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## **CYBERL@B COMO UM RECURSO EDUCATIONAL ABERTO (REA) PARA APRENDER INGLÊS ATRAVÉS DA PRÁTICA E COLABORAÇÃO**

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### **CYBERL@B AS AN OPEN EDUCATIONAL RESOURCE (OER) FOR LEARNING ENGLISH THROUGH PRACTICE AND COLLABORATION**

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### **CYBERL@B COMO RECURSO EDUCATIVO ABIERTO (REA) PARA APRENDER INGLÉS MEDIANTE LA PRÁCTICA Y LA COLABORACIÓN**

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#### **RESUMO**

O ensino do inglês como língua estrangeira (ILE) é um campo essencial da educação pública nos países em desenvolvimento. No caso da Costa Rica, a plataforma EFL de acesso livre e Recurso Educacional Aberto (ERA) *Cyberl@b* (<https://cyberlab.ucr.ac.cr>), foi projetado para atender às necessidades e políticas educacionais públicas, e é direcionada ao ensino primário e secundário de ILE. Neste artigo, o *Cyberl@b* será descrito e analisado à luz dos conceitos de Laurillard de aprendizado através da prática (ATP) e aprendizado através da colaboração (AAC). Com base nesses conceitos teóricos, foram extraídos critérios básicos para avaliar a plataforma como um recurso educacional que oferece interação multimídia, síncrona e assíncrona, *feedback* de pares e mentores, além de recursos para prática e colaboração nas seguintes habilidades macro e micro: ouvir, falar, ler, escrever, gramática, pronúncia e vocabulário. O estudo conclui que o *Cyberl@b* oferece oportunidades ricas de prática e colaboração de acordo com os princípios ATP e AAC para alunos de inglês no ensino básico e fundamental na Costa Rica e em todo o mundo.

**Palavras-chave:** ILE, ensino do inglês, aprendizado colaborativo, aprendizado através da prática, educação pública, Recurso Educacional Aberto

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**ABSTRACT**

The teaching of English as a Foreign Language (EFL) is a key field in public education in developing countries. In the case of Costa Rica, the free-access EFL platform and Open Education Resource (OER), *Cyberl@b* (<https://cyberlab.ucr.ac.cr>), was designed in order to meet public educational needs and policies, and it is targeted towards primary and secondary EFL teaching. In this article, *Cyberl@b* will be described and analyzed in the light of Laurillard's concepts of Learning Through Practice (LTP) and Learning Through Collaboration (LTC). Based on these theoretical concepts, basic criteria were extracted in order to evaluate the platform as an educational resource that offers multimedia, synchronous and asynchronous interaction, peer and mentor feedback, as well as affordances for practice and collaboration in the following macro and micro skills: listening, speaking, reading, writing, grammar, pronunciation, and vocabulary. The study concludes that *Cyberl@b* allows for rich opportunities for practice and collaboration according to LTP and LTC principles for primary and secondary English learners in Costa Rica and around the world.

**KEYWORDS:** EFL, English learning, collaborative learning, Computer-Assisted Language Learning (CALL), Computer-Enhanced Language Learning (CELL), web-based language learning

**RESUMEN**

La enseñanza del inglés como lengua extranjera (ILE) es un campo clave en la educación pública en los países en desarrollo. En el caso de Costa Rica, la plataforma ILE de libre acceso y Open Education Resource (REA), *Cyberl@b* (<https://cyberlab.ucr.ac.cr>), fue diseñada con el fin de satisfacer las necesidades y políticas educativas públicas, y está dirigido a la enseñanza de inglés como lengua extranjera en primaria y secundaria. En este artículo, *Cyberl@b* se describirá y analizará a la luz de los conceptos de Laurillard de Aprender a través de la práctica (LTP) y Aprender a través de la colaboración (LTC). A partir de estos conceptos teóricos, se extrajeron criterios básicos para evaluar la plataforma como un recurso educativo que ofrece interacción multimedia, sincrónica y asincrónica, retroalimentación de pares y mentores, así como posibilidades de práctica y colaboración en las siguientes macro y micro habilidades: escuchar, hablar, leer, escribir, gramática, pronunciación y vocabulario. El estudio concluye que *Cyberl@b* permite oportunidades ricas para la práctica y la colaboración de acuerdo con los principios de LTP y LTC para estudiantes de inglés de primaria y secundaria en Costa Rica y en todo el mundo.

**PALABRAS CLAVE:** ILE, aprendizaje de inglés, aprendizaje colaborativo, aprendizaje a través de la práctica, educación pública, recurso educativo abierto.

**INTRODUCTION**

Computers have been used for the teaching of foreign languages since the last century. Far from intending to make a review of such process, this paper will focus on the main features of *Cyberl@b* (<https://cyberlab.ucr.ac.cr>), an English as a Foreign Language (EFL) platform and Open Education Resource (OER) for both primary and secondary schools in Costa Rica, developed at the University of Costa Rica. *Cyberl@b* will be analyzed through the lens of Laurillard's (2012) theoretical concepts of "Learning through Practice" (LTP) and "Learning through Collaboration" (LTC) and also in the contexts of Computer-Assisted Language Learning (CALL), Computer-Enhanced



Language Learning (CELL), and Mobile Assisted Language Learning (MALL).

According to its creator, Dr. Allen Quesada, *Cyberl@b* is “an interactive on-line EFL program that integrates listening, speaking, reading and writing with a specific focus on authentic cross-curricular content” (QUESADA, 2006, p. 2). Thus, these conditions and features will be examined, presenting *Cyberl@b* as a learning system that can support both synchronous and asynchronous language learning inside and outside the classroom.

Currently, *Cyberl@b* is used not only by teachers and students in Costa Rica and Latin America, but also in the United States, Europe, and other regions. This projects *Cyberl@b* as a free-access platform and OER that complements the official English syllabus in Costa Rica as well as the teaching process in different environments and institutions abroad while illustrating Garrison's (2017) views that “what is learned can also overcome contextual constraints through well-designed and facilitated learning experiences” (p. 98).

It is relevant to point out that *Cyberl@b* can be accessed online for real-time practice, and also as downloadable content to be used off-line, which makes this OER dynamic, compliant with the demands of Mobile Learning (mLearning), and different learning styles. This paper will address the features of *Cyberl@b* that make it a valuable tool for the teaching of English as a Foreign Language (EFL) for primary and secondary schools in Costa Rica in both urban and rural communities.

Based on the traits proposed by Edgert, Chao & Hanson Smith (1999) regarding language teaching media, *Cyberl@b* as a platform meets the conditions that

*Learners should be given opportunities to interact and negotiate meaning, and they should be involved both in authentic tasks and able to interact with an authentic audience [besides, learners should be] exposed to and encouraged to engage in the production of varied and creative language, especially when they have enough time and feedback to formulate ideas. Learners should also be challenged cognitively and motivated to achieve high levels of proficiency within stress-free environments. Other positive effects in this process [of language learning] deal with having learners take responsibility for their own learning. Thus, learners become autonomous in the development of skills, tasks and strategies that will enable them to practice purposely the new language. (in QUESADA, 2006, p.2)*

In addition, it is important to take into consideration the way Computer-Assisted Language



Learning (CALL) is implemented within *Cyberl@b*, along with its cultural content, as a truly Costa Rican OER due to its intent, evolution, and subject matter. In spite of these characteristics, or precisely because of them, *Cyberl@b* is used not only by teachers and students in Costa Rica and Latin America, but also in the United States, Europe, and other regions.

