

A socio-cognitive approach to the development of EFL writing skills through a collaborative online discussion forum in a university course

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ABSTRACT

WBLL (web-based language learning) projects are increasing steadily in blended and distance learning environments. Although experts believe that digital technologies can assist student writing, systematic evidence for this claim in university contexts is still scarce. This paper reports on a two-stage research project carried out by Dalla Costa and Gava (2016, 2017) aimed at analysing the impact of an online discussion forum (ODF) as a pre-writing activity on the students' productions and perceptions. The study was carried out in the virtual classroom using the Moodle learning platform of an English Language II course at Facultad de Lenguas, Universidad Nacional de Córdoba (UNC), in which ICTs (information and communication technologies) are employed to promote a sociocognitive approach to the development of writing skills. The findings show that the cognitive and social opportunities afforded by ICTs seem to favour the collaborative construction of knowledge through online dialogue and the application of higher order thinking skills, which became evident in the students' contributions to the ODF, their opinions about the online activity, and their productions in the writing task. Further investigations of blended learning projects and different modes of asynchronous computer-mediated communication could help corroborate these findings and enrich our perspective of the use of online tools to promote the practice of EFL writing skills at college level in this increasingly digital age.

Keywords: online discussion forum; asynchronous computer-mediated communication; EFL writing skills; dialogue; cognitive skills; collaborative construction of knowledge

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RESUMEN

Los proyectos para el aprendizaje de la lengua en entornos híbridos y a distancia están aumentando continuamente. Aunque los expertos creen que el uso de las tecnologías digitales puede ayudar en el aprendizaje de la escritura, en contextos universitarios la evidencia es escasa aún. Este artículo reporta los resultados de un proyecto de investigación en dos etapas llevado a cabo por Dalla Costa y Gava (2016, 2017) cuyo objetivo fue analizar el impacto de un foro de discusión en línea (ODF, por su sigla en inglés) como actividad de pre-escritura en las producciones y percepciones de los alumnos. El estudio se llevó a cabo en el aula virtual a través la plataforma Moodle de un curso de Lengua Inglesa II en la Facultad de Lenguas, Universidad Nacional de Córdoba (UNC), en el que las TIC se emplearon para promover un enfoque sociocognitivo para el desarrollo de las habilidades escriturarias. Los resultados demuestran que el uso de las TIC brinda posibilidades de desarrollo sociocognitivo para la construcción colaborativa del conocimiento a través del dialogo en línea y la aplicación de habilidades de pensamiento de orden superior. Esto se evidencia en las contribuciones de los estudiantes en los foros de discusión, sus opiniones sobre esta actividad de pre-escritura y sus producciones en tareas de escritura. Investigaciones futuras sobre el uso de distintos modos de comunicación asincrónica mediada por computadoras en entornos híbridos podrían contribuir a corroborar estos hallazgos y enriquecer nuestra perspectiva sobre el uso de herramientas en línea que promuevan la práctica de las habilidades escriturarias en ILE en el nivel universitario en esta era digital.

Palabras claves: foro de discusión en línea; comunicación asincrónica mediada por computadora; habilidades escriturarias en ILE; diálogo; habilidades cognitivas; construcción colaborativa del conocimiento

CURRENT PEDAGOGICAL PRACTICES can neither ignore the application of information and communication technologies (ICTs) nor fail to incorporate issues related to online learning in a world where digital technologies have become an integral part of everyday life and professional development (Dussel & Quevedo, 2010; Lion, 2015). Despite the advances in the field of Educational Technology, in-depth, systematic studies of web-based language learning (WBLL) in higher education contexts are still scarce (Ngo, 2016; Tri & Nguyen, 2014). As to the use of digital technologies for the development of writing skills in EFL, there has been an increase of studies revealing the complexity of the factors involved in online writing in a variety of settings and most studies show that further research should explore the need for substantial changes in writing instruction (Akmal, 2017; Davis, Fernández & Mailhes, 2013; Nielsen, 2013). For instance, Cho (2017) analyses the interplay of task representation, students' perceptions of their roles and the roles of others, and peer feedback in synchronous web-based collaborative writing. Zheng, Warschauer and Farkas (2013) re-

