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# What do students learn in virtual exchange? A qualitative content analysis of learning outcomes across multiple exchanges

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## ABSTRACT

Virtual exchange refers to the engagement of groups of learners in online intercultural interaction and collaboration with partners from other cultural contexts or geographical locations as an integrated part of course work and under the guidance of educators and/or expert facilitators. This study presents a qualitative content analysis of reported learning outcomes by students of English in a Spanish university following their participation in one of thirteen online intercultural exchanges. Based on the analysis of 345 learner portfolios, several key themes were identified which provide insight into the type of learning which virtual exchange can contribute to second language classrooms. These included how virtual exchange contributed to overcoming students' stereotypes, gaining confidence as communicators in their second language (L2) and reconceptualizing English as a tool for communication rather than as an abstract academic activity. A comparison of two models of virtual exchange within the dataset also revealed how task design can influence the outcomes of this activity.

## 1. Introduction

Virtual exchange (VE) is an umbrella term used to refer to the different ways in which groups of learners are engaged in online intercultural interaction and collaboration with partners from other cultural contexts or geographical locations as an integrated part of course work and under the guidance of educators and/or expert facilitators (Jager, Nissen, Helm, Baroni & Rousset, 2019; O'Dowd, 2018; O'Dowd & Lewis, 2016). Over the past two decades different models or applications of virtual exchange have emerged in the field of second language (L2) education such as telecollaboration (Belz, 2003; Warschauer, 1996) or e-tandem learning (O'Rourke, 2007).

Current debates on the economic and environmental cost of study abroad programs (Richardson, 2016), as well as the challenges to physical mobility posed by global pandemics (White & Lee, 2020) have made virtual exchange an attractive option for institutions of higher education as they search for sustainable and low-cost models of international learning which will serve as an alternative or complement to physical mobility programs (de Wit, 2016). Organizational and governmental support for virtual exchange is also growing. In Europe, the European Commission launched *Erasmus+ Virtual Exchange* in 2018, a flagship program which expanded the reach and scope of the Erasmus+ program via virtual exchange. In the United States, organizations and networks such as the SUNY center for *Collaborative Online International Learning* (COIL) (<http://coil.suny.edu/>) and the Stevens Initiative (<https://www.stevensinitiative.org/>) provide training and support for educators and institutions who are interested in integrating virtual

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exchange in their curricula.

Furthermore, in university second language education, there is also a growing interest in online platforms that provide 'ready-made' virtual exchange experiences for their students. These platforms function in different ways but the majority connect L2 learners with native speakers in videoconferencing sessions, usually in exchange for a fee which can be paid by the institution or the students themselves. They then provide the students and/or their teachers with recordings of the conversations which can later be used as part of students' course evaluation. This 'outsourcing' of virtual exchange takes a considerable organizational and technical burden off the teachers who no longer have to look for appropriate partners for their students but there is currently a lack of reliable research as to how learners can develop their linguistic and intercultural competences through such un-mentored and often decontextualized virtual conversations with native speakers. For more information on one of these applications, see a review of the *TalkAbroad* platform (Trego, 2021).

In the area of traditional 'class-to-class' virtual exchange there is already a large body of research which has examined student learning outcomes. However, the heterogeneous nature of exchanges can make it difficult to draw reliable conclusions as to the efficacy of particular models or configurations of telecollaborative learning. Virtual exchanges can differ according not only to class and learner profiles, but also according to the task sequences, the type of technologies and the manner in which their learning outcomes are evaluated. This can render generalizing across research studies extremely problematic. This problem is compounded by a lack of replication studies which set out to confirm the learning outcomes of particular models of virtual exchange across particular student cohorts. One notable exception to this was the European Erasmus+ project EVALUATE - *Evaluating and Upscaling Telecollaborative Teacher Education* (EVALUATE group, 2019) which examined the impact of the class to class model of virtual exchange over 1000 students of Initial Teacher Education who took part in 25 class to class virtual exchanges. A second interesting approach to replication studies in virtual exchange was taken by Nicolaou (2019) who used three iterative cycles of an online intercultural exchange project to test, refine and improve on her virtual exchange model with different sets of students.

The value of the EVALUATE study and its approach is that it demonstrated that the class to class model of virtual exchange had been effective repeatedly over a number of cohorts and that certain key learning outcomes could be observed across these cohorts. With this in mind, the study reported here aims to contribute to this approach by carrying out a qualitative content analysis of a corpus of student portfolios from Spanish students of English as a Foreign Language (EFL) who took part in one of 13 virtual exchanges which occurred over a four-year period. The 345 portfolios which were analysed in the study shared the following characteristics: They were completed by Spanish students of English as a Foreign Language at one particular institution of higher education who were studying towards upper-intermediate or lower-advanced levels (B2 or C1 according to the Common European Framework of Reference, 2001). They were also completed as part of a virtual exchange which was an integrated part of the study programs and the students were mentored in their online collaborations by their course teacher. Two of the exchanges formed part of the EVALUATE project.

The main difference which can be identified within this particular set of virtual exchanges is that five of the exchanges reflected the *telecollaborative* model of virtual exchange which involved students using both English and Spanish in their interactions with students of American, British or Irish universities. These exchanges involved focused discussion and cultural comparison tasks which are common to bilingual-bicultural exchanges. The remaining eight exchanges involved the *transnational* model of telecollaboration with partner classes from a wide variety of countries and involved discussion and comparison tasks, but also collaborative tasks where students were required to work together to complete a project or joint outcome using English as a lingua franca. (The differences between these two approaches will be looked at in more detail in the following section.)