These merits, plus its constant renewal and improvement, define *Cyberl@b* as one of the most relevant contributions to the field of EFL by the University of Costa Rica to the Costa Rican educational system. Finally, we can say that *Cyberl@b* is compliant with the demands of the 21<sup>st</sup> century language users who can have access to English language digital resources, in a free manner, enhancing the English classroom experience.

## LITERATURE REVIEW

### *Computer-Assisted Language Learning (CALL)*

Computer-Assisted Language Learning has developed in recent years as web-based learning since the Internet meets the needs of students and teachers for content and variety and their changing roles in the process of learning. Thus, some of the most attractive characteristics of CALL for language learning are authenticity, literacy, interaction, vitality, and empowerment (QUESADA, 2005, p. 2). *Authenticity* refers to the availability of materials created by proficient English speakers and users of the language either as texts, videos, audios, or software.

*Literacy* means that the macro skills of reading, listening, speaking and writing are put into practice for academic and professional purposes. *Interaction* refers to the possibilities offered by CALL in terms of communication among target language speakers using the Internet. *Vitality* is seen as a means of increasing motivation for learners and teachers due to the flexibility and spontaneity offered by web-based learning. Finally, *empowerment* is expressed in the growing levels of autonomy, independence, and collaboration, fostering the shifting roles of learners into teachers, of teachers into learners and also into facilitators of the students' learning process. Such role-shifting is compatible with what Garrison (2016) defines as “leading collaboratively”. In other words, collaborative leadership.

Regarding the origins and evolution of CALL, Moras (2001) divides it into three stages: behaviorist, communicative, and integrative. Behaviorist approaches, popular during the Audio Lingual phase of language learning (1960-1980), paid attention to the creation of student habits and responses. This was provided by computers, which offered immediate feedback in terms of correct and incorrect responses. According to Warschauer and Kern (2005), this approach proved



insufficient as well as repetitive and limited in terms of motivation (in QUESADA, 2005, p.3). When the Communicative Approach became popular for language teaching (1980-1999), computers were used not only as tutors, but also as tools and stimuli since the emphasis was on interaction, games, reading, and text construction using grammar rules (MORAS, 2001). This was more effective than the behaviorist approach, but still lacking in terms of communication and negotiation of meaning.

In the 21<sup>st</sup> century, CALL has evolved into network-based language teaching (NBLT) which “refers specifically to the pedagogical use of computers connected in either local or global networks, allowing one-to-one, one-to-many, and many-to-many communication” (KERN, WARE, & WARSCHAUER, 2008, p. 281). This networked collaboration among learners is a condition for collaborative learning, expressed as Constructivism, Connectivism, or Community of Inquiry learning. For Garrison (2016), such collaboration is of key importance for learners: “creating and sustaining an environment for thinking collaboratively is complex and challenging, and is often dependent on technology” (p. 5).

### ***CALL and Synchronous and Asynchronous Communication***

Two affordances of CALL are described by Warschauer and Kern (2005) as part of Computer-mediated Communication (CMC): asynchronous communication, and synchronous communication. Asynchronous refers to interaction “in a delayed fashion” (QUESADA, 2005, p. 4). That is, by means of email, forums, messaging clients such as Twitter, students and instructors exchange opinions, ideas, and materials like documents, videos or audios when it is the most convenient for them. This can be achieved on a one-to-one basis, one-to-many basis, or many-to-many basis (WARSCHAUER, SHETZER, & MELONI, 2002, in QUESADA, 2005). On the other hand, synchronous communication takes place in real-time, by means of chat rooms or instant messaging clients like WhatsApp. Here, messages are sent and replies received immediately “as if individuals were having a telephone conversation” (WARSCHAUER, SHETZER, & MELONI, 2002, in QUESADA, 2005).

### ***Computer-Enhanced Language Learning (CELL)***

In opposition to CALL, Computer-Enhanced Language Learning (CELL) is more specifically targeted towards improving the process of learning a foreign language. As Hoven (1997) puts it, CELL “describes the role that computers play in the language learning process: as an enhancer of the learning... the inclusion of [computers] is intended to improve, expand, or enhance the learning





in some way” (p. 12). In fact, CELL promotes learner autonomy by means of computers as they “actually improve the way learners can learn by providing them with a degree of autonomy, the facility for self direction, and the power to control such things as the speed, rate, timing (convenience), order and choice of topics” (HOVEN, 1997, p. 64).

As part of student autonomy, and common to CALL, CELL, and MALL, one of the most important affordances granted by computers in learning is students' self-access to materials and the CELL environment itself. This becomes an advantage expressed as “the capacity for computers to be used by learners to work in their own time and at their own pace” (HOVEN, 1997, p.131). In addition, the convenience of self-pacing and autonomy offered by CELL should also take into consideration cognitive differences among students, such as learning styles from the very design stage itself: “the design must be inherently flexible and adaptable to unpredictable and individual learning needs as they arise” (GARRISON, 2017, p.113).

### ***CELL and Learning Styles***

When talking about learning differences among students, learning styles must be discussed. Some of the learning-style models in the literature are Pask's (1976), Honey and Mumford's (1982), Kolb's (1984), and Felder and Silverman's (1988). Learning styles are accepted as conditions that play an important role on learning (GRAF, KINSHUK & LIU, 2009). Moreover, they need to be considered beforehand during the design of CELL environments as a means to maximize learning. With this in mind, some of the ways in which learning styles can be included are the use of multimedia, such as audio and video formats, texts, and graphics (HOVEN, 1997). According to Hoven (1997), “the more information learners have of these differences and variations, the more chance they will have to make strategically effective choices in their language learning programs” (p.131), as they influence the way information is received and processed within a learning environment. Thus, learning styles

*Affect how a person learns, including also the aspects of how a person acts in a learning group, participates in learning activities, relates to others, and solves problems. Basically, a person's learning style is the method that best allows the person to gather and to understand knowledge in a specific manner. (EL-BISHOUTY, CHANG, GRAF, KINSHUK & LIU, 2014, p. 99)*

As we have seen, learning styles have an influence over learning processes. As long as teachers and students become aware of this influence, they will have more control over their own learning experiences.



### ***Mobile Learning and Mobile-Assisted Language Learning (MALL)***

As an evolution of CALL and CELL, Mobile-Assisted Language Learning (MALL) has taken advantage of the sweeping wave of mobile phone users, smartphones, and Internet connections. Mobile learning is described as learning “anytime, anywhere”. Ally (2009) summarizes the benefits of mobile technology: it can “reach people who live in remote locations where there are no schools, teachers or libraries. [It] can be used to deliver instruction to these remote locations without having people leave their geographical areas” (p. 2). For example, in a small country like Costa Rica, there are 179 mobile phone lines per 100 inhabitants as of 2018 (ROJAS, 2018, p. 5), with a yearly increase of at least 10%. This illustrates how fast the possibilities for Internet connection and mobile learning grow even in a small developing country where Internet service is offered in its majority by the state-owned telecommunications company.

