

# UNIVERSIDAD LAICA ELOY ALFARO DE MANABÍ EXTENSIÓN CHONE

# PEDAGOGÍA DE LOS IDIOMAS NACIONALES Y EXTRANJEROS

# ARTÍCULO CIENTÍFICO

# **TITULO:**

"Aplicaciones tecnológicas en la enseñanza-aprendizaje del idioma inglés en tiempos de pandemia"

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# **TUTOR CERTIFICATION**

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# **CERTIFICATION**

The present degree work called: "Technological applications in English language teaching-learning in pandemic times" has been exhaustively reviewed in several work sessions. It has been concluded and it is ready for its defense.

The options and concepts expressed in this degree work are the results of the perseverance and originality of their author(s): Steven Cedeño Montalván y Selena Mendoza Santana, being their sole responsibility.

Chone, March 2023

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Los miembros del Tribunal Examinador, aprueban el informe de proceso de solicitud de Artículo Científico sobre el tema "Aplicaciones tecnológicas en la enseñanza-aprendizaje del idioma inglés en tiempos de pandemia" del año lectivo 2023, elaborado por los estudiantes Cedeño Montalván Steven Jesús y Mendoza Santana Selena Jamileth.

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# **Dedication**

First of all, I would like to dedicate this thesis to the creator of life and everything that exists in this universe, to God, for giving me the knowledge, and strength in times of uncertainty and to the opportunity to complete the career of Pedagogy of National and Foreign Languages.

I also dedicate this work to my parents, Ángel Benito Cedeño Veliz and Purísima Consuelo Montalván Cedeño for their unconditional support, not only financially but also personally, for giving me advice, words of encouragement to not give up, for the family values and principles instilled that allowed me to become the honourable person I am today, as well as my siblings and family who were supporting me at every moment.

Dedicated to my thesis partner Selena Mendoza for all the ups and downs we had to do this work, the late nights that finally have their reward, in the same way to my thesis tutor Raisa Macias for being our guide and support throughout this process and to all the teachers of the career for transmitting their knowledge and experiences so that we can meet our goal, thank you very much to all.

Steven Jesús Cedeño Montalván

Life is full of constant challenges and sacrifices where we all need support to fulfill our dreams and goals. The completion of this thesis has been a process that has brought with it many challenges and sacrifices, but thanks to God it has been accomplished. For this reason, I dedicate this thesis to God who is a fundamental pillar in my life, my guide and who has never abandoned me and has been a light in my greatest moments of doubt.

To my family, my mother, my father and sister who have always been present throughout my university career giving me their unconditional support, motivating me to be better every day and to always trust in me and my abilities. To my co-worker Steven Cedeño for his support throughout this process that we have lived, that in spite of the differences we have had, we were able to culminate with this dream that we set out to fulfill from the beginning.

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Selena Jamileth Mendoza Santana

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And finally, to my family, my parents and siblings, who without their unconditional support, at all times, I would never have been able to achieve this goal and be a professional, everything I am is thanks to them, my eternal gratitude and this achievement are not only mine, it is theirs too, thank you.

Steven Jesús Cedeño Montalván

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Selena Jamileth Mendoza Santa

# TECHNOLOGICAL APPLICATIONS IN ENGLISH LANGUAGE TEACHING-LEARNING IN PANDEMIC TIMES

Aplicaciones tecnológicas en la enseñanza-aprendizaje del idioma inglés en tiempos de pandemia

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#### **Abstract**

New information and communication technologies began to be used more frequently in the learning of English in the last three years; with the arrival of the Covid-19 pandemic, its use intensified during the development, practice, and feedback of virtual classes. The objective of the present work consisted of evaluating the use of the technological application Liveworksheets to favor English language skills in the students of the Second High School of the "Amazonas" Educational Unit of the Chone canton. The information was obtained from 23 students and 6 English teachers. It is a qualitative research participatory research type. Surveys and interviews were applied to teachers, students, and an exhaustive review of the literature was made where it was obtained as a result. There still needs to be more knowledgeable about the use of technological applications for language learning, and the Liveworksheets application

was the most used in the Amazonas educational institution, which encouraged the motivation of teachers and students. It is concluded that the Live worksheets application favors the process of teaching and learning English despite the limitations, such as the need for more preparation of teachers in the use of technology. It is recommended to use this platform as support material, given its advantages to teachers and students.

