies of telecollaborative exchange through the simple transmission of facts and guidelines in instructor-driven set ups. Instead, possibly the ideal approach to training will reflect an experiential modelling approach (Guichon & Hauck, 2011) which involves engaging future practitioners in online intercultural exchanges themselves so they can experience first-hand, the challenges and benefits of such an activity. However, the reality is that a large majority of in-service teachers are likely to have neither the time nor the funding to take part in long-term training programmes, necessary to organise and take part in a telecollaborative project. Instead, in-service teachers are more likely to attend short one- or two-day training workshops or events where they expect to learn the basic skills and knowledge to engage in such learning activities. This has been the case for almost 200 university educators who, from 2011 to 2013, attended seven half- and full-day training workshops organised by the INTENT project team.

The comments and suggestions of the practitioners provide various insights into how future workshops and training courses on telecollaboration for in-service teachers could be structured. First, the interviewees referred regularly to the context-specific nature of telecollaborative projects and how teachers need to be able to react quickly to unexpected problems and emerging issues. This can best be achieved by giving trainees the opportunity to read or hear about previous exchanges in the form of

detailed case studies. These case studies should place particular emphasis on the problems and learning opportunities that emerged in the exchanges. Trainees could then discuss how to overcome or react to these situations. Case studies such as these can be extracted from the literature on telecollaborative projects (Guth & Helm, 2010, O'Dowd, 2007) or can be found on the 'Sample Projects' database on the UNICollaboration [platform](#). Belz and Müller-Hartmann (2003) provide a particularly useful "self-reflective case study" of two teachers carrying out a telecollaborative exchange and simultaneously reflecting on the challenges of the process.

Second, comments made by the informants also highlighted the importance which novice telecollaborators attribute to experienced peers who are willing to pass on their advice and insights about telecollaboration to colleagues. If such peers are not available to attend workshops locally, these experienced colleagues can be invited to make virtual guest appearances in workshops by being included in short Skype/videochat interview sessions. Trainees can prepare questions for the guest beforehand and the guest can then respond to these questions during the online video chat. Extended video recordings of interviews with experienced telecollaborators are also available on the UNICollaboration [training modules](#).

Third, one of the practitioners highlighted in section 4 the need for information on the educational cultures of different countries. By understanding how academic timetables work in different countries, how assessment procedures are organised, and what attitudes exist towards, for example, teacher- and student-centred learning approaches, teachers will be better prepared to understand why their telecollaborative partners participate in certain ways during their exchange. Such information can be integrated into exchanges by inviting trainees from different cultural backgrounds to talk about their home countries' educational culture or by encouraging trainees to predict how their partners may behave differently based on what they know about the target culture. In the UNICollaboration platform, the developers have tried to attend to this need by requiring collaborating teachers to provide a good deal of background information on their classes and institutions when using the collaboration tool to plan their exchange together.

Fourth, it emerged from the interviews with Marta and Melina that technical issues remain an important concern for novice telecollaborators and, as such, workshops and training programmes should continue to dedicate time to discussing the latest online communication tools available to educators and their affordances for telecollaborative exchange. Web 2.0 technologies are developing at a very fast rate and teachers are likely to appreciate some hands-on opportunities with the most recent communication tools.

Finally, novice telecollaborative practitioners evidently need opportunities to develop online exchange projects and the inherent issues of tasks, assessment procedures, language use, et cetera. Trainees can be provided with guiding questions and asked to plan and then present a possible exchange with either a fictitious ideal partner class or with possible partner classes that they find presented on the UNICollaboration [database of classes](#).

CONCLUSION

In this paper I have attempted to attend to the challenging but very relevant issue of how to prepare in-service teachers for the challenges of establishing and running telecollaborative exchanges at university level. I began by looking at sociocultural approaches to foreign language teacher education and by presenting a model of competences for the telecollaborative teacher that has been developed and verified by this author elsewhere (2013) using the Delphi technique. I then described the UNICollaboration platform (www.unicollaboration.eu), designed for telecollaborative practitioners which reflects both the competencies of the telecollaborative teachers as well as a sociocultural approach to teacher education in many ways. Following that, I presented the findings of four extensive online interviews to explore how this model of competences and the platform could further be refined to reflect the needs and problems of

novice telecollaboration practitioners. Finally, I made various proposals for training educators in this complex activity of online foreign language education.

