RESEARCH PAPER

The Influence of Outside Foreign Language and Culture Exposure in an EFL Classroom Collaborative Writing Task

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Abstract

This study examines whether foreign language acquisition occurs through sharing information when students participate in an online writing task using English as the lingua franca. It also explores whether the students with higher levels of linguistic knowledge relating to the foreign language share this information with their peers throughout the writing process. The study was conducted in two Spanish classrooms, where the participants were bilingual in both Catalan and Spanish. A pre-questionnaire was used to determine the level of exposure to the English language and English culture outside of the classroom. The students were scored on their responses and then divided into three groups: low-, medium-, and high-level exposure to the English language and culture. A one-way ANOVA was used to determine whether exposure to the English language and culture outside of the classroom would influence writing abilities on the subject matter, and there is an interaction effect between language exposure and the pre-writing task $F(2, 57) = 4.752$, $p = 0.012$. Upon the conclusion of the collaborative writing task, a one-way ANOVA was used to determine whether there was an interaction effect between language exposure and the post-writing task $F(2, 57) = 2.828$ $p = .068$. In collaborative writing and knowledge building tasks, students learn about the content from their peers, and the information disperses throughout the group so that, upon completion, there is a shared understanding of the content. This study supports these findings; the students

with more foreign language knowledge prior to the study disperse their knowledge in the same manner so that the knowledge, including writing in the foreign language, equalizes across the groups.

Keywords

Knowledge Building forums; second language acquisition; collaborative learning; intercultural competence; culture exposure; knowledge building; online collaborative learning

1. Introduction

Increased globalization has created a growing need for a multicultural focus in foreign language education (Kramer Moeller & Nugent, 2014). When teachers create a multicultural environment in the classroom where students are empowered and encouraged to share their ideas, the students show higher levels of motivation (Boesch, 2014; Benediktsson & Ragnarsdottir, 2019). Multicultural education theory draws on the ideas of construct**ivist theory, where the students' previous experiences are valued, and** they are encouraged to share their thoughts and ideas (Banks & Banks, 2010). The **constructivist theory centers around the students and emphasizes the students' skill sets** as opposed to teacher-centric approaches, where the students are presented with information from an instructor (Benediktsson & Ragnarsdottir, 2019). This student-centred approach allows for students to become critical thinkers and create knowledge during active discussions with their peers (Brown, 2003). Similar to the student-centred approach, allowing students to participate in multicultural group work, empowers them and increases their academic performance while it promotes cross-cultural exchanges (Kimmel & Volet, 2010). We often speak of intercultural competence in regard to the readiness to participate in such cross-cultural exchanges. Intercultural competence is defined as the cognitive and behavioural skills needed for individuals to engage with and interact with those from foreign cultural backgrounds in effective and appropriate manners (Sinicrope, Norris, & Watanabe, 2007). However, interculturality has often relied on subjective and biased comparisons between countries and cultures (Li & Dervin, 2018). If interculturality is integrated into a foreign language classroom, the students may not only learn what is culturally appropriate; they would also develop an understanding of how to use language to build relationships with others across cultures. (Kramer Moeller & Nugent, 2014). Enabling people from different cultural backgrounds to interact with each other allows them to connect their societal, cultural, and individual knowledge about the world to make possible an effective negotiation of meanings (Alvarez Valencia & Fernandez Benavides, 2018). While interculturality and intercultural competence are acquired through the interactions of people from different backgrounds, it is not clear whether the ideas of interculturality can be learned when students share ideas in a student-centric environment without the presence of other cultures.

While there are several methods to build interculturality in the classroom, the most prominent is done through sharing viewpoints with a foreign culture through telecollaboration. An example of this can be found when Furstenberg (2010) utilized the MIT *Cultura* program, allowing American students who were studying French to engage in online discussions with French students learning English. The students were asked to connect in online forums and share both French and American materials. They then discussed the materials, asked questions, made hypotheses, and revisited the issues so that they could understand other points of view. The results showed that students from both cultures not only obtained vital information about the foreign culture as a result of having their questions answered, but they also became more aware of their own culture because they were able to present their points of view and identify and analyze their perspectives. The students also learned valuable negotiation skills through the discussions in the forums, which allowed them to understand themselves and others better. (Furstenberg, 2010). Online forums create opportunities for students to share

ideas but also explain their beliefs, which may have been formed within their own cultures. When students share information, inquire about others, and explain their perceptions of the world, they develop a more profound sense of self-awareness along with a greater understanding of interculturality throughout this process (Alvarez Valencia & Fernandez Benavides, 2018). Furstenberg (2010) further explains that allowing students to connect with others through telecollaboration in the classroom environment allows for attitude transformations, as well as understanding other cultural norms.

