



## Online Collaborative Learning: Connecting Classrooms Between China and Colombia in pandemic times\*

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**Abstract:** Technology provides new learning environments in which 21st-century skills such as collaboration are involved, and English becomes the language of communication and interaction among participants. During the lockdown caused by the COVID-19 pandemic, students faced the shift from face-to-face to online classes, which made students feel demotivated and lost opportunities to use English in meaningful environments. This article reports a qualitative research process to explore students' perceptions of an Online Collaborative Learning (OCL) project focused on story writing between China and Colombia. Accordingly, surveys and interviews were implemented to gather data from the 51 students and 12 pre-service teachers that participated in the study. The 51 students were divided into six groups, and each group was assigned two coordinators: one from China and one from Colombia. This article contributes to knowledge in OCL and cross-cultural communication since it describes students' strengths and difficulties when interacting with others whose first language is not English. Specifically, it is concluded that speakers of English as a foreign language deal with challenges and strengths related to time zone differences, English language proficiency, intrinsic motivation, and attitudes. It is also mentioned that teamwork skills, empathetic language, and the ability to use technology mediate the collaborative writing process.

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## *Aprendizaje colaborativo en línea: Conectando aulas entre China y Colombia en tiempos de pandemia*

**Resumen:** La tecnología proporciona nuevos entornos de aprendizaje en los que intervienen habilidades del siglo XXI como la colaboración, y el inglés se convierte en el idioma de comunicación e interacción entre los participantes. Durante el cierre provocado por la pandemia COVID-19, los estudiantes se enfrentaron al cambio de clases presenciales a clases en línea, lo que hizo que los estudiantes se sintieran desmotivados y perdieran oportunidades de utilizar el inglés en entornos significativos. Este artículo reporta un proceso de investigación cualitativa para explorar las percepciones de los estudiantes sobre un proyecto de Aprendizaje Colaborativo en Línea (OCL, por sus siglas en inglés) enfocado en la escritura de cuentos entre China y Colombia. Para ello, se aplicaron encuestas y entrevistas para recopilar datos de los 51 estudiantes y 12 docentes en formación que participaron en el estudio. Los 51 estudiantes se dividieron en seis grupos, y a cada grupo se le asignaron dos coordinadores: uno de China y otro de Colombia. Este artículo contribuye al conocimiento en OCL y comunicación intercultural ya que describe las fortalezas y dificultades de los estudiantes cuando interactúan con otros cuya primera lengua no es el inglés. En concreto, se concluye que los hablantes de inglés como lengua extranjera se enfrentan a retos y fortalezas relacionados con las diferencias horarias, el dominio de la lengua inglesa, la motivación intrínseca y las actitudes. También se menciona que las habilidades de trabajo en equipo, el lenguaje empático y la capacidad de utilizar la tecnología median en el proceso de escritura colaborativa.

**Palabras clave:** Aprendizaje colaborativo en línea, escritura colaborativa en línea, aprendizaje intercultural, inglés como lengua extranjera.

## *O processo educacional em uma escola pública de Barranquilla, Colômbia, na modalidade de alternância escolar*

**Resumo:** O objetivo deste artigo de pesquisa é apresentar algumas características do processo educacional em uma escola pública de Barranquilla na modalidade de alternância escolar com base no depoimento de professores e alunos. Para realizar esta pesquisa, foram utilizados paradigma interpretativo sob abordagem qualitativa, método da teoria fundamentada, utilizando como técnica a entrevista em profundidade por meio do instrumento de coleta de dados, e roteiro de entrevista com perguntas abertas. Os resultados mostram que as matrículas aumentaram nas instituições educacionais públicas, os horários e o conteúdo programático foram redefinidos, enquanto a execução de obras de infraestrutura pelas autoridades educacionais locais é lenta e ineficiente. As conclusões revelam, por um lado, que os estabelecimentos de ensino fizeram um grande esforço para se adaptar às mudanças exigidas por essa nova realidade, embora, por outro, as administrações locais devam realizar obras nas escolas com rapidez, levando em conta que os alunos logo terão de frequentar a escola presencialmente.

**Palavras-chave:** alternância educacional; cobertura educacional; currículo; infraestrutura física escolar; distribuição do horário escolar.

## Introduction

Current technological advancements in education provide new online environments in which learning is negotiated and 21st-century skills such as collaboration are incorporated. Walker and White (2013) suggested that “digital technologies not only create new environments in which language use occurs, they also bring together interlocutors who might not otherwise have opportunities to interact” (p.17). Published studies conclude that from 2009 to 2018, there has been a transition from using tablet computers and small handheld devices to implementing virtual reality, augmented reality, Wikis, and WeChat, among others (Carapina & Boticki, 2015; Mkdadi, 2019). This demonstrates the tendency to integrate technology into the learning processes.

