Organization, Implementation and Analysis of Telecollaboration in Two Educational Projects: Methodological Challenges and Contributions of MAXQDA Software

Yordanka CHIMEVA
Pompeu Fabra University (Spain)
yordanka.chimeva@gmail.com
https://orcid.org/0000-0002-3461-4735

Abstract: This article aims to describe how technology can help address the methodological challenges that can be found in the organization and collection of data during telecollaboration among foreign language students. The study investigates the interactions of secondary school learners of English as a foreign language during task-based telecollaboration with secondary school learners of English from a different cultural and linguistic background. The research focuses on two telecollaborative projects in which the same participants from Bulgaria and students from two different schools in Spain participated in synchronous videoconferencing sessions on culture-related topics. Various data collection instruments were used to provide the triangulation of the findings, namely, video recordings of the telecollaborative interactions, interviews, questionnaires, and field observations. The data was processed with the help of MAXQDA software (https://www.maxqda.com). The article reveals numerous challenges for the participating students and teachers, as well as for the investigators in the organization and implementation of telecollaboration in educational projects. These findings are valuable and could help students, teachers, and researchers to predict and solve such challenges before starting an online intercultural exchange project in school setting. This article also presents a case study of using MAXQDA data analysis software to assist qualitative analysis of the data from learners' interactions in a telecollaborative learning environment. We demonstrate that MAXQDA enables comprehensive and in-depth analysis from multiple perspectives when analyzing students' online interactions in an intercultural setting. Importantly, MAXQDA permits us to code and analyze audio and video files without transcribing them.

Key words: videoconferencing, telecollaboration, foreign language, secondary school students, intercultural communication

Español:

Organización, implementación y análisis de la telecolaboración en dos proyectos educativos: Desafíos metodológicos y aportaciones del software MAXQDA

Resumen: Este artículo tiene como objetivo describir cómo las tecnologías pueden ayudar a afrontar los desafíos metodológicos que se pueden encontrar en la organización y recopilación de datos durante la telecolaboración entre estudiantes de lengua extranjera. El estudio de caso investiga las interacciones de estudiantes de secundaria de inglés como lengua extranjera durante la telecolaboración basada en tareas con estudiantes de secundaria de inglés de diferente origen cultural y lingüístico. La investigación se centra en dos proyectos de telecolaboración en los que los mismos participantes de Bulgaria y alumnos de dos colegios diferentes de España participaron en sesiones de videoconferencia sincrónica sobre temas relacionados con la cultura. Se utilizaron varios instrumentos de recopilación de datos para proporcionar la triangulación de los hallazgos, a saber, grabaciones de video de las interacciones telecolaborativas, entrevistas, cuestionarios y observaciones de campo, y los datos se procesaron con ayuda del software MAXQDA (https://www.maxqda.com). El artículo revela numerosos desafíos tanto para los estudiantes y los docentes participantes como para los investigadores en la organización e implementación de la telecolaboración en proyectos educativos. Estos hallazgos son valiosos y podrían ayudar, por una parte a los

estudiantes y profesores, y, por otra a los investigadores a predecir y resolver tales desafíos antes de comenzar un proyecto de intercambio intercultural en línea en el entorno escolar. Este artículo también presenta un estudio de caso del uso del software de análisis de datos MAXQDA para ayudar al análisis cualitativo de los datos de las interacciones de los alumnos en un entorno de aprendizaje telecolaborativo. Demostramos que MAXQDA permite un análisis completo y profundo desde múltiples perspectivas al analizar las interacciones en línea de los estudiantes en un entorno intercultural. Es importante destacar que MAXQDA nos permite codificar y analizar archivos de audio y video sin transcribirlos.

Palabras clave: *videoconferencia, telecolaboración, lengua extranjera, estudiantes de secundaria, comunicación intercultural*

Català:

Organització, implementació i anàlisi de la telecol·laboració en dos projectes educatius: Desafiaments metodològics i aportacions del programari MAXQDA

Resum: *Aquest article té com a objectiu descriure com les tecnologies poden ajudar a afrontar els desafiaments metodològics que es poden trobar en l'organització i la recopilació de dades durant la telecol·laboració entre estudiants de llengua estrangera. L'estudi de cas investiga les interaccions d'estudiants de secundària d'anglès com a llengua estrangera durant la telecol·laboració basada en tasques amb estudiants de secundària d'anglès de diferent origen cultural i lingüístic. La investigació se centra en dos projectes de telecol·laboració en què els mateixos participants de Bulgària i alumnes de dues escoles diferents d'Espanya van participar en sessions de videoconferència sincrònica sobre temes relacionats amb la cultura. Es van utilitzar diversos instruments de recopilació de dades per proporcionar la triangulació de les troballes, és a dir, enregistraments de vídeo de les interaccions telecol·laboratives, entrevistes, qüestionaris i observacions de camp, i les dades es van processar amb ajuda del programari MAXQDA (https://www.maxqda.com). L'article revela nombrosos desafiaments tant per als estudiants i els docents participants com per als investigadors en l'organització i la implementació de la telecol·laboració en projectes educatius. Aquestes troballes són valuoses i podrien ajudar, d'una banda els estudiants i professors, i, de l'altra, els investigadors a predir i resoldre aquests desafiaments abans de començar un projecte d'intercanvi intercultural en línia a l'entorn escolar. Aquest article també presenta un estudi de cas sobre l'ús del programari d'anàlisi de dades MAXQDA per ajudar a l'anàlisi qualitativa de les dades de les interaccions dels estudiants en un entorn d'aprenentatge telecol·laboratiu. Demostrem que MAXQDA permet una anàlisi exhaustiva i en profunditat des de múltiples perspectives quan s'analitzen les interaccions en línia dels estudiants en un entorn intercultural. És important destacar que MAXQDA ens permet codificar i analitzar fitxers d'àudio i vídeo sense transcriure'ls.*

Paraules clau: *videoconferència, telecol·laboració, llengua estrangera, estudiants de secundària, comunicació intercultural*

Introduction

It has been widely recognized that the ability to speak a foreign language is acquired through interaction with other speakers which permits learners to participate in meaningful social activities (O'Dowd, 2011, Dooly, 2011, Helm, 2015). Within this setting, as Cabrero (2013) claims, "interaction is best conceptualized as a collaborative activity that allows for the performance of communicative practices and lays the foundation for language development (Wells, 1981). […] As computer technology becomes an integral part in our daily lives, a change in the focus, pace, and form of interactions in language instruction can be observed."

The recent COVID-19 situation has boosted even further the naturalization of computer-mediated communication not only in education but in all areas of our lives. At present we are witnessing in secondary and primary schools the first generations of digital natives (Prensky, 2001) who have grown up using the Internet and, therefore, perceive it as an entirely conventional way of interaction. This ever-growing role of digitalization have created the need of incorporating the new learning approaches in the educational setting. Many of those digital native learners, however, still face the rigid context in schools and universities, obsolete curricular planning and instructors with limited technological competences. So, I wonder if the changes in teaching pedagogy brought forth by the new realities of COVID 19, will mean that some outdated pedagogy used before the crisis will be discarded when the crisis finally ends.

In view of that, I believe that educational institutions need to understand these new learners and to adapt to their approaches to learning, working, and living.

It was the appearance of Web 2.0 that revolutionized technologies, allowing users to interact and collaborate with each other through social networks (Facebook, Twitter, Linkedin, Instagram, etc.), blogs, wikis and video sharing, among other tools. Apart from interacting with social networks, another way to enhance learners' language abilities is by incorporating gadgets –smart phones, ipads, tablets and their applications – into the learning environment, since these are already an essential part of our lives and children and youth are even expert users. The increasing availability of computer-based applications has offered new perspectives for both learners and teachers, which, on the one hand, can be challenging and stimulating but, on the other, can be overwhelming and intimidating. Information and Communications Technologies (ICT) is still a relatively innovative field for research and it still needs to adopt a more realistic and balanced approach to its use in language learning.