Intercultural telecollaboration can easily allow people to communicate with foreign cultures. At the same time, other studies examine the interactions on Social Network Sites for Language Learning (SNSLL), which can allow language learning students to interact with foreigners from multiple cultural backgrounds simultaneously (Alvarez Valencia, 2016a, 2016b). SNSLL, such as Busuu, iTalki, and Babbel, are sites that provide the context for users to engage in intercultural communication by connecting language learners of different cultures. Alvarez Valencia & Fernandez Benavides (2018) studied **the exchanges in Livemocha and the participants' reflections, and they found strong** evidence of the skills of attitude (openness and curiosity) and skills of knowledge (understanding social group practices and knowledge of the processes of interaction), but less evidence for the skills of interpreting and relating and the skills of discovery and **interaction, as outlined in Byram's (1997) Intercultural Communicative Competence** Model (ICC).

In a blog writing task, Lee (2010) found that peer feedback on the content of the discussion in the L2 allows students to elaborate on the subject better, and linguistic feedback from the instructor was necessary for the students to focus on the form of language accuracy. However, Sert & Balaman (2018) determined that when students engage in online task-oriented interactions and they use these interactions to negotiate meaning, this acts as a catalyst for L2 development where the students work together to highlight the existing rules and then co-construct new rules for the L2. Online interactions and writing tasks can be used as a means of socialization and can create spaces for students to learn about language and culture (Melo-Pfeifer & Schmidt, 2013), which suggests that students should be able to assist their peers in the understanding of the rules of the L2 and cultural awareness.

The current study explores whether students participating in a telecollaborative task can share their linguistic knowledge in a knowledge building (KB) forum while using English as the lingua franca. In knowledge building classrooms, as designed by Scardamalia & Bereiter (1991), the students work collectively and create knowledge and those with higher-level knowledge at the onset of the study share this information on the subject matter with their peers. They transfer the information they have previously acquired to those who have less knowledge of the same subject (Bereiter & Scardamalia, 2010). As students participating in KB forums often work in a foreign language, this study investigates whether background knowledge of the foreign language acquired outside the classroom influences the foreign language knowledge of the group at the conclusion of the study.

The research questions for this study are as follows. Can linguistic knowledge be transferred from students with higher-level knowledge to the students with lower-level knowledge when using the knowledge building forums? Do the students with more exposure to English language and culture outside the class show higher results on both the pre-test and post-writing task scores, or do the post-writing task scores show the language knowledge to be evenly distributed in a similar fashion to content knowledge in these tasks?

2. Method

    2.1. Participants

The sample for this study consisted of two classes of secondary students in a Spanish school who are bilingual in both Spanish and Catalan. All of the students were 14 years old at the time of the study, and at similar developmental stages. There were 60 students (n = 60) enrolled, and they all participated throughout the study.

2.2. KBIP Procedure

KBIP is an educational tool where students can collaborate and share ideas collectively in knowledge building forums (Manegre, Gutiérrez-Colón, & Gisbert, 2019). KBIP was created based on the notion that students can work together and create knowledge in both student-centred and multicultural environments (Bereiter & Scardamalia, 2010). The methodology is consistent amongst the classes that participate, and it can be found **listed in the Consell Superior d'Avaluació del Sistema Educatiu (2015), which is as follows.** First, the students identify a problem that they find interesting, and they post a question in the knowledge-construction community forum. Second, the students respond to the questions using cognitive tools, such as scaffolding, and they respond to the questions using their knowledge of the topic, they develop their ideas, and they identify any issues that need further attention. Third, the students work through the 12 principles of the co-production of knowledge (see Table 1), and learning is achieved through participation (Bereiter & Scardamalia, 2010). Finally, the teachers act as guides for the construction process, researchers, assessors, and modulators who demonstrate adequate coaching qualities to help the students become stimulated during the learning process since the framework is best suited to assist student engagement in learning (Chen-Chung, Pin-Ching & Shu-Ju, 2016).