### 1.1. Review of the literature

The vast majority of the reports in the literature on virtual exchange in L2 education are of bilingual-bicultural exchanges which involve two classes studying each other's *languacultures* (Çiftçi & Savaş, 2018; Lewis & O'Dowd, 2016). Exchanges of this type generally reflect one of two models of virtual exchange— e-tandem or telecollaborative exchange.

In the e-tandem model, students are generally required to communicate in both languages during their interactions and to act as informal linguistic tutors to their partners, providing feedback on their use of the target language. This e-tandem model has been in practice for over twenty years (Brammerts, 1996; O'Rourke, 2007) and it is still common practice today as evidenced in many reports of practice (Menard-Warwick, Heredia-Herrera & Palmer, 2013; Vinagre & Muñoz, 2011; Ware & O'Dowd, 2008) and the large body of research emerging from the related *teletandem* networks (Leone & Telles, 2016).

In the telecollaborative model of virtual exchange, exchanges combine L2 practice with an emphasis on intercultural learning. These exchanges typically involve tasks where partners present aspects of their culture to each other, compare their cultural practices and perspectives; or engage in discussions based on shared texts. Ryshina-Pankova (2018) reports on a German-American exchange where both groups read journalistic articles and watched movies on the topic of soccer patriotism and national identity before engaging in weekly online chats together based on the readings and their personal experiences of the topics. Similar, discussion-based approaches based on cultural topics and texts are reported by Mullen and Bortuluzi (2019), Schenker (2012) and Zeiss and Isabelli-García (2005).

Other common activities in telecollaborative approaches to virtual exchange include the use of parallel texts and *Cultura* questionnaires. Belz (2005) defines parallel texts as "linguistically different renditions of a particular story or topic in which culturally-conditioned varying representations of that story or topic are presented" (51). This approach has been employed in Anglo-French, Anglo-German and Anglo-Spanish contexts, engaging students in comparative explorations of, for example, the American film *Three men and a baby* and the French original *Trois homes et un couffin* or of the German fairy tale *Aschenputtel* by the Brothers Grimm and the animated Disney movie *Cinderella* (Belz, 2005).

The *Cultura* model (Furstenberg, Levet, English, & Maillet, 2001; O'Dowd, 2005; Orsini-Jones, Lloyd, Bescond, Lee, & Boylan, 2017) uses the possibility of juxtaposing materials from the two different cultures together on web pages in order to offer a comparative approach to investigating cultural difference. When using *Cultura*, language learners from two countries (for example, French learners of English and American learners of French) complete online questionnaires related to their cultural values and associations and then compare the results from both classes in online discussions. The developers of this model (Furstenberg et al., 2001) report that this contrastive approach helps learners to become more aware of the complex relationship between culture and language and also enables them to develop a method for understanding a foreign culture. Chun (2015) carried out a review of *Cultura*-inspired exchanges which are reported in the literature and identified a wide range of examples of involving France-Taiwan, China-USA, and the Philippines-USA.

Bicultural telecollaborative tasks such as the ones described here remain the most common in L2 classrooms. Helm (2017) reported on the results of a large-scale survey of 210 European university language teachers who had carried out virtual exchanges and found that the most commonly used tasks were discussion of topics or texts (76%), comparison of cultural products and customs (67%) and personal presentations (65%).

However, there is a growing interest in L2 education in *lingua franca* approaches to virtual exchanges (Kohn & Hoffstaedter, 2017) which give learners the opportunity to engage in online collaboration with partner classes who are not necessarily native speakers of the target language. For example, this may involve students from Spain, Sweden and Israel collaborating together in English as a *lingua franca* (ELF) (O'Dowd, Sauro, & Spector-Cohen, 2019) or students from France, Germany, the Netherlands and Spain using German as a *lingua franca* in their online interactions (Kohn & Hoffstaedter, 2017). These exchanges may involve cultural comparison and discussion, but they usually also involve tasks which require collaboration on themes beyond explicit bicultural comparison. This approach to virtual exchange has gained popularity in countries where teachers may struggle to find partner classes studying their languaculture (O'Dowd, 2016) and also due to the questioning of the role of native speaker in L2 education (Goodwin-Jones, 2019). On the theme of engaging students in virtual exchange with authentic 'cultural representatives' Kern (2014) writes: "The problem is, what a cultural representative meant in the 1980s is quite different from what it means in today's globalized world, where language, place, and community can no longer be assumed to go together" (p. 351).

One manifestation of this approach is the *transnational* model of virtual exchange (O'Dowd, 2019) which is characterized by tasks which focus on global themes and issues and which require students to work together to solve a problem or complete a task together, rather than focusing explicitly on differences in cultural practices or perspectives. This model of online collaboration therefore moves the focus of virtual exchange away from the national paradigm and the risk of reinforcing a simplistic equation of nation, language and cultural identity (Menard-Warwick et al., 2013; Risager, 2007) and towards an incorporation of local, regional, national, and global perceptions on cultural beliefs and practices. Goodwin-Jones (2019) confirms that "one of the benefits of telecollaboration is that it introduces students to colloquial speech patterns, possibly to regional language variations, and quite likely to the reality that assumed culturally homogeneous states are, in reality, quite diverse" (p.16). Transnational virtual exchange also often take on a global citizenship perspective by encouraging students to go further and work with members of other cultures in order to take action about an issue or problem which is common to both societies (Byram, 2008; Leask, 2015).