This ever-growing availability and rapid advancement of technology is fundamentally changing the world we live in, making us part of a globalized, multicultural society (Trenchs-Parera & Pastena, 2021). As the world is becoming more globalized, nations are, in the meantime, becoming more diverse. This is mainly due to the constantly increasing immigration, mobility, and tourism rates in recent years (Trenchs-Parera, 2019). For this reason, in order to communicate successfully not only when we travel abroad, but also within our own country or community we need to possess effective intercultural communication skills that are vital for every 21st century citizen (Schenker, 2012). Telecollaboration is one way of enhancing these skills through videoconferencing in educational environment.

In view of that, this article aims to respond the following research question:

a) What methodological research challenges can be encountered can be encountered in the organization and implementation of telecollaborative projects between secondary school FL learners?
b) What challenges did teachers face when organizing and implementing such projects?
c) What challenges did learners encounter when carrying out the projects?
d) What challenges did researchers on language learning through telecollaborative interactions encounter?

Additionally, we look into the use of MAXQDA Qualitative Data Analysis Software to analyze these telecollaborative interactions. According to O'Dowd (2007), online intercultural exchange, also known as telecollaboration, is "the activity of engaging language learners in interaction and collaborative project work with partners from other cultures through the use of online communication tools such as e-mail, videoconferencing, and discussion forums." This investigation looks into the telecollaborative interactions between secondary school, non-native adolescent FL learners in task-based classroom setting.

1. State-of-the Art

Research on telecollaboration has flourished in the past 20 years, demonstrated by a large number of studies and journal articles dedicated to this topic (Belz, 2003; Belz & Throne, 2006; Dooly, 2008; Dooly & O'Dowd, 2012; Guth &

Helm, 2010; O'Dowd, 2007; Warschauer & Kern, 2000).The review of literature, however, shows that intercultural studies, and more specifically research in telecollaboration, are primarily focused on higher education institutions, where the "student population is highly heterogeneous and international" (Awad, 2019). In 2016, for instance, O'Dowd provided an overview of the most significant emerging trends and tendencies in telecollaborative practice, reviewing the recent literature in the area and identifying recurring themes from the Telecollaboration in Higher Education conference which took place in Trinity College Dublin, Ireland. In the same way, in her study Akiyama (2017) synthesized 55 distinct telecollaboration projects that took place in university foreign language classes and utilized synchronous computer-mediated communication (SCMC) tools, comparing the typical arrangements of SCMC-based telecollaboration (e.g. participants, project set-ups, and interaction set-ups).

In her systematic review on intercultural communicative competence and online exchanges Avgousti's (2018) mentions the need of diversification of participants. In her article she reviewed online intercultural exchanges (OIEs) and intercultural communicative competence (ICC) development in relation to the modality that was used. The specific focus on university contexts was due to the fact that the universities serve as contexts for OIEs more often, specifically, more than two-thirds of the reviewed studies. Avgousti revealed that regarding the academic status of the participants, most of the studies were conducted in university contexts (81%), while 10 studies (19%) were carried out with secondary and elementary school students. For this reason, the focus of the current study is on adolescent students who engaged in telecollaboration with students from different linguistic and cultural background in classroom environment.

In the section that follows we will present more details with regard to the research context of the current study. We will introduce the pilot project, the participants and data collection instruments, the telecollaborative projects and the corpus data.

2. Methodology

This investigation uses an exploratory approach as multiple sides of the telecollaborative exchange are investigated. In order to look into the challenges faced by both teachers and learners in telecollaborative exchanges we implemented two telecollaborative projects with students from three schools. In the first project, students from Mundi School (Bulgaria) and Lluís Anton School (Spain) participated in five telecollaborative sessions, starting in April and finishing in June 2018. In the second project students from Mundi School (Bulgaria) and Anglia School (Spain) participated in five telecollaborative sessions, starting in March and finishing in April 2019. In order to respond the sub questions, I used various research instruments. The post-project questionnaires and interviews with teachers and learners helped me collect information on the challenges they encountered during the projects; through the recordings of the telecollaborative sessions I gathered interactional data of students' challenges during task completion; and the field note

observations offered my personal point of view as a participating investigator. More detailed information on the research instruments and their objective is provided further below in Section 2.3.

2.1 Pilot Project

When in 2016 I contacted Diana[1], the Bulgarian school's managing director, and we agreed to organize an intercultural exchange project, we were both aware that we had almost no experience in this challenging field. Consequently, Diana and I were aware and agreed on the necessity of planning some short, independent telecollaborative sessions in order to prepare both learners and ourselves for the project. Finally, we had three pilot sessions between Mundi School (Bulgaria), and Hrabal School (the Czech Republic).

As there were a lot of uncertain and vague issues that concerned us and limited time to resolve them, we needed to set clear goals in order to make sure that the pilot sessions would be efficient and helpful. Accordingly, some of the main aims of the pilot project were to investigate: a) students' response to the telecollaborative exchange, b) data collection methods for audio/video recording, c) institutional limitations (schedule restraints, time limits, technology use), d) task design (Martin, 2013, Cabrero, 2013), and e) dyad formats (i.e., class-to-class, pair-to-pair, one-to-one).

The pilot project helped me detect certain potential problems, primarily technological ones which required the support of a technician. Likewise, I realized that it was very important to select discussion topics which were interesting and meaningful to the students and be especially cautious as far as pairing is concerned. I also became conscious of the fact that I had to be more active and engaged with students during the preparation phase of the exchange. The results of this preliminary project were crucial for establishing the design features and procedures of the two educational projects, which began in the spring of 2018, that are the focus of the present article.

2.2 Participants

Learners from Mundi School (Bulgaria), Lluís Anton School (Spain) and Anglia School (Spain) took part in the study. A total number of 28 students, aged between 10 and 15 years old, from the three educational institutions participated, as well as 4 teachers who agreed to take part in the investigation. Only students from Lluís Anton School (Spain) had previous experience with videoconferencing projects, while Mundi School (Bulgaria) and Anglia School (Spain) had not participated in any such projects before. I, myself, am also considered a participant, as together with the teachers I participated in the design of both projects.

2.3 Data collection instruments

As mentioned, various data collection instruments were used in order to provide triangulation of the findings. The main source of data came from the post-project interviews, questionnaires, and the video recorded telecollaborative interactions. The field observation of the real-time internet-mediated interaction in the foreign language classroom offered my personal standpoint of the challenges encountered by the participants in the projects, both teachers and students. Table 1 below shows each of the research instruments and the purpose of its use.

---

[1] The names of all the schools, instructors and students are anonymized.

Table 1
Research instruments and the objective of their use

Research instrument	Objective
Post-project questionnaire for students	To collect information on the challenges students faced when carrying out the projects
Post-project interview with students	
Post-project interview with teachers	To collect information on the challenges teachers encountered in the organization and implementation of the projects
Video recordings of telecollaborative sessions	To collect interactional data of students' challenges during task completion
Field observations	To offer the researcher' point of view on teachers' and students' challenges during telecollaboration

2.4 First Telecollaborative Exchange Project: Specific Context and Project Design

In the first project participants from Mundi School (Bulgaria) and Lluís Anton School (Spain) participated in five telecollaborative sessions. As a result of time restrictions, space limits within the school premises and students' curriculum, only ten participants from Mundi School were able to participate in the project. As this was an extracurricular activity for all of them, after finishing school they had to rush to arrive at Mundi School on time for the telecollaborative project (very often without even having time for lunch). Consequently, taking this into account, Aina, the instructor at the participating Spanish school and I had to adapt and organize the exchange so as to meet these requirements. This meant that the ten participants from Lluís Anton School had to stay after their class time; therefore, their parents signed a written consent allowing their children to stay half an hour after school with the purpose to participate in a videoconferencing intercultural exchange with participants from a different country. This was a serious challenge and limitation for the project, as it caused students' attendance problems. Occasionally, and just before the beginning of the meeting, students would warn us that due to personal issues it was impossible for them to stay for the exchange that day. This left us with no other option but to be flexible and resort to other students who, on that day, were willing to participate. On some days, however, there were many volunteers who wanted to take part in the project. As a result of this, students from Mundi School could not always meet the same partner for each session, despite our wish and planification.