# **Keywords**

Liveworksheets application, English language learning, pandemic, communicative competencies.

#### Introduction

The learning of foreign languages is nowadays a necessity of the first order. As a result of Globalization, trade, and mobility of citizens to and from different points of the planet, has grown, and English has become the most widely used language at the international level; therefore, it has become essential to seek methodologies, strategies, techniques and technological tools for the development of communicative language skills.

Moreira-Aguayo and Venegas-Loor (2020) and other authors share that communicative competencies are characterized as a person's ability to communicate successfully in real-life situations that fall within the domain of foreign language teaching, such as English. Communication is an essential factor to develop because that is the achievement of learning a language and interacting with speakers of the other language.

Within this order of ideas, communicative competencies, as previously mentioned, are the ability of a person to develop suitably and efficiently within a particular speech community where they share the same language and its standard. In

this sense, different communicative competencies are mentioned, such as: grammatical, psycholinguistic, sociocultural, probabilistic, strategic, and discursive. All these competencies are based on the communicative approach; authors such as Gooding de Palacios (2020) state that the communicative approach deploys many types of activities: interactive, motivating, projected in the development of communicative functions, playful to release tensions, get out of the routine and worries, making entertaining, fun classes, etc.

In this sense, for the development of classes taking the communicative approach as a premise, implementing technological applications as a support for systematization and interactive learning, even outside the classroom, is appropriate. Nowadays, several resources and applications motivate and allow students to learn a foreign language in their own time and style.

Brovetto (2011) argues that technologies provide new forms of interaction and joint work in a face-to-face, synchronous or asynchronous manner. They can establish communication and development activities in English in interaction with native speakers or with their schoolmates, which is why they have a leading role in the various academic scenarios and have contributed to improving the level of linguistic competence of learners.

According to Serrano (2016) (as cited in Torres & Cobo, 2017) indicates that educational technology (ET) is a discipline in charge of the study of media, documents, web portals, and technological platforms for the learning process; where domains are resources applied for training and instructional purposes, designed initially to meet the needs and concerns of users.

Historically, the 1940s, as indicated by Munroe (1941) (as cited in Torres & Cobo, 2017), initiated the incursion of technology as changes in behavior resulting from the school application of materials such as silent or sound film, school period; still, images, which can be viewed life or projected as slides, movies, and other.; equipment; and sheets, maps, and graphs. At this time, technology began to be part of education through different materials, techniques, and methods, where its objective was to relate new technologies to education to obtain new and better learning results.

Simultaneously, the development of ET as a discipline, according to Area Moreira (n.d.) (as cited in García-Vera & Alba, 1997), deduces that the purpose of ET has changed. During the 1950s and 1960s, its interest focused on studying audiovisual resources. In comparison, in the 1970s and 1980s, it focused on instructional design, and currently, its interest is oriented toward information technologies applied to education. The continuous evolution of IT has been carried out to meet the learner's needs and improve the learner's learning. The combination of technology with the various components of the educational process can give excellent results for the learner because, through this combination, the learner can acquire new knowledge more dynamically and assertively.

Nowadays, the world is exposed to many changes that bring with them significant positive and negative consequences in different aspects of life. Recently during the Covid-19 pandemic, several alterations arose in a society where daily activities such as communication, work, education, and others were forced to be virtual; for this reason, education assumes virtuality as a fundamental means in the teaching-learning process such as the organization of activities and tasks, the acquisition of skills and knowledge, evaluation methods, class dynamics or inter-institutional relations.

According to Diario El Universo (2022) (as cited in Arteaga-Flores et al., 2021).

"In Ecuador, only at the level of basic general education of fiscal colleges and schools, there are 3 million students enrolled in 150 thousand teaching centers, of which, 2 million have the possibility of connectivity; while 1 million do not have access to it, in addition to not having adequate digital devices for the teaching-learning process".

When virtual education was introduced in Ecuador, the lack of technological resources or their incomplete existence resulted from many gaps in the students because of the insufficient interaction with technological resources needed to allow the study in virtual mode to be received appropriately.

During the confinement, technology became the first tool for the delivery of classes, with high usage. As Bozkurt and Sharma (2020) argue, the educational system was unfit for external imminences such as Covid-19. In effect to the global education crisis, online remote teaching was implemented, a learning process involving several factors where students were provided not only with appropriate content but also with accountability and flexibility, which demands careful planning, design, and goal setting to create meaningful learning.