port on the significant gains of well-planned use of digital media on the literacy processes and outcomes of learners from diverse socioeconomic backgrounds. Also, another recent study carried out by Li and Zhu (2017) demonstrates that the features of wiki interactions and scaffolding strategies contribute to improve the qualities of writing and students' learning gains. Moreover, Eloia and Oskoz's (2017) conceptual article clearly shows that tools and genres are evolving and, therefore, literacy, writing genres, L2 teaching practice and research should be redefined from a broader perspective. Since online communication relies heavily on the written mode, it becomes evident that traditional language teaching methods should be revisited to keep pace with the digital environments in which most college students are immersed. In this broader scenario, the present study focuses on specific ways in which online tools can be incorporated by means of asynchronous computer-mediated communication in a university EFL course, where WBL is being incorporated through the Moodle platform, so as to contribute to this necessary shift in pedagogical practices in this digital age. It is important to highlight at this point that that, according to the course requirements, online activities are carried out mainly through Moodle. Thus, the purpose of this paper is to report the results of a two-stage research project carried out by Dalla Costa and Gava (2016, 2017) aimed at analysing the impact of an online discussion forum (ODF) as a pre-writing activity on the students' productions and perceptions. The study was carried out in an English Language II course at Facultad de Lenguas, Universidad Nacional de Córdoba (UNC), in which ICTs are employed to promote a sociocognitive approach to the development of writing skills. We believe that, by exploring the relationship between the pre-writing collaborative activity, the individual productions in the writing task and the students' opinions, this study may provide insights into the levels of interaction in which collaborative learning and the application of higher order thinking can be instantiated through asynchronous computer-mediated communication.

In the following sections, we first describe the context of the study and review prior research on ICTs and language teaching focusing on the use of digital technologies for the development of EFL writing skills. Next, we develop a theoretical framework about WBL, the cognitive and social opportunities ICTs offer for the collaborative construction of knowledge, the implications for EFL teaching, and the usefulness of forum debates. We also present the analytical categories of this study based on Bloom's (1971) taxonomy of cognitive skills for the construction of knowledge and Salmon's (2008) classification of online collaboration. We then summarise the purposes of each stage of the project, its methodology and findings. This is followed by a discussion of the results and limitations. The paper concludes with pedagogical applications and some suggestions for future lines of research.

Literature Review

Educational technology is an evolving field. Several works referring to the state of the art have been published and advances have been made in a multiplicity of areas (Drent &

Meelissen in Area, 2010; European Commission, 2006; Lion 2015). Nonetheless, in the field of WBL, there is still a need for more in-depth studies into technology-enhanced instruction for the development of writing skills since this is a requisite in a world highly dependent on digital technologies (Cantor Barragán, 2009; Özdemir & Ayden, 2015; Yunus, Salehi & Chenzi, 2012; Zheng et al., 2013).

As regards the use of the online forum, recent studies report on the outcomes of the use of this tool in a variety of EFL contexts and suggest its effectiveness to enhance students' collaboration, critical thinking, and writing skills. Based on an extensive review of the literature in the field, Kaur (2011) looks at the benefits and main characteristics of online forums for language learning. Her work reviews the interactional features of forums, their potential for improving written communication, autonomy and reflective thinking, as well as the key role of teachers in motivating students' participation. At international level, Nielsen's (2013) research explores the learning outcomes of ODF in a blended EFL course in a Japanese university. The results throw light into students' perceptions of the online activity and levels of participation, writing accuracy, cultural issues, and teachers' role in guiding and monitoring the activity. On the other hand, Sánchez-Upegui (2009) carried out a study of the use of the virtual forum at Universidad Católica del Norte in Colombia. The results indicate that interaction was oriented to monologic styles without a conversational structure, and messages centered on personal response. However, one of the conclusions of this study is that the forum constitutes a valuable tool since it eliminates time and space barriers and, if used effectively, it fosters the collaborative construction of knowledge. In a similar line of research, Cantor Barragán (2009) reports the findings of an exploratory study at Universidad Nacional de Colombia on the use of ODF during the transition to virtual education. The results show that the forum serves mainly for interaction, discussion and revision, and that the students have positive perceptions of this tool. The study suggests that online forums could contribute to learner autonomy, time management and students' better control over their own learning. Furthermore, Akmal (2017) reports on a recent study carried out at an Indonesian university focusing on the use of ODF for writing practice. The outcomes are indicative of the students' writing performance improvements, their application of critical thinking skills and a positive attitude towards the ODF. The author suggests that, although there are advantages to the use of this tool, research data about its pedagogical effectiveness in relation to the writing skill are still unsatisfactory.