As all participants were under 18 years old, prior to the project, they were given a consent form to be signed by their parent(s). Based on results from the pilot project and a questionnaire that we distributed to the students before

the project, we compiled a list of possible topics for the telecollaboration project which learners indicated as appealing and interesting. Thus, in an attempt to motivate and stimulate the participants while providing them with the opportunity to communicate in English in meaningful environment, the instructors at the participating Bulgarian and Spanish schools selected five final discussion topics for the project out of the list.

I was present in the computer lab during task performance in order to make observations, monitor and provide technical or linguistic support if necessary. The Spanish participants were given task sheets with questions before every session, prepared by their teacher, which they could use in order to facilitate their conversation. This decision was taken by the instructor at the participating Spanish school, as she wanted to provide her students with additional support and make sure that it was a comfortable and enjoyable experience for the learners. The instructor at the Bulgarian school, however, decided not to do so.

As mentioned above, the instructors selected the discussion topics based on themes students have indicated as appealing, such as hobbies, routines, traditions, typical food, travelling, music, etc. The prompts for the discussion topics were adapted from a study conducted by Ware and Kessler (2014) in which they investigated the interactional patterns that emerge in a classroom learning environment shaped by the introduction of an online intercultural project.

Once the telecollaborative project was over, a post-project questionnaire was distributed to all participants. It contained questions concerning learners' own attitude towards this kind of interaction, the benefits and challenges of participating in such project (See Appendix 1). This data gave us valuable information about participants' retrospection and reflection after the completion of the telecollaborative project. In addition, immediately after the completion of the online exchange, post-project interviews (See Appendix 2) were conducted with the Spanish students at Lluís Anton School. As mentioned, I was present in the computer lab of the Spanish participating school during all telecollaborative sessions and took notes of both students and teachers' difficulties and problems. A couple of months later, I organized a trip to Bulgaria with the purpose of interviewing the Bulgarian participants, as well as investigating into their interest in taking part in yet another similar intercultural project, at the same time exploring potential additional or distinct discussion topics of their interest for the second project. Due to students' interest and motivation to discover and learn about different countries, cultures, and people and for the sake of enriching and supplementing the data collected for the present study, I decided to organize the next telecollaborative project between Mundi School (Bulgaria) and Anglia School (Spain).

2.5 Second Telecollaborative Exchange Project: Specific Context and Project Design

At the time of the organization of the second telecollaborative project, I was an English teacher, as well as a manager and Director of studies at Anglia School (Spain) which significantly facilitated the organizational process for the second project to be recorded. Similarly, as Mundi School (Bulgaria) had already participated in the first project, this time it was much easier and effortless to organize the second online intercultural exchange. What is more, my goal was, if

possible, that the same students from Mundi School would take part in the second project, this time with Anglia School. For the present project, however, I was determined to modify certain crucial features, which in the case of the first project had been unfortunately beyond my control, such as:

a) similar level of English of the participants
b) students' attendance issues
c) pairing of dyads according to common interests
d) teachers' support

The second project started in March 2019 and had a similar structure as the first one. The participation in both projects was entirely voluntary and it was not part of any assessment or school's assignment. It was a great challenge for the Bulgarian school to provide the participation of the same students as in the previous project due to school schedules, time restrictions and limits. These had to fit the Spanish students' available time as the Spanish participants conducted the meetings during their class time. For these reasons and complications with technology use we could finally match six dyads, meeting online once a week for a videoconference intercultural exchange. Fortunately, in this project we managed to coordinate and adjust everything so that the pairs remained stable, namely, participants met the same partner each of the five sessions.

The instructor at the Bulgarian participating school and I were capable of pairing the dyads with more precision and care this time as I was already relatively familiar with the personalities and interests of the Bulgarian students. This was thanks to the fact that I got to know them during the first telecollaborative project and later during the interviews which I conducted in person in Bulgaria. I also knew the students at Anglia School quite well as I had been teaching them for six months before the initiation of the project. The pairing process was complex, as the topics of interest were not the only factor taken into consideration. In fact, in this project we also paid attention to L2 skill levels when forming the dyads.

In the same way as in the first project, the instructors made the final list of discussion topics based on the themes students suggested themselves. Once the project finished post-project questionnaires were distributed and post-project interviews were conducted with both teachers (See Appendix 3) and learners. Similarly, I was present during the sessions and took observation notes of any obstacles that the Spanish participants encountered while carrying out the project.

3. Corpus and Data Analysis: The Value of MAXQDA Software

This article aims to offer an insight into the methodological challenges that can be encountered by the participating students, teachers and investigators in the organization and implementation of telecollaborative projects. Additionally, we want to demonstrate how MAXQDA software contributed to the analysis in the current investigation. As mentioned

above, the data was collected through various research instruments. Next, qualitative data analysis was conducted which consisted of content analysis as a method that is commonly used in educational research.

In view of that, participants' post-project questionnaires were transcribed and translated into English by the researcher (they were conducted in their native language) and later analyzed. Audio recordings of the face-to-face interviews and students' video interactions were coded directly, without the need of previous transcription, and analyzed. All coding of the data was conducted using qualitative analysis software MAXQDA, which facilitated the organization and systematization of the results. Below we provide information on the reason for choosing this software, more detailed description of its features and capabilites, and description of how we used it to achieve the specific objectives of this investigation.

In order to be able to store, organize, analyze and obtain results from the different data sources we resorted to MAXQDA data analysis software. It was of utmost importance that the selected software could import, play, transcribe, and code video footage for video analysis. MAXQDA also allowed for mixed method research. The user-friendly interface of the software made the organization of the data easy and visual, and it also permitted us to code and analyze video files without transcribing them. The screenshots below are taken from the software´s official site (https://www.maxqda.com). Figure 1 shows MAXQDA´s main interface.