Examples of virtual exchange initiatives which reflect this transnational approach illustrate how it lends itself to connecting language learning with other curricular areas. Porto (2018) reports on a project which brought together primary school pupils in Argentina and Denmark to carry out various collaborative tasks related to ecological citizenship using ELF in their online communications. Lindner (2016) reports on an exchange between Sociology students from Germany and Slovenia who worked on collaborative tasks using English as a *lingua franca*. She found that the use of a *lingua franca* in virtual team contexts reduced awareness of national cultural and linguistic difference, encouraging instead more focus on the successful completion of the collaborative task and the emerging 'culture' of the virtual team. Transnational approaches are also very common in teacher education contexts where students of Initial Teacher Education work in international teams to create lesson plans or carry out comparative studies of their educational systems (Müller-Hartmann & Kurek, 2016; O'Dowd et al., 2019; Vinagre, 2017).

Numerous reviews and surveys of current practice coincide that collaborative tasks such as these are much less common in the literature (Helm, 2016; Lamy & Goodfellow, 2010) and there are various reasons suggested as to why this is the case. Goodwin-Jones (2019), for example, suggests that such tasks require more logistical support from teachers and that time and schedule constraints sometimes make it difficult to integrate such projects into semester timetables. A further reason may be that collaborative tasks are much more challenging for students to complete and can require a high level of collaborative skills which teachers may consider too demanding for learners.

Helm (2016) describes another variation of the *lingua franca* approach to virtual exchange under the term *critical approaches to telecollaboration*. She understands this approach as involving exchanges which seek to foster greater understanding of multiple "other" perspectives and to address social and political issues in an increasingly polarized world that seems to be characterized by conflicts, inequalities, and injustices. She outlines four assumptions of common telecollaboration, which critical approaches challenge. These are that online intercultural contact will lead to understanding and foster equality, the native speaker is the ideal interlocutor, the main aim of telecollaboration is simply to foster communicative and sociocultural competence, and, finally, that technology is a neutral medium (Helm, 2016). Various examples of Critical Telecollaboration already exist and are being carried out around the globe in different educational contexts. Many of these involve facilitator-led online interaction. The Soliya exchange format (Helm, 2016), for example, brings together students from the USA and Arab/Muslim countries to engage in open yet guided dialogue on cultural and political issues which affect their countries' relationships. An overview of the different approaches and models of virtual exchange in L2 education are presented in Table 1.

It is important to conclude this review by clarifying that a classification of L2 approaches to virtual exchange into *e-tandem*,

**Table 1**

Overview of models of virtual exchange in L2 education.

Approach	Model of Virtual Exchange	Set-up	Typical Tasks
Bilingual- Bicultural	E-tandem	Practice of both languages / Provision of linguistic feedback to partner	Informal conversation tasks / Explicit error correction
	Telecollaboration	Students discuss cultural topics related to both cultures / Comparison of cultural practices and perspectives	Discussion of culturally related materials / <i>Cultura</i> questionnaires
<i>Lingua Franca</i>	Transnational Virtual Exchange	Focus on global themes / Competences development through first-hand experience of online collaboration rather than explicit cultural comparison and discussion	Collaborative project completion
	Critical approaches to telecollaboration (Helm, 2017, Helm, 2016)	Often involve facilitator-led discussions	Facilitated discussions on social and political issues

*telecollaborative* or *transnational* and *critical* models is intended to provide an overview of tendencies within the practice, but this classification should not be seen as rigid as some exchanges may borrow from two or more of these approaches in their design. In the literature, there are, for example, bicultural exchanges which include collaborative and citizenship-based tasks (Porto, 2018, Porto, 2014) and there are also numerous transnational exchanges which include tasks which are based on bi-cultural comparison as well as collaborative tasks (Lindner, 2016). Indeed, O'Dowd and Ware's (2009) task typology in telecollaborative exchanges recommended that exchanges should include presentation, comparison and collaboration tasks.

### 1.2. Research questions

The widely held hypothesis (de Wit, 2016; O'Dowd, 2019) which underlines the engagement of students in virtual exchange is that by taking part in sustained and mentored online communication with members of other cultures, students can not only develop aspects of their L2 competence, but also their intercultural competence and other elements of global citizenship. UNESCO (2014) defines Global Citizenship Education as aiming "to empower learners to engage and assume active roles, both locally and globally, to face and resolve global challenges and ultimately to become proactive contributors to a more just, peaceful, tolerant, inclusive, secure and sustainable world" (p. 15). Models of global citizenship therefore include collaboration and conflict resolution skills as well as second language and intercultural competence sets (Council of Europe, 2016; UNESCO, 2014). With this in mind, the following research question was formulated:

RQ1: What elements of global citizenship do students report having developed during virtual exchange?

Considering that both *telecollaborative* and *transnational* models of virtual exchange were represented in the corpus of learner portfolios under investigation here, the following second research question was also articulated:

RQ2: Do students' reported learning outcomes from the virtual exchanges differ according to their participation in telecollaborative or transnational models?

### 1.3. Context of the study

This study was conducted within the qualitative content analysis research paradigm (Zhang & Wildemuth, 2009). The data analysed in the study were 345 learner portfolios which were completed by Spanish students who had taken part in one of 13 virtual exchanges as part of their studies at a university in northern Spain over a four-year period. These exchanges involved collaboration with a wide range of partner classes from Ireland, the UK, the USA as well as Sweden, Finland, Poland, Israel and France. All the exchanges lasted between 6 and 8 weeks and involved students in online communication with 'working groups' of partners from their own and the partner universities. Communication usually took place outside of class time and involved both text-based communication in forums and emails as well as videoconferencing sessions.