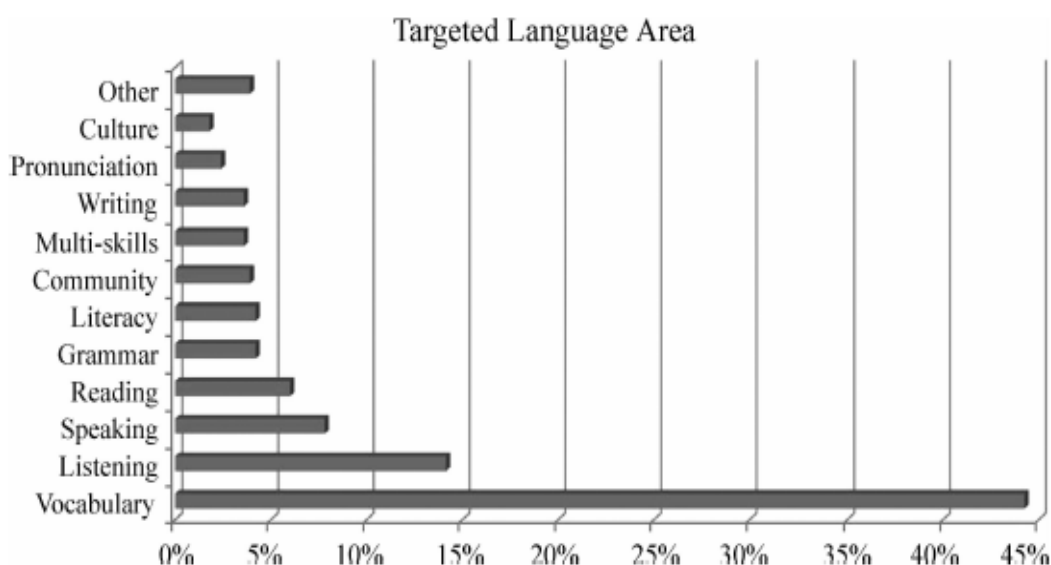
Other important features of MALL are the possibility of accessing language learning applications through different devices such as mobile phones, tablets, and others. According to Burston (2016), “the ubiquity of mobile phones has made them the platform of choice, accounting for 53% of all MALL applications” (p. 15). For Traxler (in STIFTERVERBAND, 2016), the main challenge for mobile learning lies inside and outside the classroom: “in education, we have to think how it is going to be sustainable [because students are] in control of their own devices” (2016, video interview). Although we will not discuss such factors in this paper, this refers to the “anytime, anywhere” nature of mobile learning, student autonomy, as well as student empowerment, and other topics like ethics and netiquette.

Furthermore, as part of the empowering nature of mobile learning and MALL for students, in a video interview, Palalas expressed that mobile learning entails “flexibility” to learn, that is, students could engage “whenever it was conducive to learning” (POWER, 2016). Other relevant characteristics of mobile learning she added were “portability of learning”, “convenience” for “learning online and offline”, and “accessing expert information in written and multimedia resources” (POWER, 2016, video interview).

In a review about the status of MALL around the world, it was found that more than 90% of applications address the learning of a foreign language (L2), which turns out to be English in more than 60% of the cases (BURSTON, 2016, p. 16). In addition, over 60% of L2 learners are of university level (BURSTON, 2016, p. 17). Regarding the areas of language studied (macro and micro skills), vocabulary represents 45% of the applications, listening comprehension 14%, and



reading and speaking around 7% each. Other skills like grammar, pronunciation, and writing represent a smaller figure (BURSTON, 2016, p. 18). A breakdown of all the targeted language areas in MALL can be seen in Figure 1.



**Figure 1.** Targeted Language Areas in MALL applications.

Source: Burston, 2016, p.18.

After reviewing the main characteristics of CALL, CELL, and MALL, it is now pertinent to refer to Laurillard's (2012) conceptualization of “learning through practice” and “learning through collaboration” as two fundamental types of learning to be considered during teaching design of online environments. This will allow the reader to grasp the pedagogical potential of *Cyberl@b* as a language learning Open Educational Resource (OER).

### ***Laurillard's Conversational Framework***

In her book *Teaching as a Design Science* (2012), Laurillard discusses the implications of teaching design based on the perspective of learning theories, teachers, students, the role of technology, and different types of learning. This is synthesized in the Conversational Framework she proposes for teaching design. For the purposes of this paper, two of these types of learning processes will be adopted here as a theoretical foundations for analyzing *Cyberl@b*: learning through practice (LTP), and learning through collaboration (LTC), in terms of relevance, practicality, and observability within a constructivist conception of EFL as reviewed above in the section on the evolution of CALL.





Before that, however, it is necessary to explain what the goal of Laurillard's Conversational Framework (CF) is and how it integrates learning through practice (LTP) and learning through collaboration (LTC), since this will paint a clearer picture of the elements involved in *Cyberl@b*. Such description ought to incorporate the stakeholders in the learning process in order to facilitate teaching design in different contexts. Thus, in Laurillard's (2012) words,

*The aim of the Conversational Framework is to represent, as simply as possible, the different kinds of roles played by teachers and learners in terms of the requirements derived from conceptual learning, experiential learning, social constructivism, constructionism, and collaborative learning, and the corresponding principles for designing teaching and learning activities in the instructional design literature. (pp. 93-94)*

Having looked at learning through collaboration (LTC), we will now look at the second aspect to be described: learning through practice (LTP).

### ***Learning Through Practice (LTP)***

According to Laurillard, learning through practice (LTP) is considered one of the four types of learning along with learning through acquisition, learning through inquiry, and learning through production, that reflect individual learning. In the case of LTP, learners activate “their developing concepts to improve their actions: to put the theory into practice in working to achieve a goal, generating an action to achieve it, and using the feedback received to modulate their action or their conception (LAURILLARD, 2012, p.98). In the context of EFL, for example, grammar rules are applied in an authentic context of communication to achieve a goal. The feedback students receive later will modulate their action and the learning itself.

On the other hand, the teacher's role is that of creating a model that will provide intrinsic feedback to students. Some of the most common technologies for LTP are “model answers, worked examples, interactive games, simulations, microworlds, and adaptive models” (LAURILLARD, 2012, p. 98). This type of learning is reminiscent of the second stage of the evolution of CALL, with the use of computers for a communicative approach. In other words, the teacher prepares a controlled environment with a model to be followed by students, who, by means of communication, will test the theory learned as well as their own conceptions.

Besides, practice and drilling in communicative EFL take shape as situated learning, that is, learning that occurs “in the course of an activity, in appropriate and meaningful contexts” (LAVE



& WENGER, 1991, in TRAXLER, 2009, p. 18). Moreover, authentic learning means that these contexts correspond to tasks that have “real-world relevance and utility, and are situated in real or simulated versions of the world” (LAURILLARD, 2012, p. 167). By the same token, mobile learning supports both situated and authentic learning, allowing students to carry out both situated and real-life tasks (TRAXLER, 2009).

Moreover, Laurillard (2012) sees experiential learning in LTP as reflecting Dewey's learning through experience, making the learning process, in fact, of *practical value*: “learning through practice develops our knowledge of the world, as well as the skills needed to develop that knowledge further” (p. 164). As mentioned above, the role of the teacher is “to design the practice/modeling environment to provide *goal-oriented action with meaningful feedback and revision*” (emphasis in the original) (LAURILLARD, 2012, p.166). Here, “goal-oriented” refers to motivation and direction, whereas “meaningful feedback” addresses the learner interpreting the feedback for “revision”, that is, modulating and generating more knowledge (LAURILLARD, 2012). Such feedback can be intrinsic or extrinsic. Both types of feedback and their role in LTP are illustrated in Figure 2.

