Google apps for virtual learning communities development: strengthening english language skills in an university environment

Google apps para el desarrollo de comunidades de aprendizaje: fortalecimiento de habilidades en el idioma inglés en un ambiente universitario

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Abstract

Introduction: This action research project aims to strengthen English language reading comprehension and speaking skills in college students through the use of Google Apps and Literature Circles (LCs) in virtual communities for learning.
Method: The study involved 70 students at a public university in Ecuador. The educational intervention lasted a semester, included the implementation of LCs virtually and in person with a phase of independent reading and another for the discussion. 14 learning communities were organized and students assumed specific roles in order to warranty equality participation. The "Google Apps" were chosen for their ease of access. To monitor the progress of learning English, a pretest and a posttest were applied using the Preliminary English Test (PET) by Cambridge University, whose validity and reliability are amply recognized internationally.
Results: It showed an improvement of the reading comprehension and speaking skills in English Language in the participants group, who went from A1 to B2 of the Common European Framework of Reference for Languages (CEFRL) at the end of the process.
Conclusion: it is confirmed that the use of "Google Apps" aided in the building of virtual learning communities to support the second language acquisition process (L2) in the university context.

Keywords: English language; Comprehensive reading; Educational innovation; Information and Communication Technologies (ICT); Learning communities

Resumen

Introducción: : *Este proyecto de investigación tiene como objetivo fortalecer la comprensión lectora y expresión oral en idioma Inglés de los estudiantes universitarios a través de la utilización de Google Apps y círculos de literatura (CL) en comunidades virtuales de aprendizaje.*
Método*: En el estudio participaron 70 estudiantes en una universidad pública en Ecuador. La intervención educativa, duró un semestre e incluyó la aplicación de los CL virtuales y una fase de lectura independiente y otra para la discusión. Se organizaron 14 comunidades de aprendizaje y los estudiantes asumieron roles específicos que garantizaron la participación equitativa. Las "Google Apps" fueron elegidas por su facilidad de acceso. Para supervisar el progreso de aprendizaje de Inglés, un pre-test y post-test se aplicaron usando la Prueba Preliminar Inglés (PET) de la Universidad de Cambridge, cuya validez y fiabilidad son ampliamente reconocidos internacionalmente.*
Resultados*: : Se muestra que los participantes alcanzaron una mejora significativa de la comprensión de lectura y expresión oral en idioma ingles, que va desde A1 a B2 del Marco Común Europeo de Referencia para las Lenguas (MCERL) al final del proceso.*
Conclusión*: Se confirma que el uso de "Google Apps" ayudó en la construcción de comunidades virtuales de aprendizaje para la adquisión del segundo idioma (L2) en el contexto universitario.*

Palabras clave: *Idioma Inglés; lectura comprensiva; innovación educativa; Tecnologías de información y comunicación (TIC), Comunidades de aprendizaje*

INTRODUCTION

The Ecuadorian Constitution (2008) presents an inclusive and sustainable nation with an effective global integration, for which it is necessary to strengthen the competitive levels of the population. With this view, the Organic Law of Intercultural Education (LOEI) (Republica del Ecuador, 2011a) and the Organic Law of Higher Education (LOES) (Republica del Ecuador, 2011b) stipulate that all students must demonstrate proficiency at the B2 level of the Common European Framework of Reference for Languages (CEFR) before the end of their university program.

To contribute to that purpose, this work of positivist nature appeals to the use of Information and Communication Technologies (ICT) because of the advantages they offer to the process of learning a second Language L2 (Cabero Almenara, 2005) and the possibility of their being applied in the Ecuadorian and Latin American context. However, the efficient use of ICT for educational purposes. it seems essential that teachers have opportunities

with these practices, these new social logics, and new creative ways of cultural educational settings in this contemporary world (Padilha, 2013).

In the case of Ecuador, it was possible to reach during 2015 that 96% of the population has a coverage of mobile connectivity, reducing to 14% the digital analphabetism (Republica del Ecuador, 2015). However, access to specialized platforms for the development of the macro skills in English could be a limitation to learners, which is why it is necessary to develop tools for learning L2s that are accessible and user friendly. For examples, Google Apps (Gmail, Calendar, Classroom, Contacts, Drive, Docs, Forms, Groups, Sheets, Sites, Slides, Talk/Hangouts and Vault) can be accessed from any device with or without Internet connectivity, using any browser (e.g. Mozilla, Microsoft Edge, Opera, iOS, etc.) being this a computer, a smartphone or tablet (Nevin, 2009). These attributes led to the selection of this platform for this research based in its easy and economic access.

S. Krashen (1985) asserted that L2 learners need to have exposure to content that is real, relevant and presented in a natural way, just as the student's first language (L1). Additionally, in his Comprehensible Input Hypothesis (1985), he clarified that the input (or source of the language) needs to be a little over the current comprehension capacity of the learner. For the educative intervention in this research, we chose the Literature Circles (LCs), because they offer a way for the students to have contact with language that is real, relevant and graded at a complexity level that is just the right amount.

This study begins with a review of published information about the reforms in the legal framework of Ecuador on teaching English in universities and the contribution of ICT to the process of learning an L2; and LCs contribution to learning an L2. The methodology used in this study is action research. The authors designed and proposed an educational intervention that combined the communities of classroom and virtual learning that made use of LCs and Google Apps to enhance the reading comprehension and speaking skills of a group of 70 college students in Ecuador.

The aim of this intervention was to improve the reading comprehension and speaking skills in university students that participated in LCs virtual communities of learning with the aid of Google Apps. This work intended to answer the following questions: Is it possible to improve the reading comprehension and speaking of university English language students using LCs with the support of Google Apps? What are the activities and resources that Google Apps allow to be combined with LCs to learn an L2? How efficient could the LCs with in ICT for the acquisition of an L2 in the university context be?