Approximately half of the portfolios (52%) were based on bicultural *telecollaborative* exchanges involving the use of Spanish and English in the online interactions with partners who were studying Spanish as a second language. These exchanges involved typical telecollaborative tasks requiring the presentation and comparison of aspects of the two countries in question. The remainder of the portfolios (48%) were based on *transnational* exchanges which involved collaboration using ELF with other non-native speakers of English. These exchanges involved tasks of cultural comparison but also collaborative projects where students worked in their international teams to develop and carry out surveys or, in the case of student teachers, to create collaborative lesson plans. An overview of the different exchanges is presented here in Table 2.

After completing their virtual exchange, students were asked for permission to analyse the portfolios which they had written to demonstrate their active participation in the exchanges and to reflect on what they had learned from the experience. Participants were assured that their agreement or disagreement to participate would not affect their final grades and that, in order to ensure anonymity, their documents would be completely anonymized before analysis.

The learner portfolio which was submitted by students had maintained approximately the same format across all 13 exchanges.

**Table 2**  
Overview of virtual exchanges.

Exchange code	Class level	Location of partner classes	Language(s) used in VE	Task types	No. of portfolios
VE1	B2	UK & USA	Bilingual (Spanish & English)	Telecollaborative model	54
VE2	B2	UK & France	English as a lingua franca	Transnational model	15
VE3	B2	USA	Bilingual (Spanish & English)	Telecollaborative model	8
VE4	B2	Sweden	English as a lingua franca	Transnational model	37
VE5	B2/C1	Sweden & Israel	English as a lingua franca	Transnational model	24
VE6	B2/C1	Sweden & Israel	English as a lingua franca	Transnational model	31
VE7	B2	USA	Bilingual (Spanish & English)	Telecollaborative model	80
VE8	B2	USA	Bilingual (Spanish & English)	Telecollaborative model	22
VE9	B2	USA	Bilingual (Spanish & English)	Transnational model	14
VE10	B2/C1	UK	English as a lingua franca	Transnational model	14
VE11	B2/C1	USA & Israel	English as a lingua franca	Transnational model	16
VE12	B2/C1	Finland & Poland	English as a lingua franca	Transnational model	13
VE13	B2	Ireland	Bilingual (Spanish & English)	Telecollaborative model	17
Total					345

Students were asked to do two things in the document: First of all, to provide examples of materials and interactions which had come from their virtual exchange and which they considered to be evidence of their learning, progress and efforts. Second, students were also asked to talk about these materials and interactions and to reflect on what they had learned from these experiences. The portfolios were usually between 20 and 30 pages in length and were submitted within three weeks of the conclusion of the virtual exchange. An overview of the portfolio data is presented in [Table 3](#).

#### 1.4. Research methodology

The analysis of the corpus involved a two-stage qualitative coding process following the procedures outlined in [Saldaña \(2013\)](#). As the dataset was quite large (345 portfolios) the first round of coding involved structural coding ([Namey, Guest, Thairu, & Johnson, 2008](#)) which required a broad coding of the data based on competences from the *Competences of Democratic Culture* framework ([Council of Europe, 2016](#)). This model of global citizenship was developed through a systematic analysis of 101 existing models of democratic competence and intercultural competence and therefore was considered to reflect a comprehensive overview of what is generally understood in the literature to be the key elements of global citizenship education.

Structural coding involved assigning a code for each of the areas of global citizenship which were reported in the portfolios. For example, students' reflections on to what extent the virtual exchange had helped them to develop knowledge and a critical understanding of their partners' countries and to become aware of multiple identities within cultures was coded with 'CULTURAL KNOWLEDGE'. During this first round of coding two other sets of learning outcomes were also identified regularly in the data. These were related to the impact on students' future careers or academic studies and to the issue of digital competence development. For this reason, two further broad codes were added: FUTURE CAREER and DIGITAL COMPETENCE. The codes used in the first round of coding are presented in [Table 4](#).

In contrast to many quantitative survey instruments, this form of qualitative analysis did not aim to measure students' development in the different competences. However, it did enable the identification of learning outcomes which were not specifically solicited and therefore can be seen as a more reliable identifier of what students felt they had learned from the experience.

This first-round of the coding process served as an initial organization of the data. Following this round, a second round of coding was carried out to reexamine the data in more detail and to identify sub-categories which were present within these initial coded categories. For example, within the data coded under 'COLLABORATION', the sub-codes 'COLLABORATION SKILLS' 'CONFLICT-RESOLUTION' as well as 'COOPERATION, NOT COLLABORATION [negative]' and 'CONFLICT AVOIDANCE [negative]' were identified.

The first outcome of the second round of coding was a frequency table which was used to help identify which themes, ideas, or domains were common and which rarely occurred. While frequency of occurrence is not necessarily considered an indicator of significance in qualitative coding ([Saldaña, 2013](#)), it is nevertheless a common tool in qualitative content analysis and [Weber \(1990\)](#) argues that high quality content analysis uses both quantitative and qualitative analysis of texts. When drawing up the frequency table (see [Table 5](#)), [Namey et al. \(2008\)](#) recommendation to record the number of participants who mentioned a theme rather than counting the number of times which this particular theme was actually mentioned was followed. (All names mentioned in the examples and extracts in the table and through the paper are pseudonyms.)

Three important points in relation to the thematic coding process should be pointed out at this stage. First, the coding was not exclusive, which meant the same statement with different characteristics could be coded more than once. For example, the statement "As far as the use of language is concerned, a relevant fact that caught my attention was the use of the first-person plural, so that we all felt included throughout the entire project. Additionally, the ongoing use of adjectives with positive values helped the group remain motivated" was coded twice: in the "collaborative skills" category and in the "sensitivity in intercultural communication" category.