As stated at the outset of the paper, short training courses are clearly not ideal for training teachers how to set up and run telecollaborative exchanges. However, in-service teachers often do not have other opportunities available to them to learn how to engage in new pedagogical practices such as this one. For this reason, in this paper, I have proposed a form of training course which gives centre place to both context and practice—the key principles of sociocultural approaches to language teacher education. The proposal describes a highly-practical practitioner-centred model of training which gives trainees the opportunity to read and reflect on case studies, listen to experienced practitioners, have hands-on time with new Web 2.0 communication technologies, and develop models of possible exchanges which reflect their and their future-partners' particular educational contexts.

It is, of course, important to recognise at this stage the limitations in generalizability of this study due to the small number of participants. This is a common issue with case studies based on qualitative interviews such as those presented here and it would be recommendable to complement the findings of this study in the future with more quantitative-based surveys of novice telecollaborators.

APPENDIX. Questions from first round of online interviews.

1. Tell me about your institution and the type of students you teach. What are your students studying? What is their level of electronic literacy?
2. How long have you been teaching? Tell me a little about your teaching beliefs. How would you describe your methodology?
3. How did you 'discover' this type of learning activity?
4. Why are you interested in doing telecollaboration? In your opinion, what benefits does it hold for you and for your students?
5. You mentioned you are planning an exchange to begin this term. As you plan it, what questions or doubts have come to your mind? What problems are you encountering? Are there certain aspects of the exchange you are not sure how to set up? Tell me in detail about this if you can.
6. Finally for now, you are looking for a partner on the UNICollaboration platform. Can you tell me how you find this platform? How useful have you found it? Did you find some parts more useful than others? As a new telecollaborator, what would you like to see on UNICollaboration?

ACKNOWLEDGEMENTS

The author would like to express his gratefulness to the four practitioners who invested a great deal of their valuable time in the elaboration of this study. He would also like to thank the three anonymous reviewers who provided valuable insight and suggestions in their reviews of earlier drafts of this paper. Finally, he would like to acknowledge the hard work and commitment of the members of the INTENT project team who worked together on the design and creation of the UNICollaboration platform described in this publication.

The INTENT project and the UNICollaboration platform were co-funded by the European Commission's Lifelong Learning Programme. However, the views reflected in this article are the author's alone and the Commission cannot be held responsible for any use which may be made of the information contained therein.

ABOUT THE AUTHOR

Robert O'Dowd teaches EFL and applied linguistics and is Director for International Training at the University of León, Spain. He has taught English at universities in Ireland, Germany, and Spain and has published widely on the application of telecollaborative networks in foreign language education. He recently coordinated INTENT - a project financed by the European Commission which aimed to promote telecollaboration in European Higher Education (<http://www.scoop.it/t/intent-project-news>). His publications are available here: <http://unileon.academia.edu/RobertODowd>

E-mail: robert.odowd@unileon.es

REFERENCES

- Belz, J. (2002). Social dimensions of telecollaborative foreign language study. *Language Learning & Technology*, 6(1), 60–81. Retrieved from <http://llt.msu.edu/vol6num1/BELZ/default.html>
- Belz, J. (2003). Linguistic perspectives on the development of intercultural competence in telecollaboration. *Language Learning & Technology*, 7(2), 68–99. Retrieved from <http://llt.msu.edu/vol7num2/BELZ/default.html>
- Belz, J. A., & Müller-Hartmann, A. (2003). Teachers negotiating German-American telecollaboration: Between a rock and an institutional hard place. *Modern Language Journal*, 87(1), 71–89.
- Belz, J., & Thorne, S. (Eds.). (2006). *Internet-mediated intercultural foreign language education*. Boston, MA: Heinle & Heinle.
- Commission of the European Communities (2009). *Green paper: Promoting the learning mobility of young people*. Retrieved from <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2009:0329:FIN:EN:PDF>
- Conference of European Ministers Responsible for Higher Education (2009). *The Bologna process 2020: The European higher education area in the new decade*. Retrieved from http://www.ond.vlaanderen.be/hogeronderwijs/bologna/conference/documents/leuven_louvain-la-neuve_communicu%C3%A9_april_2009.pdf
- Cowie, N. (2011). Emotions that experienced English as a foreign language (EFL) teachers feel about their students, their colleagues and their work. *Teaching and Teacher Education*, 27 (1), 235–242.
- Dooly, M. (2010). Teacher 2.0. In S. Guth & F. Helm (Eds.), *Telecollaboration 2.0: Language and intercultural learning in the 21st century* (pp. 277–304). Bern, Switzerland: Peter Lang.
- Furstenberg, G. & Levet, S. (2010). Integrating telecollaboration into the language classroom: Some insights. In S. Guth & F. Helm (Eds.), *Telecollaboration 2.0: Language and intercultural learning in the 21st century* (pp. 305–336). Bern, Switzerland: Peter Lang.
- Furstenberg, G., Levet, S., English, K., & Mailliet, K. (2001). Giving a virtual voice to the silent language of culture: The culture project. *Language Learning & Technology*, 5(1), 55-102. Retrieved from <http://llt.msu.edu/vol5num1/furstenberg/default.html>
- Freeman, D., & Johnson, K. (1998). Reconceptualising the knowledge-base of language teacher education. *TESOL Quarterly*, 32(3), 397–417.
- Guichon, N., & Hauck, M. (2011). Teacher education research in CALL and CMC: more in demand than

