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**The development of Intercultural Competence between primary
school children from Mexico and Spain: an approach framed by
SCL and CSCL**

by

Mirna Carolina Valladares Celis

**A dissertation submitted to the University of Bristol in accordance with
the requirements of the Degree of Master of Education in the Graduate
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Synopsis

With an increased convergence of people with different backgrounds and ideologies in ways never documented before, education faces the not easy task of providing students with abilities that facilitate their integration in this new world. These abilities have been referred in the literature as intercultural competence (IC). The development of such competence, though, has been mainly associated with foreign languages, and reserved for teenagers and young people. Scarce investigation has been devoted to the development of IC separated from those purposes, or consigned to elementary school settings. Therefore, this dissertation was aimed to design, implement and analyse an online-cross-cultural exchange between primary school children from Mexico and Spain to facilitate the development of IC. In doing so, a conceptual framework integrating Student-Centred Learning and Computer-Supported Collaborative Learning approaches was created.

Through the analysis of diverse observations, interviews and focus groups, this inquiry addressed the following research question: How does participating in an online-cross-cultural exchange framed by the SCL and CSCL approaches promote children's development of IC?

The results reveal that the integration of SCL and CSCL approaches are highly suitable to facilitate the development of IC. Firstly, by working collaboratively with local peers, children showed great motivation and engagement in the exploration of their own culture, which is acknowledged as an important component of IC. This achievement, though, was found to be strongly

determined by the teachers' roles given the unfamiliarity of students with the SCL approach. Similarly, the teachers' successful accomplishment of their expected roles as guides and coaches, was found to require of external support. Furthermore, concerning the students' synchronous interactions through the CSCL approach, it was found that evocative interactions do not spontaneously occur between participants, especially in the first interactions. Meaningful communication occurred when: 1) the teachers encouraged students to actively participate; and 2) the students felt increased confidence with their counterparts as the days went by. Once the communication was more fluent, the development of IC was observed to thrive. Also, in this process of communication, the technology itself revealed to be a determining factor in the way the interactions were developed.

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Finally, I would like to dedicate this dissertation to my loved family: my father, Mr. Elías Valladares Ochoa, my mother, Mrs. Patricia Celis Vargas, and my sisters, Ivette Valladares Celis and Patricia Edwigis Valladares Celis. But also to my fiancé and greatest inspiration, Artemio Arturo Cortez Ochoa.

Author's declaration

I declare that the work in this dissertation was carried out in accordance with the regulations of the University of Bristol. The work is original except where indicated by special reference in the text, and no part of the dissertation has been submitted for any other degree.

Any views expressed in the dissertation are those of the author and in no way represent those of the University of Bristol.

The dissertation has not been presented to any other University for examination either in the United Kingdom or overseas.

Signed: Mirna Carolina Valladares Celis

Date: September 8th, 2016

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Introduction

The emergence of a multicultural world where the convergence of cultures is becoming an increasingly common element of every-day life, has raised the need to develop the ability to understand and communicate with people with different ideologies and backgrounds. Such ability has been described as intercultural competence (IC) (Lustig & Koester, 2013). Hitherto, the development of such competence — within formal education — has been mainly focused on adolescents and young people (e.g. Dill, 2012; Lawrence, 2010; Tiesson, 2008). Other attempts to develop IC in lower levels of education have been intrinsically associated to second/foreign languages subjects with the aim of developing more meaningful learning practices (e.g. Byram & Nichols, 2001; Damen, 1987; Koike & Lacorte, 2014). There is a significant lack of research on the development of IC practices separated from the acquisition of a second language, and with a focus on elementary school settings. Therefore, this study is intended to design, implement, and analyse a cross-cultural exchange between 10-12 year old primary school children from Mexico and Spain with the aim of facilitating the development of IC.

Since no methodological guidelines were found in the literature to support IC practices for the specific contextual settings posed for this study, a suggested methodology was designed. This methodology is framed by sociocultural theory and contemplates the work of Student-Centred Learning (SCL) and Computer-Supported Collaborative Learning (CSCL) approaches side by side.

The implementation of the project entailed two phases, each of them consisting of a week in length. The first phase involved peer work with local classmates to jointly select, investigate, and organise an exhibition of relevant topics of their culture. These activities were guided by the SCL guidelines. The second phase consisted of connecting Mexican and Spanish students via video calling to exchange the relevant aspects of their culture in real-time. This part of the project was framed by the CSCL principles. However, it is worth mentioning that although the study is sorted into two stages, the activities and their leading theories were strongly interdependent.

By exploring students' and teachers' thoughts around the experience, this study will strive to address the following overarching research question:

- How does participating in an online-cross-cultural exchange framed by the *SCL* and *CSCL* approaches promote children's development of intercultural competence?

This dissertation is organised as follows. In chapter I, the conceptual framework for this study will be provided. To do so, a summary of the main debates around intercultural competence will be reviewed. Subsequently, the relevant theories that informed the design of the framework will be discussed. In chapter II, the methodology, methods, and implications of the research will be described. In chapter III, the findings and a discussion will be presented. Finally, chapter IV will integrate the summary and conclusions.

Chapter 1. Literature Review

In this chapter, the conceptual framework for the study will be reviewed. In doing so, the latest debates around the relevance and implications of developing intercultural awareness in formal education will be reviewed. Afterwards, the theories that informed the design of the conceptual framework will be discussed.

1.1 The relevance of promoting intercultural competence in formal education.

Generally speaking, formal education is deeply shaped by local contexts, such as the domestic history, culture, and institutional structures in which it is embedded (Levin, 2011). Yet, the rapid emergence of a multicultural society where people with different nationalities, ideologies and values converge in ways which have never been documented before bears new challenges for education; particularly those concerning how to prepare students for the upcoming all-inclusive world. Amongst the most relevant arguments expressed by scholars (e.g. Chen & Starosta, 2008; Lusting & Koester, 2013; Spitzberg & Changnon, 2009) claiming for an adoption of multicultural awareness in schools are:

- a) *The technological development.* The fast growth of communication and transportation technologies linking most places in the world has led to a prompt interconnection of the world into what McLuhan (1962) coined as a 'global village'.

- b) *Globalisation and economy.* The rise of a global market and the increasing interdependence between international economies has emphasised the role and relevance of intercultural communication for the emerging generations of the 21st century.
- c) *Population migrations.* The demographic movements of people across national borders, mainly derived from the need of pursuing better life conditions or better work opportunities, has led to the unavoidable contact between culturally diverse people.
- d) *The development of multiculturalism.* The need to develop appropriate interpersonal relationships and communication skills to live within an increasingly diverse society.
- e) *Peace.* The need of mutual understanding between people from different backgrounds in this increasingly multi-ethnic society.

When considering these circumstances, and from a standpoint that understands education as the development of minds and identities — rather than the transmission of specific contents — (Claxon & Wells, 2002), it becomes necessary to embrace practices that help students to develop new skills to understand and harmoniously participate in the common shared world they inhabit. Such currently essential skills have been referred to in the literature as ‘intercultural competence’ (IC) (Byram, 1997; Chen & Starosta, 2008; Lieberman & Gamst, 2015; Lustig & Koester, 2013).

Various scholars have emphasised the need of developing intercultural competent global citizens in the last few years (e.g. Chen & Starosta, 2008; Dill, 2012; Tiesson, 2008; Pashby, 2011). In doing so, different contributions have outlined a rich catalogue of the components that an intercultural competent person should hold. Most of those suggestions seem to concur in four key components of IC:

- 1) Knowledge: refers to the acknowledgement of the individual's own culture and identity as a member of a particular cultural group, and also to the acknowledgement of others' ideologies and practices (Byram & Nichols, 2001; Lustig & Koester, 2013; Ting-Toomey, 2009). This twofold knowledge is intended to relativize cultural practices and avoid ethnocentric behaviours in a multicultural world.
- 2) Appropriate and effective behaviours: denotes the ability to openly listen to the interlocutor's beliefs without assuming that those beliefs are incorrect (Byram & Nichols, 2001). This component also encompasses a set of other contextually suitable behaviours that will lead to effective communication (Lustig & Koester, 2013).
- 3) Skills: refers to the skills that allow the individual to communicate effectively. These skills are mainly oriented to be able to interpret the meaning of possible unknown words during the conversation by contextual elements (Byram & Nichols, 2001). Also, these skills refer to the ability to deal with potential misunderstandings — which may simultaneously require negotiation skills (Van de Vijver & Leung, 2009).

- 4) Motivation: refers to the individual set of emotional associations before and during the conversation with people from other cultures (Lustig & Koester, 2013). The motivation is also related with cultural empathy and emotional intelligence (Van de Vijver & Leung, 2009).

Creating opportunities to progress towards the development of IC involves some challenges. Koike and Lacorte (2014) highlight two key issues associated with the development of IC faced by teachers in a conventional class. They argue that it is difficult for educators to identify key representative elements that characterise a whole culture without compromising the richness of the entire society (especially if we consider that the teacher may not actually have direct contact with the culture he/she is talking about). Another challenge spotted by the authors is the difficulty for the tutor to identify and expound cultural behaviours and values of social groups. Koike and Lacorte (2014) forewarn the risk of creating stereotypes and overgeneralisations. In a similar vein, a third challenge is described by Damen (1987), who argues that all societies are dynamic and constantly reshaped, making it hard for teachers to keep up to date with cultural aspects of other countries.