One approach to incorporating technology in such processes is the implementation of OCL into language learning. Research confirms that OCL positively affects students’ attitudes, motivation, and performance (Albeshar, 2012; Freiermuth & Huang, 2012; Gharehblagh & Nasri, 2020). This entails that OCL aims to enhance the overall language learning process (Cooney & Darcy, 2020; Martínez-Carrasco, 2018; Ochoa & Medina, 2014) and cope successfully with interaction and communication (Hampel & Hauck, 2006; Zhou & Wei, 2018) since it becomes more engaging, effective, and meaningful (Mkdadi, 2019). Hence, the integration of OCL is vital to strengthen the educational processes.

In addition, the development of OCL settings allows the implementation of exchange projects in which people from different backgrounds can interact; these projects are sometimes called *cross-cultural*. On the one hand, research has demonstrated that the influence of language and culture, interest in culture, students’ positive attitudes, and using group work facilitate and are positive aspects immersed in cross-cultural OCL environments (Chih-Cheng *et al.*, 2011; Gharehblagh & Nasri, 2020; Kumi-Yeboah, 2018; Wang *et al.*, 2001; Yang *et al.*, 2014). On the other hand, these settings lack of English proficiency, cultural differences, students’ motivation, and

technology-related connection issues are common (MacLeod *et al.*, 2017). To tackle the latter, Yang *et al.*, (2014) highlighted that for better effectiveness and smoothness of the cross-cultural OCL process, there is a need for further research that focuses on collaboration, culture’s influence, and language barriers. In essence, there is a need to promote environments where people from different backgrounds interact in collaborative tasks to build knowledge. However, more studies need to be carried out in this area.

OCL was perceived as a strategy to enhance and promote students’ use of the English language while providing them with an opportunity to interact and get to know people from other parts of the world in the light of the lockdown implemented due to the COVID-19 pandemic that affected learning processes. In countries such as Colombia, students have faced problems, e.g., lack of motivation, poor internet connection (Rojas-Bahamón *et al.*, 2020), and lack of opportunities to communicate using the English language in real and meaningful conversations because of the pandemic. Thus, this manuscript reports students’ perceptions of a cross-cultural Online Collaborative Writing (OCW) process in which learners from China and Colombia interacted through social networks during the pandemic.

## Online Collaborative Learning

Technology broadens and highly supports educational environments. Zhou and Wei (2018) argued that the rapid technological changes in the 21<sup>st</sup> century “have extended language teaching and learning to any time, at any place, with any device” (p. 488). Furthermore, with new technologies emerging, it became possible to present information and knowledge in many forms and through multiple modes of representation (Huang *et al.*, 2019). Technology can play various and distinct roles, such as facilitating learning tasks and learning processes (Harasim, 2012). In this sense, technology plays the role of facilitating education.

Additionally, Lü (2017) asserted that “with the assistance of technology, teaching in the contemporary digital world can be designed to happen in a more imaginative and timeless virtual

space with or without teachers or students being present” (p.46). This implies that technology can become a crucial tool when teaching. However, Egbert (2005) claimed that technology must fit the projects, not vice versa. Therefore, technology is a means but not an end of the learning processes, for which having a well-designed methodology is vital.

Thanks to technological advances, theories such as OCL have been introduced into educational processes adding to more learning theories such as behaviorism, constructivism, connectivism, and humanism. Huang *et al.*, (2019) expressed that linking learning theories and technologies gained relevance as learning theories matured. In addition, new technologies became affordable and commonplace (e.g., the Internet and social networking). Thus, OCL emerges as a theory to connect learning, collaboration, and technology use.

In this regard, Martínez-Carrasco (2018) highlighted that incorporating digital pedagogy in language learning is a starting point for collaboration processes that build bridges between formal, informal, and non-formal learning, in which foreign language education is approached comprehensively. Moreover, combining technology and collaboration in language learning can have a long-term learning effect (Chih-Cheng, 2011), in which technologies change what people can and want to do (Huang *et al.*, 2019). This supports the importance of the OCL theory in educational settings.

Specifically, OCL “refers to educational applications that emphasize collaborative discourse and knowledge building mediated by the Internet” (Harasim, 2012, p. 88). In OCL, learners work together to identify, apply, and analyze issues of understanding, with peer discourse as a basis. Consequently, technology can engage students in OCL through conversation, debate, and discussion (Cutajar, 2019), where there is a transition from traditional teaching methods to the use of technologies to transform teaching and promote participation.

Harasim (2012) proposed a theory for OCL in online educational applications. This theory includes three intellectual phases: Idea Generating (IG), Idea Organizing (IO), and Intellectual Convergence (IC). The first deals with democratic

participation among learners in which ideas are brainstormed and built. The second implies confrontation among learners since they must select ideas and weed out weaker positions. Finally, the third handle consensus, synthesis, and understanding among participants. In this phase, there is an output co-authored by the group.