At national level, Davis, Fernández and Mailhes (2013) investigated the construction of knowledge by means of virtual forums in EFL teaching at UNLaM. The results revealed a positive attitude towards the forum as it enabled students to exchange messages in a collaborative way. Such communication led to the development of writing skills. Gava (2012) also studied the collaborative construction of knowledge by means of forums in a language course at Facultad de Lenguas, UNC. The results led to a taxonomy of collaboration in ODF. The author concludes that the ODF fosters collaboration and the

application of higher order skills relevant to EFL learning. In addition, she suggests that further studies are necessary to determine other uses of forums in virtual learning environments (VLE) focusing on the development of specific skills.

Theoretical Framework

As ICTs continue to improve global communications, information access and knowledge production, new cognitive and social opportunities for the construction of knowledge and collaborative learning emerge. As a consequence, new literacy teaching models are required. In fact, as Area and Pessoa (2012) suggest, the “appropriation of meaning and multimedia expression are the new terms for the old concepts of reading and writing” (p. 17). In this context, literacy in general and writing in EFL, in particular, imply developing not only instrumental skills to use digital technologies, but also cognitive and social skills to interact with information and transform it into knowledge in a collaborative manner. Even though online learning has increased in popularity, meaningful applications of WBL have not yet been matched by research in the context of higher education (Dalla Costa & Gava, 2009, 2016, 2017; García, González & Ramos, 2010; Gava & Anglada, 2015; Sun & Chang, 2012). Digital technologies play an important educational role as they provide cognitive and social affordances for the construction of knowledge and collaborative learning, which are two competences included in digital literacy, also called *multiliteracy* and *new literacy*, since literacy requires more complex processes than just the instrumental use of technology (Area & Pessoa, 2012).

The cognitive affordance of ICTs, the construction of knowledge, is not a new concept. Bereiter and Scardamalia (1987) already referred to the difference between *knowledge telling and knowledge construction*, that is, transforming information critically. However, this difference is especially relevant in today's society. At present, it becomes even more necessary to distinguish between information and knowledge as the possibility to access large amounts of data through the use of ICTs alone does not reflect the capacity to use them meaningfully (Area and Pessoa, 2012). From this point of view, literacy represents the appropriation of cognitive abilities to interact with information and transform it into knowledge in a critical way.

The social affordance of ICTs, collaborative learning, is not a new concept either although research in this area is still scarce (Egbert & Petrie, 2005; Gava, 2012; Gava & Anglada, 2015; Zheng et al., 2013). The idea of educational environments that foster cooperation was already present in Dewey's (1938) experiential theory of learning and Vygotsky's (1978) socio-constructivism. These theorists put emphasis on transforming information into knowledge by means of experiential and relational processes. Therefore, knowledge is not transmitted from the expert to the novice but constructed in interaction with others through meaningful learning experiences. Socio-constructivism and experiential learning respond to deficiencies in directed instruction and challenge traditional goals of

education proposing innovative approaches in which learners construct knowledge by participating in meaningful experiences. Learning happens when students construct their own version of knowledge as a result of social interaction. Vygotsky's concept of *scaffolding* also suggests new roles for the teacher and students. The teacher provides support to students in acquiring new knowledge through collaboration and participation in activities they find meaningful in the context of their own experiences. This allows students to merge their personal mental model with the conceptions of peers and experts.

The new cognitive and social opportunities for the collaborative construction of knowledge generated by ICTs have powerful implications for the teaching of EFL. First, it is necessary to analyse the changes that digital technologies are producing in education and rethink the new competences required. This implies a critical pedagogic approach to ICTs and an awareness of their potential and limitations (Levy, 2007). Second, to foster responsible participation in virtual learning environments, it is essential to develop *digital citizenship* (Jenkins in Meneses Rocha, 2013), which entails the critical and reliable use of technology. In this sense, Area and Pessoa (2012, p. 17) refer to “the formation of the citizen for the digital society” who acts with ethical principles to exercise their freedom of expression. Third, it is crucial to rethink a new pedagogy for the teaching of EFL (Warschauer, 2004). As students will need to communicate in English using the Internet in their professional lives, they should be equipped with online writing skills to interact effectively in these new communicative scenarios. Therefore, the incorporation of VLEs in formal education is no longer an option but a necessity.

