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Chapter 1. Telecollaboration in the foreign language classroom: A review of its origins and its application to language teaching practice

Introduction

This volume looks at the application of pedagogically-structured online collaborative learning initiatives between groups of learners in different geographical locations. This type of exchange is commonly known in foreign language education as telecollaborative learning. Specifically, the chapters in this book outline language learning projects, designed and carried out by primary and secondary teachers, working telecollaboratively with partners from around the globe. The projects can serve as inspiring models for other teachers who are interesting in innovating their teaching practices, especially as these teachers very openly describe the challenges they faced and how they overcame them, as well as the many rewarding outcomes they (and their students) derived from the experiences. The authors/teachers are also very generous in sharing materials they have designed for their telecollaborative projects and even offer tips on how to avoid some of the possible pitfalls that they themselves encountered.

For many of us who have been involved in telecollaboration for some time now, it would have been difficult to predict how rapidly interest in telecollaborative language teaching and learning would rise in popularity around the world in the past few years. Just ten years ago it was difficult to find any mention of telecollaboration in journals, books or even online, with the exception of a few highly specialized sections of academic conferences or publications. For instance, when first writing

about our own telecollaborative experiences from the mid 2000's, it was a challenge to find 'fellow telecollaborators' to contribute to a book on innovative approaches to teaching and learning languages. When the book was published, there was only one other submission on telecollaboration (Sadler & Eröz, 2008) in addition to our own chapter (Dooly & Ellermann, 2008). For our guidebook on telecollaboration published the same year (Dooly, 2008), only nine online websites related to online exchanges could be identified. Now, only a decade later, a simple search engine produces hundreds of references, including very large associations that offer mass online exchanges for diverse profiles (class to class, individual to individual at primary, secondary and university levels). In terms of changes in education, this is very rapid indeed.

Despite its growing popularity, telecollaboration (or as it is recently often called 'virtual exchange') is not new to the world of education. Of course, the technology used for creating and supporting exchange practices between distanced partners has changed drastically in recent years, but the practice itself has been around for at least a century, if not more (depending on how you categorize it). As Kern (2013) points out, "School pen pal exchanges and even multimedia exchanges have existed since at least the 1920's when Célestin Freinet established the Modern School Movement in Europe" (Kern, 2013, p. 206). Dooly (2017) remarks that collaboration between geographically distanced classes has been documented as far back as the late 1800s and early 1900s.

Still, with the increased speed and access to communication tools, these exchanges have taken on a new veneer. O'Dowd (2013a) mentions the exchanges promoted by Mario Lodi in 1960s Italy (p. 125) and Sadler describes the PLATO project in the early 1970s (this volume). The 'renewed' interest, beginning in the 1960's and picking up speed is perhaps not that surprising since, socio-historically, the Lodi exchange coincides with an emergent general awareness of possible 'new horizons' in the 1960s. After all, this was the decade that the term "global village" was first used by McLuhan (1962 [2011]) and the first views of the planet Earth from space were made available to the general public (Gaudelli, 2003), all of which helped kindle a vision of a single, united world system (Gooding Oran, 2011). Of course, the use of computers to connect language learners across the globe did not really pick up momentum until several decades later, when personal computers (PCs) became more accessible in homes and schools. With this increased availability, some daring teachers

and researchers began to toy with the idea of 'opening up the classroom', leading to 'pockets' of innovative practice in telecollaboration around the world. Of these pioneers, certain names stand out, among these are Kern 1996; Brammerts 1996; and Johnson 1996 – all of whom have chapters in a seminal collection of papers edited by Mark Warschauer in that same year. This collection is frequently touted as "laying down key pedagogical foundations for subsequent research and practice in telecollaboration in language teaching and learning" (Dooly, 2017, p. 172).