**Figure 1**

MAXQDA´s main interface
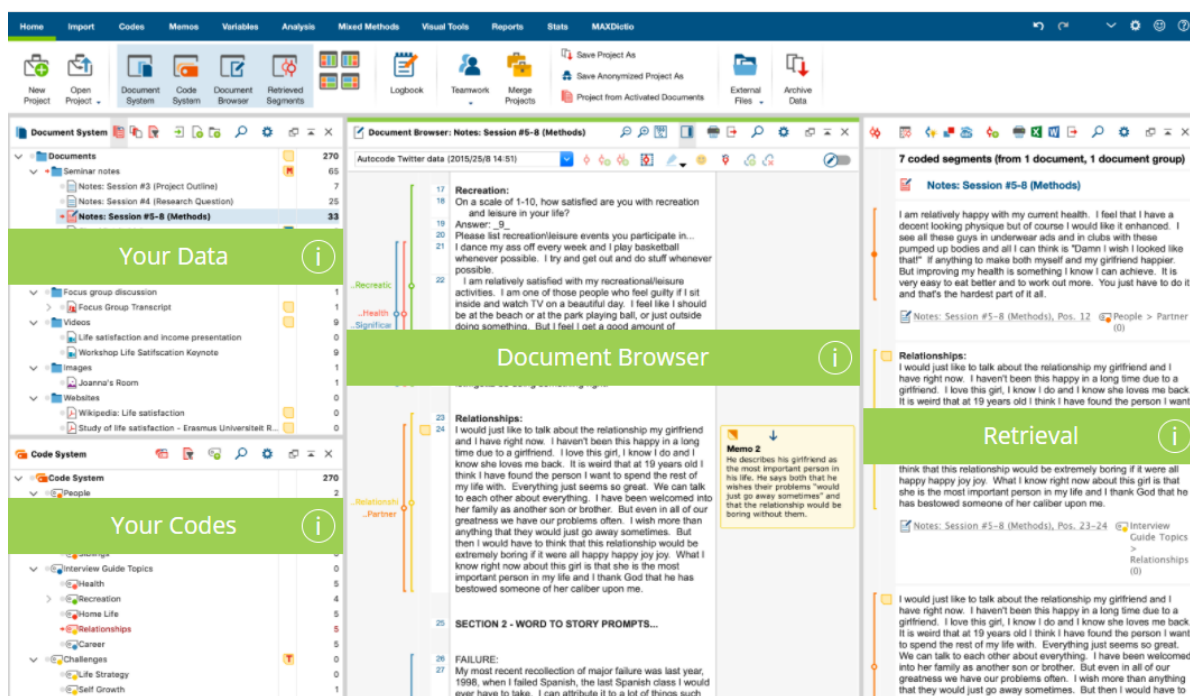
The division into four windows makes working with MAXQDA very easy and accessible. As can be seen on the screenshot (Figure 1), the first window, in the upper left corner contains the Document System, the window below contains the Code System, the window in the upper right corner is the Document Browser, and the fourth window is called Retrieved Segments.

To begin with, we imported all the files into the Document System window. The codes and subcodes that we later assigned to the data were visible in the Code System window. The Document Browser window is where we viewed and edited our data and, finally, in the Retrieved Segments window is where the results of our retrievals were displayed. Figure 2 below demonstrates the process of assigning codes to the text files, namely, the questionnaires and field observation notes.

Figure 2

Assigning codes to text files in MAXQDA
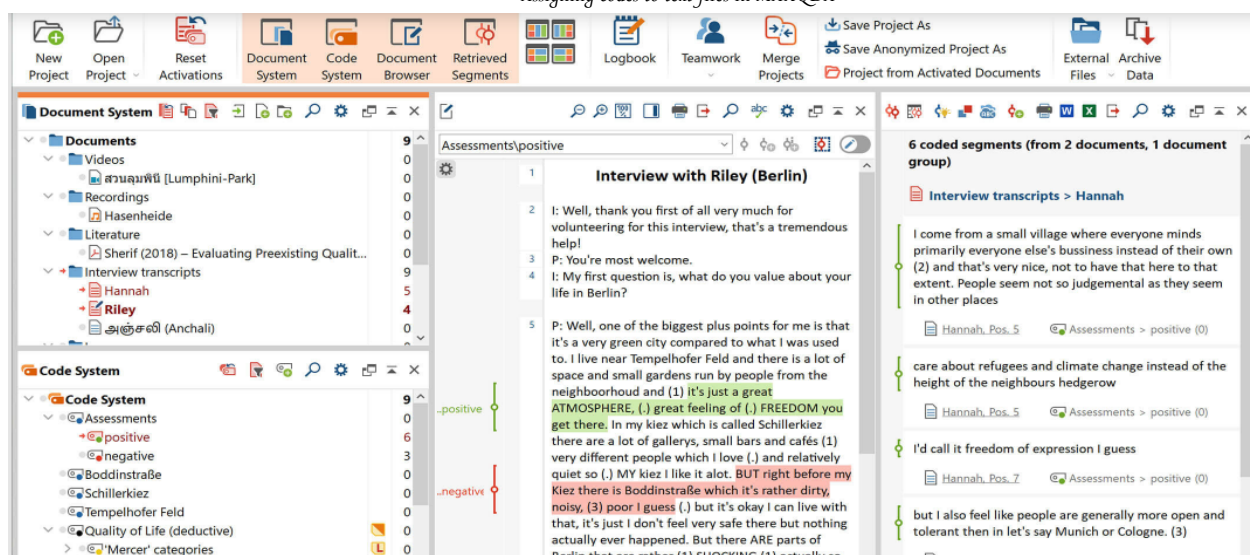
Due to the fact that our research focused also on video interactions, one of the most important features of MAXQDA was the possibility to assign codes directly to the audio/video file, without the need of previous transcription. We marked a segment of the audio/video file or so called "clip" and directly assigned it a code. As we can see in the screenshot below (Figure 3), the codes appeared in different colors below the video. The codes also appeared in the Code System window where they could be categorized in a hierarchical system. The codes were later easily retrieved with just a simple click, which activated the document/video file that we wanted to analyze and it was shown in the retrieval window. MAXQDA's visual tools were very helpful for our research as we could visualize repetitive patterns, compare documents, or use MAXMaps to visualize connections in our data. The software offers different licenses for the educational, public and private sector, with special discounts for students and PhD candidates.

Figure 3
Assigning codes to video files in MAXQDA
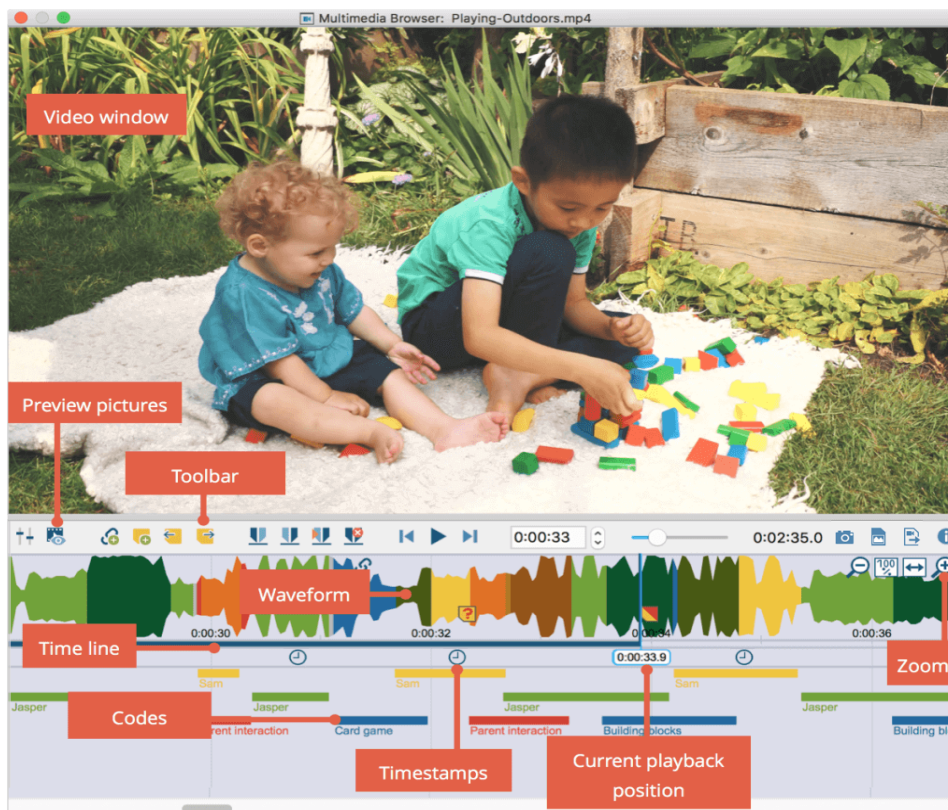
Overall, the analysis of the data showed that learners believe that the telecollaborative projects improved their confidence, encouraged sharing of ideas, views, opinion and experiences and provided real-time situations in which they felt the necessity to use English. As we see in (1), the videoconferencing technology helped students interact with international participants which made it particularly enjoyable for everyone.