Moodle is a VLE featuring interactional tools, such as online forums and tasks, which have great potential for teaching and learning practices. The use of the ODF is central to this project since it reflects sociocognitive concepts enabling students “to use technologies for experiential learning tasks, carry out tasks in collaboration with others, reflect on the process (...), and increase control over their own learning.” (Bikowski & Kessler, 2002, p. 28). These factors help increase students' motivation and engagement. Moreover, the ODF constitutes one of the most collaborative virtual learning environments to develop critical thinking and language skills and have a potential that should be exploited (Akmal, 2017; Bikowski & Kesler, 2002; Cantor Barragán, 2009; Gava, 2012; Kaur, 2011; Nielsen, 2013; Sánchez-Upegui, 2009; among others).

Context

The two-stage study reported in this paper was carried out at Facultad de Lenguas, UNC during the first semester of the 2016 academic year. This institution offers five-year Teacher Training, Licentiate and Translation Studies programmes in EFL. Each academic year of these degree programmes includes an English Language course which students are required to complete independently of the programme in which they are enrolled. In this five-level course, the four skills, namely, reading, writing, speaking and listening, are developed in the

context of Content-Based Instruction. Students are expected to make progress from an intermediate to an advanced level of English. The subjects in this study were students attending English Language II, the upper-intermediate level at which essay writing is taught.

A total of 32 student subjects participated in this study. The sample for this investigation did not consist of students taken at random but belonging to two intact classes selected on the basis of *convenience sampling* (Hatch & Lazaraton, 1991, p. 42), that is to say, the selection of individuals who happen to be available for the study. In terms of their linguistic background, all the subjects were Spanish-speaking learners of EFL enrolled in the second year of the five-year Teacher Training, Licentiate and Translation Studies programmes. They were at an upper-intermediate level of English language proficiency equivalent to level B2 of the *Common European Framework of Reference for Languages* published by the Council of Europe (Shaw & Weir, 2008).

Two EFL teachers in charge of the course in which the study was carried out also participated in the study. These teachers were selected on the basis of their experience in teaching EFL at university, since they had been teaching and researching for more than ten years in this course. The level of researcher participation and involvement is a key issue in qualitative studies, and recommendations about it vary in the literature. In the present study, although the role of teacher-researchers might have compromised the validity of the study, inter-rater reliability checks were conducted to avoid biased interpretation of the data. In addition, before this study was conducted, the instructors attended training sessions on the use of digital technologies for the teaching of writing in EFL.

Research Methods

This two-stage project constitutes a quasi-experimental study based on quantitative and qualitative methods. For data collection, questions for the ODF, a student survey and an essay writing assignment through the virtual classroom were designed. To begin the debate, which was open for three weeks, the teachers published the guidelines for the pre-writing activity. The topic for discussion was related to one of the syllabus units dealt with in the face-to-face classes at the same time as the ODF was being developed. The teachers encouraged meaningful interaction and provided the following instructions regarding the content and length of the contributions.

Guidelines for the online pre-writing activity

Welcome to this debate! In this forum we will share ideas that will then be useful to write an essay on the topic of leisure. To begin this activity, we invite you to consider the following:

In the article "The Use of Free Time", Adler poses the question: *Is it good for a society to have much free time?* In his view, the answer is that it depends on how people actually use their free time. Thus, there are many people who think that their leisure time is the perfect time for relaxation and refreshment, while others are not satisfied with undemanding activities and look for ways to exercise their skills or strengthen their minds in their spare moments.

In order to discuss this topic, you should contribute with ideas related to the variety of leisure time activities and different kinds of holidays dealt with in this course. To support your views, please refer to at least one of the articles or videos in the course materials and in the virtual classroom. You may also consider the use of leisure time as depicted in the short story *Roman Fever* by Edith Wharton. Your contribution should be brief (not more than 80 words) and to the point so that it is easier for everybody to follow the discussion and you should also build on the ideas being discussed by making reference to someone else's opinion. Please, remember to use relevant and specific vocabulary as well as appropriate grammar structures. Let's begin 😊

As the students participated in the ODF, the teachers' role was to scaffold the collaborative construction of knowledge by moderating the debate, posing guiding questions, encouraging participation whenever necessary, and summarising main points.

Once the pre-writing activity had finished, the analysis of students' contributions to the ODF was carried out to determine the levels of collaboration and cognitive abilities used. Then, the following topic for an expository essay writing task was uploaded to the virtual classroom.