Harasim (2012) noted that OCL theory and pedagogy seek to initiate the learners into the discourse processes used by knowledge communities to create knowledge and improve ideas. Similarly, Magen-Nagar and Shonfeld (2017) confirmed that OCL promotes positive attitudes toward technology and increases students’ motivation and satisfaction. Additionally, Nam (2016) expressed that OCL strategies positively affect students’ improvement regarding social presence because the instructional process becomes more specific and interactive. Research has also demonstrated that engaging learners in collaborative tasks encourages critical reflection and self-assessment (Altnay, 2016) and promotes communication, presentation skills, and the value of teamwork (Wang *et al.*, 2001). As a result, adopting the term OCL is vital for cross-cultural exchange strategies since it allows us to reflect on how communication and agreements occur in online environments.

Despite the benefits of OCL, research also supports that students involved in OCL can feel a high level of frustration, which interferes with students’ willingness to engage in the projects (Capdeferro & Romero, 2012). This means that the benefits of OCL cannot be taken for granted, and its drawbacks must be addressed.

All in all, this research process internalized the term OCL to understand the perceptions and interactions of students during the OCW process. In addition, it served as a basis for understanding how communication and interaction are processed in online settings with the interaction of people from different backgrounds.

## Social Networks to Promote Cross-Cultural Learning Classrooms

Teachers and researchers in educational environments have widely used Social Networks. For

example, Liu *et al.*, (2015) asserted that the features of social networks environments are: creating a profile, searching for friends, adding friends, communicating with others in a network via multiple means, receiving feedback from friends in a network, uploading user-generated content, enhancing peripheral awareness. These features are a resource that users can use for language learning.

In this sense, Derakhshan and Hasanabbasi (2015) noted that social network platforms are innovative and creative ways to learn a second language, especially English. The authors reviewed Facebook and email as web-based interaction tools, highlighting that they allow language learners to use large amounts of information that is always available. Furthermore, they claim that literature shows the effectiveness of social networks as they increase the power of speech and interaction, ease the learning process, and improve second language learners' writing skills.

Fewkes and McCabe (2012) argued that schools implementing social networks in the teaching and learning process must consider strategies so that teachers feel confident applying those tools in their classes. They also note that giving students freedom and trust in a less controlled environment can be crucial to learning. This entails promoting the use of social networks without the teacher's strict supervision.

Gislev *et al.*, (2020) proposed a model for experimenting with communities whose purpose is to understand better how flexible meeting places allow interaction. First, the authors explained the relationship between two communities (e.g., two groups of students):

These two communities are connected in a small network of in this case simply two partners. They do have some projects together that they have agreed upon doing. The themes they are working with include also how and when to use technologies to communicate, experiment and produce together between the two school classes (p. 281).

The model proposes that learners can interact among themselves with or without the assistance of teachers. These flexible meeting places let learners communicate, experiment, and produce together, which requires an ongoing reflection on

what to do and how to make things happen (Gislev *et al.*, 2020). This also involves reflective processes in which teachers and students learn to interact digitally or physically.

In line with this point of view, Akbari *et al.*, (2016) demonstrated that students improved their learning, motivation, and engagement using the social network Facebook. This implies that using Social Networks allows interaction among learners whose only means of communication can occur in an online meeting place. In addition, Jin (2017) agreed that using WeChat has different affordances; namely, it is a casual space with easy access to native speakers of Chinese, it allows authentic meaning-focused communication with native speakers of Chinese, linguistic resources, and multiliteracies and it is a space for new identity creation. The researcher noted that more research could also be conducted to investigate the potential of integrating WeChat communication in a foreign language context.

Several research processes support the use of social networks such as Telegram and WeChat, evidencing that those networks strengthen the willingness to participate, raise cultural awareness and motivation, and highlight the importance of technology use in learning processes and the learning itself (Wu & Miller, 2019; Xodabande, 2017). Nevertheless, Kumi-Yeboah (2018) declared that most instructors need to gain pedagogical skills when designing cross-cultural collaborative online activities to address the needs of diverse learners and cultural differences. Furthermore, research also notes that cross-cultural learning takes more processing time for effective communication due to communication context differences (Chen *et al.*, 2006), students' low language proficiency, and lack of cultural awareness (Angelova & Zhao, 2014). This embraces the need to explore how social networks can be used in cross-cultural interaction projects and the need to deepen the literature in this area.

Chen *et al.*, (2006) proposed a model for the design of cross-cultural online learning environments and their activities. The researchers explained that cross-cultural learning environments require a *technical support system* (needed

to ask, give, and receive help from peers or the instructor), *resources* (appropriate resources to assist students in their process), *cultural awareness* (knowledge to interpret and manage students' communication effectively), *orientation and training* (preparation of students for the cross-cultural process), and *instructional strategies* (successful strategies to support frequent and effective communication). According to the authors, these aspects are the axis of cross-cultural learning environments. Hence, we followed these guidelines in our cross-cultural project.