**Intrinsic Feedback.** This is the type of feedback students receive directly from the learning material or model as observable and interpretable consequences to their actions, “from which they can work out how to improve it without teacher intervention” (LAURILLARD, 2012, p.170). Intrinsic feedback, as provided by the “model answer”, promotes motivation and independent learning within a constructivist environment (LAURILLARD, 2012).

**Extrinsic Feedback.** For this type of feedback, direct teacher intervention takes place, offering advice as to how to improve learner performance in order to meet the prescribed goals. For Laurillard (2012), extrinsic feedback is considered more passive than intrinsic feedback as the student will not have to interpret the feedback offered by the environment “because the teacher does it” (p.173).

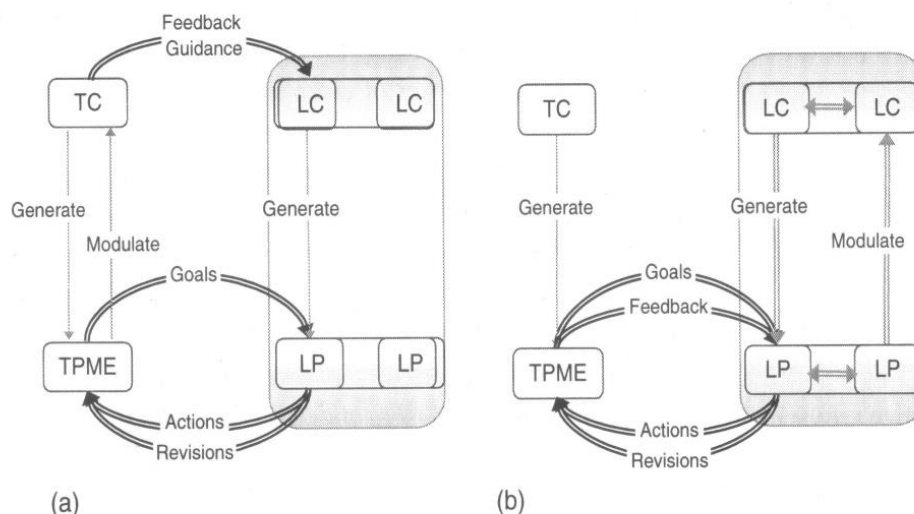


Figure 10.3 (a) How teacher reflection on the learner's actions provides extrinsic feedback, and (b) How the practice/modeling environment provides intrinsic feedback, prompting learner reflection.

Figure 2. *Learning Through Practice and the Roles of Intrinsic and Extrinsic Feedback*. Note: TC stands for “teacher content”; LC, “learner content”; LP, “learner practice”; TPME, “teacher practice/modeling environment”. Source: Laurillard, 2012, p. 173.

Having briefly described what LTP is about, the next element to be discussed is the other type of learning reviewed by Laurillard, as catered for in *Cyberl@b*, “Learning through Collaboration” (LTC).

### ***Learning Through Collaboration (LTC)***

Although the definition of “collaboration” may vary according to literature, for the purposes of this paper it means “a coordinated synchronous activity that is the result of a continued attempt to construct and maintain a shared conception of a problem” (ROSCHELLE & TEASLEY, in LAURILLARD, 2016, p. 187). As Garrison (2016) points out regarding the social nature of learning, “collaboration is essential for a learning community that creates the conditions where we can share and explore ideas through discourse” (p.19). In other words, a constant flow of communication, exchange of ideas, and negotiation of meaning flourishes among all the actors involved in the learning process: teacher, students, learning context, and content.

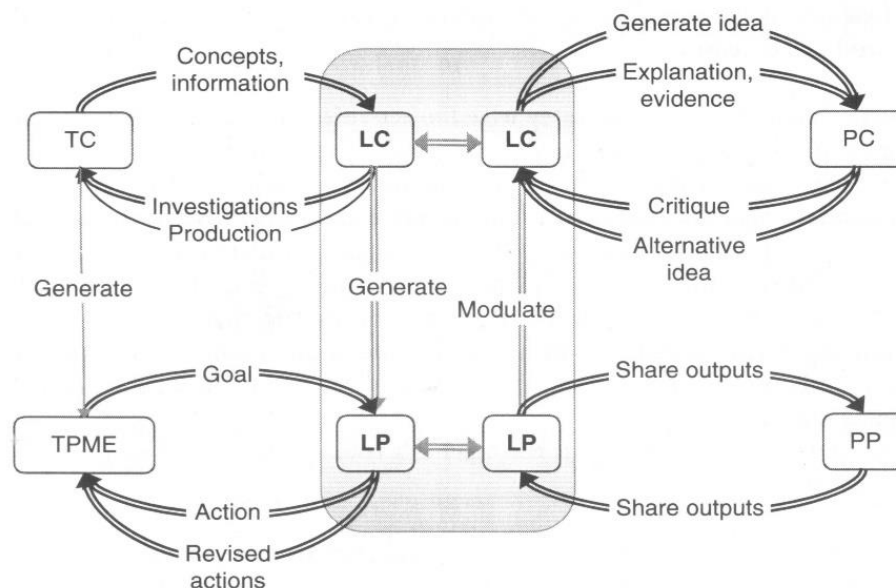


In the particular case of LTC, it can be distinguished from LTP by this social component, since knowledge is built “through participation and negotiation with peers” (LAURILLARD, 2012, p.187). In fact, in LTC “the focus is the social and cultural description of how the group constructs a shared outcome” (LAURILLARD, 2012, p. 188). This outcome is the learning itself, but first it requires a concrete and observable output: the production of a material such as “a diagram, animation, video, program, model, performance, design” (LAURILLARD, 2012, p. 188) by means of digital technology. This can be achieved by either synchronous or asynchronous interaction, depending on the task, the media, and the availability of resources and time that learners have.

Therefore, shared goals as a learning community in order to produce a common output generate three learning activities, resulting in the modulation of students’ practice (LAURILLARD, 2012). Such activities are:

- Peer Modeling: learners learn from the way their peers work and from their opinions.
- Cognitive elaboration: students learn through this “reciprocal process of articulating and critiquing their points of view” (LAURILLARD, 2012, pp. 188).
- Practice with one another: this motivates exchange of ideas, opinions, and constructs knowledge within the community.

Thus, LTC results in an iterative cycle of modulation of learning, not provided by a model as in LTP, but obtained from peer feedback, negotiation, discussion of alternative solutions, and teacher feedback as necessary. In both cases, feedback is extrinsic, as it is not “ingrained” within the environment affordances designed previously by the teacher (LAURILLARD, 2012). According to Fahy (2008), “successful online learners need an environment where they can both acquire and exercise their skills to achieve personal learning goals, and receive compensating media-based assistance and support as required” (p.171), which makes the learning process an active and interactive experience. This iterative process of modulation of learning in LTC can be seen in Figure 3, where learning takes place as a result of the collaborative interaction with peers, and is complemented by teacher feedback:



**Figure 3.** *Iterative Process of Learning in LTC, with Extrinsic Peer and Teacher Feedback.* Note: PC stands for “peer content”; and PP, for “peer practice”.

Source: Laurillard, 2012, p.191.

Now, once both learning through practice (LTP) and learning through collaboration (LTC) have been addressed, the main characteristics of *Cyberl@b* as a language learning OER will be analyzed before carrying out the evaluation of its affordances based on the literature review.