TEACHING ENGLISH AT THE UNIVERSITY EDUCATION IN ECUADOR

According to the British Council (2015), the universities in Ecuador were initially designed to train priests during colonial times. The Jesuits founded Universidad Central de Quito in 1651, and in 1843 Universidad de Guayaquil was founded. During the presidency of Eloy Alfaro in 1895, the church was separated from the university, and liberal ideologies emerged in higher education. Philosophy, Business and Medicine were the popular majors at the time. From 1946 on, private universities made their entry and for a long time it targeted the middle and upper social classes, whose interest was inclined towards Law, Philosophy, Economy and Medicine. At Universidad Central, the first College of Philosophy, Education and Letters opened in 1928. This college included the first English Language Teacher Major in Ecuador. There is no evidence of any major project for English language teaching improvement until the years 1990s. The American Embassy offered training courses and workshops to public and private educational institutions during those years, but the most active stakeholders were the private publishers who offered permanent training courses for those institutions who used their material. The classrooms were overpopulated and the teachers, in most cases, had not formal teaching qualifications; that is one reason why English language has been taught in a traditional and grammatical way until 2013 (British Council, 2015). In addition, there was no control in the coordination among the Ecuadorian universities for standardizing the English language teaching programs. Nevertheless, during 2014-2015 a university network was created as part of a national project supported by the American Embassy in Ecuador, whose main purpose was to build an English teaching national program proposal in coherence with the new education public politic implementations (Kuhlman, 2012).

At the beginning of the 1990s, as a way of improving the teaching and learning of English language in Ecuador, the government requested the help to the British Council, which developed the Curriculum Reform Aimed at the Development of the Learning of English (CRADLE). The participants of this program were the Ecuadorian Ministry of Education, the UK development agency, EDIMPRES (an Ecuadorian publisher), The Manchester University, and The College of St Mark & St John. These entities participated as clients, stakeholders and partners respectively (Haboud, 2009). The main purpose of the CRADLE project was focused on the improvement of learning English in high schools in Ecuador through different ways, such as teacher training, textbooks production, and developing examination instruments. As part of the agreement, a series of six books were adapted to the Ecuadorian reality (named "Our World through English") and were published to accompany the development of the four skills of communication. As pointed out by Haboud (2009), this project required the creation of a series of culturally and methodologically appropriate English textbooks to be used in all

Ecuadorian public high schools. Besides this project established the necessity of national examinations for the Ecuadorian secondary English language teachers.

In 2011, the Organic Law of Intercultural Education (Republica del Ecuador, 2011b) which regulates - among other activities – the access to the teaching profession - indicated that English language teachers that enter the Magisterio Nacional must have a verifiable B2 level of proficiency in English (2002). And in the case of those teachers (who are currently practicing) they should reach that level in the next five years; otherwise, they will be removed from office. Among the public policies implemented in Ecuador through the Ministry of Education was the establishing of the Cambridge First Certificate since 2012 for secondary and university English language pre-service and in-service teachers to take. Data collected by Education First program, ranked Ecuador 38th of the 70 countries worldwide where English is taught. Furthermore, these data are corroborated in the Latin American context, where Ecuador ranks above Bolivia and Colombia (Education First [EF], 2015).

The lack of English language in-service teachers with proficiency at the CEFR B2 can be explained by the fact that universities do not list it as a requirement for English Language Majors. Before 2015, undergraduate students needed to take an English language course that guaranteed very basic knowledge of the language, but there was no need to obtain an official standardized internationally recognized certificate such as the First Certificate. Therefore, it is a priority to contribute with training that favors the advancement of the future English language teachers in accordance with the following national objective: to provide education in English language with quality and warmth - Plan of good living, 2013, Obj. 4 (Republica del Ecuador, 2013).

ICT RELATED TO LANGUAGE LEARNING

In 1982, in order to strengthen the link between communication and education, UNESCO included ICT in the "Declaration of Grünwal" (Sánchez Carrero & Contreras Pulido, 2012). In Ecuador, Sarmiento (2009) - in his final investigation report - indicated that the contribution of ICT exceeds the functional language efficiency and provides the ability to reconstruct knowledge and skills that enable people to communicate in a L2. With the Web 1.0, more autonomy is given to learners who can move at their own pace, and find the learning environments more authentic. With the Web 2.0, the learner can concentrate on the content of interest (grammar, phonology, writing, vocabulary, etc.) and to overcome the barriers of physical distance, learners are exposed to real, everyday situations of the cultures of the world by means of a computer. The so called web 3.0 aims to facilitate collaborative work among those who are connected, and share thematic interests; using text, video, audio, photos and other resources, and applications, in order to exchange information that will lead to the production of new knowledge. In it, interaction and collaboration between people, places the learner at the center of the process, because are the learners who take control of their own learning (Michavila & Parejo, 2008). In addition, according to Salinas (2004, p. 35) students and professors must have the following skills for the appropriated use of ICT: "information management, communication capabilities; ICT-related skills such as media tool; ICT skills as topics for study".

ICT offer to the higher education the possibility to "create more flexible learning environments; elimination of physical spaces [...] creating scenarios and interactive environments without time and space barriers; they promote both independent learning and collaborative learning; they offer new possibilities for guidance and mentoring" (Cabero Almenara, 2005, p. 80).