All these challenges, however, are strongly interlinked with a traditional structure of a class, where the teacher is positioned as an expert who shares his/her knowledge with the students. Therefore, a sensible way to overcome those challenges is by shifting the approach. A more contextualised learning environment where authentic experts — inhabitants from different countries — converge and talk about their culture, may be mutually beneficial in the reciprocal comprehension of students' cultural characteristics. In this vein,

sociocultural theory, which sees learning as a process contingent upon social interactions (Claxon & Wells, 2002) represents an accurate frame for the development of IC. Proceeding from Vygotsky's (1978) ideas around the zone of proximal development, sociocultural theory emphasises the relevance of bringing together more and less advanced individuals so that the more mature person scaffolds the learning process of his/her peer. In the event of gathering students from different countries, each of them will be more advanced in the knowledge of his/her own culture but unfamiliar with the knowledge of the others' culture. Therefore, building a learning context founded on sociocultural theory requires the progression from a traditional structure of the class to a student-centred learning approach (SCL), which allows students to make decisions and to be active members in the learning process. Apart from perceiving students as active individuals, sociocultural theory is also characterised by the relevance given to material artefacts (Claxon & Wells, 2002; Lantolf & Thorne, 2006). We are so dependent on the material objects which shape our actions, that conceiving learning as a merely social act would be a mistake. In the attempt of promoting the development of IC through the convergence of students from different nationalities, artefacts play a key role, particularly the technological tools. Given the difficulty to physically congregate people in terms of time, cost and effort; technological artefacts have been advocated by a large body of scholars as convenient means to virtually bring together people from remote places (e.g. Anastasiades et al., 2010; Bueno Alastuey, 2011; Hopper, 2014; Lawrence, 2010; Liu, Rao, Li & Zhang, 2008; Morris, 2009; Payne, Gooday, Coutts, Duncan & Wolfe, 2006; White, 2010). A particular approach in the use of technology for education seems to be highly appropriate for the development of IC within the frame of sociocultural theory;

computer-supported collaborative learning (CSCL) (Dillenbourg, 1999). Firstly, the approach is determined by the social interactions of learners, which makes it coherent with the Vygotskian roots of sociocultural theory. Additionally, the mediating function of technology in the process of collaboration is also underlined by the second sociocultural principle which highlights the relevance of material artefacts in the learning process.

Having the above in mind, a conceptual framework that involves the integration of the SCL's and CSCL's principles will structure the development of the intervention designed for this study.

1.2 Conceptual framework

1.2.1 Student-Centred Learning

SCL is a pedagogical approach that accentuates students' power of decision over their learning processes. Different scholars have advocated diverse levels of students' degree of influence and power in the class. Acar and Yilmaz (2015) and Nanney (2004), for instance, highlight the students' power of decision over *what to learn* but recognising that as learners, they still require sufficient guidance from the teacher in order to make effective choices. On the other hand, there is another group of scholars who suggest that a genuine SCL approach should not only give voice to students over *what to study*, but also on *how to do it* (O'Neill & McMahon, 2005; Looi et al., 2009). Determining the most appropriate approach for this study requires careful consideration of the contextual characteristics in Mexico and Spain. In both cases, most state-funded elementary schools generally work around fixed curriculums that specify

the content to be learned as well as the times in which the content has to be achieved by children (see Congreso constituyente, 1917; and Ministerio de Educación Cultura y Deporte, n.d.). Moreover, in Mexico, the Secretary of Public Education provides textbooks for children and teachers that determine the flow of activities in the classroom (SEP, 2010). Under these circumstances it is likely that a large number of schools in both contexts do not exercise SCL practices. Therefore, a sensible starting point to implement SCL may require a supported empowerment of students where the figure of the teacher plays a critical role, especially when considering that students who are not used to this approach may find it difficult to adopt a model which enhances their responsibility (Baeten, Kyndt, Struyven & Dochy, 2010). In these kinds of settings, the teachers' perseverance, patience, and confidence are determining factors for the successful implementation of SCL (Felder & Brent, 1996). Furthermore, beyond the sketched values outlined by Felder and Brent, the figure of the teacher encompasses a series of roles in the development of the class. These roles include: 1) a planner and co-ordinator of the activities (Claxon & Wells, 2002), which foster students' participation and responsibility over the tasks to be developed (Wells, 2010), 2) a guide who scaffolds and monitors students through the process of making effective choices, and 3) a coach who fosters meaningful discussions among pupils (Acar and Yılmaz, 2015). Yet, achieving such multifunctional roles might depend on the disposition of the teacher. In this regard, it is warned that the teacher's rooted belief about the need to embody a dominant figure in order to keep the class under control, is one of the most common obstacles in the successful implementation of SCL practices (Felder & Brent, 1996).

With the pertinent support and guidance of the teacher, students are expected to actively participate, not only by doing individual activities according to their interests, but also by collaborating, negotiating and discussing with peers (Baeten et al., 2010; Iiyoshi & Hannafin, 1998; O'Neill & McMahon, 2005). In doing so, the class as a whole may be intimidated, especially if they are not used to this learning approach — which is the case of the students involved in this study. To help overcome this challenge, Adams and Hamm (1996) argue that the class organisation in groups of a few students (not beyond 5 children) may help to create an atmosphere of confidence where the members can ask questions, express their thoughts and take risks in a more comfortable environment. For the purpose of this study, this kind of atmosphere is significantly important to enhance students' motivation. By minimising risks such as feelings of intimidation or vulnerability, the students may foster more engaging group discussions. Also, by creating small groups, all members will be encouraged to collaborate in the division of labour in the team (Dillenbourg, 1999).

Having the above in mind, for this inquiry, students are expected to work in small groups — organised by the teachers — to discuss the most representative cultural themes to be shared with their foreigner peers. These activities are crucial in a planning stage before the actual cross-cultural exchange, and essential in the knowledge of their own culture (which is considered as an important component of IC). With their classmates, and the support of the teacher as a promoter of meaningful negotiations, pupils are also expected to determine other relevant actions, such as how to present the selected themes in the subsequent cross-cultural exchange (e.g. a bricolage,

sketch, acting, etc.). These kinds of activities (that include dialogue, group discussion and negotiation) are especially significant in the early stages for the growth of communicative skills (Reed et al., 2010) that might be helpful for the interaction with the foreigner children.

By mutually getting involved in the decision-making and information-seeking processes of the topics to be presented, it is expected to achieve an engaging and motivating learning intervention that attracts the interest of students (Lea, Stephenson & Troy, 2003).

1.2.2 The use of CSCL to develop IC

The use of Information and Communication Technologies (ICT) has been highly appreciated for its educational usefulness to connect people from all around the world without having to physically move to distant places. Its low cost and easy accessibility are the core aspects that have accentuated its relevance for educational purposes (Grant & Villalobos, 2008). Such has been its adoption, that a particular area of study has emerged to explore its potentialities for learning: the area of Computer-Supported Collaborative Learning (CSCL).

The term CSCL has been applied to online environments accessed from an electronic device (e.g. computer, laptop, tablet, or mobile phone) that enables interactions among learners for the acquisition of 'knowledge', 'skills' and/or 'attitudes' (Dewiyanti, Brand-Gruwel, Jochems, & Broers, 2007, p. 497). Interestingly, since CSCL seeks students' knowledge and social-behavioural skills' development, these kinds of environments are a suitable hub to foster IC.

However, the development of activities involving CSCL environments, does not always result in successful experiences, mainly because of the misleading belief that by enabling interaction, meaningful communication will occur *ipso facto*. On the contrary, as stated by Dillenbourg (1999, p. 5) ‘peers do not learn because they are two, but because they perform some activities which trigger specific learning mechanisms’. Therefore, in order to maximise the possibilities of achieving a successful implementation of CSCL environments, Cress et al. (2015) have argued that the joint creation of something new, which could either be knowledge or understanding that was previously unknown, is an essential component of any CSCL. In doing so, the convergence of less and more mature students (in the knowledge of the cultural aspects of a society), as a compulsory element of sociocultural activities (Claxon & Wells, 2002), will facilitate the mutual support between children in the comprehension of their culture.

With this in mind, a series of guidelines have been posed to frame the implementation of CSCL. Dillenbourg (1999), one of the most influential pioneers in the development of CSCL practices, advocates four chief considerations for its design and execution. These guidelines will be reviewed separately.

(i) To carefully plan the learning situation before its execution.

This implies a clear definition of the participants who will be involved, as well as an informed selection of the technological tools that will serve as a means of communication. In the case of developing a cross-cultural exchange between children from different nations, careful attention to the participants’ age groups,

as well as their specific countries, is an essential preliminary revision. Since a similar level of cognitive development among participants is expected to occur in order to foster fruitful communication (Dillenbourg, 1999), integrating children from equivalent school grades may help to accomplish this condition. The number of students is also an important issue. Contingent on the number of students, will be the requirements of the software and hardware that will support the collaborative process. In the selection of the software, two leading ways of communication allowed by ICT should be contemplated: synchronous and asynchronous. On the one hand, synchronous communication allows real-time contact that resembles face-to-face interactions (Giesbers, Rienties, Tempelaar & Gijssels, 2014). This kind of communication has usually been associated with video calling software. Among the stronger arguments that support its use are 1) the users' excitement and engagement produced by the sense of spontaneity, and 2) the fact that it enables immediate feedback and instant amendment of misconceptions between partakers (Bueno Alastuey, 2010; Chen & Starosta, 2008; Giesbers et al., 2014; Jepson, 2005). Nevertheless, its use represents some challenges. Diverse studies around synchronous online collaboration have reported technical issues such as dropped connections, pixelated video, or distorted speech (e.g. Bueno Alastuey, 2011; Doggett, 2007; Payne et al., 2006). Furthermore, projects that congregate students who are located in geographically distant places through this kind of communication have highlighted the added challenge of matching the times of participants to work together due to the divergence in time zones (Hopper, 2014). Asynchronous communication, on the other hand, enables delayed contact (Bueno Alastuey, 2011). In these kinds of interactions, simultaneous work online is not necessarily required (Simpson, 2002). Therefore, these ways of

collaboration are normally text-based and involve e-mails, blogs or wikis (Abrams, 2003). Different authors have emphasised its convenience by arguing that it is not spontaneous, therefore students have more time to do more conscious reflections before making any contribution to the collaborative work; this may lead to deeper learning (Hew et al., 2010; Hiltz & Goldman, 2005; Johnson, 2008; Yamada, 2009). Also, it has been stressed that the benefit for participants to work when it is more convenient for them minimises problems associated with fixed times (Brooks & Jeong, 2006). These benefits are, however, linked with some other issues. Yamada (2009) denotes concerns with the considerable amount of time required to understand the general flow of the content posted by other students in environments such as wikis or blogs. Also, some studies have shown a lack of motivation and engagement in these kinds of interactions (e.g Brooks & Jeong, 2006; Zhu, 2006), suggesting that the absence of spontaneity may be a possible negative factor in asynchronous communication (e.g. Abrams, 2003). Finally, the text-based nature of these means of communication may represent a potential difficulty for children due to the complexity involved in conveying messages in a constructive manner (Giesbers et al., 2014).

When pondering the strengths and challenges of both synchronous and asynchronous communication to develop a cross-cultural exchange between children, direct and spontaneous interactions seem to be more appropriate. Given the higher levels of motivation reported for synchronous communication in comparison to delayed interaction; and considering the spontaneous nature of children to socially interact and question others (Acar & Yılmaz, 2015), a

good suitable means of interaction seems to be synchronous communication via video calling.

(ii) To clearly specify the roles of the participants.