### ***Characteristics of Cyberl@b as a Language Learning Platform***

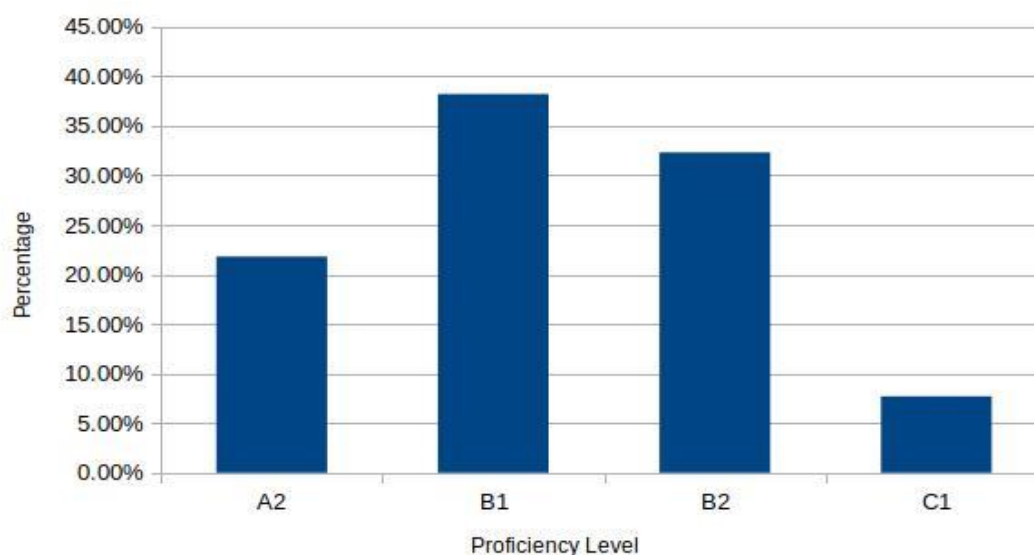
As mentioned above, *Cyberl@b* is an English learning platform created at the University of Costa Rica as an effort to implement the English syllabus designed by the Ministry of Education of Costa Rica (MEP, in Spanish). *Cyberl@b* was originally launched in 2005 as both a website and CD-ROM, covering the English curriculum for 7<sup>th</sup>, 8<sup>th</sup> and 9<sup>th</sup> grades (high school). As Quesada explains, *Cyberl@b* was conceived as a “website where teachers could go and pick digital resources for their courses” (DÍAZ-DUCCA, 2018, audio interview). Its purpose is complementing the official syllabus and classroom learning as an online resource for both urban and rural primary and secondary schools, using CALL. This is achieved within an interactive, meaningful learning environment. As Quesada (2006) points out, “the *Cyberl@b* project uses interactive media resources that are designed to engage students in learning English within authentic contexts that are relevant to the students’ lives” (p. 2).





Important milestones in the development and evolution of this platform have been the launching of *Cyberl@bTeens* in 2008, *Cyberl@b Kids* in 2011 (funded by MEP and the Costa Rica USA Foundation for Cooperation - CRUSA), and *Cyber@bTeens* for 10<sup>th</sup> and 11<sup>th</sup> grades in 2014. Currently, Quesada is working on the implementation of the platform for 7<sup>th</sup> and 8<sup>th</sup> grades based on the MEP new curriculum (QUESADA, 2018, p. 3). As a result, during more than a decade since its inception, the project has addressed the four macro skills for teaching and learning English: listening, reading, speaking, and writing, along with grammar, vocabulary, pronunciation, and Costa Rican culture.

The importance of original and innovative educational efforts such as *Cyberl@b* is evident for a small, developing country like Costa Rica. Competing in the international market requires the acquisition of an adequate proficiency level of English among the new generations, in order to promote opportunities for better work conditions and competitive salaries, job positions in multinational companies, access to world-level universities and institutes, and the gestation of entrepreneurship and international cooperation for national growth and progress. So far, however, although it has improved in recent years, the English proficiency level of Costa Ricans is still reported as “insufficient” for the needs of employers as of 2014, when the results of the TOEIC exam diagnosed 38.2% of test takers as B1 (Intermediate) users, and only 7.7% as C1 (Advanced) users, based on the Common European Framework of Reference for Languages (CEFR) (PRENDAS, 2016), as depicted in Figure 4.



**Figure 4.** Results of TOEIC exam in Costa Rica, 2014. Source: Authors' own graph, based on Prendas, 2016.

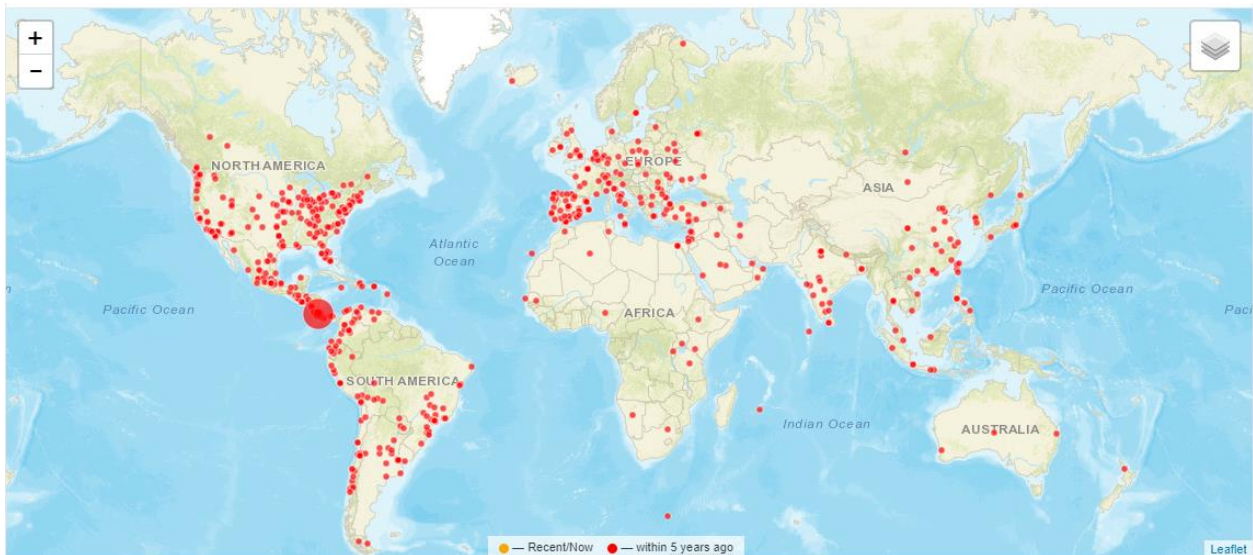


Finally, it is worth mentioning that presently this Open Educational Resource (OER) comprehends the complete English curriculum as prepared by MEP, from grades 1<sup>st</sup> through 6<sup>th</sup> in primary school, and 7<sup>th</sup> through 11<sup>th</sup> in high school. This means that the platform is being used by teachers and students in primary and secondary schools in different regions of Costa Rica either online or as a software provided in USB units or CD-ROMs. As a platform for CALL and MALL, Quesada reports that “with the new technology [HTML5], students can download the unit [of content] and once they've downloaded it to their cellphones or tablets, it can be accessed without Internet” (DÍAZ-DUCCA, 2018, audio interview). According to Quesada, since it is an OER and thus it is free of charge, teachers and students from Latin America, Europe, Asia, and Africa visit the *Cyberl@b* website regularly. Nevertheless, “the United States is the country that uses *Cyberl@b* the most” (DÍAZ-DUCCA, 2018, audio interview). This indicates that *Cyberl@b* has transcended its original focus on the Costa Rican educational context by far, while contributing to the impulse of EFL learning and teaching in Costa Rica and worldwide.