Second, when coding for learning outcomes, it was not considered sufficient for a student to mention an aspect of, for example, cultural knowledge, in order for it to be coded as a learning outcome. Instead, it was necessary to explicitly state or demonstrate that the learning outcome had come about specifically thanks to their participation in the virtual exchange. This was usually identified through the context of the statement but also through the use of phrases such as "During the project I noticed that...", "Thanks to the exchange I learned that...", "Her comment made me realise that..." etc.

Third, regarding intercoder reliability, it was not possible in this study to have the data coded by a second coder and this is clearly a weakness of the study. However, the researcher followed [Saldaña's \(2013\)](#) approach and extensive extracts of his coding were shown to colleagues from this area of research who provided feedback on the coding and acted as "rigorous examiners and auditors of my analysis" (p.35). He also carried out various iterations of intra-rater reliability which involved re-coding a portion of the data later in order to test for consistency.

**Table 3**  
Overview of research data.

Type of portfolio	Total number	Percentage of portfolios
Student portfolios from transnational virtual exchange involving collaborative tasks	164	48%
Student portfolios from bicultural, telecollaborative virtual exchange not involving collaborative tasks	181	52%
Total	345	

**Table 4**  
Areas of global citizenship and their structural codes for first round of coding.

Guiding questions & related areas of the <i>Competences for Democratic Culture</i> (CDC) framework	Structural Code
Has the VE helped students become aware of differences and similarities between their beliefs, world views, practices and those of their partner? [CDC competences: Skills of listening and observing/Analytical and critical thinking skills]	CULTURAL DIFFERENCE
Has the VE helped students reflect critically on their own beliefs, world views and practices? [CDC competence: knowledge and critical understanding of the self]	DISTANCING
Has the VE awakened students' interest in and appreciation of their partner's beliefs, world views and practices? [CDC competences: Openness to cultural otherness and to other beliefs, world views and practices /Valuing cultural diversity]	OPENNESS
Has the VE helped students to develop knowledge and a critical understanding of their partners' cultures and to become aware of multiple identities within cultures? [CDC Competence: Knowledge and critical understanding of the world]	CULTURAL KNOWLEDGE
Has the VE given students the opportunity to cooperate with others in shared tasks and to understand their partner's point of view, including when disagreements appeared? [CDC competences: Co-operation skills / Conflict-resolution skills / Empathy]	COOPERATION
Did the VE help students to develop their linguistic, communicative and plurilingual skills to communicate effectively and/or to act as a mediator between speakers of different languages? [CDC Competences: Knowledge and critical understanding of language and communication / Linguistic, communicative and plurilingual skills]	SL DEVELOPMENT
Do students report that the VE has influenced their future academic or professional career paths in any way? [Independent of the framework]	FUTURE CAREER
Do students report that the VE has helped them to develop their digital competences? [Independent of the framework]	DIGITAL COMPETENCE

## 2. Results

### *Research question 1: Reported global citizenship learning outcomes from the full dataset*

Overall, the dataset provided evidence repeated across a number of cohorts that mentored virtual exchanges which are integrated into classroom learning will give students ample opportunities to learn about cultural information and practices of their partners' countries, to develop a greater openness to cultural difference, to increase their confidence of using the target language and to develop intercultural collaboration skills. This confirms the findings of other large-scale studies in the literature (EVALUATE group, 2019; EVOLVE Project Team, 2020; Helm & van der Velden, 2020). However, within this broad conclusion, the two rounds of coding carried out on the dataset also allowed for the development of *themes* which provide a more nuanced understanding of student learning in their virtual exchanges. (Themes are used by Braun and Clarke (2006) to capture a common, recurring pattern across a dataset, clustered around a central organizing concept.).

The first theme is the impact of the personalized nature of virtual exchange on students' learning. The experience of engaging with student peers from other cultures (described by Belz, 2002 as 'people who matter') gives students the opportunity to see first-hand examples of what they may encounter in course books and the mass media. This also can lead them to move away from stereotypes and overgeneralizations. Students considered virtual exchange to be a great source of information about their partner cultures and that the online interactions had provided them with opportunities to gain contextualized, personalized insights into the social and political issues which are prevalent in their partner countries at the time. In the following example, a student reported being able to see a first-hand example from her partner of the multicultural origins of American society:

"Her family had to emigrate from Ireland and Germany, her mother arrived to the USA during the Second World War but her father's family had been in the USA since XIX century. She told me that she thinks nowadays her whole family is successfully integrated into the United States ...but at the beginning it wasn't easy, as she knows their family arrived to America by boat, suffering famine, storms and diseases."

The following example shows how virtual exchange can also allow students to see differing perspectives within the partner culture on controversial issues:

"As far as American people are concerned about the use of guns, [partner 1] from Missouri said that they need them to protect themselves... Those who had answered this question also stated that in Missouri it is normal for people to use guns because they like hunting wild animals. However, [partner 2] said that in other cities such as St. Louis, where her mother grew up, is not very common the use of guns."