In doing so, it is necessary to ensure that all students have a clear understanding of what is expected from them in the activity. Apart from reinforcing the relevance of all members' contributions to the activity, an effective division of labour may lead to more efficient time management — which is a crucial aspect of synchronously communication (Ng, 2007). Previous studies involving real-time interaction among international students have observed the importance of effective use of time during the online sessions due to the time constraints derived from the differences in the participant's countries' time zones (e.g. Hopper, 2014; Paasivaara, Lassenius, Damian, Raty & Schroter, 2013). This issue is particularly important for the implementation of the project here posed. Given the discrepancy in the local time between Mexico and Spain — seven hours ahead of Spain — and that the only way to coincide within school hours is at the first and last hour of class in each school respectively — 8:00am to 9:00am in Mexico and 3:00pm to 4:00pm in Spain — a strict delimited use of time is required. Therefore, establishing responsibilities, particularly in terms of turns to speak, may lead to a more effective use of time during the session.

(iii) To establish communicational rules in advance to the session and reinforce them during the actual online interaction.

Clear rules such as “we all have to be respectful of others’ ideas”; “the participation should not exceed ‘x minutes’, so that there is enough time for us all to participate”; “only one person should speak at a time”; or “raise your hand whenever you want to participate” are examples of these rules. Specially in real time communication, those punctuations are necessary in order to foster a coherent and organised dialogue.

(iii) To supervise and regulate the interactions of participants in their online communication.

In such tasks, the teacher is expected to monitor the conversations and guide them to achieve a significant and productive contact. Taking for granted that the teacher’s support and guidance will be naturally right, however, it may not be a reliable consideration. Instead, it is proposed, that in advance, the teachers foresee the possible issues that may occur during the communication in regard to students’ skills or lack of them to meaningfully interact, so that the teacher can work on them in advance as well as during the actual interaction. Particularly in primary school settings, where students alone may not intuitively foster evocative conversations (Muscat & Mollicone, 2012), this kind of in-advance planning is necessary to maximise the possibilities to develop a more significant experience. For this project, supported practices of the students’ presentations before the online connection are, therefore, crucial to identify problems of time management, communicative skills and mastery of the themes to be shown.

These four recommendations — foreseeing technical issues such as group size, kind of technology, rules for participation and anticipation of interactional difficulties — are essential to be considered in advance and during the online interaction in order to maximise the possibility of developing a successful CSCL practice.

1.3 Summary

In this chapter, the relevance of fostering IC in schools has been addressed. Also, a condensed exploration of the SCL and CSCL principles that served as a guidance to develop an online-cross-cultural exchange between Mexican and Spanish primary school children were presented.

Chapter 2. Methodology

This chapter is aimed to present the research stages of the study. To provide a coherent description of the process, the stages will be organised chronologically. Firstly, the *research planning* phase will be explained. In this stage the structure of the study will be justified. Secondly, the *research design* phase will be described. This section will address the methods used and will introduce the participants. Thirdly, the *research implementation* phase will describe how the study was conducted in the field, step by step. Lastly, the challenges and limitations of the inquiry will be explained. In the account of the decisions made throughout the stages, a reflexive stance has been adopted by contextualising the specific settings in which the study was carried out.

2.1 Research planning

2.1.1 Research structure

Given the nature of this study (i.e., an exploratory research design), some of the elements attached to the Design-Based Research (DBR) approach were followed. This methodology is concerned with the design and implementation of educational innovations in real contexts — framed within particular theories — to give theoretical insights into how certain ways of teaching and learning can be encouraged (Anderson & Shattuck, 2012; Design-based Research Collective, 2003). As previously discussed, the development of IC among primary school children from different backgrounds is a field of research that is still emerging, and requires more solid foundations. Therefore, the design, testing and analysis of new ways to develop IC was needed. Furthermore, contrary to other applied research methodologies (e.g., action research), DBR allows the presence of a teacher and a researcher in the field (Anderson & Shattuck, 2012). This fact is convenient because it allows the added presence of a researcher in the field which, arguably, may enhance the scope of the research.

There are specific characteristics that frame the implementation of DBR. According to Design-Based Research Collective (2003), this methodology is characterised by: 1) developing continuous cycles of design, implementation, analysis and redesign of learning environments, 2) reporting relevant implications for practitioners and scholars, 3) explaining not only whether the implementation was successful or not, but also how it was, and 4) linking the

outcomes with the design. However, for the purpose of this small scale study, achieving the development of a complete DBR process is unfeasible. Therefore, the process will be reduced into a partial cycle of design, enactment, and analysis. Since the iterative cyclic processes of redesign and testing are not part of the study, it will not be possible to verify whether the reported outcomes could be enhanced in subsequent executions. In this sense, the reader is warned to explore the findings of this study, considering its limitations.

2.1.2 Researcher's role

The added presence of the researcher in DBR studies can be the one of an active member during the activities' development (e.g. an insider), or not (e.g. an outsider). However, due to the particular characteristics of this inquiry, the researcher's position was at a midpoint, as an 'inbetweener' (Milligan, 2014); in other words, a partially involved member. On the one hand, by being moderately involved in the activities; answering questions about the project to students and teachers, clarifying responsibilities and roles, and being directly involved in the settings of the project (technical conditions), the researcher could build bounds of trusts amongst participants. On the other hand, given the fact that the relationship between the researcher and the participants was too short — around two weeks — it is not possible to say that strong bonds of confidence were built. Also, a second factor that helped with keeping enough distance amongst them was the researcher's role as a guest, rather than a formal teacher or colleague. Being an external element to the school community was an important factor, lessening participants' sensation of having to *please* the researcher.

2.1.3 Research ethics

The development of this study entailed some ethical considerations. Since children are considered as a vulnerable group, it was necessary to inform and consult their parents or legal guardians for approval (Bera, 2011; Morrow & Richards, 1996; Robson & McCartan, 2015). Yet before reaching this stage, schools were initially contacted (via email and video calling) to inform them in detail about the study. This explanatory stage was concerned in clarifying issues regarding the aims and activities involved, but more importantly, in elucidating the ethical procedures related to confidentiality and anonymity of participants. They were explained that all participants will remain anonymous in the report of the findings, and also, that their participation was voluntary and, as a result, they could decide to stop being part of the study at any time. All these measures were written down in three consent forms that were elaborated specifically for each kind of participant (i.e. students, the students' parents or legal guardians and teachers) by following the ethical procedures of the University of Bristol (University of Bristol, n.d.). A copy of these forms (in English) can be consulted in the appendices A, B and C, respectively. These forms were sent in conjunction with information sheets to the schools via email so that they could print and share them with students, their parents, and teachers.

2.2 Research design

2.2.1 Research questions

This exploratory inquiry is aimed to study how a cross-cultural exchange framed by SCL and CSCL approaches encourages the development of IC. In this sense, the following question was posed: *How does participating in an online-cross-cultural exchange framed by the SCL and CSCL approaches promote children's development of intercultural competence?* Yet, as it can be noticed, this is a complex question that involves diverse components. Therefore, in order to simplify the exploration of the findings, three further sub-questions emerged:

1. How does planning their participation in a cross-cultural exchange under the SCL approach help children to develop IC?
2. How does participating in an online-cross-cultural exchange framed by the CSCL approach help children to develop IC?
3. How does technology help or hinder the development of IC in an online-cross-cultural exchange?

2.2.2 Research stages and timing

According to the partially adopted DBR structure, this study was developed in three core stages: design, enactment and analysis. The activities and timing involved in each stage are described in Table 1 below.

Stage	Time	Activities involved
Design	2 months	<ul style="list-style-type: none"> ❖ Literature Review. ❖ Revision of ethical considerations. ❖ Contact with potential schools to discuss the aims of the involved activities.
Enactment	2 months	<ul style="list-style-type: none"> ❖ Informative phase: <ul style="list-style-type: none"> » Video callings and contact through email with the teachers to formally discuss the implications of the project. » Diverse pilots of the software and hardware used to develop the video calls. ❖ Implementation stage: <ul style="list-style-type: none"> » Independent work of each school to prepare the themes to be shown (One week, an hour per day). » Collaborative work between schools to exchange the prepared cultural themes (One week, one-hour-video call per day). ❖ Data collection stage: <ul style="list-style-type: none"> » Face-to-face interview with both teachers in Spain. » 2 focus groups with a few students in Spain.

		<ul style="list-style-type: none"> » Online interview with the teacher in Mexico. » 2 online focus group with a few students in Mexico.
Analysis	2 months	<ul style="list-style-type: none"> ❖ Exploration of the data in light of the literature.

Table 1. Stages and timing of the study.

2.2.3 Participants

Having in mind the foundations that gave origin to the conceptual framework of this study, it becomes essential to distinguish the particular characteristics of the people, backgrounds and settings in which the intervention was developed. Sociocultural theory, claims that every learning environment is unique, and therefore, it has to respond to specific contextual characteristics (Claxon & Wells, 2002). By acknowledging the relevance of understanding these issues, the characteristics of both groups involved in the study are presented below.

- Primary school in Colima, Mexico:

This school is catalogued as an ‘urban school’ which means that it is placed within the heart of the city and features many facilities (e.g. Internet, technological equipment, and staff in charge of the computing services). This school has 12 groups from 1st grade (6-7 year-olds) to 6th grade (11-12 year-olds), each of around 25 students. The selected group for this study was a 6th

grade class integrated by 17 students. Apart from the reduced size of the group, these students were selected because they were previous pupils of the researcher. This circumstance facilitated the confidence and participation of students and parents in a project where the researcher was not physically present. Also, as a former teacher at the primary school, the researcher negotiated relatively easily with regards to her access to the school.

- Primary school in Alicante, Spain:

This school is categorised as a 'rural school', which means that it is distantly located from the city, and the services are more reduced than in schools located in the city centre. The school had internet access and technological equipment (projector, desktop computer and interactive whiteboard), but not the support of computing staff to help with technological issues. The school provided education services to preschool (3-5 year-olds) and primary school children (6-12 year-olds) in the same building. Given the fact that it was located in a rural area, the number of students was low (no more than 50 students in total). In this school, two groups participated: the 5th and 6th grade classes. The 5th grade class had 4 children in total, from which only 3 students participated. The 6th grade class had 10 children in total and all of them participated. The groups were clustered for two reasons. Firstly, the two groups showed interest in participating in the project. Secondly, to have a similar number of students in each school it was necessary to join the classes into a single group. Therefore, two teachers participated in the activities in this school.