Guidelines for the essay writing task

You are a member of a debate group at the local college. The course instructor has asked you to write a short report on the following topic and submit it in the form of an academic essay:

One of the main characters in the short story *Roman Fever* says, "the new system has certainly given us a good deal of time to kill; and sometimes I get tired (...)" The luncheon hour was long past, and the two had their end of the vast terrace to them-

selves. At its opposite extremity a few groups, detained by a lingering look at the outspread city, were gathering up guidebooks and fumbling for tips." (pp. 20 & 21). As this scene in the story shows, the amount of free time most people have has been increasing over the years. Although some people enjoy having free time in their hands, many others prefer to engage in some form of creative activity or active entertainment, which may bring some sort of satisfaction or benefits to the individual.

Based on the above statement, write an essay of around 300-350 words about the physical, intellectual and spiritual advantages of leisure time activities. You should include some reference to the materials and short stories dealt with in this course. Please, note that your file should be named as follows: SURNAME_Name_Group_Assignment1_Expository essay. Make sure you comply with the guidelines for submitting compositions. Otherwise, you will not receive feedback on your essay. SUBMISSION DEADLINE: Tuesday, May 9, at 14:30.

This assignment provided the students with a learning experience in which they could use the knowledge collaboratively constructed in the pre-writing activity through the ODF. The students submitted their essays using the interactional tool offered by Moodle. Finally, a post-study survey consisting of closed- and open-ended questions was administered to obtain the students' perceptions of this activity (see Appendix).

Analysis Procedures

The categories of analysis applied in this two-stage study are based on Bloom's (1971) taxonomy of cognitive skills and Salmon's (2008) classification of online collaboration for the construction of knowledge. As regards cognitive skills, Bloom identifies six levels: *knowledge*, *comprehension*, *application*, *analysis*, *synthesis* and *evaluation*. Each of these levels is based on the previous ones and represents a higher order thinking skill. Assuming that the development of critical thinking can be facilitated by the collaborative construction of knowledge by means of the ODF, we use this taxonomy to describe the levels of cognitive abilities evidenced in students' contributions to the debate.

To examine the effects of the online pre-writing activity through ODF on students' essay writing task, the references made in the essays to information previously discussed in the forum were classified by the researchers taking into account the categories described above and another researcher acted as second-rater when reliability checks were conducted. This process yielded an interrater reliability percentage of 80%. This indicated that the researchers and the second rater agreed on their rating 80% of the time and disagreed 20%, which showed a good level of agreement between them.

A table was designed to tabulate data related to the type of information included (i.e., reference to short stories, background readings and audiovisual materials), the section of the

essay in which the information was presented (e.g. introduction, body, conclusion) and the levels of higher order skills evidenced, namely, *knowledge*, *comprehension*, *application*, *analysis*, *synthesis* and *evaluation* (Bloom, 1971). Later, these results were compared to the results of the survey carried out to obtain the students' perceptions of the online activity and to determine whether the collaborative construction of knowledge evidenced during the first stage of this project was also reflected in the analysis of their productions in this second stage.

Salmons (2008) proposes a taxonomy of five types of online collaboration that provides a framework to understand different levels of collaboration in VLE. These include: *dialogue* (participants exchange points of view), *peer feedback* (students exchange comments to create a task), *parallel collaboration* (each participant completes a component of a task that is combined in a collective product), *sequential collaboration* (participants work over prior contributions and these are combined), and *synergic collaboration* (a final product is created mixing individual contributions). Thus, even if students complete a writing task independently, if there is integration of other students' opinions and ideas (from the pre-writing stage) into their essay, we can describe their work as collaborative, which offers opportunities to construct knowledge.

First Stage of the Project: Students' Types of Collaboration, Cognitive Skills and Perceptions of the ODF Activity

The purpose of the first stage of the project was to analyse the impact of the blended learning project carried out in the virtual classroom of an English Language II course at Facultad de Lenguas, UNC for the collaborative construction of knowledge in a VLE. The specific objectives were: (a) To carry out a forum debate in the virtual classroom as a pre-writing activity, (b) to analyse the types of collaboration and the cognitive skills employed by the students, and (c) to conduct surveys to obtain the students' perceptions of this online activity. In the following sections, we describe the findings of this first stage of the study.