Table 1. The 12 KBIP Knowledge Building Principles (Scardamalia & Bereiter, 1991)

1) Real Ideas, Authentic Problems – problems arise from an effort to understand the world
2) Improvable Ideas – advance ill-conceived ideas to improve them
3) Idea Diversity – improve ideas through comparison, combination and alignment with other ideas
4) Rise Above – work with complexity, diversity, & messiness to improve ideas
5) Epistemic Agency – participants recognize personal and collective responsibility for knowledge building efforts
6) Community Knowledge – aim to produce knowledge as a value to others
7) Democratizing Knowledge – all participants are legitimate contributors to shared goals.
8) Symmetric Knowledge of Advancement – expertise is distributed within and outside the community
9) Pervasive Knowledge Building – creative working with ideas
10) Constructive Use with Authoritative Sources – report and understand the sources of knowledge
11) Knowledge Building Discourse – knowledge is defined and transformed through discussion
12) Concurrent, Embedded, and Transformative Assessment – the community has an internal assessment

2.3. Course Content

The topic for the forums in this study was one of the United Nations Sustainable Development Goals. The students chose to learn about goal 19, which is Climate Action. The students first had to work in groups face-to-face in class to decide which questions they wanted to find the answers to. Once the questions were determined, they posted the questions in the online forum using the scaffold *I need to understand* (See Table 2). They then worked in groups in the class, where they discussed their responses together and then posted their responses in the forum to answer the questions. If they were providing an opinion, they would use the scaffold *My theory* or *This theory cannot explain.* If they had completed research to find the answer, they would use the scaffold *New information.* Once the students had created an entire web of information to answer the questions, their findings were then summarized using the scaffold *Putting our knowledge together.* At this point, the students had reached a mutual consensus on the response to the question that had been asked. The students worked together and collaborated until they had collectively reached the answers.

Table 2. KBIP Climate Action Examples from the Student Forum

Scaffold	Examples of Forum Posts
I need to understand	How can we reduce the greenhouse effect?
My theory	I think that we don`t have tu put more factories, we have to put oil factories.
This theory cannot explain	The point of putting less factories its that we reduce the contamination and the oil we use. If we put more oil factories we are contributing to the contamination.
New Information	Tarragona have some oil refinery and according to the law 50 years late we can have less production
Putting our knowledge together	Without the greenhouse effect, the temperature of the planet would be similar to conditions experienced on the moon. We've found a project to reduce greenhouse effect from an American company thet wants to send a satellite to collect data about pollution that is warming the planet. If people knows the real effect of our pollution in the atmosphere, they'll react. They want to cut the methane pollution by 45% by 2025. We can reduce the greenhouse effect by different ways: -Using renewable energy -Avoid using the car -Planting more trees to reduce the carbon footprint -Stop using diesel cars and use electric cars -Search for a balance of using machines and humans in the first sector -Save electricity -Stop paper banks statements -Avoid using paper -Buy from companies that have sustainable practices and don't harm the enviroment -Report online bullies -Use the different types of containers (blue, yellow, green, brown and gray) Some conseqüences of the greenhouse effect are: -Natural resources are disappearing -Pollution is increasing -Ecosystems and habitats are disappearing -

All of the writing in the forum was done in English, which is a foreign language for the students. In conjunction with writing in English, the students were instructed by their teacher not to copy information from websites and to use their own words when writing in the forum. The posts were checked in Google and then in a plagiarism checker to verify the students were creating novel posts. The classes were also monitored by the researchers, and the classroom activities were recorded.