In the development of the cross-cultural ocw project that is reported in this article, the researchers suggested the use of WeChat for communication and interaction among participants. However, due to technical issues regarding creating a profile in this application, the participants suggested using DingTalk, another application highly used in China. Therefore, more information related to this aspect is deepened in the methodology.

## Methodology

This research is framed within a qualitative research paradigm. Vasilachis *et al.*, (2009) remarked that qualitative research involves studying, using, and collecting empiric materials that describe individuals' behaviors and meaning, emphasizing the experiential conveying of meaning. Accordingly, this study explored students' perceptions of an OCL project focused on collaborative story writing between students from China and Colombia during the pandemic.

Based on qualitative research methods, entry and exit surveys (including closed-ended and opened-ended questions) and interviews were implemented to gather data from the 29 Chinese and 22 Colombian learners participating in the study. Vasilachis *et al.*, (2009) noted that the instruments to gather the data are oriented at capturing and describing the complexity of the phenomena under study and its context, respecting the individuals' gaze. This implies that the instruments explore and understand the meaning individuals give to social and human issues (Creswell, 2009).

Participants in this ocw process called Connecting Classrooms Between Colombia and China (CCBCC) were 51 students and 12 pre-service English teachers. Pre-service teachers are students being trained to be teachers because they are in the last semester of their undergraduate studies. Hence, 29 participants were Chinese 3rd year undergraduate students (SCH, henceforth) from a university in Wuhan, Hubei, China. They had an average age of 21, and 22 participants were Colombian students (SCO, henceforth) who were 10<sup>th</sup> graders in a public school in Florencia, Caquetá, Colombia, whose average age was 17. Chinese students were intermediate English language learners, while Colombian students were beginner English language learners. Additionally, six pre-service English teachers were from the university in Wuhan, and the other six were from Universidad de la Amazonia, a university in Florencia, Caquetá, Colombia. Pre-service English teachers from both universities had an average age of 25 and had an upper-intermediate English level. These pre-service teachers played the role of mediators in the writing process and were crucial during the development of this cross-cultural project.

For the ocw process, the 29 SCH, the 22 SCO students, and the 12 pre-service teachers who participated in the study were organized into six groups (see Table 1). Each group was assigned two pre-service teachers from China and Colombia; they were called *coordinators*. For communication and interactivity, three groups used DingTalk, and three used WeChat. Coordinators created the groups and sent invitations to the participants of each group. Both groups of students signed an informed consent about their participation in the study. Additionally, guardians of students who were underage also signed the consent. Regarding the coordinators, they volunteered to participate in the study as part of their teaching training and signed informed consent.

**Table 1.** Organization of the groups and applications used for communication

Group	Students	Application
1	5 SCH 4 SCO	DingTalk

2	4 SCH 4 SCO	DingTalk
3	5 SCH 3 SCO	DingTalk
4	5 SCH 4 SCO	WeChat
5	5 SCH 4 SCO	WeChat
6	5 SCH 3 SCO	WeChat

Source: own work.

The writing process lasted five weeks. The ocw process aimed to write stories about a topic chosen by the group collaboratively. An orientation meeting was held at the beginning of the project

and a celebration meeting at the end. On the one hand, the orientation meeting aimed at explaining to students the organization of the groups and the task objective: to write a story collaboratively. It also included the presentation of the researchers, coordinators, and students.

On the other hand, during the celebration, activities such as sharing the final stories, voting for the most creative story, the best beginning, and the best ending, among others, and a farewell were held. Furthermore, before starting the process, an entry survey was delivered to the 51 participants, and after the celebration meeting, an exit survey was implemented (see Figure 1). Moreover, both researchers carried out interviews; each interviewed their students using their mother tongue. In these interviews, students and coordinators participated.

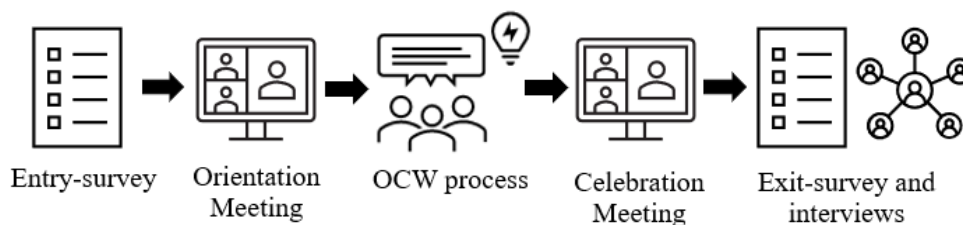


Figure 1. Research Design

Source: own work.