The type of cultural information provided by the students' partners is subjective and personalized in nature, but this appears to make it all the more real and engaging for students. This was seen to bring many students to cast a more critical perspective on their cultural norms and practices. The following two examples illustrate how students were led to compare their country's approach to education and to immigration with that of their partners' home countries:

"In Spain, we are used to being taught something and then being required to know it as it appears in the books or the teacher says when dictating notes. Teachers ask us a question and we respond by memory, as if we were trained parrots. Instead, what I appreciated

**Table 5**  
Code Examples and Frequencies.

Codes	Representative citations	Number of portfolios displaying the code
Knowledge of partner cultures	The most important things that I have learned from that project are knowing and understanding different perspectives and cultures through the communication with our partners who are from Nigeria and Japan. It also has been useful in the topic we have dealt with: immigration.	138
Openness to cultural otherness	I think it is interesting to share opinions on different current issues to know how each one sees it and what solutions could be given to issues such as refugees and immigration.	114
Focus on linguistic form	Another thing to mention about this aspect is that the three girls I have talked to were always polite and all of them used the expression "it was nice talking to you!" at the end of the conversations.	97
Minimization of Difference [negative]	We all have a similar age, therefore, our thoughts and customs are also similar, as the ones of the rest of society	69
Collaboration skills	I think I also progressed in cooperation working in groups. It is hard for me to work in groups, not because I am difficult at sharing cooperation but because I usually think better on my own about my work.	63
Digital Competence	Overall, I found that working with Pablo strengthened my ability to use digital technologies/ web platforms for communication, my ability to identify problems and their causes, breaking down issues into component parts and working effectively in a culturally diverse team.	59
Intercultural sensitivity in communication	We have communicated in a more polite way when talking about our meetings and how to organize the dates. We have expressed with politeness doing this in order to avoid problems with other members of the group and not to disturb each other.	50
Gaining confidence in L2	Thanks to this project I have been able to practice and improve my English skills in connection with the speaking and I have added a lot of vocabulary. Because of this, I think that now I will have more confidence when I have to speak with people from other countries and to speak in public in general.	47
Impact on future career	Now we feel more prepared to deal with the new online technologies as we have learnt how to use them and solve the different problems they might give to us, which can be very useful for our professional future.	43
Distancing or critical view of own culture	Belonging to Europe is something that our generation, due to the fact that we have been already born and raised in an EU environment, usually takes for granted, so it has been a helpful and interesting exercise to stop for a minute and reflect upon it.	39
Defence against difference [negative]	It may seem prejudiced but I think in Spain is much more evolved in Zambia because we are developed country within the European Union, but this is just an opinion.	26
L2 skills development	This task has given me the chance of testing and improving my own communicative skills.	25
Empathy	I have learnt that is important to have empathy, because sometimes you depend on others which circumstances are totally different of yours and you have to be patient and have to understand the others.	12
Failure in communication or collaboration [negative]	In spite of the fact that we are quite good at speaking English, it was a big misunderstanding. When we were talking about LGTB, Linnea was quite angry because perhaps we did not get across a message in a correct way and she understood another thing and it was a little disappointed for both parts.	11
Valuing cultural diversity	It has shown me the richness and variety of options offered by the multicultural setting.	10
No impact on learning [negative]	I think that nothing about our online interactions affected me. I did not change my visions of Europe, maybe just about some people, but not as a whole continent.	10
Skills of listening and observing	To conclude, I think that the one of the most important things that I have learned from this project is to work in groups. I've learned to listen to other people ideas and to decide which things are important and necessary and which aren't and finally, put everything together in a final common thought.	9
Understanding of variety within national cultures	One of the things that surprise me the most is that we assume that all the partners with Arab background were from Israel. It was a very nice surprise to discover that they were from Sweden and they were fully integrated in the Swedish culture although they did not spent many years there.	9
Conflict-resolution	What did I learn from this? That every problem can be solved if communication is good enough and respecting others opinions and views is key. Also that in a team group if something isn't working sometimes you have to take the lead and have the initiative to carry what you have asked to do.	6
Cooperation, not collaboration [negative]	when it came to divide our respective sections in the task, we found no problem with that, since we all chose the section we liked and when we chose it, we asked each other if they were okay with it	5
Conflict avoidance [negative]	As far as controversial issues (such as medical insurance, racial riots or the effect of the economic crisis in the families) are concerned, both American and Spanish students have been extremely shy about asking.	2

from the American educational model was the fact that it expects you to form an opinion based on what you learn."

"When I heard from [my partner] the treatment the immigrants received in Austria and I compared with immigration politics in Spain, I felt really disappointed. Spain does not seem to value the entrance of immigrants in its borders unless they have money to spend."

When examining the impact of the virtual exchanges on students' attitudes to cultural difference, a second theme is that the



personalized nature of the intercultural collaboration is key to further developing students' openness and curiosity about the partner culture and cultural difference per se and also to overcoming stereotypes. For example, one student who had taken part in an exchange with Israeli and Swedish students wrote: "It allowed me to change a little bit my conception about Israelis thanks to my collaboration with Katrina; it has been the first time that I work with people from this particular country, and it has reduced the prejudices that I have against the Israeli culture." While another student who had worked with American partners reflected: "I have drawn clear conclusions, and that is that you do not have to trust stereotypes or thoughts that you have about things that you do not know. I have realized that what you think of a country that you do not know or have visited, can be very wrong."

A final example is representative of how students developed empathy thanks to the experience: "I think that helped me to be more open minded. Now I am more interested to know the way of thinking of other people. I think that now I think in another way because I realize that it is important to see things from a different point of view. It is wrong to have only one point of view and only one opinion."

However, a third theme identified in the data is that there was also a significant tendency of many students to conclude their reflections by engaging in a superficial interpretation of what cultural knowledge actually involves and thereby minimizing cultural difference (Bennett, 1993). The minimization of difference involves recognizing superficial cultural differences in, for example food, traditions etc., but also emphasizing human similarity and assuming an adherence to universal values. For example, one student concluded from her transnational exchange with European partners: "As I have checked, our cultures have a lot of similarities in common. We share the European culture and we have more or less the same timetables. They eat and go to bed earlier and also have classes mainly in the morning."