(1)
Angela (Lluís Anton School, Spain): *I liked the project a lot! ….I am more or less good at English, even though I don't know a lot of vocabulary… and because in class they don't teach us a lot of English I feel like I don't know the vocabulary… so speaking with another person helps me in my performance in English, to understand better and how to explain things. I have failed in some things because I am not English but I have seen that I have improved my English and how to interact with others in English. It is better like this because the other person is also starting to speak English, she is not English either, even though she speaks well but yet we are at more or less the same level and so I could communicate with her, despite the fact that her level was a bit higher. But well, we were quite similar because we understood each other. I sometimes got nervous…I don't know why, especially during the first sessions because I didn't know how I will manage to speak but after a few sessions I was not so nervous.*

However, various challenges were identified in the data, such as the emotional level and the importance of pairing process. Müller-Hartmann (2000a and 2000b) recommends that students first need to develop rapport with their virtual partners in order to create an atmosphere in which different cultural meanings can be explored and a 'change-in-perspective' can be achieved. To facilitate the development of such a favorable environment, Müller-

Hartmann (2000a and 2000b) suggests that exchanges should have adequate initial stages which would include activities, such as the exchange of photos or videos, e-mails describing students' hobbies and interests prior to the beginning of the project. This was a significant drawback for Andrea, a student from Anglia School, Spain, who considered the project not to be very beneficial due to the lack of good relationship between her and her partner Iana (2). Curiously, Iana never implied to have noticed anything of this kind; on the contrary, she felt content to learn about her partner's point of view and lifestyle.

(2)

Andrea (Anglia School, Spain): *I did not like the fact that with my partner we did not have a lot in common and sometimes it was uncomfortable as we ran out of topics to discuss or she did not contribute to the conversation a lot. I would have change the way the pairing is done. The entire project would have resulted better if you got on well with your partner, therefore, I think it would have been better if we had introduced each other through a letter or a video beforehand and depending on the things we have in common, select the partner.*
Honestly, the project was not very beneficial, I suppose because my partner did not like me very much.

Malek is another participant from Lluís Anton School, Spain, whose parents are from Pakistan, and therefore, he is considered to have multicultural background as well. This fact makes his response (3), that he has not learned anything about the culture but the traditions and celebrations, quite alarming and perplexing. If he does not consider traditions and celebrations as an integral part of the cultural heritage of a country, it makes us contemplate the necessity of raising more intercultural awareness and knowledge among students. As we have already mentioned, the sheer participation in telecollaborative projects does not automatically lead to linguistic and intercultural knowledge, but these projects need to be set up carefully and involve previous preparation and active teacher support.

(3)

Malek (Lluís Anton School, Spain): *I haven't learned anything about their culture but I have learned about their traditions and that they celebrate many holidays which are celebrated in other European countries.*

Actually, Malek's teacher, Aina, raised this issue in her post-project interview (4). She stressed the necessity of prior preparation as one of the fundamental requirements for the successful outcome of the project. She claimed that more attention and in-class work is needed in order to prepare the students for more in-depth conversations. Apart from this, she mentioned other challenges, such as lack of time and difficulty to fit a project of this kind within the busy school curricular, logistic and timetable issues among others.

(4)

Aina (teacher at Lluís Anton School, Spain): *I have to say that the continuity and consistency of the project are fundamental. The fact that they had the topic previously set and having to arrange with the other person to talk about the same topic was great… But we lack time for preparation and, well the kids did what they could and it was fine. I like it very much because it was not only "come on let's chat!", no, it was "we must talk about this topic".*
I wish more children could have had the opportunity to participate in the project, even though they would be different children every, everything else was great. It was very well organized, thanks to you and the other teacher, as you arranged the time of the meetings and the topics…it was only possible thanks to your help, if not, with our day-to-day duties it would have been extremely difficult. Firstly, finding the school was a challenge and then also managing to fit their and our timetables….as you remember, we had to ask for the parents' permission to let their children stay after classes were over.

But well, it was very useful because until now they had never felt the necessity to communicate with someone in English…if only we had worked it better in the classroom!…How to make longer sentences…this is something we need to focus on in class, not only projects, projects…but also dedicate in-class time to this experience, to the oral communication. I could see that the kids just hung up without saying goodbye, just like that, they hung. These are the basic norms that I would like to work on next year and hopefully we have opportunity to organize a project like this again.

While most participants perceived significant improvement in their ability to communicate in English, yet some of them, mainly students with high level of language proficiency, reported that they did not notice considerable improvement in their communication skills. It is important to point out that only a small number of participants stated such lack of improvement, however, their overall perception of the telecollaborative experience was very positive. In 5, 6 and 7 below we see Andrea (Anglia School, Spain), Iana (Mundi School, Bulgaria) and Patricia's (Anglia School, Spain) responses in the post-project interview to the question whether they have noticed any improvement in their language skills after the project. We can clearly observe that in their replies all three participants mentioned that they attribute this lack of improvement to the insufficient duration of the project, that is, the limited time that they had to dedicate to such experience. They also revealed that having had more sessions might not only have led to better linguistic skills, but would as well have given them the opportunity to discuss broader topics and engage in more in-depth discussion on the topics.

(5)
Andrea (Anglia School, Spain): *No, because there were very few sessions so as to notice so rapidly an improvement.*

(6)
Iana (Mundi School, Bulgaria): *I don't think it has improved considerably. Maybe if we had the chance to speak more, yes.*

(7)
Patricia (Anglia School, Spain): *Yes, this project helped me expand my vocabulary and I have used everything I know. I think that only 5 sessions are not enough so as to see a change in your language level. Honestly, I expected to improve more.*

Undeniably, all participating teachers in these educational projects found this experience enjoyable and beneficial for their students. Yet, we wanted to investigate into the challenges and difficulties they faced during the organization and implementation of such innovative project in the schools' curricular. In line with the drawbacks mentioned by the students, the teachers mentioned the difference in language proficiency (9, 10 and 11), the insufficient duration of the project (8), the lack of involvement of some participants (9, 11), and the technology (9) as some of the major obstacles. Teachers also stated the complexities of organizing an online synchronous project, such as difficulty in finding a partner school, matching the objectives and the schedules, organizing the tasks and pairing of the students, among others.

(8)
Aina (teacher at Lluís Anton School, Spain): *I think that the project was very interesting for the children mainly because they use English in real communicative situation, they need to use it. If you do an activity in class they just don't see this need and they*

TEISEL

Tecnologías para la investigación en segundas lenguas

ISSN 2696-676X

UNIVERSITAT DE
BARCELONA
Facultat de Filologia
i Comunicació

don't take it seriously. In my opinion, with this project we have managed to make the children see this necessity to learn a language, so that they can speak and communicate with others, otherwise they realize they cannot understand.

I saw a change in children's attitude because as we took them from different levels, well, there were kids who were not interested in English at all and so I saw how they were making a big effort to understand and speak using the resources that they had to communicate with the other kids, and this was fundamental. This was the idea of the project, change their perception…the only bad thing was that too few could participate.

And also I think that we needed more sessions because I could observe the change in their attitude after the third or fourth session…before that it was just "well, I just go and chat and that's it"….and it was not until a few sessions had passed that Malek saw the need to study and learn in order to be able to communicate with his partners.

(9)

Boyana (teacher at Mundi School, Bulgaria)*: Well, the level of the language…they were sometimes laughing at some .."ahh this one said so..". and also the thin we already mentioned, that they asked the same questions, some of them of course, not everybody. The pronunciation also….but it was emotional to see in front of you totally different children, with different attitude…ah yes, maybe something they didn't like is their attitude, they were too relaxed, were nor serious towards the idea…but they wave, they laugh…well, the boys mainly. And the other problem was the technology, I expected it to be at a higher level, with the widespread use of internet but…*

Well, what else can I say? This was a precious experience for both students and teachers and it provoked more ideas for future projects.