Findings

The analysis of the data showed that the students' contributions to the debate were indicative of collaboration by means of online *dialogue* among the participants —the first level of collaboration identified by Salmons (2008). The students constructed knowledge collaboratively as they exchanged ideas and summarised key points. Besides, the six levels of higher order thinking skills identified in Bloom's (1971) taxonomy were applied. The following exchange illustrates three of the six levels: *knowledge* and *comprehension* of the topic and *application* of background knowledge and personal experiences to make contributions to the ODF.

Student A: One of my favourite things to do in my free time is reading and, although I do it for pleasure, I know it also contributes to my learning process as a language student (knowledge, comprehension and application). I also think choosing how to spend our free time has a lot to do with our background and everything we were exposed to during our childhood (knowledge and comprehension). For example, going back to my personal experience, I think, probably, I like reading because I grew up in a home where everyone read a lot during their free time (application).

Student B: I also agree with the point of view regarding the role of parents (comprehension). Free time is the moment when we can do activities we enjoy (knowledge). Personally, I enjoy reading and travelling. I read throughout the year whereas I only travel on holidays. I consider both of them enrich the mind, and also widen one's horizons (application).

In addition, the students' contributions show instances of *synthesis, analysis and evaluation*—the other three levels of higher order skills. As the following exchange shows, the students analysed specific examples by making meaningful connections among reading materials and summarising main points. The level of evaluation becomes evident as they assessed the value of leisure time activities that contribute to intellectual and spiritual growth.

Student A: Hello everyone, yes, participating in our communities is very important. "El Sistema" is a kind of social project aimed at young people from poor socioeconomic and cultural backgrounds in order to change their lives. Similarly, the Wallace Foundation also seeks to improve the relationship youngsters have with the arts (synthesis and analysis). Both of these educational projects work towards humanitarianism (synthesis and evaluation).

Student B: I agree. It seems to me that leisure time activities are indispensable. They help us improve and foster our spiritual and moral growth (evaluation). In my case, I enjoy spending my leisure time listening to music, and contributing to Bell Ville's charitable association. From my point of view, a day off work not always makes us lazy (analysis and evaluation). As we learned in this unit, leisure is the time for doing something useful and depends on which kind of activities we do (synthesis). To summarise, it is very interesting to see the activities that can be developed for the growth of the soul and the spirit (synthesis and evaluation).

As these contributions show, students constructed knowledge collaboratively by selecting and sharing information related to the topic. Thus, the content of the forum evidenced the participants' knowledge, their ability to comprehend the topic, apply it to a new situation, analyse, synthesise and evaluate others' contributions.

The analysis of the students' answers to the survey shows that 59% of the participants

were familiar with the use of online forums although 94% had not used them as a pre-writing activity. Many students referred to the advantages of the ODF. For instance, most of them said that it was very useful to learn from their classmates' contributions and improve their writing skills. They also maintained that this debate was beneficial since there were no time or space constraints. Some students expressed that they could learn more about digital technology and believed that forums might be helpful for future translators. They also mentioned that this online dialogue was useful to learn new vocabulary. Some pointed out that this online environment was suitable for those who are introverted and tend not to participate in face-to-face classes. Interestingly, 72% of the participants admitted that the ODF was conducive to the development of the skills of analysis and synthesis. In general, students stressed the benefits of using the virtual classroom, of the guiding role of the teachers, and of developing group work skills. These are some of their opinions as regards the usefulness of the forum to carry out the pre-writing activity:

- The forum was very useful to get new ideas and different opinions and use them in my writing. There were different ways of relating the material I hadn't thought of before.
- The forum helped me include new ideas in my essay and also new words, so I could improve my vocabulary.
- It is good to exchange ideas over the Internet through a forum. It doesn't take much time to participate and we do not have to be at a certain place to do this.
- I could not participate in the forum, but I got some ideas. I would like to participate in the next one.
- We can analyse the topic because there are many opinions and the teachers also participate, so the ideas are more precise and the content is better organised.
- We share detailed information and then teachers help to synthesise ideas.
- The forum was good for collaborative learning because we had to read previous posts before we wrote our contributions. I think it was a good strategy to work in teams.

The analysis of the students' contributions and opinions shows that this online task appears to have been conducive to the collaborative construction of knowledge by means of the application of higher order skills and the meaningful negotiation of ideas through dialogue, key elements in collaborative higher education settings (Bruffee, 1999).