However, as Kern points out

> the relationship between technology and language learning has never been as complex or interesting as it is today. The accelerating diffusion of digital media and wireless networks, together with the increased naturalization of EMC [electronically mediated communication], promises that technology-supported language learning will remain a critical area for teaching and research. (2013, p. 211)

This diffusion of communication technology has not only presented teachers with new resources and opportunities, it has, arguably, brought new responsibilities for educators. As hackneyed as it may seem to state (yet again) that the world is becoming increasingly interconnected, this point should not be underestimated because local and global interaction between individuals and institutions will shape future outcomes of society as a whole. Since the late 1990s, societies, cultures and people are no longer perceived as separate; they are all part of a globalized infrastructure, in what Bauman (1998) has described as global, fluid (Bauman, 1998) and Castells (2001) has termed the networked society; all leading to a 'postmodern globalization' (Jameson & Miyoshi, 1998). In his seminal work, Appadurai (1996) has tried to capture this new reality of geopolitical interactions in a model of 'transcultural flows', placing emphasis on multilateral movements, versus a model of unilateral flow from center to periphery. His model theorizes different domains of transcultural flows: ethnoscapes (involving flow of people); mediascapes (flow of information); technoscapes (flow of technology); financescapes (flows of finance); and ideoscapes (flow of ideology or ideas). The flow of all of these 'scapes' contributes to transnational communities (including, one might assume, online communities).

In today's society of 'transnationalism', it seems self-evident that teachers must consider carefully the implications of their teaching efforts, both locally and globally, and reflect on how to best prepare their students

for the future. It is becoming increasingly more common to hear of the need to educate future 'global citizens', although admittedly, what the term 'global citizen' –and how to prepare to be one- has been understood very differently across diverse education fields, and is controversial, to say the least (Dooly & Vallejo, 2018). Still, this controversy does not detract from the argument that the widespread access to and use of electronically mediated communication tools offers teachers key opportunities to introduce their students to an important learning process that includes interaction with geographically distributed partners. Moreover, this is arguably a scenario that is increasingly more common as social and professional arenas become more connected internationally and students who learn how to interact, from an early age, in electronically mediated environments will inevitably feel more comfortable in similar situations in the future.

We set forth in this book the notion that telecollaboration can productively support this learning environment and the role of the innovative teacher is a principal factor. "Language teachers stand at an important juncture between the global (intercultural and linguistic experiences for themselves and their students) and the local (socializing 'life experiences' in the school and community)" (Dooly, 2013, p. 238). The chapters in this book illustrate this point quite clearly as the classes engage with other classes around the world, in many cases to discuss, explore deeply and consider possible solutions to issues that will have a profound impact on the world in the near future. Topics include projects on the devastating effect of pollution and plastics in the ocean, EU policies on refugee status, intercultural understanding and in one case, a primary school class in Spain has worked in collaboration with refugees living in Mynamar. However, before advancing further explanation about the projects, we first outline key underlying assumptions of these exchanges, beginning with some consideration of the many different definitions that have been applied to telecollaboration.

So what is telecollaboration exactly?

As mentioned above, the notion of 'connecting' language learners in pedagogically structured interaction and collaboration seems to have proliferated in recent years and it is not unusual to see mention of telecollaboration

in conferences, articles, online blogs and online news outlets. There have been several book publications exclusively on the topic of telecollaborative learning (Belz & Thorne, 2006; Dooly, 2008; Guth & Helm, 2010; O'Dowd, 2006, 2007; O'Dowd & Lewis, 2016; Chapelle & Sauro, 2017) as well as two special editions of the journal *Language Learning & Technology* (volumes 7/2, edited by Julie Belz and 15/1, edited by Dorothy Chun and Irene Thompson). The European Commission has dedicated considerable funding to projects on telecollaboration (e.g. *Moderating Intercultural Collaboration and Language Learning*) (Dooly, 2008), *Intercultural Communication in Europe* (Kohn & Warth, 2011) and *Integrating Telecollaborative Networks in Higher Education* (O'Dowd, 2013b). There also have been chapters on telecollaboration in many of the recent overviews of foreign language methodology, including the *Encyclopedia of Applied Linguistics* (2007), the *Routledge Handbook of Language and Intercultural Communication* (Jackson, 2013) as well as reflections on its application to intercultural foreign language education in publications such as Liddicoat and Scarino (2013) and Corbett (2010). Finally, there are a growing number of platforms dedicated only to providing support for educators interested in this teaching practice, including UNICollaboration (www.unicollaboration.eu), eTwinning (www.etwinning.net and epals (http://www.epals.com/).