The participating schools, i.e., urban/rural, were those that responded to the researcher's invitation within the timeframe specified, hence their contextual

characteristics should not be considered deliberately chosen for comparability or to build judgements based on their differences.

2.2.4 Methods of data collection

Three methods of data collection were used: observation during the sessions, focus groups with a few children after the intervention, and semi-structured interviews with the teachers. The selection of various methods emerges from the need of addressing a complex descriptive question. By triangulating the data from observation with the views of participants based on their direct experience, as well as reflecting on the research literature, it is expected to obtain a richer perspective of the phenomenon (Cohen, Manion & Morrison, 2007).

- Observation

In a general sense, this method consists of watching what occurs throughout a specific phenomenon and how it happens (Robson & McCartan, 2015). It is valued because it enables the researcher to collect data in regard to physical, human, interactional and organisational settings (Morrison, 1993 cited in Cohen et al., 2007). Since this study is concerned with the analysis of the development of an intervention, collecting data about the way in which the process happened, as well as the way in which interactions among participants occurred, was crucial. With this in mind, the researcher recorded videos and audios along the two-week project. Video recording the sessions was very helpful for the overall analysis. By preserving the raw data of the process, the

recordings allowed further in depth analysis of the intervention (McLafferty, 2004). Nevertheless, the massive storage capacity required to preserve all video recordings was a constant concern.

An important issue to ponder regarding the observations is the unavoidable uneven exploration of children and teachers' experiences of both countries. Given the unfeasibility to directly record or register any observation of the participants in Mexico — because the inquiry was carried out by a single researcher — a considerable difference in the data regarding how the process was carried out in each country represented an important challenge. The only way to attempt addressing this issue was to explore students' and teachers' experiences through latter interviews and focus groups.

- Interviews

Qualitative semi-structured interviews are useful methods to understand the subject's own perspective about a specific phenomenon (Kvale & Brinkmann, 2009). In the case of this study, teachers' views of the experience are important aspects to investigate. By being direct actors in the intervention and having more knowledge of the students' behaviours and skills, and their perceptions are especially valuable.

Given the fact that the researcher was not deeply aware of the characteristics of the students, school, parents, etc., (especially in Spain) it was likely that some important situations were not considered within her range of outlined questions. Therefore, since these kinds of interviews enable participants to explore further situations that they consider significant (Longhurst, 2016), semi-structured

interviews were selected. Conducting these kinds of interviews entails some challenges, such as the time required to explore the matters outlined by the researcher and the added thoughts raised by the interviewees (W. C. Adams, 2015). Yet, a positive factor that helped to manage the time to keep the interviews within the estimated length, was the straightforward understanding between researcher and interviewee due to their shared professional backgrounds. Another factor facilitating the development of the interviews was the language; both interviewer and interviewee participated in their native language: Spanish. This factor simplified their mutual comprehension.

It is important to mention that the interviews were not conducted in the same way with all teachers, and as a consequence, the quality of the interaction in each of them was different. On the one hand, the interviews with Spanish teachers were developed face-to-face. These interviews were fluent and took the estimated time to be developed. On the other hand, the interview with the Mexican teacher was settled via video calling. Although video calling reassembles face-to-face interactions, its quality's dependency on the Internet-speed service affects the nature of the interviews carried out by this method (Janghorban, Latifnejad Roudsari & Taghipour, 2014). Therefore, the dropped connections caused by the instability of the Internet service on the day of the interview compromised the flow of the conversation.

- Focus group

Focus groups are highly valued methods of data collection for children transiting to adolescence. Since this age-group tends to be reserved when talking with unfamiliar adults (Horner, 2000) the presence of peers in the conversation

process helps to foster higher levels of confidence to openly express their thoughts (Horner, 2000; Morgan, Gibbs, Maxwell & Britten, 2002). When considering a suitable size to work with children, Morgan et al. (2002) recommend gathering groups of four participants. According to them, small groups allow the researcher to control the common problem of uneven participation. Also, since not many voices are simultaneously involved, the scholars highlight its convenience for the researcher to make transcripts. Therefore, groups of three and four students were integrated. Two of them per school.

Despite the considerations taken to execute this method, some difficulties still arose. Firstly, although only a few students were congregated per group, each of them had at least one stronger personality that outlined the path of the dialogue. In this case, Williams's (2003) recommendations to balance the conversation by directly asking questions to the shier participants were useful to encourage a more balanced participation of all children. Secondly, some students assumed that the researcher would understand ideas which were partially developed. In these situations, it was necessary to constantly verify the original ideas of the speakers. A favourable factor that helped to overcome this issue was the previous experience of the researcher working with children around those ages. Also, the selection of an open and quiet setting at the back of the school — as advocated by Darbyshire, Macdougall, and Schiller (2005) — was found to be a suitable strategy in creating a relaxing environment where children demonstrated easiness to participate.

An added factor that only affected the focus groups with the Mexican children was the fact that they were developed through video calling. This situation, alike the interview with the Mexican teacher, affected the flow of the conversation due to the dropped connection on the day of the focus group.

2.2.5 Credibility and trustworthiness

In an attempt to lessen bias in the interpretation of the findings, various strategies suggested in the literature were followed. Firstly, to gain an articulated and comprehensive view of the phenomenon — as advocated by Casey and Murphy, (2009) — multiple methods of data collection were used, including observations, interviews and focus groups. By triangulating data from all participants involved with the researcher's own observations, the risk of interpreting the findings in an unfair way was reduced. Furthermore, a personal journal with daily annotations of the researchers' own perceptions was kept to help 'bracket out' her personal values and interests (Casey & Murphy, 2009; Polit & Beck, 2012).

To avoid misinterpretations that could affect the transcription of the findings, and therefore its interpretation, the transcripts of the interviews were sent to the teachers for approval. Member checking has been acknowledged by scholars (e.g. Harper & Cole, 2012; Lincoln & Guba, 1985; Robson & McCartan, 2015) as a beneficial method to validate the interpretation of the data and enhance its accuracy. Yet, it is important to mention that only two of the three teachers were able to check the transcripts without making any comments on them.

Another important element required to enhance the credibility of the study is its transferability. Especially in studies framed within the DBR approach, the development of *sharable theories* is a key aspect that must be achieved (Design-based Research Collective, 2003). Yet, the findings of this work do not satisfy this characteristic. Firstly, since the intervention followed a partial cycle of the DBR, no further modifications and revisions of the design were made. Also, since the specific contextual characteristics of the participants involved play a major role in the findings of this work, this study is not intended to suggest any generalizable outcome.

2.3 Research implementation:

2.3.1 Design

This stage was aimed to design the intervention in light of the literature. Therefore, a careful revision of the main discussions and debates around the development of IC in education was conducted. Also, the conceptual framework was created based on suitable theories to the outlined aims of the study.

During this time, contact was made with five schools in Spain to have diverse options in case a chosen school would drop out. In Mexico, only two schools were contacted, given that there was a high possibility that the first school which was contacted would remain interested in the project. This was due to the fact that the researcher worked there as a teacher for four years and the staff and students knew her well and had confidence in the project. The potentially interested schools received an information sheet with the aims of the study, the possible length of the activities and the ethical considerations.

2.3.2 *Enactment*

- Informative phase:

Once having received access from both schools, an informative period integrated by various video call sessions and exchange of emails with the teachers and head teachers of both schools was carried out. This constant communication was important to create bounds of trust among researcher and participants. By clearly defining the aim and relevance of the project, the participants' roles and rights as well as the researcher's background, the necessary confidence in the inquiry was set and, therefore, the commitment from both schools.

- Implementation phase:

This phase was divided in two stages, each of them a week in length. Stage 1, or the '*planning stage*' consisted of the organisation of the themes to be shown. Stage 2, referred here as '*enactment stage*', entailed the online communication between schools to develop a cross-cultural exchange. During the planning stage, each school worked independently. The researcher suggested a length of the activities of around one hour per day. However, each school made modifications to this recommendation according to their own timetables. Along this week, it was expected from teachers to encourage group discussions helping children decide themes of interest to present in the subsequent cross-cultural exchange. Respectively, it was expected from students to be actively involved in the discussions, and have a good disposition to independently

investigate issues of their culture after school (with family members, neighbours, or the Internet).

For the enactment stage, one hour of online communication was proposed. Twenty minutes of participation per school was expected, and ten extra minutes after each presentation for questions and comments. Four days in total were set for the video calls (from Monday 23rd to Thursday 26th of May). The first three days were for each school to show some aspects of their culture, and the last day was intended for a free talk between students to exchange what they learnt from each other and for the farewell.

- Data collection phase:

After the intervention, two focus groups were conducted with a few students from Spain, as well as one interview with each of the teachers. Also, two online focus groups were carried out with some children from Mexico, and one online interview with the Mexican teacher.

2.3.3 Analysis

This step was intended to evaluate the outcomes of the intervention through the exploration of the data. To do so, the collected information from the three interviews and the four focus groups was initially transcribed in a digital document. The subsequent exploration of the transcripts was developed through thematic analysis using the conceptual framework as a guide to scrutinise participants' thoughts. This process was developed through the two main cycles of coding suggested by Miles, Huberman and Saldaña (2014).

Firstly, early labels were assigned to chunks of data that were relevant to give a response to the research question in light of the literature. General codes such as “Previous experience with SCL approach”, “Difficulties to implement SCL”, “Teachers’ support”, “Teachers’ obstruction”, “Student’s positive perceptions towards SCL”, “Students’ negative perceptions towards SCL”, and “Evidence on IC acquisition” are examples of some of the broad labels assigned to the data in the first cycle of coding. Subsequently, these labels were further scrutinised to find patterns among them and group the codes in a smaller number of categories (Miles, Huberman & Saldaña, 2014). For instance, in the grouping process of the above labels, only two final categories were found: 1) the teacher’s role (that included his/her “supportive” “obstructive role” in helping student’s overcome the problems associated with their “previous lack of experience with SCL approach”), and 2) the student’s response towards the approach and the development of IC (which included both “negative” and “positive perceptions” of children towards SCL approach, and how these responses impacted in the “acquisition of IC”)

Although this kind of “theoretical thematic analysis” has been criticised by a limited exploration of data, leaving aside other rich insights that are out of the theories that frame the study (Braun & Clarke, 2006), coding the texts under a specific framework was necessary in a response to the exploratory nature of the study.