Another student drew the following conclusions from her exchange with the US: "I have realized that my partner and I aren't so different, in fact, we have similar hobbies and ways to spend our free time. Like I have said, the main differences I see between her country and mine are the timetable and the weather."

This tendency in virtual exchange for students to minimize cultural difference or to reduce it to superficial aspects such as variations in timetables is undoubtedly a challenge to the learning potential of this approach. It has been referred to as "the illusion of commonality" (Ware & Kramsch, 2005, p.200) and it is also a common outcome in other forms of international education such as periods of study abroad (Kinginger, 2009). In the context of virtual exchange, it highlights the importance of regular pedagogical mentoring (O'Dowd et al., 2019) during the period of online communication in order to raise students' awareness of differences in cultural significance which may underly daily practices common to both cultures.

A fourth theme which was identified in the data is the manner in which virtual exchange led learners to reconceptualize how they experienced the process of second language learning. For many students, the online interactions and their relationships with their partners moved the second language from being an abstract, text-based academic activity to being a communicative and social activity involving people who were genuinely interested in what the students have to say. It also gave many students their first experience of using English for an authentic communicative purpose outside of the classroom context. Their perceived success in communicating with international partners gave them confidence and an impetus to continue their study of the second language:

"I did this activity and I feel really great because I can see that other people from another country can understand what I am trying to say but also this person can help me to improve."

"I have realized that I speak more fluently than what I used to believe and I have fought against my shyness and fears. I feel more confident than ever and I am ready to travel abroad and put all this into practice."

These quotations reflect the impact of online collaborative learning on students who have come from an educational system where second language education is still widely taught using a strong grammar focus. It may also reflect the fact that these students were studying in a Spanish city with a small international population and where English was rarely used as a vehicular language.

The final theme which was identified in the overall dataset is how virtual exchange can contribute to students' developing awareness of how interactional norms and communicative style can influence success in contexts of intercultural communication and collaboration. Very often this was due to episodes of communication breakdown and misunderstandings. Very often, it was episodes of perceived communication failure or conflict which pushed students to reflect on their own communicative and collaborative practices and how they could be improved in the future. For example, one student reflected:

"I have not learned new language but I have learned to express my ideas more accurately so there is not any miscommunication. I have also learned to be careful with the way I present my viewpoints and communicate with people from other cultures, because there can be cases when what I say may be misunderstood. So, it is necessary to select appropriate language."

Another concluded: "The main problem in our team was communication. There were some misunderstandings that lead us to not trust one another. We solved it by reading again carefully all the messages and asking and answering politely. At the end, we manage to finish our task properly and even enjoy it."

Finally, one student involved in creating lesson plans with Israeli and Swedish partners identified cultural differences in communicative style:

"The most important thing I have learned from participating in this project is that you have to take into account the cultural backgrounds of each person and the norms of each culture in order to understand certain ways of expressing yourself, avoid misunderstandings and make yourself understood in a safe, polite way and more easily."

The key to achieving such learning outcomes would appear to be related to the provision of tasks which lead to intense negotiation and the achievement of a common outcome or product. Students reported that it was tasks such as these which 'forced' them to collaborate as opposed to simply exchange information and it was in these communicative contexts that students' sensitivity to issues of tone of voice, directness and clarity in expression emerged when they experienced negative reactions by their partners or when they were not successful in their communicative goals. Numerous references to incidences of communication breakdown can be found in the dataset, involving issues related to the appropriate use of emojis, formulations of questions which were considered to be direct or

aggressive, and different attitudes towards the appropriateness of certain strategies for reaching consensus. Very often, it was the guided discussion and reflection on these incidents in the local classroom (Belz, 2002) which led students to become aware of how their intended communicative goals had been misinterpreted by their partners.

*Research question 2: Comparing learning outcomes in telecollaborative and transnational models of exchange*

In order to answer research question 2 and explore differences between the reported learning outcomes of students who took part in bicultural telecollaborative exchanges and those who took part in transnational exchanges, a second frequency table was created which differentiated between these two data sets within the corpus. The results of this can be seen in Table 6 below.

Many of the conclusions which can be drawn from this comparison are in line with what could be expected considering the structure of the two models of virtual exchange. For example, it is not surprising that bicultural telecollaborative projects led to students' placing more emphasis on acquiring 'cultural knowledge' than their counterparts who worked in international teams on tasks which often did not require a comparison of cultural practices. Furthermore, considering that bicultural exchanges also often involved explicit stages of using and reflecting on the target language, it was also to be expected that students participating in this model would more regularly report developing confidence in the use of the target language and also acquiring linguistic or lexical knowledge.

However, it is significant that the bicultural model produced much less evidence of students taking a more critical view of their own culture due to their interactions with members of another culture (referred to as *distancing* by Cummins & Sayers (1995), and also that it regularly led students to reject or evaluate negatively their partners' culture. This can be seen in the regularity of the codes "Distancing or critical view of own culture through comparison" and "Defence against difference". This may be due to the tendency in bicultural exchanges to juxtapose the two countries in question and thereby to position students as 'ambassadors' and 'defenders' of their own language and culture and to avoid taking a more critical perspective on their own cultural practices. Hanna and de Nooy (2009) warn that the personalized content of telecollaborative exchange "predisposes the student to launching conversations about the self that inevitably position him/her as the exotic little foreigner/ the other" (2009, p.195).