Second stage of the project: Effects of the pre-writing activity through ODF on students' essay writing task

The purpose of this second stage of the project was to find out the effect of the pre-writing activity through ODF on the writing task carried out in the virtual classroom of the English Language II course at Facultad de Lenguas, UNC. This helped us determine whether the

collaborative construction of knowledge evidenced in students' contributions to the forum during the first stage of this project was also reflected in their productions. The specific objectives were: a) to analyse the effects of the online pre-writing activity through ODF on students' essay writing task, and b) to compare them to the results of the survey carried out to obtain the students' perceptions of the online activity.

Findings

The students' collaborative construction of knowledge by means of online dialogue—the first level of collaboration identified by Salmons (2008)—in the first stage of the project seems to have helped students in the subsequent essay writing task. Moreover, the application of the six levels of cognitive skills in Bloom's (1971) taxonomy found in the first stage of the project were also reflected in the information included in the different sections of the essay.

Ninety per cent of the essays written by students who had participated in the forum included information previously discussed in the forum, which shows that the online dialogue generated was helpful to carry out the essay writing task. As regards the types of information included in the essays as a result of the online debate, most students included information from audiovisual materials. For example, they made reference to *El Sistema*, a social programme to help poor children in Venezuela:

A great example of this is the amazing children's orchestra in Venezuela called El Sistema where a group of people keep kids away from the streets and vices teaching them how to play instruments and also values. (Supporting detail in a body paragraph)

Some students also related this programme to the short story "The Legacy" by Virginia Wolf: Like Angela, in the short story "The Legacy", you can participate in institutions that help people in need such as El Sistema in Venezuela, an organization that educates people through music. (Supporting detail in a body paragraph)

Most students referred to the short story "Roman Fever" as this example shows:

Although everybody is free to choose what to do, I think that just sitting without doing anything productive, as the two main characters of Roman Fever do at the beginning of the story, is not the best thing to do when one has some time to kill. (Introductory paragraph)

Many students also mentioned background reading materials such as "The Use of Free Time":

In conclusion, these different leisure activities let us produce the goods of the soul, spirit and intellect, which makes a life worth living, as Mortimer Adler holds in

“The Use of Free Time”. (Concluding paragraph)

In relation to the section of the essay in which information from the forum debate was included, most essays presented such information in the supporting details of body paragraphs where the students included examples from audiovisual materials such as *El Sistema* or short stories as shown above, and also in the introductory paragraph where they mainly made reference to the short story "Roman Fever" and the article "The Use of Free Time":

According to Aristotle, there are two kinds of serious activities in which a person can engage. Over the years, most people have dedicated themselves to that kind of work that only provides money, in other words, the one from which you make a living. However, there is another type of work which produces not the goods of the body but the goods of the spirit, and is called leisure work. There are three productive and creative leisure activities by which people can grow morally, intellectually or spiritually. (Introduction)

With regard to the levels of higher order skills evidenced in the ODF and also reflected in the essays, the six levels of cognitive abilities in Bloom's (1971) taxonomy were achieved. *Knowledge* and *comprehension* of the topic and *application* of background knowledge to develop main ideas are evidenced in this excerpt, which shows how a student developed the idea of helping others dealt with in the materials by applying it to her knowledge:

Moreover, helping others is another popular leisure activity and it is considered one of the most rewarding ones. Although it generally involves long hours, research has shown that those who are involved in different projects to help people in need tend to be the happiest. A good example of this could be the people who take part in volunteering programs abroad during their holidays.

In addition, students' contributions show instances of *synthesis, analysis and evaluation*—the other three higher order skills. As the following excerpt shows, students analysed specific examples by making connections between reading and audiovisual materials and synthesising them. The level of evaluation becomes evident as students assessed the value of leisure activities that contribute to intellectual and spiritual growth.

One of the leisure activities which fill people's soul is being engaged in cultural pursuits, as they provide artistic and collective feelings. (...) In addition to art and entertainment, participating in social programmes such as *El Sistema* and political affairs is important to reflect upon the society we want to live in and the kind of person we want to be.

As it can be seen, the effects of the pre-writing activity through collaborative ODF on the

students' writing task are evident in the types of information included in the different sections of the essays, which showed the application of different levels of cognitive skills. The analysis of students' essays shows that this online task appears to have been conducive to the collaborative construction of knowledge by means of the meaningful negotiation of ideas through dialogue in the forum and the application of higher order skills to the subsequent essay writing task.