2.4. Questionnaire and English Language Exposure Scores

At the onset of the study, the students were given a pre-questionnaire regarding their exposure to English outside the classroom (see Appendix A). The questionnaire was written in Catalan so that the students understood the questions. It was also reviewed **by three university faculty members and the students' teachers prior to being sent t**o the students to ensure the validity of the questionnaire. Each participant was assigned an English Language Exposure (ELE) score where points were granted based on whether the participants had studied in English speaking countries, travelled to English epeaking countries, spoke English with friends or family outside of school, and were enrolled in after-school programs for additional English education (see Table 3).

Table 3. ELE Points

English Language Exposure	Response	Point Value
Which languages do you speak at home and with family?	English	2
How many years have you studied English in school?	2 – 4 years	1
	4 – 6 years	2
	6 years +	3
Do you speak English outside school? If yes, with whom?	No	0
	Yes, on vacation	1
	Yes, with my friends	1
	Yes, with tourists	1
	Yes, with community or sports groups	1
	Yes, in an afterschool program or with a tutor	1
Where have you travelled outside of Spain?	For each mentioned country where one of the main languages is English	1
Have you been an exchange student?	If yes to a country where one of the main languages is English	2

Once the scores were tabulated, the students were assigned to one of three groups based on their English Language Exposure (ELE): *Low ELE*, *Medium ELE*, and *High ELE* (see Table 4). The students in the Low ELE group received three or fewer points, the students in the Medium ELE group received four to six points, and the students in the High ELE group received greater than seven points.

Table 4. ELE Groups

English Language Exposure

		Frequency	Percent
Valid	Low ELE	12	20.0
	Med ELE	30	50.0
	High ELE	18	30.0

2.5. Pre-Writing Task and Post-Writing Task

The questionnaire was administered at the onset of the study in September. The students were then given a pre-writing task on the subject matter, which they would be writing about. The pre-writing task was to create a baseline of their English language production on their writing task topic. The knowledge building writing process lasted throughout the first semester of the school year, which began in September and it was completed in December. Upon completion of the knowledge building writing task, the students then participated in a post-writing task.

According to the students' teachers, their English level should be in the lower intermediate range, which would be around the A2 and B1 levels, as stated in the Common European Framework of Reference for Languages (CEFR). The tests were identical and designed based on B1 English textbook material on the subject of climate action, which was the same subject chosen for the forum.

3. Results

When comparing the ELE scores to the pre-writing task results, there appeared to be a strong positive correlation (see Figure 1); therefore, a one-way ANOVA was conducted

with the three groups (low ELE, medium ELE, and high ELE) as an independent variable and the pre-test results as the dependent variable.
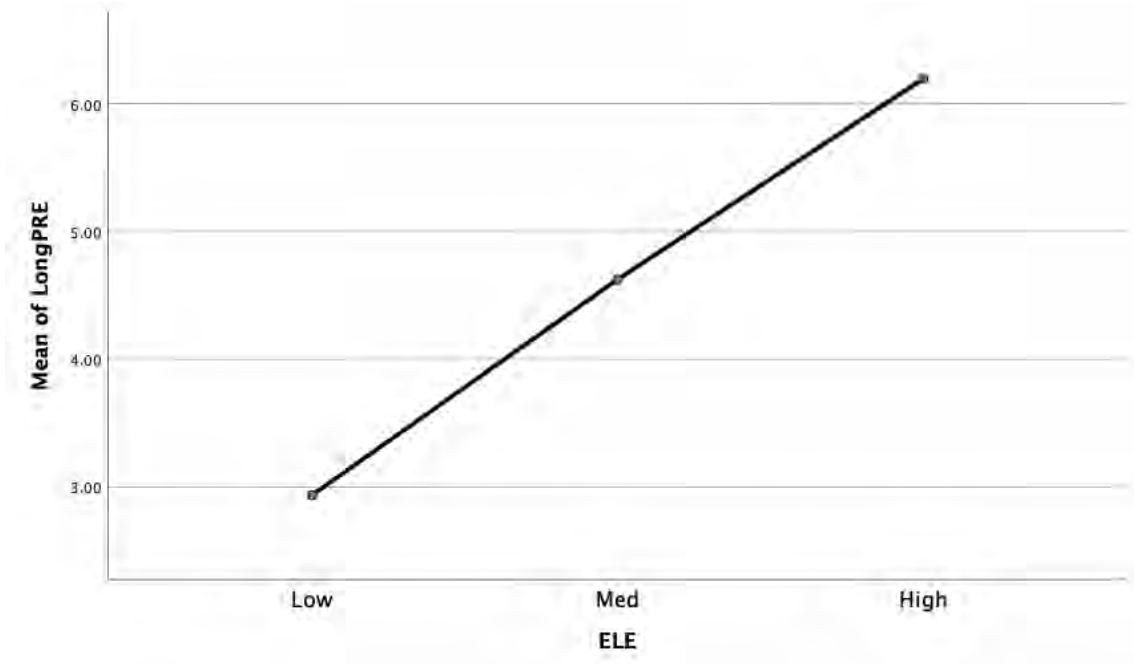