(10)

Lidia (teacher at Mundi School, Bulgaria): *Maybe the difficulty that my students faced was that the Spanish ones were often late. Also, the Spanish students' lower level of English was a bit challenging.*

(11)

Marina (teacher at Mundi School, Bulgaria): *In my opinion they enjoyed their talks with the Spanish children a lot. It was a great opportunity for them to meet someone with different culture, background and habits. The only thing they didn't like much was the difference in their language skills and preparation. They think some of the Spanish children couldn't understand their questions.*

The project was a breath of fresh air in the learning process at Mundi language school.

Yet again, the result of the analysis of both students and teachers' responses indicates the overall favorable view regarding the impact of this innovative tool on learners' communication skills and motivation. However, as Dooly (2011) warns, technology is not a "panacea for challenges facing language teachers", referring to Warschauer's words from 1996 which still seem valid even today:

> "New technologies will not revolutionize, or even improve, language learning unless they are well understood and intelligently implemented. The Internet itself is only a tool, albeit a powerful one, in the hands of good or bad pedagogy" (Warschauer, 1996, p. ix).

4. Results and Discussion

As Magnan (2008) suggests, "although online CMC can provide unprecedented opportunities for quick, extensive, and reasonably authentic exchanges and collaborations between learners in different countries and cultures, there are a number of inherent challenges that can be obstacles to successful L2 learning, and particularly to successful C2 or

intercultural learning" (See O'Dowd & Ritter 2006, who developed a structured inventory of factors, suggesting 20 different factors at four different levels: individual, classroom, socio-institutional, and interaction). We will see all these levels reflected in the kind of challenges that were encountered when implementing educational projects.

a) Challenges for teachers

Throughout our two telecollaborative projects, the teachers involved and I were able to fit within different course curricula and time limits (socio-institutional level), and managed to agree on common pedagogical goals', not without obstacles and complications. We did not, however, have control over learners' motivation (individual level), groups' dynamics, technology issues and pre-exchange briefing time in the first project (classroom level).

At the beginning of the first project there were more students from Lluís Anton School willing to participate in the project than from Mundi School, which caused problems as far as student pairing and project design was concerned. As I noted during my observations, in many occasions one student from Mundi School had to share his online time with two students from Lluís Anton School and he ended up being a bit frustrated and demotivated at times, as he had to repeat everything all over again. Another very serious problem that we encountered was the students' attendance at Lluís Anton School. Since this factor was beyond our control, we had to be flexible and quick in finding substitute students, which caused serious pairing disruption. However, as the project was out of their class time and was not part of the course curriculum, we were not capable to resolve this problem. Additionally, since the project was an extracurricular activity and because of students' busy schedule, our pre-exchange briefing time was extremely limited. For this reason, and to minimize the risk of breakdown in communication, all participants from Lluís Anton School were given task sheets with questions related to the topic that was to be discussed in the current meeting. On the other hand, students from Mundi School were able to dedicate in-class time to project preparation and discussions. On a few occasions, participants from Mundi School complained about their partners' English level, or the fact that they did not demonstrate enough interest in the topic under discussion (interaction level in O'Dowd & Ritter, 2006).

In the second project (Mundi School-Anglia School) most of the abovementioned risks of potential "failed communication" were minimized. Due to the fact that I was, at that time, rather well acquainted with both Spanish and Bulgarian participants, I took into account language proficiency levels, personality, and attitude toward the project (Martín, 2013) and pairing was successful without any significant breakdown in communication or reduced group dynamics. Furthermore, enough time for pre-exchange briefing was provided and students' attendance issues were insignificant.

Although both the instructors and I tried to anticipate and prevent potential problems with technology through tests and experiments during the pilot project, some technological hindrances did appear in the course of the projects. In spite of the invaluable support and help of the technician in the first project, we lost the recordings of three

conversations due to software issues. Likewise, during the second project one participant lost the recordings of two sessions, most likely as a result of the personal settings of his electronic device.

Many studies have demonstrated the exceptionally positive attitude of participants - both students and educators - to telecollaborative activities. Caluianu (2018), for instance, reports that over 80% of the students and more than 70% of the educators surveyed in Helm (2015) agreed that taking part in a telecollaborative exchange was a positive experience. Among the benefits listed by student participants were: learning to communicate with people from other cultures, improving language skills and becoming more proficient in the use of online tools to communicate. Despite the support from European organizations, such as the European Commission and the Council of Europe, and in spite of the high satisfaction levels of participants in these exchanges, telecollaboration has yet to bring to light its potential "as telecollaboration has not been mainstreamed into higher education" (Helm, 2015). The cause for this delay, as Caluianu claims, might be due to the difficulties faced by practitioners of the method, some of which are difficulties in coordinating timetables, levels of proficiency and educational goals, lack of institutional support, cultural clashes, and lack of time. Most of the educators surveyed in Helm (2015) stated that telecollaboration was time-consuming (84%) and many referred to technical issues.

The current study has also detected that the organization of a telecollaborative exchange is extremely challenging. However, we should understand the dynamics of telecollaborative exchanges and recognize that "failed communications", as we have seen in the present study, are very often a result of complex factors and, therefore, sometimes inevitable. As Magnan (2008) argues, when organizing intercultural exchanges, "there are a number of extralinguistic, social, cultural and institutional factors that must be dealt with beforehand in order to ensure successful collaborations, for example, finding appropriate and compatible partner classes and colleagues to work with; finding sufficient overlap in the calendars/schedules of the two institutions" (see Belz, 2001; Belz & Müller–Hartmann, 2003), or dealing with different expectations from the project (Thorne, 2003; Ware 2005). Moreover, the differences in linguistic proficiency of both learners, as well as individual differences, such as motivation, attitudes and the maturity of the learners, must also be considered, as we have seen in this investigation.

b) Challenges for students

When selecting a partner class for the telecollaborative project, several factors have to be taken into account. For instance, the academic calendars of the participating institutions should match allowing for the desired length of the exchange, which was one of the challenges that the participants stated. Motivation was another issue mentioned by the learners. Therefore, it is important that both classes have motivation for the project because, if one group of students is not motivated, the success of the virtual exchange may be put in danger. According to Schenker (2012), students who have no motivation "may not participate fully, may not fulfill all requirements, or may not respond in

timely manners". Besides, she adds that "lack of motivation may impact the amount of willingness students demonstrate to communicate cross-culturally and their receptiveness to learning about the target culture and language."

Importantly, the classes need to have similar language abilities in order to communicate together in the target language so that both sides are able to complete the assigned tasks together and can learn collaboratively. In the first project we did not have the last word in the design and we had to adapt the number and the selection of participants to schools' suggestions. Therefore, my observation notes and the video recordings of the first project demonstrate that there were dyads with a significant difference in their language proficiency, which caused understanding problems, frustration and often a certain inability to maintain the conversation and fully perform the tasks. In the second project we managed to pair the students better, in accordance to their linguistic level. As a result, the second project went smoothly, without any major breakdowns in communication or dissatisfaction of the participants.

Another factor to consider is the class size. In a telecollaborative exchange, it is important that every student can have a partner, that is, class sizes should be similar (O'Rourke, 2007). In the first telecollaborative project we ran into this problem as there was a different number of students on both sides willing to participate. As a result, some learners had to share their time online with various partners, which, I observed, also led to motivation issues and sometimes caused dissatisfaction and loss of interest. This lack of reciprocity also affected the duration of the sessions which was at times uneven among the dyads.

