Helping aerospace engineering students develop their intercultural communicative competence

Sofia Di Sarno-García[1]

Abstract. This paper presents a six-week telecollaborative project carried out between B2 (Common European Framework of Reference for languages – CEFR) level learners of English from the Universitat Politècnica de València (UPV), Spain, and B1 (CEFR) level students of Spanish as a foreign language from the University of Bath (UK). The aim of the project was to help Spanish-speaking students develop their Intercultural Communicative Competence (ICC). Students carried out asynchronous discussions focusing on two cultural topics in groups of four through the social network MeWe and participated in synchronous Zoom sessions in pairs. To conclude the project, students completed a collaborative task with their overseas partners. Qualitative data was gathered through the analysis of the transcripts of the Zoom sessions, the students' posts on MeWe, as well as a final project questionnaire. Results revealed that the students who engaged the most in the synchronous sessions and felt curiosity about their partners' culture were also the same ones who contributed the most to the cultural discussions on MeWe. At the end of the course all participants felt they had learnt something about their partners' culture.

Keywords: intercultural communicative competence, asynchronous computer-mediated communication, telecollaboration, social network.

1. Introduction

Nowadays it is crucial that university students acquire the necessary skills to be able to appropriately interact with foreign people. As Seiz Ortiz et al. (2015) claimed, engineering students will probably need effective intercultural skills in their future

professional life, as well as the ability to successfully communicate in English, which today is of paramount importance (Gimeno-Sanz, 2013). The purpose of this study was therefore to develop the ICC of a group of aerospace engineering students (n=8) through a telecollaborative exchange project with students from the University of Bath (UK) (n=8). This paper discusses the six-week telecollaborative project in which students from both groups engaged in asynchronous cultural discussions and synchronous videoconference sessions.

Byram (1997) defined ICC in terms of five *savoirs*, or objectives:

- attitudes of curiosity and openness;
- knowledge of social groups and their products;
- skills of interpreting and relating;
- skills of discovery and interaction; and
- critical cultural awareness/political education.

We used this model to assess students' ICC in this telecollaborative project. In fact, telecollaboration is a beneficial approach to develop language learners' ICC (O'Dowd, 2012). Studies such as Vinagre (2014) and Oskoz and Gimeno-Sanz (2020) demonstrated the effectiveness of telecollaborative exchanges to foster students' ICC. The novelty of the study presented here lies in the tool used for the cultural discussions, which is the social network MeWe. As far as we know, this is the first time that this instrument has been used to sustain intercultural discussion among students in a telecollaboration project.

2.   Method

The study belongs to a larger project leading to a doctoral dissertation. Therefore, it will be replicated to complete the whole study. Here we try to answer the following research question: will students perceive that they have acquired cultural knowledge regarding their international partners' culture?

The study involved eight third year aerospace engineering students enrolled in an optional B2 level English course from UPV and eight highly proficient speakers of English taking a B1 level Spanish course enrolled in different degree programmes at the University of Bath.

Students from both universities completed a pairing questionnaire consisting of nine open questions to match them with somebody who had similar interests.

Afterwards, the participants started meeting in synchronous Zoom sessions where they accomplished collaborative tasks and where they were given free time to interact in pairs. Students also carried out asynchronous cultural discussions on a weekly basis in groups of four on the MeWe social network. The topics discussed were (1) the independence of Catalonia and (2) digital education. Topic 1 was conducted entirely in Spanish, and Topic 2 in English.

MeWe was the channel chosen for the cultural discussions because it allows users to upload and share different types of file formats such as PDF, images, and videos. The researcher created a private group, which the students were each invited to join. After registering and joining the group, the participants were required to upload a video presentation or a picture of themselves with a recording so that they could 'meet' their keypals before the first Zoom session. At the beginning of the two cultural discussions, the researcher provided a text and a video to trigger the dialogue. Students were required to ask the questions below.

- ¿Por qué se ha llegado a pedir la independencia de Cataluña en España? [Why has the independence of Catalonia been demanded in Spain?]

- What do you think about digital education in your country?

In both cases we intended to make participants focus on the different perspectives that each student could have depending on their cultural background.

At the end, students from both universities created a sound-enhanced PowerPoint presentation with their MeWe partners where the main ideas from the cultural discussions were summarised and they explained how they felt while dealing with those topics with partners from different cultures.

Finally, students completed a final project questionnaire whose aim was to explore their opinion regarding the project in general, the tools used, and whether they felt they had learnt something about their partners' culture. It was made up of 13 questions using a five-point Likert scale, one multiple-choice question, and an open question.

The Zoom conversations were transcribed through MediaUpv, which is a digital tool developed by UPV that allows users to generate automatic subtitles in the selected language and to modify them in short chunks while one listens to the audio.