Each team was coordinated by the pre-service teachers (coordinators). They led students toward achieving the task and mediating and/or solving communication issues. Each team organized its schedule, roles, duties, and deadlines to write the story; they also chose the topic they would write about. This means that students organized how the communication and writing process would work. Finally, the coordinators reported that information to the researchers, and it was systematized.

Finally, once students presented the stories created, responded to the surveys, and participated in the interviews, a triangulation process was carried out to analyze the data gathered. First, data from the interview transcripts and the survey's open-ended questions were analyzed through a research matrix in which categories generated by participants' answers were organized and

described. Next, data from the closed-ended questions presented as Likert Scales in the surveys were analyzed by calculating Mean (M) and Standard Deviation (SD). The Likert Scale questions report Cronbach's  $\alpha = 0.77$  in the entry and  $0.89$  in the exit survey. Both surveys were adapted from the Global Perspective Inventory (GPI), the Intercultural Development Inventory (IDI), and Intrinsic Motivation Inventory (IMI) and were validated by experts in the area.

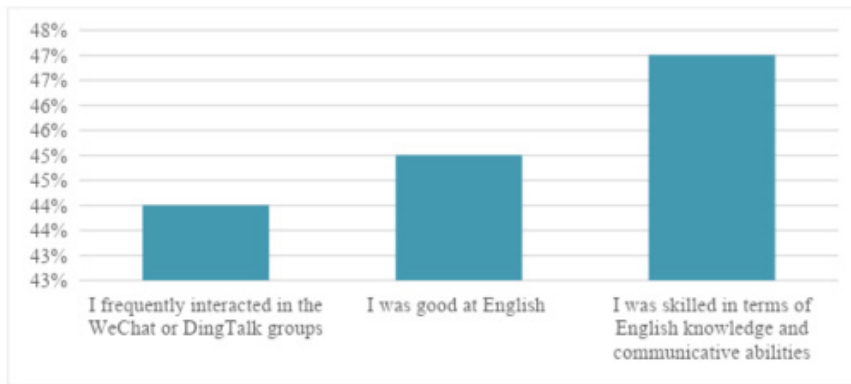
## Results and discussion

This ocw process evidenced that students faced difficulties and strengths during the lockdown in 2020 and the project's development. It is vital to mention that Colombian students were on vacation by the time the project finished, and Chinese students were in their final exams simultaneously,

which may have affected the implementation and accomplishment of the goals. It also becomes essential to highlight that both groups of students were using English as the language of communication. That gives a unique characteristic to this research.

On the one hand, in terms of difficulties, as presented in Figure 2, 44% of the students claimed that they frequently interacted in the WeChat or DingTalk groups (1), 45% thought they were good at English (2), and 47% felt they were skilled in

terms of English knowledge and communicative abilities to participate in CCBCC (3). This means that the students were concerned about their ability to interact (writing ability in English), English level, and skills to become part of a cross-cultural project. On the other hand, the previous findings are supported by Angelova and Zhao (2014), who also found that there are constraints such as lack of cultural knowledge, time allowance, and English language ability in cross-cultural projects.



**Figure 2 .** Students’ responses to the survey

Source: own work.

Likewise, since the students from both countries were learners of English as a foreign language, 78% of the students noted that their participation was determined by the relevance of the information they needed to share. Otherwise, they did not interact or write anything in the group chats. Chen *et al.*, (2006) also found that students’ narrative responses suggested that “their online inactivity was due to fear of incorrect English use resulting in concerns of losing face (embarrassment due to their English language competence) and dragging the group behind” (p. 23). This fear of using the English language was evident during the process, in which a student reported: ‘I did not feel confident to talk’ (SCO7).

The following transcripts and Figure 3 evidence communication difficulties due to time zone

differences. In this case, China is 13 hours ahead of Colombia, so when students in Colombia were awake, Chinese students were about to go to sleep, which also had implications for interaction inside the group chats:

‘Sometimes it was a little difficult to have communication in time because of time difference’ (SCH19)

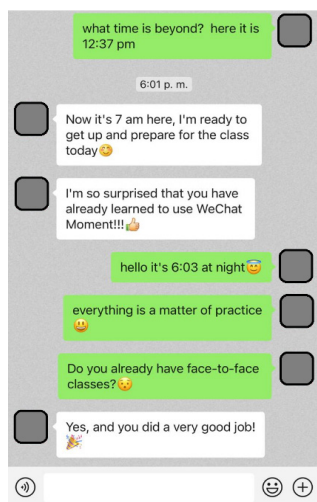
‘Actually, the communication inside our group was not as much as I had imagined. Besides, because of the different time zone, we can’t reply to each other’s message in time so sometime our communication would be interrupted’ (SCH20)

‘The communication was very brief and comfortable, I just felt a little sad because I couldn’t interact as I would have liked; The app did not send me notifications and



when I remembered, several hours or days had passed and the conversation had even ended' (SCO3)