Before the beginning of the telecollaborative exchange, students must be prepared for their role in the project. This pre-session stage might influence strongly on the way students engage in the exchange and retain their motivation hence it might affect the overall fruitful outcome and positive attitude towards the whole experience. The preparation stage should be dealt with responsibility and precision in the face of finding a way to fit it within the traditional course curricula. In the case of telecollaboration, this preparatory phase should include work on specific discourse styles, linguistic and pragmatic competence, and, without a doubt, a focus on raising students' awareness of IC, the concept of culture, the differences and the connection with the two targeted cultures. Very often we anticipate that students would have understanding of the connection between language and culture but, in the case of this study, whose participants were young adolescents, we have realized that they needed some guidance and aid in order to cope successfully with the multilayered and complex field of intercultural communication. For instance, Malek who is accustomed to living in a multicultural society (his parents are from Pakistan and he lives in Spain) and spoke several languages (Spanish, Catalan, Urdu, and English) showed lack of knowledge on what culture is, what it includes and how to discover differences and similarities between the cultures. Therefore, we believe that there is a need to introduce telecollaborative exchanges but these should be included more systematically in the curricular along with a solid introduction to basic notions of intercultural communication in the target language and culture. In the first project we did not have the opportunity to previously brief students on topics such as culture and intercultural communication

and, as a result, a lot more intercultural misunderstandings and troubles were detected, as opposed to the second project, in which learners had sufficient time for preliminary in-class preparation.

c) Challenges for researchers

Since the investigators are normally also participants in the telecollaborative projects, they are, therefore, faced with the challenges that students and teachers encounter during the organization and implementation of such projects. Thus, when investigating telecollaborative interactions researchers confront and need to handle most of the problems and complexities that we have described above in sections a) and b). An added challenge for the investigators, however, is the process of collecting, organizing, and analyzing the data collected through multiple instruments. In this study, MAXQDA software was used as a tool for analysis.

The study presented here demonstrates the potential of using this software for qualitative data analysis of students' interactions during task-based synchronous videoconferencing with learners from a different cultural and linguistic background. When investigating the features of such software programs, they all present advantages and limitations that one should take into consideration before choosing to use them to conduct qualitative research (Mavrikis & Geraniou, 2011) since each software is created with a different purpose in mind.

Some software is built for Grounded Theory method which creates a large quantity of codes without relying on previously defined categories and after that connects, merges and relates these codes to each other. That is, it is meant to find patterns within a text. Content Analysis, however, works differently as it creates its own categories which are later applied to the text. Therefore, it is the goals of the research and the research questions that should determine our choice of data analysis software.

MAXQDA is based on a classification system where data is organized into previously defined categories. For each document individual variables can be assigned, which allows it to work with many statistical programs. The coded segments are categorized into a tree structure built of several levels of codes and sub-codes. The analysis is usually done with a Mixed Methods approach (https://methodos.hypotheses.org/1533), incorporating both qualitative and quantitative methods.

As mentioned, we found MAXQDA's option of assigning a code directly to the audio and video file without previous transcription very useful. Also, the facility and ease with which we could retrieve the data segments that we wanted to analyze, the ability to write notes, as well as to quantify and visualize the results determined our choice of software. Additionally, MAXQDA generates a variety of reports, Memo Manager, Summary Grids and Summary Tables which can be helpful when offering a holistic approach of the data. These can also be exported for further analysis into other formats, like a Word document, Excel spreadsheet and others.

TEISEL
Tecnologías para la investigación en segundas lenguas

ISSN 2696-676X

UNIVERSITAT DE BARCELONA
Facultat de Filologia
i Comunicació

Conclusion

The writing up of this investigation coincided with the COVID-19 lockdown crisis in which language teachers around the world, like myself, had to implement Emergency Remote Teaching (Hodges et al., 2020). Although the current study was designed and carried on with students who were in the classroom before the COVID-19 crisis, it shows results that should be taken into account when implementing intercultural telecollaborative projects with learners who are fully online. I believe that such projects will become more motivating and appealing in a world in which both students and teachers have become more accustomed to communicating online. Therefore, I trust that further research should and will be done in this area, specifically focusing on the use of videoconferencing technology to enhance language learning and intercultural awareness. Additionally, this article has demonstrated that MAXQDA qualitative data analysis software enabled the analysis from multiple perspectives and aided systematic approach to the data in this investigation whose purpose was to look into the potential of videoconferencing technology for intercultural exchange in educational environment.

References

Akiyama, Yuka; Cunningham, Joseph (2017). Synthesizing the practice Of SCMC-based Telecollaboration: A SCOPING Review. *CALICO Journal, 35*(1), 49-76. https://doi.org/10.1558/cj.33156

Avgousti, Maria Iosifina (2018). Intercultural communicative competence and online exchanges: a systematic review. *Computer Assisted Language Learning*, *31*(8), 819-853. https://doi.org/10.1080/09588221.2018.1455713

Awad, Hiltrud (2019). *Exploring the Intercultural Competences of High School Students: A Case Study of Traditional Classrooms in a Minimal-Cultural-Gap Context* [Doctoral dissertation. University of Pompeu Fabra]. http://hdl.handle.net/10803/667672

Belz, Julie Anne (2001). Institutional and individual dimensions of transatlantic group work in network-based language teaching. *ReCALL*, *13*(2), 213–231. https://doi.org/10.1017/S0958344001000726a

Belz, Julie Anne (2003). Linguistic perspectives on the development of intercultural competence in telecollaboration. *Language Learning & Technology*, *7*(2), 68-117. http://dx.doi.org/10125/25201

Belz, Julie Anne; Müller–Hartmann, Andreas (2003). Teachers as intercultural learners: negotiating German? American telecollaboration along the institutional gault line. *The Modern Language Journal*, *87*(1), 71-89.

Cabrero, Tecedor Marta (2013). *Developing interactional competence through video-based computer-mediated conversations: Beginning learners of Spanish*. [Doctoral dissertation, University of Iowa]. https://doi.org/10.17077/etd.t6sm6wlt

Caluianu, Daniela (2018). Telecollaboration: Foreign Language Education in the Digital Age. *小樽商科大学人文研究*, *135*, 49-74.

Dooly, Melinda (2011). Crossing the intercultural borders into 3dr space culture(s): Implications for teacher education in the twenty-first century. *Language and Intercultural Communication, 11*(4), 319-337. https://doi.org/10.1080/14708477.2011.599390

Dooly, Melinda (Ed.). (2008). *Telecollaborative language learning: A guidebook to moderating intercultural collaboration online*. Peter Lang

Dooly, Melinda; O'Dowd, Robert (Eds.). (2012). *Researching online foreign language interaction and exchange: Theories, methods, and challenges*. Peter Lang.

Guth, Sarah; Helm, Francesca (Eds.). (2010). *Telecollaboration 2.0. Language, literacies, and intercultural learning in the 21st century*. Peter Lang.

Helm, Francesca (2015). The practices and challenges of telecollaboration in higher education in Europe. *Language Learning & Technology*, *19*(2), 197-217. http://dx.doi.org/10125/44424

Hodges, Charles; Moore, Stephanie; Lockee, Barb; Trust, Torrey; Bond, Aaron (2020). The difference between emergency remote teaching and online learning. *Educause Rewiew*. https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning

Magnan, Sally Sieloff (2008). *Mediating Discourse Online*. John Benjamins.

Martin, Veronique (2013). *Mediational Effects of Desktop-Videoconferencing Telecollaborative Exchanges on the Intercultural Communicative Competence of Students of French as a Foreign Language*. [Doctoral dissertation, University at Albany]. https://eric.ed.gov/?q=exchange&ff1=pubDissertations%2fTheses+-+Doctoral+Dissertations&pg=3&id=ED563757

Mavrikis, Manolis; Geraniou, Eirini (2011). Using Qualitative Data Analysis Software to analyse students' computer-mediated interactions: The case of MiGen and Transana. International Journal of Social Research Methodology, *14*(3), 245-252. https://doi.org/10.1080/13645579.2011.563623

Müller-Hartmann, Andreas (2000a). The role of tasks in promoting intercultural learning in electronic learning networks. *Language Learning and Technology*, *4* (2), 117-135. http://dx.doi.org/10125/25103

Müller-Hartmann, Andreas (2000b). Wenn sich die Lehrenden nicht verstehen, wie sollen sich dann die Lernenden verstehen? Fragen nach der Rolle der Lehrenden in global vernetzten Klassenräumen. In Lothar Bredella, Herbert Christ & Michael Legutke (Eds.), *Fremdverstehen zwischen Theorie und Praxis* (pp. 275-301). Tübingen.