The comparison of the students' perceptions of this online activity in the post-study survey with the effects of the online pre-writing activity through ODF on students' writing task enables us to confirm that the usefulness of the forum for the collaborative construction of knowledge evidenced in the survey during the first stage of this project is also reflected in their productions in this second stage.

Discussion

The results of this two-stage research project enable us to state that the cognitive and social opportunities offered by ICTs seem to favour the collaborative construction of knowledge for the development of EFL writing skills in the context of this study. In fact, the analysis of students' contributions to the ODF, their opinions about the online activity and their productions in the essay writing task shows that this online project led to the collaborative construction of knowledge by means of the application of the higher order skills proposed by Bloom (1971) and the first level of collaboration proposed by Salmons (2008), dialogue.

There are two main limitations of this study. First, it focused on a relatively small population of EFL Argentinean university students belonging to two intact classes selected on the basis of *convenience sampling* (Hatch & Lazaraton, 1991, p. 42). Although the selection of individuals who happen to be available for the study was appropriate in this investigation, this design precludes generalisation of the findings. Therefore, it would be interesting to conduct replication studies with larger groups of learners and students with different language proficiency levels. Second, the twofold role of the teachers as researchers and participants may influence the interpretation of results owing to subjective perceptions of students' performance. In order to have an additional instrument to analyse the data and triangulate results, the student survey was carried out, which enabled us to corroborate the information obtained from the analysis of the ODF contributions and the essays.

Despite these limitations, this study provides evidence that the cognitive and social affordances of the ODF have positive effects on students' writing since the collaborative construction of knowledge evidenced in the ODF and their perceptions about the pre-writing activity was also reflected in their productions. In addition, this online learning experience revealed a change in roles since the teachers' scaffolding in the ODF encouraged students to play an active role transforming information critically into knowledge. Therefore, the teachers were no longer the experts but the guides of the learning process.

Conclusion

As to the pedagogical implications of this study, it is necessary to continue analysing the impact of ICTs on language education and rethink the new competences required. This calls for teacher training that includes not only an instrumental but also a critical approach to ICTs. Moreover, as these EFL students will communicate using the Internet in their profession, it is vital for them to develop the necessary online writing skills. Further investigations of blended learning projects could help corroborate these findings and enrich our perspective of the use of digital technologies in EFL writing. Future research could also seek to determine whether the collaborative construction of knowledge for the development of writing skills is possible in other courses offered at Facultad de Lenguas, UNC and similar contexts, and whether the application of higher order abilities increases with students' proficiency. It would also be interesting to examine the impact of a wider variety of online tools and modes of communication on the development of EFL students' socio-cognitive writing skills.

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Appendix

Post-study survey

This survey was administered in Spanish, the students' mother tongue, to facilitate students' answers of open-ended questions.

Por favor, marque con una cruz o conteste las siguientes preguntas:

1. ¿Conocía o estaba familiarizado con la dinámica de los debates en foro?

Sí No

2. Si contestó “No”, especifique qué aprendió en este debate sobre el uso de un foro electrónico.

3. ¿Alguna vez había utilizado el foro de debate como actividad de apoyo a la escritura?

Sí No

4. ¿Considera que fue útil el uso del foro de debate como actividad de apoyo a la escritura?

Sí No

5. Explique por qué.

6. ¿Si contestó afirmativamente a la pregunta anterior, para qué parte de su ensayo le resultó particularmente útil el debate en foro? Ejemplifique brevemente. (Puede marcar más de una opción.)

Thesis

Topic sentences

Supporting sentences

Supporting details

Conclusion

7. ¿Considera que el foro permitió la construcción colaborativa del conocimiento? ¿Por qué?

Sí No

Justificación:

8. ¿Considera que el foro permitió el análisis y la síntesis de los temas tratados? ¿Por qué?

Sí No

Justificación:

9. ¿Considera que realizar más debates en foro sobre los temas asignados para tareas de escritura académica sería beneficioso? Por favor, explique por qué.

Sí No

Justificación:

10. ¿Tuvo alguna dificultad en esta actividad o percibió alguna desventaja?

11. ¿Tiene algún comentario o sugerencia? Por favor, escríbalo a continuación.

Muchas gracias por su colaboración.