The adoption of platforms, classes and digital learning objects (videos, games, networks, social applications, etc.) can help each student develop skills, that are more compatible with new social demands (D'Imperio & Rosendo, 2013). Today, a variety of those platforms to practice an L2 can be found on the Internet. These resources foster participation, critical thinking and learning (Esteve Mon, 2009); at the same time, Herrera, Kavimandan, and Holmes (2011) assert that they also facilitate the implementation of various activities to develop the macro skills (listening, speaking, reading and writing). However, "the emphasis should be place on the change in the strategies of teaching, teachers educative practice, communication systems and distribution of learning materials, rather than emphasizing the availability and potential of technologies" (Salinas, 2004, p. 454). Currently, universities apply a process of redesign of the programs in order to be in coherence with the new educational goals in Ecuador.

One of the elements that need to be examined further in this study was the definition of "cloud computing". This concept refers to rendering services running in a web browser that range from email to virtual environments and social networks. It allows sharing data and easier collaboration, as well as the safe storage of data. According to Ernst & Young Global (2011), cloud computing, technically, is a computing paradigm in which tasks are assigned to a combination of connections, software and services accessible through a network. This network of servers and connections is collectively known as the cloud. Users can access the cloud resources from anywhere at any time in order to share information, to build educative projects in cooperative dynamics which promote the interaction and use of the L2. The use of this and other ICT support the capacity to build experiences for collective and collaborative learning, potentially reshaping space and time school, and expanding the role of

the teacher as a knowledge mediator (D'Imperio & Rosendo, 2013). Typical academic uses of cloud computing, according to Thomas (2011), are:

a) As a tool that helps the teaching / learning process;

b) As a personal learning environment used as an alternative to those controlled institutionally;

c) As a virtual learning environment that offers customized tools to address preferences and study needs;

d) As a substitute to the need to back everything up on a memory card and transfer from device to device;

e) As an alternative to the need to copy all information from computer to computer when purchasing a new device. This also means the possibility of creating a permanent repository of information that continues to grow as long as one wants.

Google has brought cloud computing a step further by providing a word processor, a spreadsheet and slide presenter. In coherence to Souza, Moita, and Carvalho (2011) technologies in education should be used to facilitate the learning of concepts by students, as well as contribute to the development of cognitive skills. Google Docs, Google Sheets and Slides, respectively, have become an option at no cost to the known Windows Office programs: Word, Excel and PowerPoint respectively. Thus, Google applications have become increasingly a set of powerful tools based on the cloud for almost any task, especially E-learning applications. To Railean (2012) Google Apps represent a package of collaborative tools with potential use for schools, colleges, universities, public and private organizations, and state agencies.

LCS FOR THE COMMUNICATIVE SKILLS IMPROVEMENT

Reading comprehension and speaking are two essential skills for the acquisition of an L2. Snow (2002) defined reading comprehension as a simultaneous process of extracting and constructing meaning through interaction and involvement with written language. Likewise, speaking is essential for speech. Of the four language skills (listening, reading, speaking and writing), speaking has an integrative role. Ur (2009) states that people who know a language, are individuals who can speak that language, that is, speaking inherently involves having knowledge of other skills. In the same line, Graham-Marr (2004) emphasized that the basis for teaching students to express themselves in any language is precisely that humans began to communicate orally long before they did so in writing because the brain is programmed to learn a language through sounds and dialogue.

The Comprehensible Input Hypothesis developed by S. Krashen (1985) stated that the speaking [and writing] cannot be taught directly; rather, it emerges over the time, as long as there is comprehensible contact with the target language. Therefore, acquiring and developing a language are linked to extensive exposure to the language. In this sense, reading is a way to provide direct exposure, and provide the input the learner needs to acquire the L2. Then, the development of this skill will only develop when the learner feels "ready" as the result of having entered information in their brain, which they will be able to reproduce and recreate later on. However, this condition of being ready arrives at different times depending on the person, i.e. how often and the quality of the exposure to L2.

The Literature Circle (LC), according to Daniels (2002) and Furr (2004), is an educational resource that makes use of extensive reading, and promote reading comprehension as well as speaking. They consist of two phases: a phase of reading and a subsequent discussion. LCs are defined as small groups of conversation with a student-centered approach whose members meet to organize what to read, how many pages and what role to fulfill in the discussion phase. Participants then on a regular basis, are to share in a conversational tone, the contents of the book or novel read by fulfilling some roles assigned. These roles involve a focused task that gives students a specific reason for the reading. The contributions made in the second phase of the circle arise primarily from the preparation based on these roles.

The LC process begins with the intervention of the teacher; the learner responds, and then the teacher nourishes and stimulates the generation of dialogue, and implementation of activities around the text read. The promoted reading in the LC, during its first phase, is an activity that fosters acquisition and creates data to be used in the discussions. In the discussion phase or socialization of roles, learners have the opportunity to produce in a collaborative, low affective filter, and fun environment (S. D. Krashen, Long, & Scarcella, 1979).

The acquisition of a foreign language is a gradual process that requires learners to develop a receptive vocabulary through exposure to oral and written language (Herrera et al., 2011). Students need a multitude of opportunities for exposure and practice with new vocabulary that is being acquired.

In line with Wilkins (1972), two essential components are present in acquiring and learning language: grammar and vocabulary; however comparatively learning vocabulary is more practical.

Wilkins (1972) stated that studying and learning vocabulary including phrases and expressions gives the speaker the possibility to express almost anything even if the grammatical structure is not perfect.

The essential role that vocabulary poses has been recognized for a long time in the development of reading ability. Students who enjoy a wide baggage of words can deal with more academically demanding texts. And in a reciprocal activity, when exposed to a significant amount of textbooks, more words are incorporated into the database of new terms in the new language. Additionally, this increased exposure makes it possible that by observing how words combine with each other, and how they behave both semantically and grammatically, learners may internalize and potentially use the language applying a speech not only rich in lexical variety, but also by applying the correct grammatical rules (Wilkins, 1972).