However, the abundance of references to online exchanges exacerbates the difficulty of deciding upon a single definition of telecollaboration. As O'Dowd (2013a, p. 124) points out, the use of the Internet to connect online language learners for different types of learning exchanges "has gone under many different names". These range from "virtual connections" (Warschauer 1996), "teletandem" (Telles 2009), "globally networked learning" (Starke-Meyerring & Wilson 2008) to the more generic term of "online interaction and exchange or OIE" (Dooly & O'Dowd 2012), to name just a few terms. It appears that the term *Virtual Exchange* is being used increasingly in a wide range of contexts. Not only is it the preferred term of educational organisations such as *Soliya* (https://www.soliya.net) and *Sharing Perspectives* (http://www.sharingperspectivesfoundation.com), but it is also the term being increasingly used by foundations, governmental and inter-governmental bodies such as the Stevens Initiative (http://stevensinitiative.org/), the Bureau of Educational and Cultural Affairs in the USA (http://eca.state.gov/gallery/virtual-exchange) and the European Commission (2016). However, for the sake of simplicity and cohesion, and reflecting the long tradition of *telecollaborative*

research in foreign language education, the authors in this book use the term telecollaboration to refer to their online collaborative initiatives. It is a term that is still widely used and accepted amongst academics and practitioners in the field of foreign language education.

One of the most widely referenced definitions of telecollaboration comes from Belz (2003), who defines the term as a "partnership in which internationally-dispersed learners in parallel language classes use Internet communication Tools" (emails, chats, forums) to support "social interaction, dialogue, debate, and intercultural exchange" (Belz 2003, p. 2). O'Dowd (2018) defines telecollaboration and Virtual Exchange as "the engagement of groups of learners in extended periods of online intercultural interaction and collaboration with partners from other cultural contexts or geographical locations as an integrated part of their educational programmes and under the guidance of educators and/or expert facilitators". Dooly (2017) provides a definition of the term that goes beyond education:

> the process of communicating and working together with other people or groups from different locations through online or digital communication tools (e.g., computers, tablets, cellphones) to co-produce a desired work output. Telecollaboration can be carried out in a variety of settings (classroom, home, workplace, laboratory) and can be synchronous or asynchronous. In education, telecollaboration combines all of these components with a focus on learning, social interaction, dialogue, intercultural exchange and communication all of which are especially important aspects of telecollaboration in language education. (pp. 169–170)

In what he calls 'online intercultural encounters', Kern (2013) highlights the cultural aspects of these exchanges. "An increasing trend in language teaching is the development of long-distance collaborations involving two or more classrooms, usually in different countries. Often referred to as telecollaboration, these international partnerships generally place an emphasis on culture in language use and learning" (p. 206).

It should be noted, however, that the focus on international partnerships for language education has also had its critics. Kramsch (2013) suggests that "[i]n the USA as in Europe, there is right now a push to de-institutionalize the teaching of foreign languages and cultures: sending the students abroad, pairing them up with native speakers and telecollaboration over the Internet have all transformed language study into skill training for the real world of the job market" (Kramsch, p. 313). This argument may be related to the apparent 'outsourcing' of telecollaboration

to large-scale platforms, enterprises and non-governmental organizations that provide telecollaborative[1] resources for worldwide exchanges (for substantial fees usually contracted by universities) that offer a 'complete package', from course design to communication tools, monitoring and assessment. The size and outreach of some of these organizations (many with government backing) may prompt some criticism in that they may promote somewhat top-down models of how to organize the exchanges. Also, oftentimes they are outsourced, therefore potentially releasing universities from accountability and they may be vulnerable to being overtaken by different political factions for 'soft-power' influencing.

So, as we have already seen, there are a dizzying number of definitions and settings that have been applied to this practice, and to add to the complexity, as Lamy and Goodfellow (2010) insist, any definition implicitly covers a wide range of pedagogical (and one might add sociopolitical) underpinnings. This is why we feel this book is timely. The term 'telecollaboration' has been used to describe many different types of online exchange, ranging from loosely guided language practice of the target language (e.g. online conversations in text or oral chat) to elaborately designed project-based collaborative exchanges. And as it has already been discussed, definitions of telecollaboration (or virtual exchange) have been applied to 'ready-made' telecollaborative models that include pre-selected curriculum, content, materials and tutors (see Lewis & O'Dowd, 2016 for an overview of these models). But for teachers who do not have the institutional backing or money to become involved in such programmes, a more 'home-grown' version may be the only alternative. Associations such as UNICollaboration[2] or EU projects such as EVALUATE[3] are working towards providing evidence-based pedagogical templates for this type of exchange. However, having teacher-tested examples is also extremely useful and many such models are provided in the chapters herein. But first, we turn to a second, quite common question concerning telecollaboration: is it a method, methodology, approach or merely a teaching activity?