Besides, the content of the platform is constantly updated with current news from Costa Rica, since the English-published newspaper *The Tico Times* has given permission to Quesada to adapt their stories according to the requirements of the MEP curriculum (DÍAZ-DUCCA, 2018, audio interview).

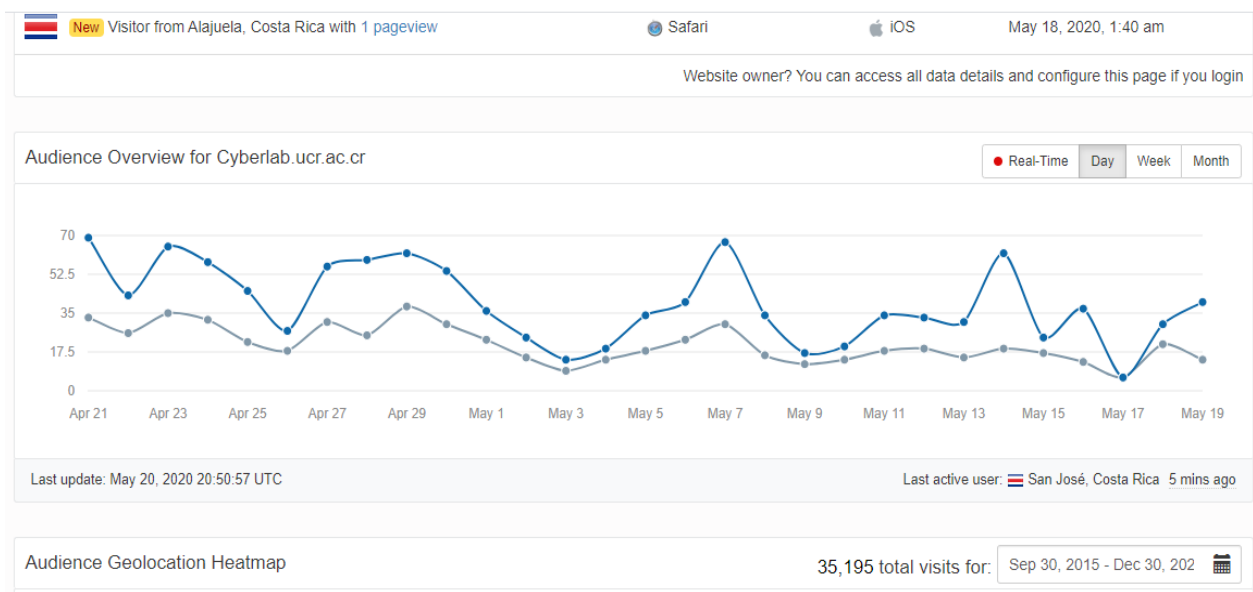
### ***Cyberl@b in Figures***

Since it became available online, *Cyberl@b* has received so far more than 74,000 visits from more than 100 countries in all five continents, which illustrates its global nature. In order to have a clearer picture of this phenomenon, a visitor map can be seen in Figure 5 below.

**Figure 5.** Visitor map for Cyberlab.

Source: Quesada, 2020.

In addition, this OER is currently accessed from personal computers, tablets, and mobile phones, covering operative systems and browsers such as Win10, Win 8.1, Win 7, Android, iOS; and browsers such as Chrome, Safari, Android WebView, and Edge. A daily audience overview of the last month is shown in Figure 6.

**Figure 6.** Daily Audience Overview of April-May 2020.



Source: Quesada, 2020.

As it can be seen, *Cyberl@b* as an OER receives visits from all over the world, which is also reflected in the daily hits flow chart. Next, we will focus on the discussion based on the theory and data presented so far.

Before we proceed on to our discussion, it is relevant to add that since the beginning of the coronavirus pandemic, *Cyberl@b* has gained popularity in Costa Rica and abroad. Thus, due to the COVID-19 pandemic, and how it has affected educational systems worldwide, the Costa Rican Ministry of Education (MEP) had to make important changes in its school year, leading to the total closure of schools in the whole country. One of the changes had to do with the implementation of self-study guides for all subject matters for remote teaching and learning. In the case of English teaching, many online websites were considered to help students practice and learn English by themselves. Among those websites and digital materials, *Cyberlab* has been included in the Self-study Guides for students to work independently and remotely on the well-structured and instructed guides. Therefore, interactive exercises found in *CyberlabKids* and *CyberlabTeens* can be found in the every primary and secondary self-study guide.

## DISCUSSION

### *Analysis of Cyberl@b as Learning through Practice and Learning through Collaboration*

Based on the theoretical aspects of learning through practice (LTP) and learning through collaboration (LTC), this section will expose a brief analysis and discussion of *Cyberl@b* using criteria extracted from the Literature Review. The main goal is to illustrate how this OER meets LTP and LTC conditions, using examples from a single content unit, describing exercises and tasks, and collating them against such criteria. In order to do this, one unit from the 8<sup>th</sup> grade high school curriculum was chosen based on convenience.

Looking at the homepage from the online version of *Cyberl@b*, it is evident that the platform has been designed for different devices, as suggested by Burston (2016) as part of MALL. The interface allows the user to choose how to access the environment: from the Web (for desktop and laptop computers), from a mobile phone, or from a tablet, as shown in Figure 7.





**Figure 7.** *Cyberlab's as it is displayed on different devices.* Source: Quesada, 2020.

On the other hand, in Figure 8 we can see a breakdown of all *Cyberlab's* units, from first through eleventh grades. For Tenth and Eleventh gradies, representative examples of traditional and modern Costa Rican culture are illustrated: indigenous masks, typical clothing and dishes, and the former Real Madrid's goalkeeper, the Costa Rican Keylor Navas.



**Figure 8.** *Cyberlab's level breakdown for primary and secondary schools.* Source: Quesada, 2020.





Another example can be seen on Figure 9, where the units for Eight Grade are depicted. The menu is attractive to the young's eye and well organized, as shown. The unit complies with the need to cater for students' different learning styles, as the materials are varied: multimedia, texts, graphics, etc. (HOVEN, 1997; FAHY, 2008).



**Figure 9.** *Cyberl@b* Teens' Level 8<sup>th</sup>, showing Table of Contents.

Source: Quesada, 2018.

Next, selecting any of the units brings a pop-up window with the structure of the unit divided into the different linguistic macro skills and micro skills included: listening, grammar, reading, writing, recycling of macro skills, as shown in Figure 10. These are labeled as follows,

- “Log on”: for unit goals, warm-up and schemata activation activities.
- “Turn it up”: for a Task-Based Instruction listening cycle with listening strategies, multiple choice exercises, and short collaborative group projects such as interviews and surveys.
- “System Tools”: for inductive and deductive learning of grammar structures, including research activities, and quick surveys for using the grammar rule in daily life activities.
- “Scan it”: for reading, including reading strategies and “postreading surveys, research activities, QAR [Question and Answer], or other authentic supplementary activities to establish experiential reciprocity to the topic [being] read” (QUESADA, 2006, p.13).
- “Type it up”: for process writing, and post-writing activities such as “collaborating

techniques that include discussions, conversations, paper exchanging with both their peers and teacher” (QUESADA , 2006, p. 14).