The new terms cannot be taught. They can be presented, explained, included in activities and experienced in all forms of associations. In the end, after constant and spaced repetition, they are learned. It is necessary, as English teachers, to awaken interest in vocabulary learning on the part of the students. This can be accomplished by sharing ideas for effective learning of new words in English, keeping in mind that everyone will learn a personal selection of terms organized in groups individually. There are different ways to develop vocabulary. Learners can, for example, may keep a vocabulary log of the new terms encountered in the readings. Using a dictionary is always an option. In addition to this, learners can also stick labels to objects whose concepts are being introduced in the stories, and are easily accessible at home, school or work (Wilkins, 1972).

From a psychological stance, when addressing the term motivation, it is understood that this is the set of reason(s) that moves the behavior of a person towards achieving a goal (Eggen & Kauchak, 1994). That is, it is the inner state that a person has to lead and sustain efforts in one direction and time; in order to achieve the desired goal (Kong, 2009). Motivated learners will not be focused on failing or in comparing themselves with their peers, unless it is to find ways of working that enable them to achieve mastery that others have already achieved.

Guanjie (1996) as cited in Kong (2009) notes that Gardner, in 1985, presented four elements of motivation when learning a foreign language. These elements contemplate the goal, the behavior with effort, the desire to achieve the goal, and attitude; therefore, motivated learners are willing to experiment and get out of their comfort zone, take risks and expose themselves to learn the language. Thus, for Eggen and Kauchak (1994), when the learners are curious about a language, they feel attracted to learning about it, and have feelings to increase that knowledge. In this case, it is intrinsic motivation, which generates in the learner the enjoyment of the learning process not only for praising or for receiving a reward (Kong, 2009).

Spaulding (1992) as cited in Kong (2009) argues that extrinsic learning exists when people are motivated to achieve an outcome; like when the goal that students seek is to gain acceptance from their parents, receive praise from teachers, or win prizes. In these cases, the stimuli are external, but to get them, students must learn the L2.

Among the relevant previous work on ICT and the acquisition of an L2, Heath and Ravitz (2001) worked at the Education Technology Consortium (CET) of the regional South Central United States of America is presented, in which it was favorably responded to questions about constructivist learning environments supported with technology, and new ways to support teachers in using constructivist learning technologies.

Chun, Choi, and Kim (2012) investigated the relative effectiveness of extensive reading compared to paired-associate learning and its effect on the retention capacity of new vocabulary in L2 learners in South Korea. The results indicated that extensive reading was more effective than the paired-associate learning program to a considerable degree. Also, Bowers-Campbell (2011) conducted a study with 15 EFL graduate students. They were organized in three reading clubs to participate in online discussions. Information published about the readings by the participants is evidence of group harmony, focus on the text, connections to text, and aesthetic responses.

METHODOLOGY

The participants

This action research used quantitative methods to analyze the results of the reading comprehension and speaking assessment in EFL university students. The study took place at a public university known as ULEAM on the coast of Ecuador. The sampling method selected that best fitted the design of this study was purposive.

Two classes of the English language program in the College of Education, taking the course Literature Workshop were chosen. The group of participants were doing their last semester of studies at the time this project was executed and they represent the 80% of the total population in this Foreign Language Program at ULEAM (Table 1).

Two professors from the University Eloy Alfaro assumed the role of facilitators of the process and two students acted as teacher, aids in the coordination of the sessions and communication between students and teachers. This project had the support of a professor from the Universidad de Guayaquil (located in 240 km. from Manta), she assumed the role of data analyst.

Participants groups	Women	Man	Total
Course Literature Workshop – Group 1	23	10	33
Course Literature Workshop – Group 1	25	12	37
Total Participants	48	22	70

Table 1. Sample composition.
Source: the authors (2015).

Data Collection Tools

The instrument used for measuring the level of reading comprehension and speaking proficiency was the Cambridge PET, which is administered worldwide by hundreds of schools, institutes and some universities. It's validity and reliability are guaranteed by Cambridge English Language Assessment. In addition, it is one the official exams currently applied by the Ministry of Education to determine teachers' eligibility to contract new English language teachers in the public schools (British Council, 2015).

Procedures

Following APA ethical protocol, the consent letters from each of the 70 members of the sample was obtained. Before commencing the sessions of the LCs, the participants took the Cambridge PET pretest and the results were tabulated to have a starting baseline. With the guidance of the teacher and using the scores of the pretest, fourteen groups of five students each were formed, seven in each class. Each group was assigned a novel. During the first lesson, time was given to the students to discuss the five roles of the LC (See Table 2). After that, participants read at home a portion of text or a book chapter. Novels were graded books of the MacMillan Readers series, were assigned based on the level of each group.

Main Funtion	Role	How to Carry it Out
Conducting and promoting discussing the content continuously	**Leader of the Discussion**	Students develop questions about the story to be discussed in class. They use their ability to interpret and predict to get participants talking.
Identifying literary forms in the text and explaining the reason(s) for selecting them.	**Detective of New Words and Phrases**	Participant searches for words, phrases, passages that are descriptive, comical, appealing, powerful and even confusing. The students attempt to explain why the author selected that particular form.
Establishing different types of connection between the story, the reader and the world.	**Meaning Builder**	The meaning builders read with a focus on finding relationships between the book and themselves. They search for places and events, communities or cultural values and connect them with their own life.
Presenting a condensed version of the accounts in terms of the plot, the setting and the characters.	**Story Reporter**	They identify and extract from the text the essential points to be summarized and then reported to the others in the circle. They make predictions on how the setting might change, where the story may lead and how the characters will behave.
Contributing from an artistic view with nonlinguistic information.	**Artist**	They represent an event of the story by creating a sketch, a graphic, drawing, cartoon or any other non-linguistic expression. They encourage first the other to opine, and then they describe and explain the creation.