1 Several large, worldwide organizations are now available. They provide entire holistic services, including the design of curriculum, in-house trained monitors and assessment criteria. They also widely promote the idea of what is most commonly called 'virtual exchange' as the way forward in education.

2 https://www.unicollaboration.org

3 http://www.evaluateproject.eu

Method, methodology, approach or practice?

The chapters in this book provide descriptions of telecollaborative experiences carried out by novice and experienced teachers alike. There are also two chapters outlining a telecollaborative exchange that was designed and implemented by student-teachers during their internships. This underscores the point that telecollaboration is becoming an object of study in some schools of education and, little by little, gaining a foothold in teacher education.

As teacher educators engaged in introducing student-teachers to the workings of telecollaboration, we have found that a question that is commonly posed quite early in a semester on telecollaboration in language education is whether it is a method, methodology, approach or a teaching practice? Actually, this is a rather profound question and cannot be answered with a generic, uni-dimensional response. There are a vast number of answers, many of them field-dependent. Even if we limit our answer to the field of educational science, the answers will vary. But for teachers interested in telecollaboration it is an important question as these terms will have bearing on both how one teaches and why one teaches a specific way.

In 1990, Richards defined classroom teaching methodology as "the activities, tasks and learning experiences selected by the teacher in order to achieve learning, and they are used within the teaching/learning process" (p. 11). Kumaravadivelu (2006) makes a distinction between "established methods [that are] conceptualised and constructed by experts in the field" (p. 84) and methodology, which is "what practicing teachers actually do in the classroom in order to achieve their stated or unstated teaching objectives" (p. 84).

Thornbury (2013, p. 185) defines methodology as "the how of teaching. But also implicated are the what, the why, and the who [all of which] will be influenced by their (implicit and explicit) theories of language and of learning". He then goes on to mention the many constraints these decisions may have, such as curricular and institutional demands, materials and technologies available, assessment and evaluation procedures, and so forth. He accounts for six domains that determine language teaching 'method': The nature of language; the nature of second language learning; goals and objectives in teaching; type of syllabus; roles (teachers, learners, materials); activities, techniques and procedures (p. 192). Like

Kumaravadivelu (2006), Thornbury points out that methods cannot be assumed to be 'unproblematic' nor are they 'stable phenomena' (p. 193) – what goes on in a classroom can generally be seen as stemming from the simultaneous overlapping of diverse "methodological persuasions" (Chaudron, 1988, p. 8) – methods are "imported", "customized and tailored to local conditions" –in other words, teachers do not follow methods, they 'appropriate' with "an approach that accords uniquely with their 'sense of plausibility' (Thornbury, 2013, p. 193).

In short, as it is apparent by this brief review of terminology, there does not seem to be a consensus. Moreover, often times the word 'approach' is studiously avoided in academic texts, however, perhaps it is the term that is most applicable to telecollaboration in the context of these chapters. Approach is generally understood as the way in which an individual applies quite explicitly defined principles of how something should be done – based on theoretical foundations (e.g. a socio-cultural learning theories). These principles might include the roles of teachers and learners, expected activities and outcomes, learning goals and how these are best attained, and so forth.

As demonstrated by the previous section on definitions of telecollaboration, this particular teaching practice does have specific features that distinguish it from other practices and therefore it can be categorized, minimally, as an approach. Telecollaboration involves engaging geographically distributed learners in some sort of interaction for a truly communicative purpose (ideally to co-construct knowledge of some sort). There are widely accepted learning theories underpinning the design and implementation of the exchanges (socio-cultural, interactional). However, the basis of the tasks and activities are sufficiently varied that it could be argued that telecollaboration is not an actual method although minimally it should be recognized as a growing instructional practice, based on a set of principles or ideas used to account for the learning that (should) take place through this practice. This assumption, in turn, brings us to yet another key question concerning telecollaboration in language education: What are the key underlying principles of language learning in telecollaborative approaches?

Evolution of language learning paradigms and telecollaborative environments

In her entry to *The Routledge Handbook of Applied Linguistics*, Larsen-Freeman poses three pairs of questions that will help identify key concepts in language learning and language education: 1) what is language? What is culture; 2) What is learning? Who are the learners?; 3) What is teaching? Who are the teachers? Larsen-Freeman points out that "languages have been taught and learned for centuries" (p. 155) and throughout this time, different features of the three key points (language and culture; learning and learner; teaching and teacher) have been focused as more influential at one time or the other and even within the same pairing of foci (e.g. learning and learner), "the questions have not always been accorded equal treatment" (p. 155). She then goes on to show how all of these features intersect so that when theories of language learning shift, this will inevitably affect language education and vice-versa.