2.4 Challenges and Limitations

Conducting a study entirely dependent on technological tools (software and hardware) with the added difficulty of setting the activities in an inflexible

schedule, were the biggest challenges of this work. Despite the constant revisions of the Internet service and the proper functionality of the software and hardware in advance to the cross-cultural exchange, machines and programmes are imperfect. In this sense, the quality of the interactions of children was always contingent on all these technological artefacts working correctly, and this fact caused some problems. Furthermore, the fact of requiring a technician to look after the hardware was another issue. During the first day of the project, the person in charge of these issues in Mexico could not assist the school due to personal constraints and he did not warn the researcher about his absence. As a consequence, the project could not start on time until another person with enough knowledge to set up all of the technical requirements was found. This issue affected the participation of the students in Mexico by cutting their interventions to three days instead of four.

Finally, a limitation which was not related to technology, but with the scope of the study, was the unbalanced collection of data between the two countries involved. Since the study was carried out by only one researcher, it was not possible to equally gather data from both contexts. In this regard, the record of the experiences from the Mexican students and teachers was narrow in comparison with Spaniards.

2.5 Summary

The methodology used for this study consisted of a partial implementation of the DBR: a cycle of design, enactment and analysis (without further cycles of redesign). As a consequence, the reader is warned to understand the results considering the entailed limitations of this inquiry. The selected methods of data

collection integrated the observation, interviews and focus group. The exploration of the findings was made through thematic analysis using the conceptual framework designed for this study. The participants were two teachers and 13 students from a rural school in Spain, and 1 teacher and 17 students from an urban school in Mexico.

Chapter 3. Findings and discussion

The purpose of this exploratory study was to design, develop and assess a cross-cultural exchange between primary school children with the aim of addressing the following research question (RQ):

- How does participating in an online-cross-cultural exchange framed by the *SCL* and *CSCL* approaches promote children's development of intercultural competence?

In order to explore all the involved aspects within this complex interrogation in-depth, the following sub-questions are used as a frame to present the findings:

1) How does planning their participation in a cross-cultural exchange under the *SCL* approach help children to develop IC?, 2) How does participating in an online-cross-cultural exchange framed by the *CSCL* approach help children to develop IC?, 3) How does the technology help or hinder the development of IC in an online-cross-cultural exchange?

To answer these questions, the collected data was explored through thematic analysis using the conceptual framework presented in Chapter 1 as a reference. The emerging categories from the data analysis are used below to present the findings of each question.

3.1 How does planning their participation in a cross-cultural exchange under the SCL approach help children to develop IC?

Students' active involvement in the organisation of the cross-cultural exchange — from the early decision-making process to identify relevant topics, to their collaborative work to plan their intervention — demonstrated to foster a great level of engagement and motivation. These enthusiastic circumstances also proved to facilitate the early growth of some components of the IC — that were gradually developed in the subsequent interaction with their foreigner peers.

Two main factors were found highly relevant in the described findings: 1) the teacher's role, and 2) the students' response towards the SCL approach and the entailed collaborative work. The analysis of these factors is presented below.

- **The role of the teacher**

As described in Chapter 1, the figure of the teacher turned out to be highly relevant to foster student's commitment and interest, and consequently, in the way they achieved the development of some IC components. The influence of their role was remarkably stressed through the observation of significant

differences in students' perceptions, as a result of different roles adopted by the teachers in each of the schools. On the one hand, teachers in Spain encouraged students to be active actors along the process. Their active support was observed to positively affect their motivation and engagement. On the other hand, the teacher in Mexico was reported to give certain levels of freedom to students, but still keeping control and making decision on behalf of students in some situations. This approach was found to produce frustration in some students, and to be inappropriate to foster the expected collaborative work between children. These findings are discussed below. However, before continuing, it is important to underline that the teachers' role should be interpreted by considering the inference of the researcher's presence and absence in each of the locations respectively¹.

The initial setting in both contexts were very similar. As expected, both schools were not used to working under the SCL approach. In this regard, a Spanish teacher acknowledged that *'it's not usual to work with students in that way, what is more common is to follow the activities in a book [...] Therefore, students are used to writing without thinking; they are not used to talking in front of an audience, they are not used to searching for information and finding the most relevant content... they surf the Internet and pick the first information they find, without being critical'*. In the case of the school in Mexico, the acknowledgment of this scenario was not openly stated by the teacher. However, the student's narration of the way she conducted the project suggest a strong adherence of the teacher to more traditional practices.

¹ Since the researcher accompanied the whole process in Spain, teachers were able to ask questions, suggestions, and ask for recommendations as demanded by the circumstances. On the other hand, the Mexican teacher was relatively isolated, facing the emerging challenges without immediate support of the researcher, especially due to the difference between their local times.

Under the described circumstances, similar difficulties were faced by children in both contexts due to the enhanced responsibility conferred to them, especially at the beginning of the project. In this regard, the figure of the teacher was crucial to help overcome (or not) this difficulty. One of the first emerging problems, as highlighted by Baeten et al. (2010), was the resistance shown from some children towards the approach. In Spain, when the activities started the whole class was congregated in a room and the teachers were waiting for suggestions with regards to the cultural topics to be presented in the cross-cultural exchange. This moment was especially interesting because only a few extrovert students dared to participate and suggest various ideas. The rest of the class only listened to the others' opinions quietly, showing shyness and, in some cases, unwillingness to get involved. When noticing this issue, teachers changed the strategy and gave them some time to discuss their ideas with peers next to them. This strategy, as advocated by Addams and Ham (1990), resulted in being very helpful by providing them with an environment of confidence to discuss with their classmates. After the implementation of this strategy, students showed more openness to express their thoughts with the whole class. Comparably, in Mexico, the teacher reported having '*problems with the behaviour*' of some students, referring to the lack of involvement exhibited by some of them. In contrast to the scenario in Spain, and in an attempt to fluently develop the project, the teacher determined the topics herself. This situation was reported by one of the students when saying '*the teacher gave us the themes, and in teams we planned how to find the information and each of us brought what we were requested*'. This divergent scenario, although efficient in terms of saving time in the decision of the

themes, was not as favourable in the attempt to minimise the unwillingness to participate that was shown by some students.

During the following days, when students were expected to plan the way in which the themes would be presented, the teacher's role was equally relevant. On the basis of the above identified difficulties faced by some students, teachers were asked to organise the class into small groups and constantly supervise and scaffold their interactions. In Spain, all of these suggestions were followed by the teachers throughout all the sessions, reporting great progress in the achievement of the expected collaborative and evocative work between the children. An illustrative example of this progression happened during the first day of work in the teams. At the beginning of the class, one of the groups was noticeably quiet. The members were not saying much beyond agreeing on where to find the information. It seemed that they did not know what else to do, or maybe, what the teacher expected them to do. When observing this situation, a teacher approached the team and started giving ideas such as *'if you were about to learn what a traditional parade was, how would you like to learn about that event?'*, *'you can bring pictures or videos of the parades to show them how they are!'*. Immediately after this tiny piece of advice, some children shifted their quiet stance and started making really interesting contributions. Yet, all the contributions were made in the form of questions. For instance, one of the children suggested (asked) *'teacher, can we recreate the parade in the class?'*, *'we could bring the music and costumes to the session'*. After the teacher's approval, other children started thinking about which customs they had at home to bring for the video call. All the groups were equally assisted by the teachers and were observed to gradually evolve towards a more collaborative method of

working with their peers throughout the week. Indeed, a teacher highlighted the remarkable progress of some students in terms of social interaction as a result of the work in small groups (and the implied assistance of the teacher) when saying *'there are children that normally fail to excel socially, such as the case of Santiago², and they have gradually started to brake their barriers. Working in teams has been really beneficial to them'*. This outcome also supports Reed's (2010) claims on the benefits of students' collaborative work to facilitate the development of skills to socially interact.

Meanwhile, the teacher's role in Mexico was slightly different. On the one hand, the teacher effectively followed the recommendation of organising students into small groups. This organisation of the class was found to be highly useful in the enhancement of students' active participation. Indeed, the presence of some disagreements between team members was narrated by various children. For instance, one of the students said *'I would have liked to participate showing a book like the one that my teammate Pedro presented... the one about La Catrina³. He and I discussed it, we first said "yes", then he said "no" [...] but in the end, the teacher told me that I will not be presenting it'*. The discussion of these students is particularly interesting when considering that disagreements represent a distinctive element of genuine collaborative work, as a side effect of internal negotiations (Dillenbourg, 1999). Yet, although children's active involvement is inferred from these kind of discussions reported by students, the role of the teacher as a mediator element was not perceived as suitable as expected. Instead of coaching and scaffolding their negotiations, her instruction

² All names mentioned in this dissertation are pseudonyms in order to guard the identity of participants.

³ A Mexican character that represents death as a female figure.

over what to do when students showed disagreement led to the disappointment of the students whose ideas were not considered. These feelings were noticed through the continuous incidence of the phrase *'I would have liked'* reported by different students.

In the dissimilar scenarios accounted in Spain and Mexico, the researcher's presence/absence was observed to be an influential element. In the case of Spain, the teachers approached the researcher on various occasions to ask for recommendations and guidance whilst developing the activities with children. By constantly accompanying and supporting the Spanish teachers, they could redirect the flow of the class whenever required to obtain enhanced outcomes. On the other hand, the teacher in Mexico did not have the same level of support, and as a consequence, most of her decisions were taken alone. The lack of support received in this scenario was probably the reason that triggered a remarkable tendency to follow previously established traditional practices. The dissimilar approaches developed in each setting suggest that in the progression towards implementing SCL practices, teachers require encouragement and support from an external advisor.

- **The students' response to the SCL approach, and its inference in the development of IC**

As briefly discussed above, the different approaches taken by the teachers in each of the schools raised various outcomes in students' enthusiasm and engagement. Besides this, these outcomes strongly permeated the way in which they started developing some elements of the IC. In the case of the

Spanish students, the previously described support from teachers helped to set favourable conditions to enhance their motivation and commitment. In regard to their collaborative work, many students commented on their high levels of satisfaction with the team work due to the mutual interdependence fostered among members. For instance, a student reported *'I really liked to work with other children in a way that we all had to participate. I enjoyed the fact of saying "let's search for this", and then, other [teammates] could say "no, let's look for this other information", [...] that [way of working] was like a real team... and at the end, you feel like "bua!"⁴. What a great time we've had together, and what a nice job we have done!'*. This positive perception towards the teamwork is coherent with the various scholars' claims about the students' enthusiasm when feeling actively involved in their learning process (e.g. Baeten et al., 2010; Iiyoshi & Hannafin, 1998; Lea et al., 2003; O'Neill & McMahon, 2005). A constructive effect of their engagement with the activities was the easy emergence of certain elements of IC. Insights into the early growth of their *own culture's knowledge* were reported by most students while expressing their excitement of learning unknown things about their country. Observations such as *'The best part was that you search for information about your country and you discover that half of the information is new for you [...] what? do we really do that? [laughs]'*, suggest an evocative and unexpectedly natural learning process of their own culture. At this point, it is important to acknowledge that an external factor that also influenced this rich learning process was the support of the families. The first-hand information provided by relatives was probably more meaningful than what they could have found in other less contextualised sources of information such as Blogs or online articles suggested by search

⁴ An expression of joy.

engines. In fact, one of the students indicated that when he was looking for information about a traditional Spanish drink (i.e. red wine), he first went online, but the information he found was not coherent with the actual practices he had normally observed in his family. Therefore, he decided to consult his family. He commented *'When I searched online, the information I found said something different to what I wanted to say. Then, I asked my dad'*.