ever. *ReCALL*. 23(3), 187–199.

Guth, S., & Helm, F. (Eds.). (2010). *Telecollaboration 2.0: Language, literacies and intercultural learning in the 21st Century*. Bern, Switzerland: Peter Lang.

Hanson-Smith, E. (2006). Expert-novice teacher mentoring in language learning technology. In P. Hubbard & M. Levy (Eds.), *Teacher Education and CALL* (pp. 301–317). Amsterdam, Netherlands: John Benjamins.

High Level Expert Forum On Mobility (2008). *Making learning mobility an opportunity for all*. Retrieved from http://ec.europa.eu/education/doc/2008/mobilityreport_en.pdf

Johnson, K. (2009). *Second language teacher education*. New York, NY: Routledge.

Kelly, M., Grenfell, M., Allan, R., Kriza, C., & McEvoy, W. (2004). *European profile for language teacher education: final report*. Retrieved from http://ec.europa.eu/education/languages/pdf/doc477_en.pdf

Kohn, K., & Warth, C. (2011). *Web collaboration for intercultural language learning*. Münster, Germany: MV-Wissenschaft.

Lewis, T., Chanier, T., & Youngs, B. (2011). Special issue commentary. *Language Learning & Technology*, 15(1), 3–9. Retrieved from <http://llt.msu.edu/issues/february2011/commentary.pdf>

Meskill, C., Anthony, N., Hilliker-Van Strander, S., Tseng, C. & You, J. (2006). Expert-novice teacher mentoring in language learning technology. In P. Hubbard and M. Levy (Eds.), *Teacher education and CALL*, (pp. 283–300). Amsterdam, The Netherlands: John Benjamins.

Müller-Hartmann, A. (2007). Teacher role in telecollaboration: Setting up and managing exchanges. In R. O'Dowd (Ed.), *Online intercultural exchange* (pp. 167–193). Clevedon, UK: Multilingual Matters.

Müller-Hartmann, A. (2012). The classroom-based action research paradigm in telecollaboration. In M. Dooly & R. O'Dowd (Eds.), *Research methods for online interaction and exchange* (pp. 56–192). Bern, Switzerland: Peter Lang.

Newby, D., Allan, R., Fenner, A., Jones, B., Komorowska, H., Soghikyan, K. (2007). *European portfolio for student teachers of languages*. Retrieved from <http://archive.ecml.at/mtp2/fte/pdf/STPEExtract.pdf>

Nunan, D., & Bailey, K. (2009). *Exploring second language classroom research*. Boston, MA: Heinle.

O'Dowd, R. (2006). *Telecollaboration and the development of intercultural communicative competence*. Berlin, Germany: Langenscheidt.

O'Dowd, R. (Ed.). (2007). *Online intercultural exchange: an introduction for foreign language teachers*. Clevedon, UK: Multilingual Matters.

O'Dowd, R. (2011). Online foreign language interaction: Moving from the periphery to the core of foreign language education? *Language Teaching: Surveys and Studies*, 44(3), 368–380.

O'Dowd, R. (2013). The Competences of the telecollaborative teacher. *The Language Learning Journal*, DOI: 10.1080/09571736.2013.853374.

Roberts, B. (1994). *What works?* Retrieved from <http://www.iecc.org/discussion/what-works.html>

Schocker-von Dittfurth, M., & Legutke, M. K. (2002). Vision of what is possible in teacher education – or lost in complexity? *ELT Journal*, 56(2), 162–171.

Warschauer, M. (Ed.). (1996). *Telecollaboration in foreign language learning*. Honolulu, HI: University of Hawai'i Second Language Teaching and Curriculum Center.

Wright, T. (2010). Second language teacher education: Review of recent research on practice. *Language Teaching*, 43(3), 259–296.