Following Cook and Seidlhofer's (1995) categories of ways in which language (and subsequently language education) have been theorized, Larsen-Freeman underscores their two most contrastive perspectives: "language as a rule-governed discrete combinatory system" and "language as a social fact" (p. 157). It can be argued that these two contrastive views of language still hold strong on general perspectives regarding how language should be taught and in many cases are the two main pillars in the same course –contradictory as that may seem. As Larsen-Freeman points out, "many teachers teach their students both structures and how to communicate" (p. 158) and "many of the educational developments, both old and new, are widely practiced today" (p. 163). Moreover, these two contrastive points seem to have fused most significantly and at times, with some controversy, in the now widely-known 'communicative methodology'.

In his overview of language teaching methodologies, Thornbury (2013) separates 'communicative methodology' from 'communicative learning theory' (CLT). He is careful to point out that 'communicative methodology' covers a lot of ground – from a more 'radical' (cf. Allwright, 1979) or 'strong form' (cf. Prabhu, 1987) interpretation of communicative methodologies, with the major (and sometimes only) aim being communication in the process of learning, to a more 'creative compromise' that "interweave[s] several strands –grammatical, lexical and functional- into

one integrated course design" (p. 189). No matter which stance one takes on CLT, its impact on language education (in particular in the European Union), along with the publication of the Common European Framework of Reference for Languages: Learning, teaching, assessment (CEFR; 2001) has been extensive. CLT is one of the most widely accepted methods in foreign language teaching education and is usually taught in language education methods courses, in combination with socio-cultural, socio-constructivist learning theories.

This influence is also visible in most pedagogical approaches to telecollaborative activities: there has been a "shift towards social technologies […] constructivist principles promoting collaborative learning […] now focused more on communicative ability" (Thomas, Reinders, and Warschauer 2013, 6–7). "Given that telecollaboration is principally about communication, the move toward socioconstructivist underpinnings—which poses that learning takes place through social interaction—is quite comprehensible" (Dooly, p. 174). We have argued elsewhere that the growth in technological accessibility has inevitably contributed to an increase in telecollaboration in language learning but this is not sufficient to explain both its growing popularity and the widening acceptance of a telecollaborative language teaching approach through an interactional, socio-cultural perspective (Dooly & O'Dowd, 2012). There appear to be at least three other key factors: the widespread acceptance that intercultural awareness and intercultural and interpersonal communicative competence are extremely important for foreign language learning; the need for an interactive approach through cognitively challenging, meaningful use of language that goes beyond the classroom walls; and thirdly, the fact that language learners must gain combined skills of communicating in multiple language and through multiple modalities (Dooly & O'Dowd, 2012). (It should be noted that the latter notion has recently appeared under many different labels, ranging from new literacies, digital skills to trans-semiotic meaning-making).

At the same time, perhaps in accordance with the rapid advance of technology and increase in the number of examples of telecollaboratives practices, other language learning theories have been proposed as suitable frameworks for understanding the complexity of these learning environments. One theory known as 'distributed cognition' has become increasingly more prevalent in discussions regarding the fusion of technology with language learning. In this framework, knowledge is not seen

as being located in any given place (in particular it does not reside in an individual's mind). Instead, knowledge is considered to be made up of 'networks' of connections between multiple individuals, contexts, artifacts, socially constructed norms, and many other factors, both tangible and intangible. Knowledge is produced and shaped from multiple experiences (by many) and consists of sharing, creating, participating, and interacting with a knowing community—increasingly, these include online communities (Dooly, 2013). This also implies that knowledge is ever-expansive (dare we say infinite?) while simultaneously embedded in meaningful activities with others. For language learners engaged in telecollaboration, this implies interacting locally (e.g., with their classmates) and globally (e.g., online peers) and is closely related to the notions of combining 'learning in the wild' (Hutchins, 1995) with teaching and learning in the classroom (Hellermann, Thorne, Fodor, 2017). As Eskildsen and Majlesi (2018) state, "Not only is language learned through interaction, but it can also be difficult to ascertain where one ends and the other begins" (p. 3). It is important to highlight that this is a highly 'ecologically-comprehensive' and 'contextually-sensitive' learning theory. In this sense, learning and development involve human activity as an 'ensemble process' taking place in what might be called a brain-body world continuum (Spivey, 2007; Atkinson, 2011; cited in Thorne, 2018).