Figure 1. Mean Pre-Writing Task Performance and ELE Scores.

The null hypothesis is that the means of the three groups are equal, and the alternative hypothesis is that the means of the three groups are not equal. The results for the pre-writing task are $F_{(2, 57)} = 4.752$, $p = 0.012$; therefore, the null hypothesis has been rejected in favour of the alternative hypothesis (see Table 5).

Table 5. ANOVA Pre-Writing Task Scores and ELE Scores

	df	Sum of Squares	Mean Square	F	Sig.
Between Groups	2	77.442	38.721	4.752	.012
Within Groups	57	464.429	8.148		
Total	59	541.871			

The post-writing task results, similar to the pre-writing task results, appear to show a positive correlation; however, it does not appear to be as strong (see Figure 2).
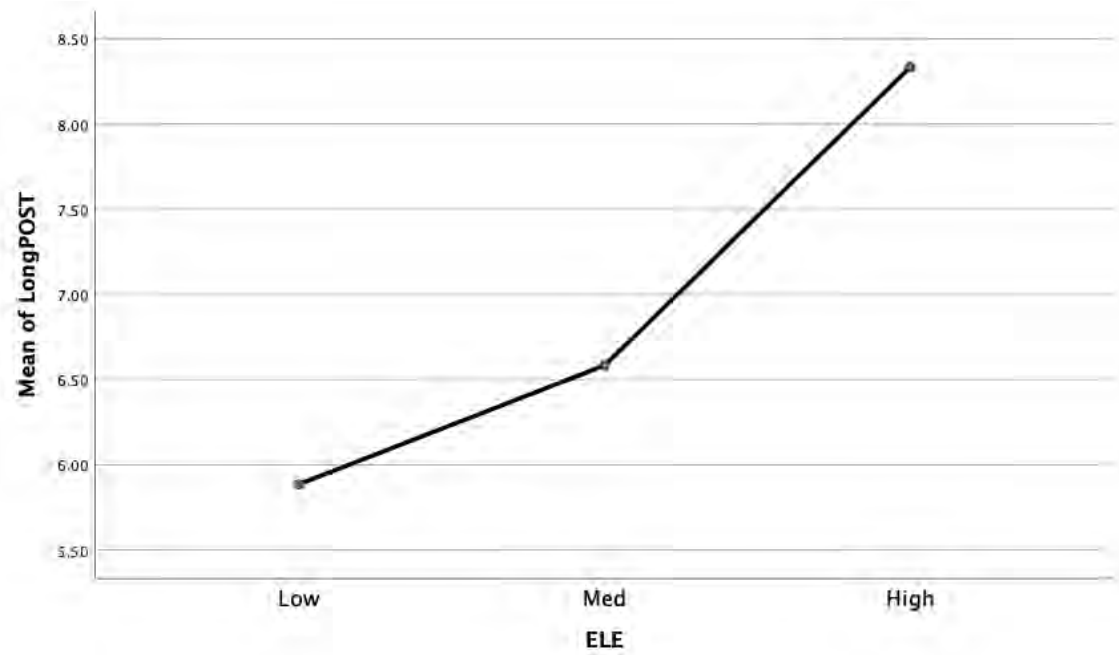
Figure 2. Mean Post-Writing Task Performance and ELE Scores.