Table 2. Literature Circle roles and what they involve.
Source: Adapted from College Board (2010).

The learners individually prepared their roles using the worksheet with the guidelines for their specific role. These instructions helped guide their participation in the debate in the discussion session. This first lesson allowed them to experience and become familiar with the process so that there was an opportunity to comment regarding the preparation and resolution of assigned roles, and about the discussion phase. To conclude the opening session, the members of each group decided on the details for a new cycle (e.g. new roles, number of pages to be read).

Once a week during twelve weeks (two weeks were used for the pre and post tests and one week served as the introductory and model for the LCs) the participants read and prepared their roles independently and together carried out the presentation phase of roles and subsequent discussion. At the end of each session, the members the groups decided on their new role for the next session, this way all the participants did all the five roles twice. If any group finished a book because they happened to read a lot of pages between sessions, they were given a new novel.

The LCs provided the students with opportunities for exchange, cooperative learning, written production and evaluation using the apps Google Docs and Google Sheets. During the independent reading the students needed

to complete the form double-entry journal for which students used Google Docs (See Fig. 1) and a vocabulary log form using Google Sheets (See Fig. 2) to help them interact with the content and share with other members of the LC, and to learn the new vocabulary encountered in the readings respectively.
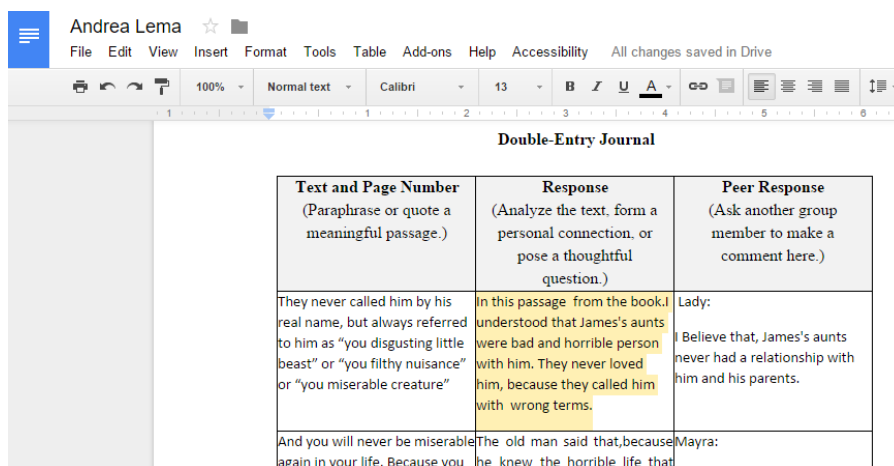

Figure 1. Double-Entry Journal using Google Docs to share and exchange comments among participants.
Source: Created by the LC's Participants (2015).

The Google Sheets spreadsheet included a vocabulary log instrument, which was designed to help students learn new terms. The format required that every new or difficult word was entered, accompanied by definition, an original sentence of the text explaining where it was found, its syntactic category, one (optional) image, and a sentence created by the student.
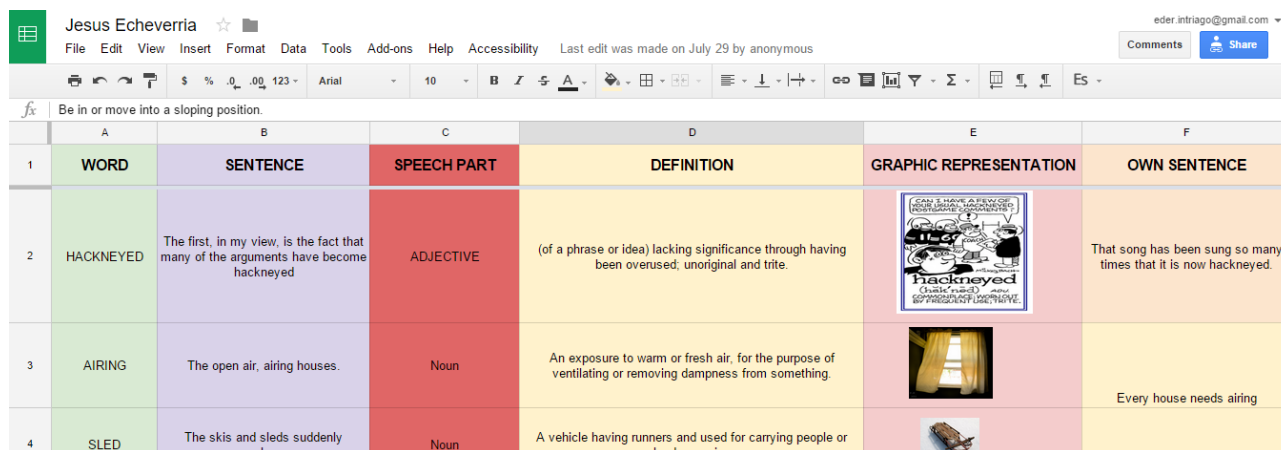

Figure 2. Vocabulary Log using Google Sheets to learn new terms.
Source: Created by the LC's Participants (2015).

As learners delved into the readings, filling out the double entry journal and completing the fields of the vocabulary logs, some students were also encouraged to use Google translator to check difficult sections of the novels. Gmail was used to communicate between members of the group, and to ask the teacher for clarification questions. Finally, Google Search was used to look for information to complete the data required to complete all the information on the form.