This brings us to yet another central question that traverses the chapters in this book: How can these learning theories be operationalized effectively in telecollaborative exchanges? More specifically, how can teachers (in state schools; in limited funded circumstances such as refugee camps or in restricted parameters of teaching internships) optimize the learning opportunities afforded through telecollaboration; and always in conjunction with local and national curriculum limitations? In many cases, this may mean they must teach languages through a transdisciplinary lens or it may mean (as in the case of telecollaboration in a refugee camp), adapting the exchange to very different learning objectives and age groups. In all of the cases illustrated here, telecollaboration was combined with a Project-Based Language Learning (PBLL) approach (Fried-Booth, 2002; Beckett & Slater, 2005; Stoller (2006).

Why project-based learning in telecollaborative language learning settings?

One of the principal challenges facing teachers' today is to help students develop new competences adapted to the 'knowledge society' –including a metacognitive understanding of the nature of knowledge as distributed, transformative and fluid while at the same time, promoting language learner agentivity (Eskildsen & Majlesi, 2018). This undoubtedly requires a profound reflection upon what it means to efficiently design learning events that fully integrate communication technology as part of a highly complex, experientially and contextually laminated learning process (Dooly, 2018). Moreover, apart from these 'loftier' ideals of the purpose of education, teachers 'in the trenches' are increasingly pressured to bring technology into their own teaching. And these expectations go beyond bringing technology into their classrooms in 'any old way'. As tools for electronically mediated miscommunication become more commonplace in schools, there is a growing call for technology-enhanced learning tasks and activities that allow the learners to deploy these resources *creatively* in ways that *resemble potentially authentic situations* in the 'real world' – including the use of *multiple* technological tools to interact with others for problem-solving, sharing of knowledge, collaborative and critical thinking and presentation and discussion of ideas.

Decades of studies demonstrate that these are key features related to Project-Based Learning (problem-solving, collaboration, teamwork, critical thinking). Project-Based Learning (PBL) is also suitable for providing an interdisciplinary framework, which is often the case of foreign language teaching as Content and Language Integrated Learning[4] (CLIL) grows in popularity and as telecollaboration expands into multidisciplinary approaches these elements are relevant to the learning process. According to BIE (2003), a PBL approach challenges learners to complete tasks that are cognitively, interpersonally and communicatively demanding and which lead to final output that have an impact on an audience outside the

4 Also commonly known as Content Based Instruction (CBI), English Across the Curriculum (EAC), and English as Medium of Instruction (EMI). However, these last two terms have been increasingly criticized for the monolingual focus on one language and other terms such as Foreign Language as a Medium of Education (FLAME) and Foreign Language Immersion Programmes (FLIP) are gaining wider acceptance.

school. These challenges can be tackled from multiple disciplines simultaneously, for instance learners, as seen in one of these cases, can be asked to engage with social issues from the lens of language, social studies and political science classes simultaneously (and in multiple languages).

Through telecollaboration learners will have opportunities for using the target language for an authentic purpose since they are addressing a wider audience than their colleagues in the classroom. Still, this is not merely a question of arranging for learners to 'talk' with each other in the target language. It is about working towards a 'final goal' of the project, thereby getting learners to 'do things' with language, rather than simply learning 'about' the language. Both PBLL and Technology-Enhanced Project-Based Language Learning (TEPBLL) are based upon the belief that language learning is stimulated when the teaching approach adopted in the classroom connects both content and target language to students' reality outside of the classroom – bringing us back to both the socio-cultural/socio-constructivist paradigms mentioned earlier as well as the notions of distributed cognition. TEPBLL –and in particular projects that use telecollaboration –can unite learners through 'networks' of connections between multiple individuals, contexts, artifacts so that the shared goals of the project ensure embedded learning in a 'brain-body world continuum' (Spivey, 2007) that goes far beyond the language classroom. In short, telecollaborative language learning projects are well-founded in current language education theories.

This brings us to the crux of this book. Telecollaboration is increasingly proclaimed by teachers, administrators, and by governmental and non-governmental organizations as a sound approach to interdisciplinary language teaching and learning. However, telecollaborative projects require teacher know-how to coherently sequence the activities (both in and out of class) in order to ensure appropriate meta-cognitive scaffolding. This implies designing effective, intricately meshed tasks (carried out collaboratively through both online and in-class activities) that lead to acquisition of identified content and language objectives.