In contrast, the data from transnational exchanges, which often move virtual exchange away from explicit cultural comparison and focus instead on achieving successful collaborative goals in multicultural groups, produced a much higher frequency of learning outcomes related to collaboration skills, digital skills and the importance of cultural differences in communication styles. This type of virtual exchange shifted students' focus away from a more traditional interpretation of culture learning and instead encouraged them to see how language, culture and medium interact together in online intercultural communication and also to become aware of the impact which the medium can have on computer-mediated intercultural communication (Kern, 2014). These findings can be seen in the high quantity of the codes "Collaboration skills" and "Intercultural sensitivity in communication" for transnational exchanges using collaborative tasks.

### 3. Discussion

This study looked for recurring reported learning outcomes from online intercultural contact over a large dataset of learner portfolios from thirteen virtual exchanges. The students who took part in the exchanges shared several characteristics – they were Spanish students, taking courses of a B2-C1 level of English, and had taken part in a mentored VE as an integrated part of their English

**Table 6**  
Code frequency differentiating between telecollaborative (Bicultural) and transnational (Lingua Franca) exchanges.

Code/ Sub-category	Total Number of coded instances	Instances from transnational VEs with collaborative tasks	Instances from telecollaborative VEs with NO collaborative tasks
Defence against difference [negative]	26	4	22
Skills of listening and observing	9	8	1
Distancing or critical view of own culture through comparison	39	34	5
Empathy	12	7	5
Openness to cultural otherness	114	52	62
Minimization of Difference [negative]	69	24	45
Valuing cultural diversity	10	7	3
Knowledge of partner cultures	138	48	90
Understanding of variety within national cultures	9	4	5
Cooperation, not collaboration [negative]	5	4	1
Collaboration skills	63	59	4
Conflict-resolution skills	6	5	1
Conflict avoidance [negative]	2	1	1
Failure in communication or collaboration [negative]	11	10	1
Focus on linguistic form	97	24	73
Intercultural sensitivity in communication	50	35	15
Gaining confidence in L2	47	16	31
L2 skills development	25	15	10
Impact on future career	43	31	12
Digital Competence	59	46	13
No impact on learning [negative]	10	10	0

courses. A qualitative content analysis of the dataset led to the identification of several key themes which provide insight into the type of learning which virtual exchange can contribute to second language classrooms. These included the importance of the personalized nature of peer-to-peer interaction in helping students to gain nuanced insights into the partner cultures and also to develop curiosity and overcome stereotypes. The experience of online intercultural communication was also seen to help learners gain confidence as communicators in their second language and to reconceptualize English as a tool for communication rather than as an abstract academic activity. The data analysis also gave insight into how intensive online collaboration with members of other cultures helped to develop students' awareness of how interactional norms and communicative style can differ across cultures and how they can influence the outcomes of virtual communication and collaboration. Significantly, it was also seen that students regularly concluded by engaging in a superficial interpretation of what cultural knowledge actually involved and thereby minimizing cultural difference. Evidence of empathy development was also scarce in the data.

When the learning outcomes from telecollaborative and transnational exchanges were compared, it was seen that bilingual telecollaborative exchanges tended to emphasize cultural difference and to lead to an explicit comparison of both cultures. Bilingual exchanges also served to conceptualize virtual exchange as language practice. Meanwhile, transnational exchanges led students to focus more on developing collaboration skills, digital skills, and the importance of cultural differences in communication styles.

Various conclusions can be drawn from this analysis for this practitioner-researcher's own future virtual exchange initiatives, but also for other educators and institutions interested in this activity. First, it was seen that the cultural origin of the partner classes is less important for virtual exchange outcomes than the actual tasks and focus of the exchange itself. The exclusive use of tasks which require students to compare cultural perspectives can lead to an oversimplification and perhaps an accentuation of difference as students strive to provide generalized information about their culture and homeland, thereby ignoring cultural variety and multiple cultural identities complexities within the national culture itself. It is also questionable whether this approach is in line with current approaches to intercultural learning. Kramsch (2006) points out that "[i]t is no longer appropriate to give students a tourist-like competence to exchange information with native speakers of national languages within well-defined national cultures. They need a much more sophisticated competence in the manipulation of symbolic systems" (p. 251).

In contrast, the use of tasks which shift the focus away from cultural presentation and comparison can help learners to develop intercultural awareness, not through the acquisition of cultural facts or issues per se, but rather as they become more sensitized to the role of culture in pragmalinguistics and sociopragmatics through working together to achieve common collaborative goals (Cunningham, 2016). This lingua franca approach also contributes to developing a transnational paradigm of culture learning (Risager, 2007) which, according to Menard-Warwick et al. (2013), "moves cultural pedagogy in language education away from a simplistic focus on national identities, by incorporating local, regional, national, and global perspectives on cultural practices" (p. 966).

A second conclusion which can be drawn from this study is related to the outsourcing of virtual exchange to professional language learning platforms which offer to match students and administer exchanges without the active involvement of their teachers. While these companies may facilitate the process of connecting students and engaging them in intercultural interaction, they may not be in a position to provide the pedagogical mentoring which students need to interpret and learn from their experiences. This increases the risk of students minimizing difference – a tendency which was already seen to have been quite common in the data analysed here – or not being able to learn from the many critical incidents which emerge during online intercultural collaboration. Teachers must therefore play an active role by developing tasks which require intense negotiation and collaboration as opposed to simply exchanging information. They should also actively guide their students through the learning process by providing them with examples or models of appropriate online interaction strategies before they engage in online interaction with their partners (O'Dowd et al., 2019) or by integrating extracts and recordings of students' own online interactions into class interaction as learning 'rich points' emerge (Cunningham, 2016). While current technological advances may mean that it is easier than ever to bring students together in online communication, the vital task of helping students to learn from this experience remains in the charge of the teacher.

## Declaration of Competing Interest

None.

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