'I would have loved more frequent online meetings' (SCO19)

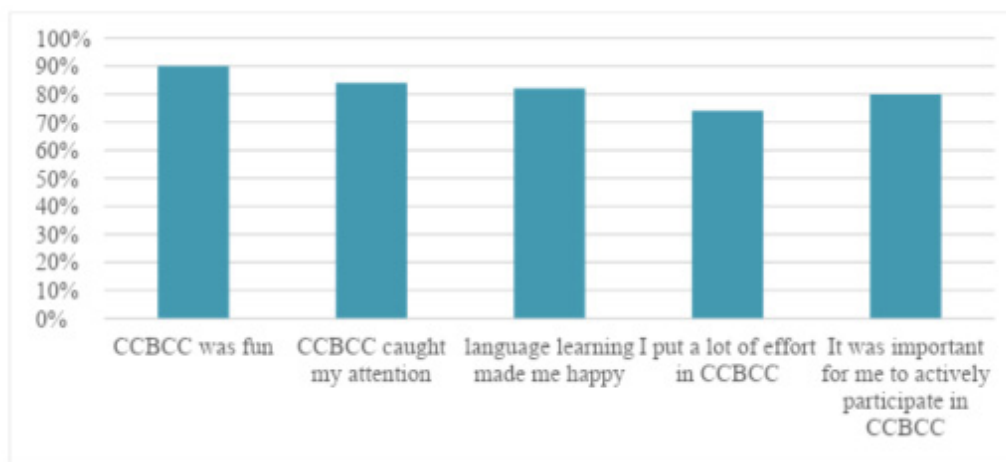


**Figure 3.** Conversation between a Chinese and a Colombian student on WeChat

Source: own work.

Additionally, technological problems related to the notifications sent by the applications (WeChat and DingTalk) were frequent among Colombian students, who constantly reported this issue to the researchers. These students mentioned that they did not get notifications from the applications, making it difficult to respond to the groups' messages instantly. In addition, as suggested by Fewkes and McCabe (2012), students were free to organize their schedule for interaction, which may have affected their willingness to communicate.

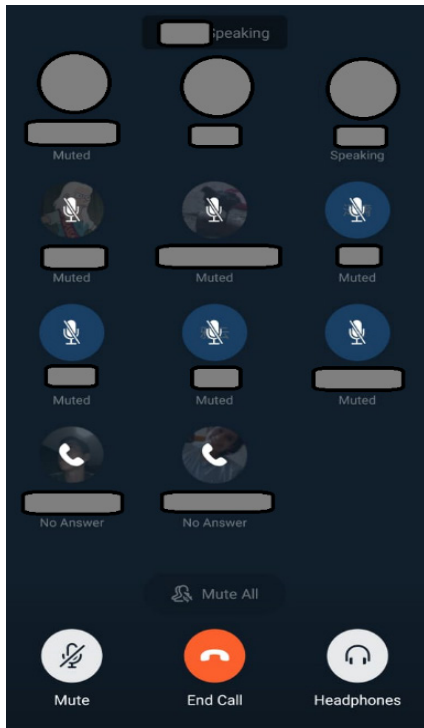
On the other hand, the strengths were aligned with students' positive perception of the ocw project since 90% thought CCBCC would be fun, and 84% thought CCBCC would catch their attention. Additionally, 82% of the students agreed that language learning makes them happy, implying they were intrinsically motivated. In this line, 74% of the students agreed that they would put much effort into CCBCC, and 80% said it was vital for them to participate actively in CCBCC. This is presented in Figure 4.



**Figure 4.** Students' responses to the survey

Source: own work.

The previous finding was also evident in students' groups' meetings in which most of them attended and interacted, as can be seen in Figure 5:

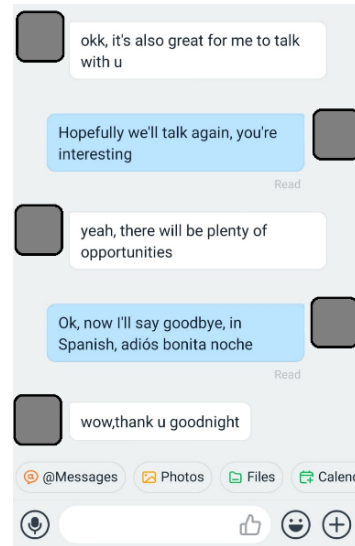


**Figure 5.** Online meeting arranged by one of the groups  
Source: own work.

Accordingly, 78% of the participants thought CCBCC was necessary for their improvement, which is supported by García and Frances (2017), who claim that the use of applications can have a substantial effect on motivation and are expected to improve and provide a way of viewing evidence of language competence. Furthermore, even though 42% of the students noted that they were nervous about the activity, 88% believed that the activity was going to be of value to them because they do not frequently interact (40%) with people from a different country, adding that 84% of the students said that most of their friends are from their ethnic background. This finding is supported by Altınay (2016), who demonstrated that

collaborative learning environments through socially constructed knowledge are a critical dimension for learning and growth.