Teachers around the world are required to use digital tools effectively and innovatively – not just to replicate with more 'bells and whistles'- the same teaching approaches they have used till now.

> [G]iven the rapid evolution of technologies and the fluidity of communicative environments, teachers face increasingly complex decisions related to teaching with technology. Success in technology-mediated projects has been repeatedly shown to depend largely on teachers' efforts in coordinating learners' activities, structuring

> language and content, and helping learners to reflect critically on language, culture and context. But keeping on top of project goals, activity/task design, technology interface, and the management of often complex logistical realities is challenging, and flexibility is a key asset. Teachers need to know how technology can constrain as well as enhance their students' language use and know when it is better not to use computers. (Kern, 2013, p. 210)

The narratives in this book can provide blueprints for other teachers who wish to follow in their footsteps, especially since planning, executing and assessing telecollaborative language learning projects can seem formidable for anyone considering going at it alone. The authors in this book had the good fortune to be in a situation where they could be supported by more experienced practitioners and researchers in their first telecollaborative endeavours (the cases displayed here are related to the research project KONECT[5]). The authors have drawn from their experiences to address many of the questions and issues that other teachers might have when considering whether and how to begin a telecollaborative language learning project.

What is in this book?

The chapters in this volume represent a 'bottom-up' approach to telecollaborative research, and provide valuable insight into how online intercultural exchanges are being implemented by educators in primary and secondary level.

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5 The Knowledge for Network-based Education, Cognition & Teaching (KONECT) project aims to analyse data stemming from the design and implementation of telecollaborative, international projects with classrooms (primary school pupils and middle-school students) that have been matched with international partners. Based on conclusions drawn from the results of the analysis, the KONECT team has proposed specific measures for improving students' communicative and academic skills in order to better ensure their future participation in the 21st century knowledge society. Results from the evaluation and analysis of the projects serve for the conception of an educational reference model that has been piloted in workshops and in local teacher education programmes. The research project is funded by the Spanish Ministry of Economy, Industry & Competitivity: Proyectos I+D del Programa Estatal de Fomento de la Investigación Científica y Técnica de Excelencia, Grant number: EDU2013-43932-P. https://www.konectproject.com

In the second chapter of this book, two student-teachers (finishing an undergraduate teacher education degree) first explain the motivations behind their decision to design and carry out telecollaboration between their internship classes. The young, soon-to-be teachers, inspired by examples of other successful telecollaborative projects and having experienced telecollaboration as part of their own teacher development (during which they had to design a 'hypothetical TEPBLL), took it on themselves to introduce the approach to the primary education school that were hosting them during their practice teaching. The two authors (Anaïs García-Martínez and Maria Gracia-Téllez) based their telecollaborative project on Content and Language Integrated Learning (CLIL) in order to design an interdisciplinary project to teach primary education students about the different systems in the human body. This chapter is rich in its detail of how the materials were developed, along with very detailed accounts of the programming of the telecollaborative exchange which can inspire other teachers with ideas on how they can adapt similar materials and programmes to their own telecollaborative contexts.

The third chapter, written by Anna Morcilo Salas, is situated in a refugee camp in Myanmar. The circumstances of the telecollaborative project are quite unusual to most telecollaborative projects: the two groups involved were of very different ages (adults in Myanmar; primary education children in Spain) with vastly different day-to-day lives and circumstances. This telecollaborative project took a dual focus: principal anticipated learning outcomes for the European primary education class was to explore and improve their competences of working with and through electronically mediated communication, to raise intercultural and socio-political awareness and to improve their fluency and accuracy when using English as a foreign language. For their partners, who were mixed-ethnic adult groups in a Myanmar refugee camp taking courses in educational science, the learning outcomes were focused on both language gains (in English) as well as improving their content knowledge of materials development.

In their heuristic chapter, Maria Mont and Dolors Masats focus principally on 'tips and strategies' for other teachers who wish to try telecollaborative language learning projects. Following a somewhat briefer description of a two-year telecollaborative project with very young language learners (age 6 in the first year, age 7 in the second), the authors provide an annotated inventory of the key points to bear in mind

when planning, implementing and assessing a telecollaborative language learning project. They illustrate the items in their list with insights taken from their own experience of working in this type of learning environment.