In the case of Mexico, the partial freedom given in the class thrived both motivation for some students, but also disappointment for others. From the perspective of children who reported being more involved and whose thoughts were taken into account, the experience was very positive. Comments such as *'I liked the work in teams because we organised ourselves'* or how *'it was nice that we worked together to prepare the presentations because it was also really interesting what we did to prepare them'* suggest immersion and motivation to participate. On the other hand, students who expressed being more restricted on their suggestions commented *'I would have liked to present other aspects of my culture such as New Years' eve and Christmas'*, or *'I would have liked to show how we celebrate other festivities like Easter or so on'*. These fragments provide insights into how the intervention of the teacher in the internal discussions of the teams was perceived as a discouraging factor due to the obstruction to students' effort to participate. Despite how disappointing the teacher's inference was for some students, the *growth and strengthening of their own culture* was observed to be somehow interesting. A determining factor triggering students' engagement in the development of this component of IC, was perceived to be the external agency of parents. An example of children's motivation in their learning process can be noticed in comments such as *'I really*

liked to learn things that I didn't know in that level of depth. We knew basic things, but through these activities we learnt more about our traditions', or 'What I liked the most in the process of preparing our intervention was that every tradition, such as the Fiestas Charro-Taurinas⁵ or Day of the Dead, we learnt in more depth'. The agency of students' relatives in the evocative accomplishment of this IC component was appreciated through their joyful expressions when narrating the support of their parents during the information-seeking process. In this regard, a couple of students commented 'To prepare the presentation of the Mexican gastronomy, such as the Pozole⁶, the Sopitos⁷ and so on, my mother helped me a lot. She explained to me how to prepare them, the ingredients...', 'My parents helped me to better understand the tradition of the Day of the Dead. For instance, they explained to me the meaning and the importance of the elements that integrate the altars'. Although not expected to be of such relevance, the involvement of relatives resulted in being highly supportive in the process.

As reported in both contexts, the growth and strengthening of the knowledge of their own cultures was highly fostered by exploring their traditions through this kind of evocative settings. This aspect is of special relevance in Mexico. Since traditions are not normally explored or analysed as something relative to each society (see Secretaría General de Desarrollo Curricular & Dirección General de Formación Continua de Maestros en Servicio, 2011) projects which encourage its investigation, and also, that allow the involvement of families to

⁵ Traditional festivities from one of the municipalities of the state of Colima.

⁶ Traditional Mexican food made of popcorn and pork meat.

⁷ Traditional Mexican food made of a fried tortilla and other elements on top.

bring their expertise into these environments reveal themselves to be helpful in the promotion of the students' own cultural awareness.

Besides the growth of the knowledge of students' own culture, and independently to the role of the teachers, both groups of students demonstrated great motivation and thrill of knowing about their peers; which is an important element of IC. In Spain, although not openly expressed in the focus group, this situation was observed during the playground. On multiple occasions, students approached the researcher to have lunch together and leverage to interrogate her about Mexican students. They asked questions about their local time, the games they played during playground time, the activities they could be doing at the same time they were with the researcher, etc. Similarly, Mexican students reported great curiosity to know about Spaniards. In this regard, the teacher expressed during the interview that *'for them, the investigation was more like an excuse. For them, the most important thing was "we will talk [to them]" [...] They actually checked where the school was [the country] within the European Union [...] Look... here, in the school, mobile phones are not allowed, but I lent them mine so that they could find the location because they were so curious'*.

The motivation of students was still emerging in this stage of the project, but was gradually developed along the second week when the actual interaction of students happened.

3.2 How does participating in an online-cross-cultural exchange framed by the CSCL approach help children to develop IC?

As proposed in Chapter 1, the CSCL approach proved to be highly suitable to facilitate the acquisition of knowledge, attitudes and skills (Dewiyanti et al., 2007), but also, motivation, which together embody the four components of IC. In the achievement of this goal, the four guidelines stated by Dillenbourg (1999) to enhance the successful accomplishment of this approach were decisive. Therefore, the incidence of each of his recommendations will guide the exploration of the findings below.

1st recommendation: to carefully plan the learning situation before its execution.

The early revision of the participants' characteristics, as well as the technological issues before the implementation of the project, were key steps to enhance its successful implementation, and therefore, the achievement of its main goal: the development of IC. Since all the initial settings were mainly stipulated and revised by the researcher, the participation of children in both schools was more or less balanced in terms of the number of students that could be in front of the camera at a time, the technical equipment, and the support from a technician. In both schools, as recommended, a few children participated in the conversation each time so that the interaction was easier. Also, all the technical supplies required were fulfilled (an Ethernet wire, a laptop, an external webcam, a microphone, speakers and a projector). The internet connection was also constantly checked, as well as the best location in each of the schools to develop the calls (based on the quality of the Internet

service). These steps helped to reduce the scholars' reported issues regarding technology as much as possible (e.g. Bueno Alastuey, 2010; Chen & Starosta, 2008; Giesbers et al., 2014; Jepson, 2005).

However, unforeseen events naturally lead to an imperfect development of the project. Yet, a detailed account of these issues is further explored in the third sub-research-question.

2nd recommendation: to clearly specify the roles of the participants.

This second piece of advice was extremely important for the coherent flow of the interactions between the schools. The articulated course of the conversation was observed to be enabled by the roles and turns to speak established in both schools. In Spain, as advocated by the researcher, teachers talked to the teams and clearly accentuated the relevance of establishing responsibilities for each member during their intervention (e.g. the designation of one or two main speakers and one or two students that supported the speaker(s) by providing some examples or showing supportive materials). In response, the teams designated roles to all members for each of the interventions throughout the week. In this process it was particularly interesting to observe that all teams decided themselves to designate different roles to each member for each of the sessions, this was so all students had the opportunity to be speakers, as well as assistants, at least once. Besides the establishment of roles, the teachers' constant supervision of the time spent for each of the teams during the calls was crucial for efficient time management;

this resulted in being a critical factor enabling a balanced participation of both schools due to their distant local times (Ng, 2007; Hopper, 2014).

In Mexico, the establishment of roles was also observed to be highly efficient and useful for the coherent flow of the interactions between the students. Although the organisation of the teams and the support of the teachers in this process was not directly witnessed, from the observation of their organisation during the video calls it was quite noticeable that a carefully planned designation of roles was set. Throughout the four sessions, the students' roles were observed to be well organised in terms of turns to speak or to assist the speaker with pictures and other objects. In both scenarios, the relevance of establishing clear roles was key for the effective use of time and coherent flow of the interactions.

3rd recommendation: to establish communicational rules.

The establishment of rules to socially interact during the cross-cultural exchange was remarkably relevant in setting the conditions to facilitate the development of the IC components. There are three key IC elements to highlight: 1) *appropriate behaviours*, 2) *knowledge of the other's culture*, and 3) *motivation*. The way in which each of these elements were favoured is further explored in the following lines.

❖ *Appropriate behaviours*

Teachers' contributions to the establishment of rules for mutual respect (i.e. the accepted, but also the unsuitable, attitudes during the video calls), proved to be

highly relevant for the achievement of appropriate behaviours. This finding was attested through the analysis of the students' inner judgements which occurred during the calls, along with their external compartment (Lustig & Koester, 2013). In this regard, students from both schools reported some sort of disagreement with the traditions presented by their peers. For instance, in conversations with the Spanish students during the focus groups, most of them reported astonishment by a Mexican festivity known as 'The Day of the Dead', which consists of building altars to relatives that have passed away. The following comment is indicative of many similar opinions expressed by students; *'...the altar they make for the dead... at the beginning it overwhelmed me because I thought that it was like playing with the dead [referring to prohibited rituals]'*. Meanwhile, Mexican children also expressed having experienced this kind of cultural-divergence-shock, one of which stated *'I would have never imagined that they could eat a leg of pork with a length of 50cm [...] it amazed us because that's something unusual here'*. These expressions clearly reveal that both groups of students presented uneasy thoughts. Interestingly, despite their inner discomfort, students did not display disrespectful comments or expressions that compromised the flow of the sessions. Indeed, the mutual respect and attentiveness raised among groups were greatly valued by children as essential elements for their fruitful communication. Comments such as *'The respect they showed to us was very important. If they would not have been courteous, or would not have shown interest, I would have correspondingly participated with less attentiveness and effort'*, or *'When you are saying something and you watch the screen, and notice that they are looking at you with a face like "tell me more" [...] you feel really pleased that they are truly interested'* support this idea.

❖ *Knowledge of the other's culture*

Besides facilitating the development of appropriate behaviours, the attentive environment raised by the establishment of rules was observed to be very helpful in enabling the acquisition of knowledge about the others' culture. By working in a non-harmful environment where no judgements nor taunts were observed from the interlocutors, students could openly talk, listen and ask questions to their peers. In this regard, both Spaniards and Mexicans acknowledged feeling the conviction to ask questions and be open to answer queries from the others during the interaction. A Spanish child stated that *'it was nice that we could talk to each other because we could ask each other questions mutually. For instance, if I would have said something that they didn't understand, they could have asked me to explain it again'*. Correspondingly, a Mexican student commented that *'when they [the Spanish students] had a question, they could ask us, and we could explain further to them what they didn't understand. Explain it in a way that they could [easily] understand it'*. This shared feeling of comfort and willingness expressed by both groups to openly ask and answer questions demonstrates that the environment raised from the mutual respect of schools was helpful to learn from the others. Furthermore, students' reports also prove the suitability of the chosen technology for the fruitful development of the cross-cultural exchange. Coherent with various scholars' claims (e.g. Bueno Alastuey, 2010; Chen & Starosta, 2008; Giesbers et al., 2014; Jepson, 2005), the use of synchronous communication demonstrated to effectively enable immediate feedback and instant amendment of misconceptions among students.