These apps had their advantage in high level of accessibility and no cost, permanent online availability, capacity for real-time collaboration which allowed review and update; aspects that facilitated and encouraged collaborative learning derived from an accessible digital environment in the university context.

Assessment and Evaluation

The teacher used a rubric for assessing the participation of each member of the group via observation (See Fig. 3). The monitoring and evaluation activities were done digitally keeping track of finished products that are uploaded into the cloud on the terms agreed. Product quality was valued by the teacher.

The work was carried out digitally but when necessary it was also done personally during the reading sessions prior or after the discussion sessions.

Figure 3. Example of the rubric used to assess the participation of the students during the LCs.
Source: Created by the LC's Participants (2015).

RESULTS

The results of the *pre* and *post* test made possible to categorize the LCs based on the scores obtained. This categorization was done based on ECFRL (2002).

Group	CEFR	Pretest	Post test	CEFR
1	A1++	10	15	A2
2		9	14	
3		8	15	
4		8	14	
5	A2	13	17	
6		13	16	
7		15	20	B1
8		14	21	
9		13	20	
10	B1	19	22	
11		17	24	
12		19	26	B1++
13		19	27	
14		18	29	

Table 3. Summary of *Pre* and *Post* Test of Reading Comprehension.
Source: Created by the authors (2015).

In comparison the results of the *pre* and *post* test on reading comprehension were: four groups at A1 escalated to A2; of the five groups that on the pretest ranked A2, two remained at the same level while three reached the B1 level. Finally, five groups that had initially reported a B1 level went to B1++ at the end of the intervention (Fig. 4).
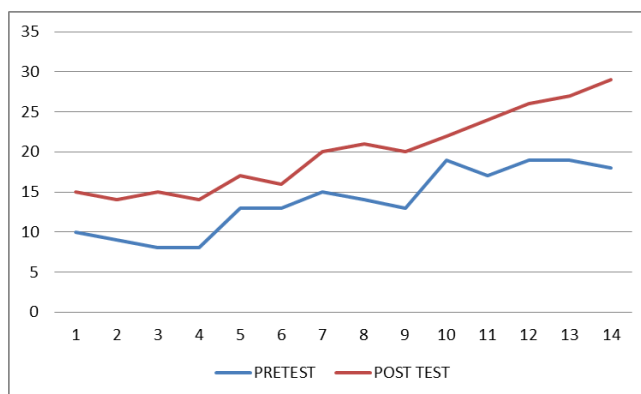

Figure 4. Comparison of Pre and Post Test results in Reading and Comprehension skills.
Source: Created by the authors (2015).

At the end of the intervention, there was an improvement of speaking skills in the LCs where four circles went from A1++ to A2. Seven circles at A++ had an improvement by two points, but remained at the A++ level. Finally, the remaining 4 circles reached B1 level (Table 4).

In the figure 5 it is possible to observe how the participants made progress in the development of the reading and speaking skills.

Circle	CEFR	Pretest	Post test	CEFR
1	A1++	8	12	A2
2		7	11	
3		7	11	
4		9	11	
5	A2	8	12	
6		7	11	
7		7	15	
8		7	15	
9		9	14	
10		9	14	
11		9	16	B1
12	A2++	10	16	
13		12	16	
14		11	15	

Table 4. Comparison of Pre and Post Tests of Speaking.
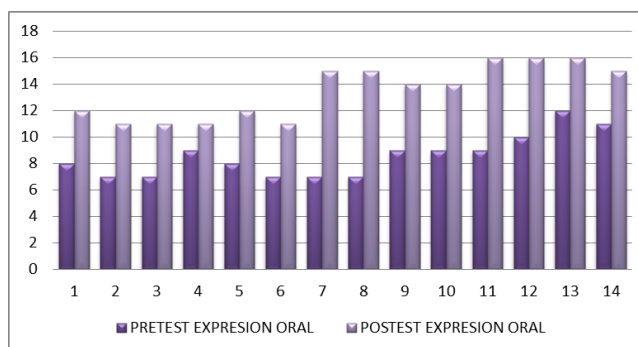Source: Created by the authors (2015).

Figure 5. Evolution of Speaking between Pre and Post Test.
Source: Created by the authors (2015).

DISCUSSION AND CONCLUSIONS

In the process of strengthening English language reading comprehension and speaking through LCs, it is possible to confirm the general theory of second language acquisition which states that learners of a second language need to have exposure to the target language. S. Krashen (1985) and Herrera et al. (2011) also stated that a language is learned when the data in that language is a little above the learner's current level of comprehension.

To the previous position, it is added that the use of Google Apps, which in support of LCs generate adequate technical experience as collaborative knowledge construction in virtual spaces. This combination may be seemed as an innovative available resource especially in secondary and higher education contexts.

The use of ICT, and in this case Google Apps, seemed to allow the building of virtual learning communities, meaning that participants were real people who contributed to this community with their ideas, speeches, visions and interpretations from reading texts that demand a degree of reading comprehension that got better along the way. The position of Souza et al. (2011) is reaffirmed in their statement when they affirm that technologies in education contribute to the development of cognitive skills. Therefore, a community synergy that encourages the production of contributions without being intensively competitive arises; and as such it generates collaborative actions as the members of the LCs demand of each other the responsible, creative, punctual and innovative work of each of its members.

Both Vygotsky and Krashen proposed that teachers should create conditions so that learners, from what they already know, achieve a new level of knowledge or skill. However, it is evident that these two authors differ in the way a person learns a foreign language. For purposes of this paper, it is assumed that language learners acquire an L2 in the same way they learned their L1. Also, it is recognized that university students trying to acquire an L2 will have already acquired concepts and linguistic categorizations that exist in both languages (Torga, 2004, p. 7).