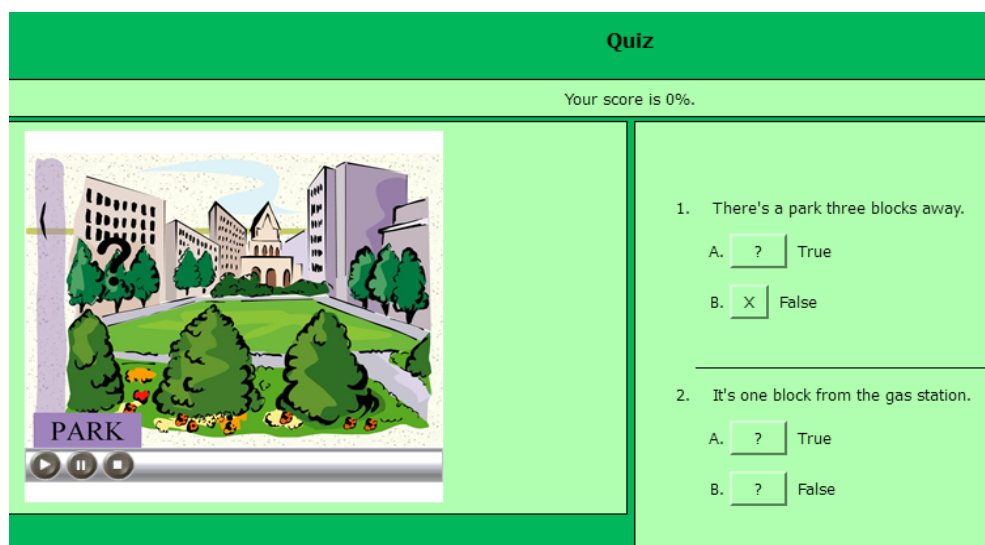
- “Log off”: for recycling and integration of the four macro skills practised in the unit: listening, reading, speaking, and writing into a three-stage process: team project, web search, and self-assessment. The team project “establishes a bond between the topic of the unit and a situation encountered in the learners’ everyday life” (QUESADA , 2006, p. 15). This project uses cooperative learning (assigning different roles to students), but can also be developed as a collaborative process, as students will work in a coordinated manner having a specific output in mind, such as “an oral presentation of the project to class, to the school or to the community” (QUESADA , 2006, p.15).



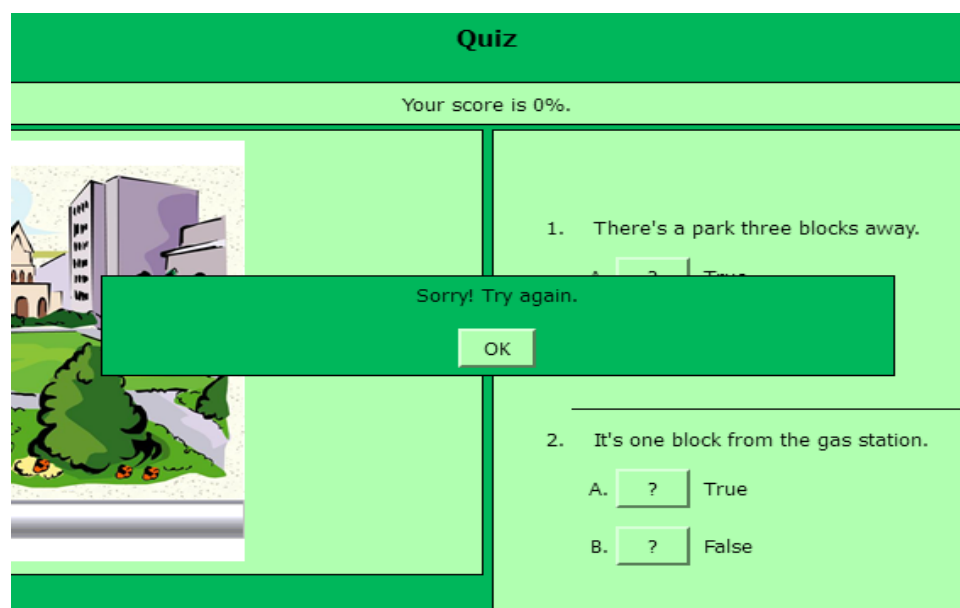
**Figure 10.** *Cyberl@b's unit structure with the linguistic skills to be practised.*

Source: Quesada, 2018.

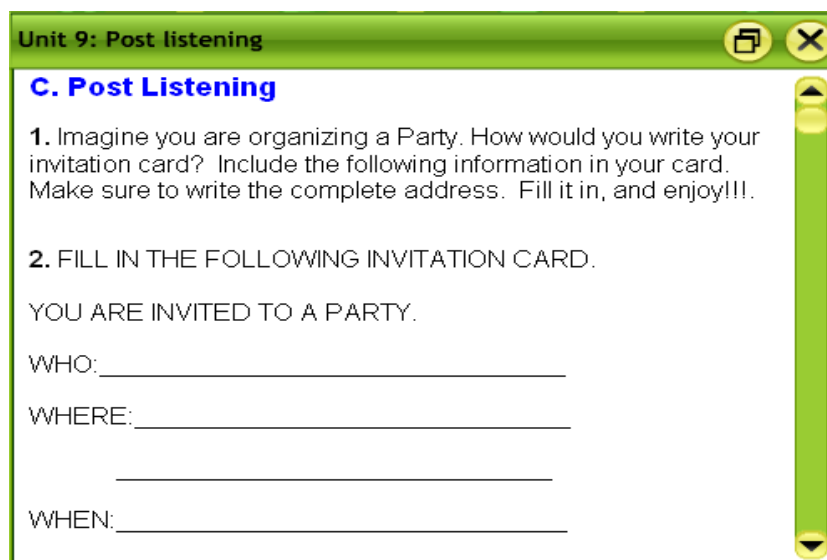
To synthesize, components of each unit meet the criteria established for LTP, as they present affordances such as exercises, listening, reading, and writing models which provide intrinsic feedback (LAURILLARD, 2012). Such feedback can be used by learners to modulate their own learning as it is presented in practice and self-assessment exercises and games (LAURILLARD , 2012). In addition, the short production (post-task) projects offer contexts where students can receive extrinsic feedback from their instructors and modulate their learning in an iterative process as stated by LTP. An example of listening activities, including listening along with intrinsic feedback, can be found in Figures 11 and 12. A sample post-task exercise allowing for student practice and extrinsic teacher feedback is shown in Figure 13.



**Figure 11.** Sample listening activity from *Cyberl@b Teens*, Unit 9, “Turn it up” section, including an audio track and comprehension questions. Source: Quesada, 2018.



**Figure 12.** Sample listening activity from *Cyberl@b Teens*, Unit 9, “Turn It Up” section, offering intrinsic feedback to students' choices. Source: Quesada, 2018.



**Unit 9: Post listening**

**C. Post Listening**

1. Imagine you are organizing a Party. How would you write your invitation card? Include the following information in your card. Make sure to write the complete address. Fill it in, and enjoy!!!.

2. FILL IN THE FOLLOWING INVITATION CARD.

YOU ARE INVITED TO A PARTY.