In the fifth chapter, Alexandra Bonet Pueyo provides a very comprehensive outline of a telecollaborative project between her secondary school class in Spain with students of the same age and grade level in Sweden (13 to 14 year olds). The author discusses in length the pedagogical and contextual rationale for the decision to take part in the project, including the importance of administrative backing, before then describing the planning and implementation phases of the project. The project covered social and political domains, along with English as a foreign language learning goals by introducing a current sociopolitical topic of refugees in the European This chapter explains how Web 2.0 generation tools, which are normally devoted to promoting communication in social relationships (e.g. blogs, whatsapp) can be effectively integrated into a foreign language learning telecollaborative project while triggering their critical thinking; thereby helping moving them towards goals of becoming productive and skilled 21st Century citizens. The text not only focus on the strategies and methodology used while developing the tasks, but will also highlight the problems that arose while developing the experience and how these were dealt with.

The sixth chapter is written by two fairly novice teachers (now teaching in public schools). However at the time of the implementation of their project, Granada Bejarano Sánchez and Gerard Gímenez Manrique were also in their internship for their fourth year of an undergraduate degree in teacher education. In their case, the exchange involved two target languages (English and Catalan) and was based on bringing together two student populations which at first glance, are not that different, but in reality both have very dissimilar sociocultural and socioeconomic realities. During the project, the two groups of students produced three "main" products (videos that each group elaborated for the other class) that were instrumental to the development of the project, thus in this way, integrating the students as 'co-authors' in the telecollaborative project. The first video consisted of a brief presentation in which they introduced themselves to the other class, the second video included explanations of the main features of the different architectural spaces in the school and how they are used and in the final video, the two classes explain what makes the other school unique, based on what they have learnt from their telecollaborative partners.

A key feature of the project is that it allowed the young students to become 'teachers' to each other in their stronger L1, while at the same time, encouraging them to reach across social boundaries that they do not usually bridge in their everyday lives. The authors provide detailed descriptions of the planning, the materials and the implementation process. The chapter is unique in that it provides insight into the multiple challenges faced by pre-service teachers who are not only first-timers in a face-to-face classroom while taking on the added challenge of carrying out a telecollaborative exchange.

The next to last chapter is also written by student-teachers. The authors, Jennie Ingelsson and Anna Linder, were completing their MA degree in teaching at the time of writing the chapter. Based in Sweden, they were working with a partner school in New Zealand. Using the exchange as an excuse to engage the primary education students in reflection on their own and the partners' countries and culture, the project described in this chapter principally focused on developing students' writing competences in English (as a foreign language). The chapter provides a detailed analysis of the planning process and the many changes the initial programming underwent before its implementation, along with some explanations of adaptations that were immediately deemed necessary. The authors also discuss openly the challenges they faced as novices – in both teaching and telecollaboration and how they resolved the problems they encountered.

In the last chapter, Sara Bruun describes a telecollaborative project between a middle school in Sweden and one in Tanzania. After describing how the project came about (through an online meeting with other teachers), the author not only explains the key phases of the project –again based on a transdisciplinary science project regarding ocean water pollution and conservation- she also portrays the unexpected obstacles that arose when implementing the exchange. These range from differing sociocultural norms and expectations regarding the project execution phases to the inevitable challenges faced by schools with less economic and technological resources.

To conclude, we believe it is important to point out that the chapters in this volume are significant in two ways. First, the authors are working (or preparing to work) in pre-university education. Their experiences and their research come from the application of telecollaboration in classes of primary and secondary education around the globe. This differs to the large majority of publications on telecollaboration which are based on university-level exchanges. Although there has been a great deal of telecollaborative

activity in schools (see etwinning, for example), until now there has been a severe lack of research on its outcomes.

Second, we believe this volume is important as it presents an honest, 'warts and all' insight into how telecollaborative learning works and the challenges which educators meet when they engage in such initiatives. The authors in the following chapters are above all telecollaborative practitioners who wish to inform about the opportunities which telecollaboration offers their learners, but also about the institutional, pedagogical and practical barriers they had to overcome to engage their pupils in meaningful online intercultural collaboration.

If telecollaboration is to continue to grow as an educational practice, it will of course need the support of policy makers and researchers. But it will also need the contributions of reflective practitioners such as the ones featured in these chapters, providing insights into how telecollaboration can become an integral part of foreign language education.

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