The selection of literary works according to the level of knowledge of participants, turns out to be a key element which promotes reading comprehension and production of sentences of varying levels of grammatical complexity; where the use of new vocabulary, empower the improvement of reading comprehension and speaking in the participants during the process of reading. As Wilkins (1972) reasoned, the enrichment of vocabulary and correct application of grammatical structures are essential in the acquisition of an L2.

The use of Google Docs, Sheets, Translator and Gmail as ICT bring about an element that may highly motivate or discourage students. Therefore, teachers and instructors must be careful in providing students with the

necessary explanations and give enough technical support to ensure that all participants could fully benefit of the advantages offered by them. These forms of ICT provide the teacher with the bridge to achieve a more personalized and concrete instruction without losing the big picture of the entire group, it is essential that teachers look for those opportunities they need to practices the use of ICT in order to be set in the contemporary world referred by Padilha (2013).

The roles of each member of the LC revealed the creativity of the participants and with the use of Google Apps, a space for sharing and meaningful learning was created. That is to say, as the readers delved into the stories generating questions; making personal connections; dwelling on specific terms and phrases; following up on how the setting, the characters and how the whole story evolved; and artistically representing the stories, they were communicating orally and in writing in relevant and meaningful ways. This to a great extent enabled the internalization of the texts read; and through discussion and analysis, communicative practice in English was achieved, externalizing knowledge and reflection.

Therefore, the results reflect the performance of the proposed objective: to improve the level of reading comprehension and speaking in the participants. In that sense, the group of participants advanced from level A2 to B1 in almost every case, and those more dedicated participants reached level B2 of the European Reference Framework of the Language. Equity of opportunities for participation due to the dynamics of the LC and Google Apps were able to generate the enabling environment for learning according to the Zone of Proximal Development that Vygotsky (1988) suggested.

It is confirmed, under the natural limitations of the universe of participants, that the introduction of ICT by means of Google Apps empowered the learning of an L2 (in this case English) through the creation of virtual resources for collaboration learning and sharing understood as means for digital education in transition. That is, real people on the analog level experimenting a mutation from analog education to a digital education, where their personal mark is expressed through the products uploaded into the cloud, in a synergy that is nourished by the desire of sharing views of the stories read.

These virtual learning accommodations also prove, under the same universe circumstances, to be an effective alternative to provide opportunities for practicing a foreign language, taking into account that Ecuador does not have abundant natural spaces to do so. In the LCs aided by Google Apps, the language learner encountered a space to get in contact with the language receptively (when reading), had opportunities to produce language orally (during the discussion session), and in writing (double-entry journal), had opportunities to focus on grammar and learn new vocabulary (vocabulary log). All of this was done around one of human's' oldest ways of entertaining: story reading.

As a contribution to the conceptual construction of the "motivation for learning an L2", it was observed that the use of ICT can bring a new parallel dimension in the generation of virtual learning communities, an issue that motivated and contributed to the generation of meaningful learning. Also, the space and time were no longer the limitations for learning a second language in a university context since the teaching process was supported by ICT of easy and economic access.

This experience is offered to the language teaching universities in the national and international context; and it is an invitation to researchers and teachers to continue exploring and conducting works on the topic: virtual learning communities for a foreign and second language learning.

REFERENCES

British Council. (2015). *English in Ecuador: An examination of policy, perceptions and influencing factors.* Retrieved from https://ei.britishcouncil.org/sites/default/files/latin-america-research/English%20in%20Ecuador.pdf

Bowers-Campbell, J. (2011). Take it out of class: Exploring virtual literature circles. *Journal of Adolescent & Adult Literacy*, *54*(8), 557–567. doi: 10.1598/JAAL.54.8.1

Cabero Almenara, J. (2005). Las tic y las universidades: retos, posibilidades y preocupaciones. *Revista de la Educación Superior*, *XXXIV*(3), 77–100. Retrieved from http://www.redalyc.org/articulo.oa?id=60413505

Chun, E., Choi, S., & Kim, J. (2012). The effect of extensive reading and paired-associate learning on long-term vocabulary retention: An event-related potential study. *Neuroscience Letters*, *521*(2), 125–129. doi: 10.1016/j.neulet.2012.05.069

Daniels, H. (2002). *Literature circles: Voice and choice in book clubs and reading groups* (2nd ed.). Portland: Stenhouse Publishers; Markham; Pembroke Publishers.

D'Imperio, A. L., & Rosendo, R. (2013). Séries finais do ensino fundamental: o papel das TIC na etapa mais desafiadora do ensino básico. In Comitê Gestor da Internet no Brasil (Ed.), *TIC educação 2013: Pesquisa sobre o uso das tecnologias de informação e comunicação nas escolas brasileiras* (pp. 73–80). São Paulo: Comitê Gestor da Internet no Brasil. Retrieved from http://www.cetic.br/media/docs/publicacoes/2/tic-educacao-2013.pdf

Education First. (2015). *El ranking mundial más grande según su dominio del inglés.* Retrieved from http://www.ef.com.ec/epi/

Eggen, P., & Kauchak, D. (1994). *Educational psychology: classroom connections*. United States of America: Macmillan.