WHO: \_\_\_\_\_

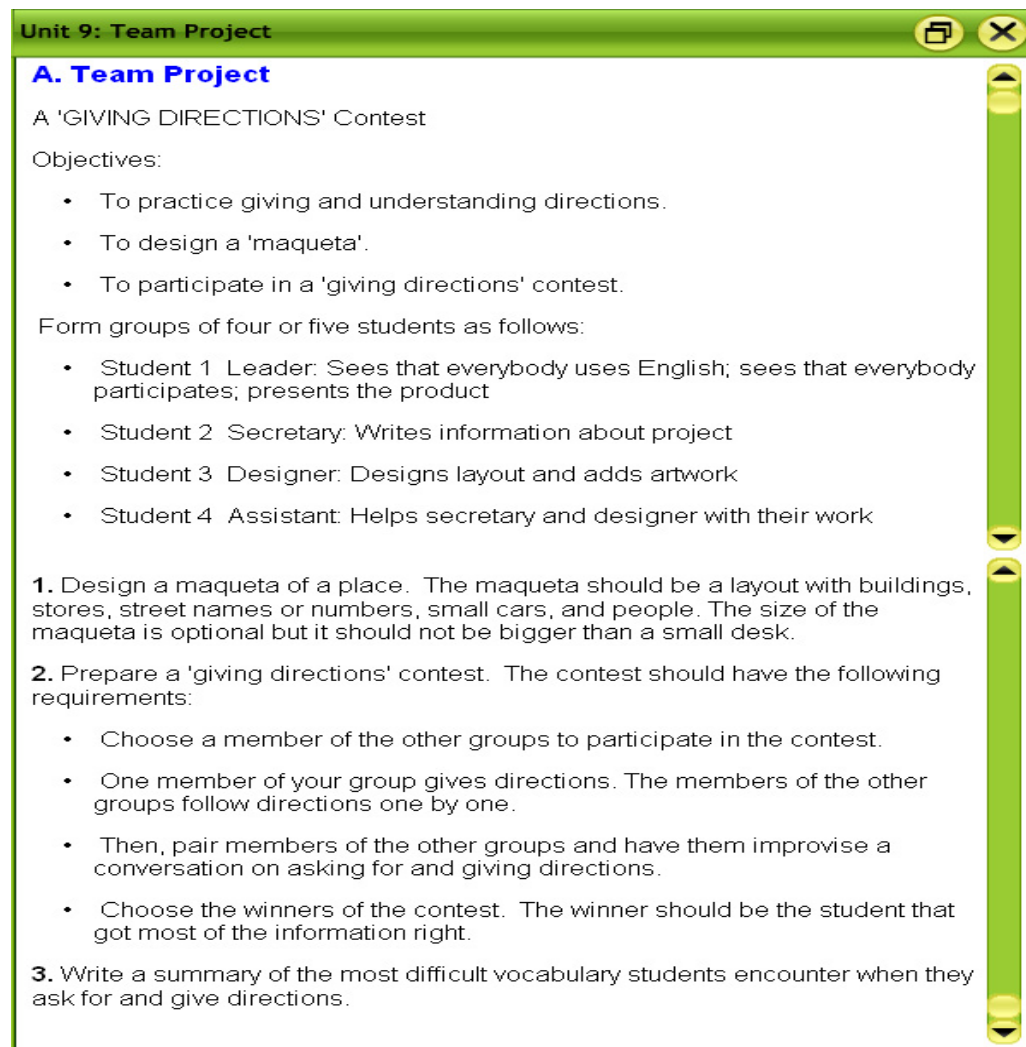
WHERE: \_\_\_\_\_

\_\_\_\_\_

WHEN: \_\_\_\_\_

**Figure 13.** Sample post-task listening activity from *Cyberl@b Teens*, Unit 9, “Turn it up” section, affording practice and teacher extrinsic feedback, Source: Quesada, 2018.

On the other hand, the team project for the “Log off” section, for recycling and extension of the skills and contents learned and practised, responds to the criteria laid down by LTC. Although cooperative, such projects can be adapted by the teacher for collaborative learning as well, granting students opportunities to work with their peers synchronously or asynchronously, in face-to-face contexts (the classroom) or distance learning (CALL, CELL, MALL). Within this context, learning is built through negotiation with peers, based on the common goal of preparing a concrete project (output) such as a performance, an oral presentation, or a digital product (LAURILLARD, 2012). An example of such a project requesting to design a city model (either physical or digital), and allowing for peer modeling and teacher extrinsic feedback is shown in Figure 14:



**Figure 14.** Sample team project from *Cyberl@b Teens*, Unit 9, “Log off” section, allowing for a physical or digital output and peer and teacher feedback.

Note: “maqueta” is the Spanish word for “scaled model”. Source: Quesada, 2018.

After a detailed presentation of this OER’s characteristics, contents, and possibilities has been, this paper will close with some considerations about the future and further potential of *Cyberl@b* in the next section.

## CONCLUSIONS

*Cyberl@b*, as an Open Educational Resource (OER), is designed for the teaching of English as a





Foreign Language (EFL) in Costa Rica, following the curriculum and objectives required by the Ministry of Education. It has been conceived as an environment that caters for the richness of learning styles students exhibit, including different media such as audio, text, and graphics. It also affords access through different devices such as computers, tablets and mobile phones, which reflects its foundations on CALL, CELL, and MALL. As a website, flash drive, CD-ROM or software, *Cyberl@b* performs as a complementary source of materials for teachers and students in their teaching and learning contexts, since it provides interactive activities and exercises in which students can engage “anytime, anywhere”. Thus, motivation for learning increases while it is used as an asynchronous environment for learning. Due to its wide database of exercises, given models, and intrinsic feedback affordances, *Cyberl@b* functions as a platform for learning through practice (LTP).

Finally, as a learning tool that includes cooperative and collaborative activities, *Cyberl@b* creates learning through collaboration (LTC) settings where students may participate in projects that reflect situated, authentic, and experiential learning as joint efforts for a common goal in order to produce an output in the form of a specific material either in face-to-face communication or digital form. Thus, there is plenty of peer modeling, cognitive elaboration, and practice among learners (LAURILLARD, 2012). This also entails constructivist, connectivist, and Community of Inquiry affordances that combine the social, cognitive, teaching, and emotional presences (GARRISON, 2016; CLEVELAND-INNES, 2012) which, in turn, cultivate learner autonomy, independence, metacognitive skills, and empowerment over their own learning process.

The hard and patient work that *Cyberl@b* represents must be continued at all costs. As Quesada points out in our podcast interview, there are future plans for implementing voice recognition, collaborative projects among Costa Rican students and cooperation for international cultural exchange (DÍAZ-DUCCA, 2018). In other words, as a learning environment and CELL and MALL platform, *Cyberl@b* has opened vast horizons for numerous young Costa Ricans and English learners worldwide, allowing “participants [to] develop shared metacognitive awareness and ability that translate into successfully navigating a connected and rapidly changing society and knowledge based economy” (GARRISON, 2017, p. 168).

For new generations of teachers, researchers, and educational designers, it is mandatory to extend this valuable legacy and pioneer work into new directions. As such, it is important to keep in mind how technological innovation creates “challenges that must be faced to guarantee success in contexts of equity, availability, and academic excellence” (BRENES, SALAS & VALERIO, 2014, p. 40). In short, the possibilities offered by emergent technologies such as virtual devices, user-generated content, OERs, and artificial intelligence for EFL should be exploited in an efficient,



humanistic, and democratic fashion that benefits both teachers and learners.

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