The ELE scores to the post-writing task results were then compared with a one-way ANOVA. The null hypothesis is that the means of the three groups would be equal, and the alternative hypothesis is that the means of the three groups are not equal. For the post-test, the $F(2, 57) = 2.828$ p= .068, and the null hypothesis has been accepted in this case where the alternative hypothesis has been rejected (see Table 6).

Table 6. ANOVA Post-Writing Task Scores and ELE Scores

	df	Sum of Squares	Mean Square	F	Sig.
Between Groups	2	50.841	25.420	2.828	.068
Within Groups	57	503.337	8.988		
Total	59	554.178			

4. Discussion

As might be expected, exposure to English language and culture outside of the classroom determines the performance of the students on the pre-writing task $F(2, 57) = 5.358$, p = 0.007, since students from enriched environments tend to have a head start in academic performance. It was previously noted that when students work in the KBIP project, the students with the most knowledge pass the knowledge to the other students, and they teach each other (Bereiter & Scardamalia, 2010). Furthermore, the knowledge is created collectively and shared amongst the class allowing the students with less information prior to the study to benefit from their peers, causing the students to be at similar levels at the end of the project. After three months in a KB telecollaborative writing task, the results from this study show that writing ability and comprehension of the subject in the foreign language equalizes across the groups and that the students with high-level knowledge appear to transfer their knowledge to the students with low-level knowledge. The students with higher exposure to English language and culture outside the classroom outperformed the students at lower levels only on the pre-writing

task, but not throughout the entire project. It was anticipated that, for the post-writing task results, the null hypothesis would be accepted, that the three ELE groups would be the same, based on the knowledge building principles, specifically, the eighth knowledge building principle of symmetric knowledge of advancement where the expertise is distributed throughout the community. The null hypothesis was accepted $F(2, 57) = 2.828$ p= .068, which indicates that students with the most knowledge of English language and culture have transferred their language and culture skills to the other students throughout this study. This indicates that this classroom method is beneficial for increasing both writing abilities and comprehension of a topic working in a foreign language, the linguistic knowledge specific to writing tasks appears to be shared and distributed evenly amongst the students.

5. Limitations of the study

The KBIP was created to bring classrooms together around the globe. Unfortunately, the students in this study did not end up working with students from another country. Students from a school in South America had enrolled to collaborate with the students in this study; however, they did not log in to the forum and they did not contribute to the discussion. This limited the discussion to students from similar backgrounds.

It is also recognized that there could be a performance bias in the results of the post-writing task, as it was similar to the pre-writing task. However, it was necessary to keep the post-writing task similar to the pre-writing task to ensure the students were evaluated on the same material. Additionally, only writing abilities and comprehension of the subject matter in the foreign language, were being measured.

6. Conclusion

In this study, there was an examination of whether exposure to the foreign language and English-**speaking cultures outside of the classroom environment influenced the students'** performance within a telecollaborative writing task. Additional exposure to English outside the classroom influenced the pre-writing task scores; however, the additional exposure to the English language and culture did not impact the post-writing task scores. In the KBIP, students typically share their knowledge, and they tend to have a mutual understanding of the subject matter once the project is finalized. When analyzing the results of a KBIP project using a foreign language in a writing task, the students with more exposure to the English language and culture outside of the classroom appear to transfer the language skills to their peers as predicted by the knowledge building theoretical background.

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Appendix A

Questionnaire

Questions in Catalan	*Translation in English*
Quina és la teva llengua materna?	What is your native language?
Quins idiomes parles a casa o amb familiars?	Which languages do you speak at home or with family members?
Quins idiomes estrangers has estudiat a l'escola?	Which foreign languages have you studied at school?
Quants anys has estudiat l'anglès?	How many years have you studied English?
Parles anglès fora de l'escola? On? Amb qui?	Do you speak English outside school? If so, where and with whom?
On has viatjat fora d'Espanya?	Where have you gone for vacation outside of Spain?
Has estudiat en algun país estranger? En cas afirmatiu, quin país / països?	Have you ever been an exchange student? If yes, to which country or countries?
Gaudeixes d'estudiar anglès o altres idiomes estrangers?	Do you enjoy studying English or other foreign languages?
Vols continuar estudiant anglès?	Do you wish to continue studying English?