O'Dowd, Robert (2011). Intercultural Communicative Competence Through Telecollaboration. In Jane Jackson (Ed.), *The Routledge Handbook of Language and Intercultural Communication* (pp. 1-33), Routledge. https://doi.org/10.4324/9780203805640.ch21

O'Dowd, Robert (2016). Emerging Trends and New Directions in Telecollaborative Learning. *CALICO Journal*, *33*(3), 291-310. http://dx.doi.org/10.1558/cj.v33i3.30747

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

O'Dowd, Robert; Ritter, Markus (2006). Understanding and working with 'failed communication'in telecollaborative exchanges. *CALICO Journal, 23*(3), 623-642. http://dx.doi.org/10.1558/cj.v23i3.623-642

O'Rourke, Beto (2007). Models of telecollaboration (1): eTandem. In Robert O'Dowd (Ed.), *Online intercultural exchange* (41-61). Multilingual Matters.

Prensky, Marc (2001). Digital natives, digital immigrants. *On the Horizon*, *9*(5), 1-6.

Schenker, Theresa (2012). *The effects of a virtual exchange on language skills and intercultural competence* [Doctoral dissertation, Michigan State University]. https://eric.ed.gov/?id=ED545831

Thorne, Steven (2003). Artifacts and cultures-of-use in intercultural communication. *Language Learning & Technology*, *7*(2), 38-67. http://dx.doi.org/10125/25200

TEISEL
Tecnologías para la investigación en segundas lenguas

ISSN 2696-676X

UNIVERSITAT DE
BARCELONA
Facultat de Filologia
i Comunicació

Trenchs-Parera, Mireia (2019). Higher education language policies at the crossroads of glocal challenges: Rethinking multilingualism, internationalization and public service in Catalonia. In Laura Marqués Pascual & Antonio Cortijo Ocaña (Eds.), *Second and Third Language Acquisition in Monolingual and Bilingual Contexts* (pp. 15-44). Juan de la Cuesta.

Trenchs-Parera, Mireia; Pastena, Andeana (2021). Exploring transcultural competence in the internationalised university classroom: The role of intercultural friendships and plurilingualism in the construction of a transcultural identity. *Journal of Multilingualism and Multicultural Development*, 1-15. https://doi.org/10.1080/01434632.2021.1874391

Ware, Paige (2005). 'Missed' communication in online communication: Tensions in a German- American telecollaboration. *Language Learning & Technology*, *9*(2), 64-89. http://dx.doi.org/10125/44020

Ware, Paige; Kessler, Greg (2014). Telecollaboration in the secondary language classroom: case study of adolescent interaction and pedagogical integration. *Computer Assisted Language Learning*, *29*(3), 427-450. https://doi.org/10.1080/09588221.2014.961481

Warschauer, Mark (Ed.). (1996). *Telecollaboration in foreign language learning*. University of Hawai'i at Mãnoa Second Language Teaching & Curriculum Center.

Warschauer, Mark; Kern, Richard (Eds.). (2000). *Network-based language teaching: Concepts and practice.* Cambridge University Press.

Wells, Gordon (1981). Becoming a communicator. In Gordon Wells (Ed.), *Learning through interaction: the study of language development* (pp. 73–115). Cambridge University Press.

Xiao, Mingli (2007). *An empirical study of using internet-based desktop videoconferencing in an EFL setting*. [Doctoral dissertation, College of Education of Ohio University]. https://etd.ohiolink.edu/apexprod/rws_etd/send_file/send?accession=ohiou1194703859&disposition=attachment

APPENDICES

APPENDIX 1: Post-project questionnaire

/English version/[2]
1. Did you like the project? What exactly did you like?
2. What did you not like about it? What would you change?
3. How did you feel during the conversations? Why did he feel that way?
4. When he didn't understand your partner, what did he do?
5. What were your expectations before the project? Did these expectations come true?
6. What was different from what you expected? Did anything surprise y
7. What did you learn about their culture?
8. What similarities and differences did you find between you and the Spanish children?
9. Do you think your English will improve after this project? How/what exactly?
10. What has this project contributed to you personally?
11. If this is the second project in which you participate, what differences and similarities do you find between the two? What did you like more and what did you not like?

Thank you for your participation!

---

[2] All participants conducted the interviews and questionnaires in their native language, Spanish or Bulgarian respectively. Here, we provide only the English version.

APPENDIX 2: Post-project interview for students

Interview protocol

Thank you for coming. I appreciate the time you've taken to come in for this talk. The purpose of it, other than giving me a chance to know each of you a little better, is also to find out more about English teaching in Spain/Bulgaria, which helps my research project[3] [4]. Do you mind if I have the tape recorder running?

1. What is your opinion about the project? What was the best and the worst part of using videoconferencing in these sessions?/ What did you enjoy most/least about the project?
2. What did you learn from it?
3. Is it a good way to learn English? Why (not)?
4. Do you think your English improved as a result of participating in this online learning project? What aspects have you felt improved in your English? Which ones do you think didn't improve? If Not, why not?
5. How did you feel about the task (i.e. did you enjoy it, find it boring, dislike it, learn a lot from doing it, etc.)? Please briefly explain your answer. *(Always pros and cons!!!!!)*
6. How would you compare learning in this way with participating in more conventional language classes?
7. Do you think it is better or worse than the activities you do in your classroom? What activities did you like/not like?
8. Do you think videoconferencing should be incorporated in your language classes? Why? Why not? How?
9. During the sessions did you sometimes not understand what the other student was saying? What did you do?
10. Did you at any time pretend you understood your partner?
11. Did you feel uncomfortable/nervous?
12. Do you think talking with the students online was similar to talking in real life? In what sense?
13. When you noticed a mistake made by your partner did you sometimes correct him/her? How did you correct him/her?

---

[3] The post-project interviews were semi-structured and did not follow a strict order or content of the questions.

[4] The questions for the post-project interview were adapted from (Xiao, 2007) study.

APPENDIX 3: Teachers' interviews

Interview protocol

1. Have you had any previous experience with the use of technology in the classroom? If yes, can you explain in details about the experience?
2. Are you willing to use technology in the classroom? Why/not/?
3. Do you think this project will contribute with something to the learning process? If yes, how?
4. What did you learn from it?
5. Is it a good way to teach English? Why (not)?
6. Do you think your students' English improved as a result of participating in this online learning project? What aspects have you felt improved in their English? Which ones do you think didn't improve? If not, why not?
7. How did you feel about the task (i.e. did they enjoy it, find it boring, dislike it, learn a lot from doing it, etc.)? Please briefly explain your answer. *(Always pros and cons!!!!!)*
8. How would you compare teaching in this way with participating in more conventional language classes?
9. Do you think it is better or worse than the activities you do in your classroom? What activities did you like/not like?
10. Do you think videoconferencing should be incorporated in your language classes? Why? Why not? How?

Chimeva, Yordanka (2022). Organization, Implementation and Analysis of Telecollaboration in Two Educational Projects: Methodological Challenges and Contributions of MAXQDA Software. *TEISEL. Tecnologías para la investigación en segundas lenguas*, *1*, e-a_inv01, 1-24. http://doi.org/10.1344/teisel.v1.38362