Data was collected through the analysis of the transcripts, the PowerPoint presentation, and the final questionnaire. The comments posted on MeWe were

analysed following Byram's (1997) objectives for the assessment of ICC, led by the fact that previous studies such as Vinagre (2014) found evidence or traces of the objectives proposed by Byram thanks to cultural discussions and active dialogue.

3.   Results and discussion

A qualitative analysis demonstrated that the students who met more times with their keypals on Zoom also participated more actively on MeWe. A quantitative analysis (Pearson coefficient) further revealed that there is a high correlation between the number of Zoom sessions and the number of times those sessions dealt with cultural topics spontaneously. Figure 1 represents this relation.

Figure 1.   Correlation between No. of Zoom sessions and No. of sessions dealing with culture
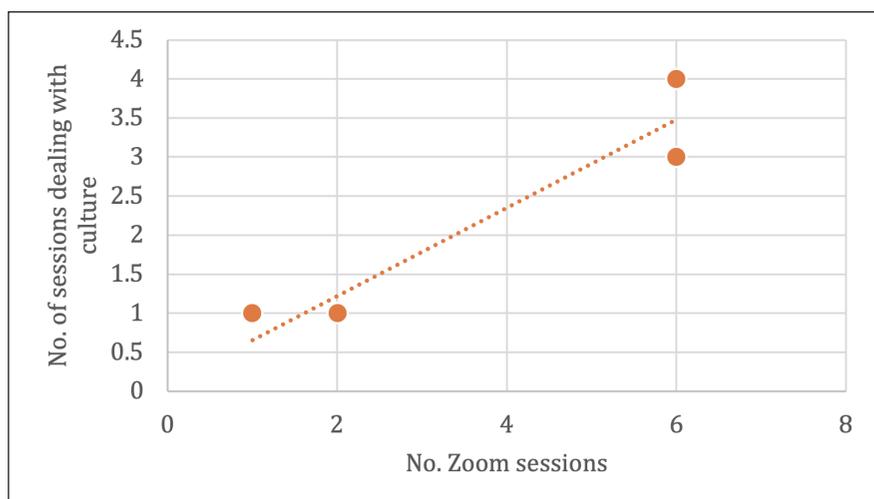
Students discussed topics such as differences among educational systems; linguistic diversity in Spain; differences among Spanish varieties across the world; preferred sports in each country; phonetics; differences in food and eating time; notions of family; and Christmas and New Year's Eve traditions.

Turning to the analysis of the participants' comments on MeWe, Spanish students posted a total amount of 45 comments (including the short description of their video introduction). These included several instances of entries that illustrate the

development of ICC according to Byram's (1997) five objectives. Table 1 below quantifies them. However, due to space limitation, examples cannot be provided.

Table 1. Number of instances of Byram's (1997) objectives of ICC

Objective	Number of instances or traces
Attitudes of curiosity and openness	42
Knowledge of social groups and their products	13
Skills of interpreting and relating	2
Skills of discovery and interaction	17
Critical cultural awareness/political education	9

The final artefact and the comments sent to the researcher provided insightful feedback regarding the students' degree of satisfaction, which was high although some students had preferred to discuss the cultural topics orally. For instance, one student wrote "it has been a great experience and I take with me a new friend". Another one said in his presentation, "it has been a pleasure to be part of this telecollaborative project in which we have been able to meet, interact and discuss with people from another culture. It has been very rewarding". In line with that, results from the final project questionnaire revealed an overall satisfaction regarding the project since 71.4% of the participants chose the fifth option to the item *In general, I found the project useful*, while 28.6% selected the fourth. Additionally, to the item *I have learnt something about my partner's culture,* 85.7% chose the fifth option, and 14,3% selected the fourth. All the participants found the Zoom (100% for the fifth) and MeWe (28.6% for the fifth and 71.4% for the fourth) sessions useful.

4.　　Conclusions

The results of this study corroborate those suggested by similar studies that used online tools such as wikis (Vinagre, 2014) and online forums (Oskoz & Gimeno-Sanz, 2020), where learners successfully engaged in intercultural discussions gaining insight into and understanding of their partners' culture. We can therefore conclude that MeWe is a suitable tool since it gives language learners the opportunity to engage in meaningful dialogue with target language speakers and to enable them to show an ability to maintain an established relationship. This is a key feature an intercultural speaker should cultivate, and thus the ideal that language learners should pursue instead of trying to become a native speaker (Byram, 1997), which could lead to unnecessary frustrations. Also, the asynchronous written activities

gave the participants time to reflect on the topics discussed, which helped them to foster their ICC.

5.   Acknowledgements

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