It was also found that students mentioned some aspects as *mediators* to solve the difficulties they encountered. For example, in the survey, 75% of the students reported that they were good at helping the team solve problems and manage conflicts, 77% of the students expressed that they used empathetic language while communicating with group members (see Figure 6), and 75% of the students felt confident with their ability to use technology as agreed upon by the team consistently. This supports the idea that students were eager to implement teamwork, communication, and technology skills during the ocw process to face and deal with difficulties.



**Figure 6.** Evidence of the use of empathetic language for communication in Dingtalk  
Source: own work.

The previous results were verified in the final survey because 74% of the students mentioned that they completed all the tasks proposed by CCBCC without being reminded, and 76% of them are willing to continue being part of this project. This means that students' commitment to the ocw

process was evident. These results support the data presented by Capdeferro and Romero (2012), who observed that the student’s primary source of self-declared frustration is the teammates’

commitment imbalance. In our study, students’ commitment was evident from the beginning to the end of the project, as evidenced in the analysis of Table 2.

**Table 2.** Comparison between entry and exit survey

Entry Survey	Mean	SD	Exit Survey	Mean	SD
I am confident with my ability to complete tasks without having to be reminded	5.13	1.38	I completed all the tasks proposed by CCBC without having to be reminded	5.63	1.45
I frequently interact with people from a country different from my own	3.54	2.06	With CCBC I made friends from a different country	4.60	1.90
I use empathetic language while communicating with group members	5.40	1.30	I used empathetic language while communicating with group members	5.46	1.20
I speak when I have something relevant to say, and what you say consistently adds to the group’s productivity.	5.13	1.02	I spoke when I have something relevant to say and what you say consistently adds to the productivity of the group	5.25	1.04

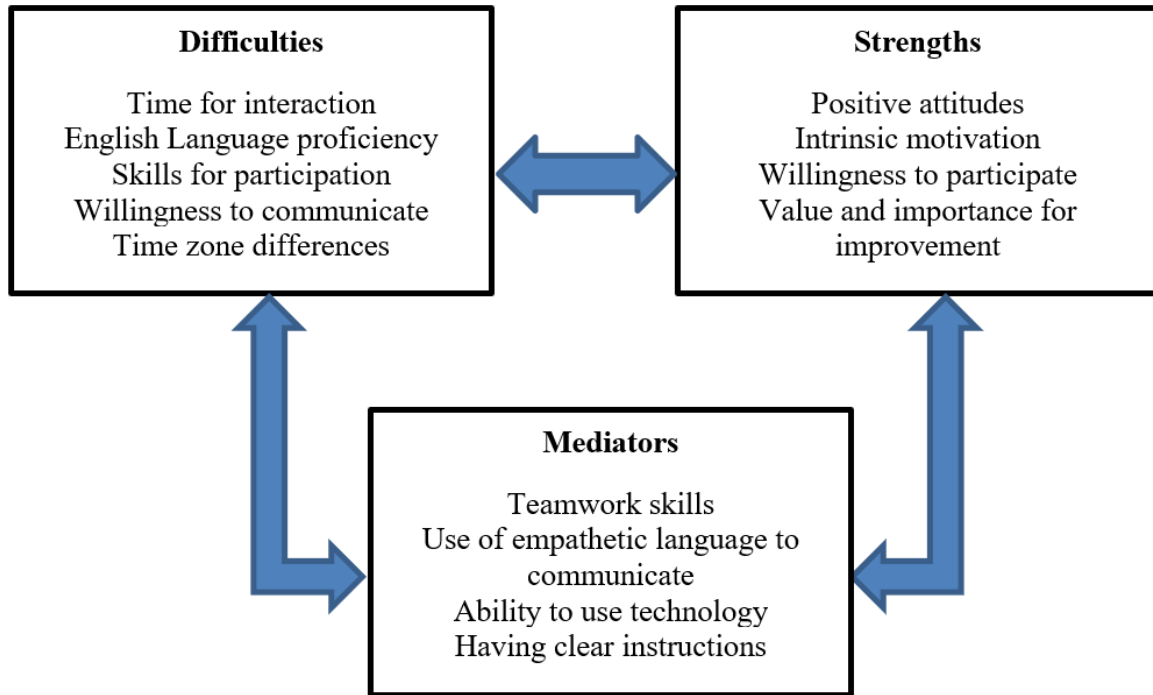
Source: own work.

Table 2 illustrates the progress in confidence, interaction, and communication that the students reported from the beginning to the end of the project. This table notes that the students acknowledged making new friends and interacting with people from different backgrounds while developing the proposed task. It also includes information that reveals that communication and confidence increased thanks to the implementation of this project.