❖ *Motivation*

The motivation was also highly fostered by the environment in which the sessions were developed. Added to the above scenario, the inspiring feeling of being the national representatives of their culture in a cross-cultural exchange revealed to raise great engagement and enthusiasm. In this regard, a Spanish student commented that they were *'really glad about being able to teach something about [their] culture to children from other country, to other students... [they] felt like teachers'*. Likewise, another child stated *'I never thought that I was going to dress myself up like that [referring to a costume used in one his presentations] to show a tradition to children from another country, [to children] that I didn't even know [...] But I was not embarrassed or anything because they are from other country and for them this is something new'*. Similarly, Mexican students reported feelings of satisfaction when sharing their traditions with children from another country. In this regard, a representative comment made by a student was *'I was very pleased with helping other people to know about our traditions'*.

4th recommendation: to supervise and regulate students' interactions

The teachers' roles as monitors and supervisors in the development of the sessions was a crucial element in the facilitation/hindrance of the last component of IC: the skills to socially interact.

❖ *Skills to socially interact*

As monitors for the effective communication between children, teachers were asked to regulate the participations and support students when required during the calls. This recommendation was differently effected in each of the schools. On the one hand, the teachers in Spain were observed to constantly support students during their interventions. For instance, in one of the sessions a student was nervous and forgot a part of the information he was going to say. He was in silence for a moment, and the teacher gave him some ideas to help him continue his participation. The student, with the aid of the teacher, could face his nervousness and finish his presentation in a more satisfactory way. Similarly, other students reported having feeling embarrassment and nervousness during the calls. In this regard, a student reported *“Sincerely, to me, that I don’t like much to talk in public or so, to me it was like a little challenge to be in front of... they were children, I know... they were no other people, but..., for me, it was like a little challenge to be in front of a camera and say something that I should have somewhat memorized’ [...] ‘My hands were shaking like this [shake his hands] when holding the microphone [laughs]’*. However, all of them where seen to overcome their difficulties with the support of their teachers. Meanwhile, the teacher’s role as supervisor was differently understood and developed in Mexico. During the sessions, students where observed facing similar difficulties and levels of nervousness as the Spaniards. Yet, instead of encouraging children to continue developing their topics, the teacher was observed to take the responsibility on behalf of the students to further develop their themes. On various occasions, she took the microphone to develop students’ ideas in more detail when necessary. This kind of assistance to students, however, was not beneficial in helping them develop their skills to socially interact, but rather, by reducing their effort, she obstructed their

possibilities to develop this IC component. Furthermore, it is important to mention that not all students participated in the online interaction with the Spaniards. As reported by students, only those who demonstrated less nervousness and more self-confidence to talk in public were chosen by the teacher to participate in the exposition of the topics; students commented that *'the teacher selected the students who participated [...] it was a decision she made'*, and that *'the ones who had more skills to talk in public and to explain things were selected'*. An average of 4 to 5 Mexican children participated each day, whilst in Spain, all students were involved in every session. The agency of the Mexican teacher to facilitate/hinder students' opportunities to socially interact was found less appropriate for the development of this IC component.

Apart from the teachers' role during the sessions, a second factor was found to have an influence on the students' development of this component of IC: the agency of adults to fulfil their curiosity after the sessions. Contrary to the expectations raised from Acar and Yilmaz's (2015) claims regarding the spontaneous nature of children to interact with others, at the beginning of the cross-cultural exchange students showed embarrassment to talk. During the first couple of days, no comments or questions were made after each group's participation. In the case of Spain, although some children were observed to whisper questions about specific topics presented by Mexicans, no one openly expressed them in the microphone. Instead, they waited until the end of the sessions and curiously approached the researcher, seeking responses. In an attempt to be kind and sympathetic, the researcher answered the questions, but, certainly, this affected the communication between participants, because the children knew that they did not necessarily have to publicly express their

thoughts. When the researcher noticed the inference she was making in their process of communication, she shifted her behaviour. The researcher stopped answering their queries and encouraged students to express their thoughts and questions with their peers during the calls. This fact was observed to be beneficial for their following interactions. Similar to the circumstances in Spain, Mexican students satisfied their curiosity after the sessions with the support of the teacher. In an interview with her, she described how children approached her after the calls to ask her about topics that were remarkably interesting for them. The teacher narrated how *‘they used to tell me “teacher, why do they eat Paella⁸ in their family meetings? Is it like eating Birria⁹ here?” and then, I explained to them that, indeed, it is very similar. Or, “teacher, and are they normally dressed in those dresses [referring to the dresses used by a couple of girls that performed a Flamenco dance]?” and I explained to them, no, it’s just a traditional costume, just like the ones we use here’*. This kind of support, as in the case of the Spaniards, was probably an important obstruction for the development of the student’s social skills. In this scenario, however, the teacher did not report stopping answering the children queries, which was a possible factor affecting the observed limited participation of some Mexican students to socially interact throughout the sessions.

3.3 How does the technology help or hinder the development of IC in an online-cross-cultural exchange?

⁸ Traditional Spanish dish made of rice.

⁹ Traditional Mexican dish made of goat.

In addition to the described influence of the procedures, circumstances and actors, a fourth determining aspect that unavoidably permeated the development of the cross-cultural exchange was the technology itself. Its affordances, as well as its limitations, shaped the way in which the interactions occurred and, consequently, the way in which the IC was facilitated or hindered. Therefore, these two leading lines will guide the exploration of the findings.

- **Elements that facilitated the intervention**

The selection of synchronous communication as a means of interaction was made based on two leading affordances presented in Chapter 1: its similarity with face-to-face communication (Giesbers et al., 2014), and the promise of fostering users' engagement and excitement (Bueno Alastuey, 2010; Chen & Starosta, 2008; Giesbers et al., 2014; Jepson, 2005). Both of them were highly valued by teachers and students as astonishing affordances of this technology that were beneficial for their interaction. In Spain, a student commented *'It impressed me because, of course, you're not talking with your neighbour! You're talking with people who are 15,000km away! [as an exaggerated expression] [...] you know what I mean? What's that? You get connected in 10 seconds! What's that, gosh!'*. In a similar sense, one of the teachers expressed *'The fact of approaching children from Mexico and Spain [...] in a moment through a screen [expression of astonishment] I really liked that. Thanks to that, we could see each other, otherwise it would have been too different. If they would have talked to us only with voice, it would have been too different. We have seen them! we have not imagined them!'*. In the case of Mexico, one of the students reported *'It amazed me that we could talk to people that are pretty*

far from here!'. Likewise, the Mexican teacher expressed *'I truly believe that they enjoyed having participated in this cross-cultural exchange through the use of technology. They were amazed about being able to talk to them [Spaniards] and the nice way in which it was developed. They were amazed because it was like how it would have been if they were close'*. The recurrent expressions of amazement among participants towards the relevance of this means of communication for the aims of the project confirm the suitability of synchronous communication via video calling to felicitate the development of IC between the Mexican and Spanish children.

- **Elements that hindered the process of communication.**

Since the technology functioning correctly is normally dependant on aspects that may be out of humans' control, its reliability is not always stable. Certainly, diverse studies using technology as a means of communication in the Social Sciences account at least one problem attached to technological tools in their reports (e.g. Bueno Alastuey, 2011; Doggett, 2007; Payne et al., 2006). Therefore, it was unavoidable to achieve a perfect intervention. In the revision of the factors that disturbed its implementation, two main themes emerged: (i) the connectivity, and (ii) other technical requirements. These aspects are further discussed below:

- (i) *The connectivity*

The instability of the Internet connection was found to be a remarkable issue along the four sessions of interaction. These circumstances were mainly faced in Spain, where the quality of the images was at times unclear, and also, the connection sometimes dropped. On average, three to four calls were needed per session due to the connectivity. In this respect, students reported the fact as problematic in terms of anxiety and difficulty to understand their peers in Mexico. Two of them commented *'I didn't like that the connectivity was sometimes bad... that made me nervous'*, and *'I didn't like the fact that the connectivity sometimes failed, because sometimes it was difficult for me to understand what they said'*. However, the situation was different in Mexico. Both the teacher and the students reported being able to clearly view the images and listen to the interlocutors during the four sessions. The only issue faced by them was the need to cut the calls due to the connectivity in Spain. In this regard, a student observed how *'at moments the calls dropped, yet, most times the connection was good. We could see them and listen to them clearly'*.

Although the dropped connection certainly affected both schools, their inference was not totally negative. These *breaks* were useful moments where children could take a breath and recover their serenity; especially when considering the nervousness and embarrassment experienced by some students. In Spain, children were observed to take advantage of these moments to practise their speeches a little more, prepare materials, or just calm down. Generally speaking, in most cases, when the connectivity had been restored, students were observed to continue with their performances in a more relaxed mood.

(ii) *Other technical requirements*

Apart from the connectivity, other technical requirements were observed to obstruct the development of the project in some way: 1) the presence of only one person to deal with the technological artefacts, and 2) the lack of appropriate conditions and equipment (a media classroom and special hardware to implement the project). On the one hand, the presence of a single person in each of the schools to be aware and deal with all technical issues before the sessions was found to be insufficient. Since the whole project was dependent upon the correct functioning of technology, the support of a technician was compulsory for all sessions. Having only one person in charge of this great responsibility resulted in being an ineffective decision. In Spain, no problems were attached to this issue because the researcher developed this role and attended all sessions. However, in Mexico, the technician faced unexpected personal problems on the first day of the cross-cultural exchange and could not assist the school; nobody reported his absence to the researcher in time to find another person that could substitute his role. His unexpected absence caused an important delay in the start of the activities because it was not easy to find another person with the required skills to set up the technical conditions. As a consequence of this delay, only the Spanish children could participate in the first video call, and the Mexicans had limited their participation to the three remaining days. This negative experience, however, raised important reflections about the relevance of having a second member in the school with sufficient skills to be in charge of technical issues in the event that the main person who is responsible is not able to assist.