Ernst & Young Global. (2011). *Asuntos relevantes sobre protección de datos personales para 2011.* Retrieved from http://www.ey.com/Publication/vwLUAssets/Folleto_Asuntos_relevantes_sobre_Proteccion_de_Datos_Personales_para_2011/$FILE/Asuntos_Relv_Protec_datos.pdf

Esteve Mon, F. (2009). Bolonia y las TIC: de la docencia 1.0 al aprendizaje 2.0. *Revista La cuestión universitaria*(5), 59–68. Retrieved from http://www.anobium.es/docs/gc_fichas/doc/LRSPFDzlbc.pdf

Furr, M. (2004). *Literature circles for the EFLClassroom.* Retrieved 5 May 2009, from http://www.eflliteraturecircles.com/litcirclesforEFL.pdf

Graham-Marr, A. (2004). *Teaching skills for listening and speaking.* (Unpublished manuscript)

Haboud, M. (2009). Teaching foreign languages: A challenge to ecuadorian bilingual intercultural education. *International Journal of English Studies*, *9*(1), 63–80. Retrieved from http://revistas.um.es/ijes/article/view/90641/87451

Heath, M., & Ravitz, J. (2001). Teaching, learning and computing: What teachers say. In *Edmedia: World conference on educational media and technology* (pp. 708–713). Norfolk, VA, USA: Association for the Advancement of Computing in Education. Retrieved from https://www.learntechlib.org/p/8806/

Herrera, S. G., Kavimandan, S., & Holmes, M. (2011). *Crossing the vocabulary bridge: Differentiated strategies for diverse secondary classrooms*. New York: Teachers College Press.

Kong, Y. (2009, May). A brief discussion on motivation and ways to motivate students in english language learning. *International Education Studies*, *2*(2), 145–149. Retrieved from http://www.ccsenet.org/journal/index.php/ies/article/view/1711/1647

Krashen, S. (1985). *The input hypothesis: issues and implications*. New York: Longman Group.

Krashen, S. D., Long, M. A., & Scarcella, R. C. (1979). Age, rate and eventual attainment in second language acquisition. *TESOL Quarterly*, *13*(4), 537–182. doi: 10.2307/3586451

Kuhlman, N. (2012). *Portal Embajada de los Estados Unidos.* Retrieved from http://spanish.ecuador.usembassy.gov/pr_05150112.html (Entrevista a Natalie Kuhlman)

Michavila, F., & Parejo, J. L. (2008). Políticas de participación estudiantil en el Proceso de Bolonia. *Revista de Educación*(número extraordinario), 85–118. Retrieved from http://www.revistaeducacion.mec.es/re2008/re2008_05.pdf

Nevin, R. (2009). Supporting 21st century learning through Google Apps. *Teacher Librarian*, *37*(2), 35–38.

Padilha, M. (2013). Das tecnologias digitais à educação: nova cultura e novas lógicas para a formação docente. In Comitê Gestor da Internet no Brasil (Ed.), *TIC educação 2013: Pesquisa sobre o uso das tecnologias de informação e comunicação nas escolas brasileiras* (pp. 81–86). São Paulo: Comitê Gestor da Internet no Brasil. Retrieved from http://www.cetic.br/media/docs/publicacoes/2/tic-educacao-2013.pdf

Railean, E. (2012). Google apps for education: a powerful solution for global scientific classrooms with learner centered environment. *International Journal of Computer Science Research and Application*, *2*(2), 19–27. Retrieved from http://www.ijcsra.org/current-issue/v2i2

Republica del Ecuador. (2008). *Constitución de la república del ecuador.* Retrieved from http://www.asambleanacional.gov.ec/documentos/constitucion_de_bolsillo.pdf

Republica del Ecuador. (2011a). *Ley Orgánica de Educación Intercultural del Ecuador (LOEI).* Retrieved from http://educacion.gob.ec/ley-organica-de-educacion-intercultural-loei/

Republica del Ecuador. (2011b). *Ley Orgánica de Educación Superior del Ecuador (LOES).* Retrieved from http://www.ceaaces.gob.ec/sitio/wp-content/uploads/2013/10/rloes1.pdf

Republica del Ecuador. (2013). *Plan del buen vivir 2013-2017.* Retrieved from http://www.buenvivir.gob.ec/

Republica del Ecuador. (2015). *Informe de estadísticas del periodo 2013 del Instituto Nacional de Estadísticas y Censos.*

Salinas, J. (2004). *Innovación docente y uso de las TIC en la enseñanza universitaria.* Retrieved from https://www.uoc.edu/rusc/dt/esp/salinas1104.pdf

Sarmiento, E. P. Q. (2009). *Como aplicar las Tics en el aula en la asignatura de inglés* (Tesis Doctoral, Universidad Tecnológica Israel). Retrieved from http://www.slideshare.net/patricioquito/tesis-de-aplicacin-de-las-tics-en-el-area-de-ingles

Sánchez Carrero, J., & Contreras Pulido, P. (2012). De cara al prosumidor: Producción y consumo empoderando a la ciudadanía 3.0. *Revista Icono 14*, *10*(3), 62–84. doi: 10.7195/ri14.v10i3.210

Snow, C. E. (2002). *Reading for understanding: toward an R&D program in reading comprehension.* Santa Monica, CA: RAND Corporation.

Souza, R., Moita, F. S., & Carvalho, A. (2011). *Tecnologias*

digitais na educação. Campina Grande: EDUEPB.

Thomas, P. Y. (2011). Cloud computing: A potential paradigm for practicing the scholarship of teaching and learning. *The Electronic Library*, *29*(2), 214–224. doi: 10.1108/02640471111125177

Torga, M. C. (2004). *Vigotsky / krashen: Zona de desarrollo próximo y el aprendizaje de una lengua extranjera.* Retrieved from http://www.slideshare.net/darkcrow08/zona-de -desarrollo-prximo-vigotsky

Ur, P. (2009). *A course in language teaching: Practice and theory.* Cambridge, UK: Cambridge University Press.

Vygotsky, L. (1988). *El desarrollo de los procesos psicológicos superiores*. México: Editorial Crítica.

Wilkins, D. (1972). *Linguistics in language teaching.* Cambridge: MIT Press.