In the same way, the clear instructions given by the coordinators of each team allowed students’ purpose of interaction to be precise and concise, as reported in the interviews. This confirms that the quality of the online learning environment and the collaborative effort of peers increase the involvement in learning and skills development (Altınay, 2016; Vartiainen *et al.*, 2022). Thanks to the role of the coordinators and the quality of the

communication settings, students knew what they must do and how to do it, supporting the model proposed by Gislev *et al.*, (2020). However, a student mentioned they would have liked to ‘communicate more and get help from the coordinators when improving the work’ SCH27, which means that more communication would have improved students’ interaction and enhancement with the project.

As mentioned, this cross-cultural ocw project found that students’ perceptions of the process led to difficulties and strengths (see Figure 5). It is also discussed that there were *mediators* that allowed students to cope with the aim of the ocw process successfully. Figure 7 summarizes how the difficulties and strengths faced by students were related to the aspects they found as mediators in the ocw process.



**Figure 7.** Students’ perceptions of the ocw process

Source: own work

Regarding the OCL model proposed by Harasim (2012), it was evident that students accomplished interaction using strategies from the IG, IO, and IC phases during the implementation process. Coordinators played the role of the teacher in each group; hence, Angelova and Zhao (2014) noted that their roles were reversed. They were not just coordinating; they were also teaching and learning. As noted by Harasim (2012), “the role of the teacher is essential to facilitating the process and providing the learners with the resources and kinds of activities that will help them to build knowledge collaboratively” (p.97). Therefore, coordinators were the axis of the project, the ones in charge of facilitating the accomplishment of the task and mediating when communication issues were evident, which supports the OCL theory. However, this article is mainly focused on students’ perceptions of the ocw process, whereby this information is not deepened.

## Conclusion

This study explored students’ perceptions of an ocw project between China and Colombia in which students whose native language is not English participated and interacted to accomplish the task of collaboratively writing a story. It is worth noting that the CCBCC project was carried out during the pandemic when people around the world were put into quarantine, and there were no chances of having face-to-face lessons. This implied that students’ homes, computers, and technological devices became their school environment. Additionally, motivation and lack of opportunities to use the English language in meaningful communicative scenarios became a significant issue, especially in countries with few opportunities to interact with speakers of English. Considering the previous situation and the context in which CCBCC was implemented, findings provide evidence of the difficulties and

strengths of the cross-cultural collaborative process that students perceived and related.

It is concluded that time for interaction, English language proficiency, students' skills, willingness to communicate, and time zone differences were the most consistent difficulties when communicating and interacting in the WeChat and Dingtalk groups. This implies a need to improve proficiency in speaking English to make students feel more confident to communicate. From the data analyzed, it can be stated that the strengths students revealed are related to their positive attitudes toward the project, their intrinsic motivation, their willingness to participate, and the value and importance of the project for students' improvement. In addition, it is confirmed that this ocw project enhanced and improved students' confidence, interaction, and communication.

It is also noted that the mediators students mentioned as part of the cross-cultural project were crucial to accomplishing the assigned task. Those mediators were their good teamwork skills, the use of empathetic language to communicate in their chat groups, and their ability to use technology. Additionally, the pre-service teachers' participation in their role as coordinators during this ocw project significantly impacted communication and understanding. This implies that cross-cultural collaborative projects are to be improved, and the difficulties students must deal with should be solved by the time the project is being developed and should count on the support of practitioners.

Finally, the ocw project in these two countries serves as a basis for understanding how online collaboration works in this century. These findings interest educators who want to connect classrooms from different backgrounds and promote collaborative learning through online environments. This project's conclusions also support the literature about cross-cultural OCL. For future research purposes, we expect to analyze the stories the students wrote to understand how their cultural backgrounds influenced the texts they collaboratively produced. Additionally, it would be interesting to analyze the improvement in terms of knowledge of the English language itself, which should have been specifically analyzed in this research process.

The research participants felt optimistic about the project and looked forward to participating again. This implies that more research should be focused on analyzing the motivational aspects of the OCL process. Additionally, considering that "understanding how cultural perceptions and experience influence the thinking and behavior of learners from different cultures will help instructors design and conduct effective online learning and foster productive learning communities" (Chen *et al.*, 2006, p.32). This means focusing on cultural issues in cross-cultural online learning is also needed.

As stated by Nam (2016), it is essential to have instructional materials such as checklists to examine students' learning activities in collaborative learning environments; this means that there is a need to establish a framework that aligns with the current technological advantages that are part of this century. Further research should also consider technical support, interaction, social inclusion, and software program applications, among others, to support online collaboration (Altnay, 2016) to understand better how to implement and provide settings to connect classrooms.

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