On the other hand, the not entirely appropriate equipment and conditions to develop the project inferred the quality of the interactions. These issues were mainly observed in Spain. For instance, since there were no special media classrooms in the school with the necessary equipment to develop a video conference, a provisional room was adapted for the project. This room, however, did not fulfil the requirements for the project. Firstly, it did not have a special projector installed in a top position, but rather, a portable projector was used. This piece of equipment was normally collocated on a desktop, however, the location of the projector in the sessions was inadequate because students regularly obstructed the projector and created body shades in the projected images. Secondly, the connectivity of the external speakers and microphone were sometimes problematic. Since the laptop had only one input for both functions, it was necessary to constantly connect and disconnect them in order to use them as appropriate according to the emerging requirements of the session.

Technology can be highly useful for educational proposes, as it has been demonstrated here. However, it is still strongly dependent on external factors, making it unreliable and problematic at times. In the case of this project, synchronous communication worked well for the outlined aims and facilitated the development of IC. However, the unavoidable unreliability was a constant factor that certainly affected the way in which the outcomes were obtained.

3.4 Summary

This chapter discusses the way in which SCL and CSCL approaches supported the development of IC among primary school children from Mexico and Spain.

Firstly, in regard to the implementation of SCL for the planning stage of the cross-cultural exchange, it was attested that the students' active involvement and mutual interdependence fostered great motivation and engagement, as suggested by Lea et al. (2003). These encouraging settings were found to be highly suitable and joyful for the students to learn about their own culture, which is considered an important component of IC (Byram & Nichols, 2001; Lustig & Koester, 2013; Ting-Toomey, 2009). Yet, in the successful achievement of this active participation, some challenges were found. On the one hand, as pondered in Chapter 1, none of the schools were used to such an approach. Therefore, pupils in both contexts presented some difficulties in moving towards a new model that enhanced their participation (Baeten et al., 2010). Under these circumstances, the teachers' perseverance and support, as advocated by Felder and Brent (1996), proved to be a determining factor to help them progress towards SCL. The way they organised the group (D. Adams & Hamm, 1996), encouraged students to participate (Wells, 2010) and scaffold their discussions (Acar & Yilmaz, 2015), thus strongly influencing their motivation and progress. In this complex task, teachers, as well as students, were also found to face difficulties and require the assistance of an external advisor.

In regard to the actual interaction of schools during the cross-cultural exchange through CSCL, it was found to be coherent with the expectations outlined in Chapter 1; this approach satisfactorily facilitated the development of the four components of IC. In such achievement, the four guidelines suggested by Dillenbourg (1999) were essential. Firstly, by *carefully planning the learning situation*, i.e. the participants, the arrangement of the group, the kind of technology to be used, and its affordances and strengthens, etc., the conditions

to carry out the cross-cultural exchange and, therefore, to foster the development of IC were very favourable. Secondly, *the clear establishment of roles and turns* for the interaction were highly useful for the coherent flow of the interactions, but most importantly, to make an efficient administration of time, which, as advocated by Ng (2007) and Hopper (2014), was essential for this kind of synchronous communication that integrated participants from distant locations. Thirdly, the *establishment of communicational rules* revealed to be extremely useful for the actual development of IC between students. Through the establishment of rules, students were persuaded to develop *appropriate behaviours* (Byram & Nichols, 2001), which they indeed demonstrated. This kind and non-harmful interaction was also key in fostering the necessary confidence among children to ask questions and *learn about the other's culture* (Lustig & Koester, 2013; Ting-Toomey, 2009). These elements together revealed to trigger great *motivation* in students to actively interact with their foreigner peers (Van de Vijver & Leung, 2009). Fourthly, the *supervision and regulation of teachers* during the video calls showed to be decisive factors in the facilitation/hindrance of the last IC component: students' *skills to interact* (Byram & Nichols, 2001; Van de Vijver & Leung, 2009).

Lastly, the technology itself was found to play an important role in the whole process. Beyond its careful selection and revision, unexpected and out of control circumstances, such as unstable internet connection, or even the unpredicted absence of the person in charge of all technical issues, were found to infer the development of the project and the outcomes.

Chapter 4. Conclusion

This dissertation was aimed to pose, execute and analyse an intervention to facilitate the development of IC among Spanish and Mexican primary school children. The intervention consisted of an online cross-cultural exchange which was developed in two stages. Firstly, a *planning stage* was settled in which each school worked independently to prepare their presentations. Secondly, an *enactment stage* was carried out where students interacted in real time via video calling to develop the cross-cultural exchange. In the design of the intervention, two theories were considered: SCL and CSCL.

The findings associated with the *planning stage* show that it is necessary to have external guidance and encouragement from an advisor in order to effectively develop the complex roles expected from teachers, especially in contexts where they are not used to the SCL approach. In the effective accomplishment of these functions (i.e. teacher's encouragement of students' participation and continuous support to help them raise meaningful discussions), the results prove that great motivation and engagement is fostered among students. On the contrary, in the absence of the required guidance, the partial accomplishment of the teacher's roles (i.e. asking for student's proactivity, but not supporting them in a way in which they can reach meaningful discussions and negotiations) showed to thrive disappointment and frustration among students. Furthermore, in reference to the development of IC, the results indicate that the students' exploration of their own traditions, with the aid of their families, were highly relevant in the comprehension of their own culture. Therefore, since it was also found that the investigation of students'

own traditions is not part of the curriculum in Mexico, it is recommended that the educational authorities in Mexico consider the inclusion of these kinds of activities whereby students can explore their culture with a joyful and relevant aim: to share them with peers from other countries.

In relation to the actual interaction of students during the enactment stage, the findings indicate that all components of IC (appropriate behaviours, knowledge of the other's culture, skills to socially interact, and motivation) can be highly facilitated by CSCL. Yet, the results also reveal that many considerations have to be contemplated in this process. Therefore, five main recommendations are posed for schools that may be interested in the implementation of similar projects in the future. Firstly, since the four recommendations of Dillenbourg were found to be highly relevant in the accomplishment of IC among children, their careful consideration and monitoring are strongly recommended. Secondly, based on the nervousness and embarrassment detected in some students during the first interactions and their progress as days went by, it is advised to consider the possibility of allocating a longer period for interaction between the children as well as constant encouragement for students to actively talk. Thirdly, in order to enhance the quality of the interactions, it is suggested that a special projector that is located in a top position where no shadows infer the projection of the images is used. Also, a computer with different ports to plug in the microphone and the speakers is proposed. Fourthly, with regards to technical issues, the presence of at least one person with sufficient knowledge and skills to use technological devices is recommended in addition to the presence of the main technician. Fifthly, since the great difference in local times of the involved schools restricted the flexibility

of the timeframe set for the video calls, it is advised that schools with shorter differences in time zones participate so that any unexpected events do not significantly alter the development of the sessions.

Finally, it is important to underline that the small scale of this study did not allowed the development of further cycles of redesign and testing, as required in DBR methodology. Therefore, in order to further contribute in the comprehension of the fomentation of IC between children for the harmonic approach of human beings in the following generations, it is advised the development of similar interventions where continuous cycles of design, implementation, analysis and redesign are contemplated in future research. In such tasks, based on the outcomes obtained in this intervention, it is recommended that investigations into the influence of a longer intervention where students are exposed to more days of interaction, and where the communication is closer are carried out. Also, it is suggested that a combination of means of communication (e.g. synchronous and asynchronous) are explored so that the extended possibilities of interactions enrich the exploration of the phenomenon.

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Appendices

Appendix A. Copy of the consent form given to students (English version).

Please put your initials in the box next to each statement so the researcher knows you have understood it.

- I have read the information sheet for the project. I understand what the project is about.

- I understand that I don't have to take part in the project and that I can stop being part of the project at any time without giving a reason. I can ask for my photos and video and voice recordings not to be used until 15th June 2016.

- I understand that what I say might be put in reports but my name won't be used or shared with other people.

- I understand that my participation during the activities will be video recorded.

- I understand that the group discussion will be audio- recorded.

- I understand that my photo may be taken but that I will be able to decide which pictures Mirna uses.

- I agree to take part in the project.

Full name _____

Signature _____

Date _____

THANK YOU

Appendix B. Copy of the opt-out consent form given to students' parents / legal guardians (English version).

My name is Mirna Carolina Valladares Celis. I am a MSc student at the Graduate School of Education of the University of Bristol, England. As part of my dissertation process I will conduct the study '*The development of Intercultural Competence between primary school children from Mexico and Spain: an approach framed by SCL and CSCL*' This study seeks to understand how the development of intercultural competence is fostered throughout an online-cross-cultural exchange between 11-12 year old students from Mexico and Spain.

To that end, I would like your child to participate in the project by working in groups with his/her classmates to prepare a presentation of some cultural aspects of your country. Following the preparation of the presentations, your child will have the opportunity to communicate with a group of Spanish/Mexican primary students to present them his/her culture and learn about Mexican/Spanish culture. This communication will be developed via video callings and will be coordinated by the teachers. During these sessions I would like to video record the activities and take some pictures of the group work. The recordings will be used for further revision and analysis but will not be published anywhere. The pictures may be used in a dissertation document that will be available at the University of Bristol Library.

In case you have any questions, please contact the teacher or the researcher. If you have read and clarified your questions and **DO NOT** want your child to be part of this project, please indicate it below.

	Please initials
1. I confirm that I have read and understand the information sheet for the above study and have had the opportunity to ask questions.	
2. I DO NOT wish my child to take part in the above study	

Please use BLOCK CAPITALS

Your name: _____

Child's full name: _____

Signature of parent/guardian: _____ Date of Signature: _____

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Appendix C. Copy of the consent form given to teachers (English version).

	PLEASE INITIALS
<ul style="list-style-type: none"> ▪ I confirm that I have been given, read and understood the information sheet for the study and have asked and received answers to any questions raised. 	
<ul style="list-style-type: none"> ▪ I understand that my participation is voluntary and that I am free to withdraw at any time without giving a reason and without my rights being affected in any way. 	
<ul style="list-style-type: none"> ▪ I understand that the researcher will hold all information and data collected securely and in confidence that all efforts will be made to ensure that I cannot be identified as a participant in the study (except as might be required by law) and I give permission for the researchers to hold relevant personal data. 	
<ul style="list-style-type: none"> ▪ I agree to take part in the study 	

You also may need to include the following:

	PLEASE INITIALS
<ul style="list-style-type: none"> ▪ I am over 18 years of age 	
<ul style="list-style-type: none"> ▪ I agree to being video recorded during the sessions 	
<ul style="list-style-type: none"> ▪ I agree to be photographed in the sessions. 	
<ul style="list-style-type: none"> ▪ I agree to be audio-recorded during the interview 	

Name of:	Signature	Date
Participant		
Researcher		
Supervisor		