Therefore, educators had to look for new ways to bring knowledge to their students through strategies, didactic materials, and technological resources that, before the pandemic, could have been used more optimally.

In Ecuador, learning English during the confinement period was familiar to the way it was approached in other latitudes. As in other countries in the region, there were several problems. It started with the difficult access to the internet and technological equipment to connect to online classes, the limited experience in the mastery of ICTs,

and the decrease in the development of foreign language proficiency in students (Córdova et al., 2022).

Before completing this work, we participated in the pre-professional internship project of the Universidad Laica "Eloy Alfaro" of Manabí - Chone of the National and Foreign Languages Pedagogy career at the "Amazonas" Hight School. This was an authentic experience in the formation of future teachers, especially at a time when changes were made in the methodology of teaching English as a result of the international pandemic situation.

About the experience lived in the "Amazonas" Educational Unit where the preprofessional practices were carried out, the authors of this work wanted to deepen the topic related to the technological applications used for the learning of English through the development of the practices it was evidenced that the students and teachers did not make good use of the technological applications during the classes, for such reason the interest for the learning of the language with the use of the technology was low.

Motivated by the experience, a diagnosis was made to the students and teachers of the institution, various instruments were applied through which English language skills were put into practice using various technological applications, and as a result, it was evidenced that students had insufficiencies in the development of oral and written communication skills and that the most used platform was Liveworksheets. Therefore, motivated by the use of tics during the pandemic stage and to favor the learning process in high school, a scientific question was posed: Can the use of technological applications favor the teaching-learning process of the English language?

The objective was established as follows: "to evaluate the results obtained with the use of the technological application Liveworksheets in the teaching-learning process of the English language to favor language skills," the following scientific tasks were established among which are: To study the main theoretical and methodological aspects of the research, to determine the current state of the preparation of teachers and students, to evaluate the use of the technological platforms used in the teaching-learning process during the COVID 19 pandemic, to elaborate the pertinent recommendations to improve the use of these technologies and to expose the experiences systematized in this work about the use of the technological application Liveworksheets as a novel tool in the teaching of the English language.

This research benefits teachers and students by highlighting the benefits and offering recommendations for using the Liveworksheets application in the learning of English in a didactic and fun way. Likewise, interest in the optimal use of technology in education is encouraged,

This research is qualitative; the concept of the qualitative method is supported by Taylor, and Bogdan (1986) (as cited in Herrera, n.d.), who indicates that "it is the one that produces descriptive data: people's own words, spoken or written, and observable behavior," in this research it is used because through this method the different scenarios in which the instruments were applied to 23 students and 6 teachers of the subject of English were analyzed, information was subtracted from the sources consulted to determine the problem, analyze it and reflect on the topic addressed.

Due to those mentioned above, this research is important because it provides teachers and students with necessary information about the use of technological applications in the process of learning English in the virtual modality, highlighting the Liveworksheets application as an alternative tool for the teaching and acquisition of knowledge during the classes together with the development of the communicative skills of the language.

The hypothesis: The use of the technological application Liveworksheets, due to its characteristics and correctly used after preparation of teachers, students, and a minimum of technological resources, can favor the development of communicative skills in the English language.

#### **Literature Review**

Linguistic competencies play a vital role in the adequate development of a language. Thus, as Cisneros (2009) indicates, communicative competencies are how people can establish a relationship with other people in a given environment. These skills begin to be acquired through the relationship of the person with the different scenarios of the environment of the other language to be learned, such as family, school, and society in general.

Linguistic competencies must be developed under an approach; therefore, it is considered the concept of Gooding de Palacios (2020) that the communicative approach has several objectives, techniques, and ludic activities for language learning. In the same way, Zambrano and Alirio (2001) expose:

The communicative approach is based on five primary objectives: 1) to provide support to students in the management of the communicative competencies of the foreign language; 2) to facilitate the use of the foreign language in everyday actions to express diverse personal and intrapersonal information; 3) to provide adequate feedback and correction of errors according to the needs that arise; 4) to promote the learning of the foreign language not only for educational purposes but for foreign language linguistic purposes; 5) to enliven the exploration of different teaching methods and techniques that strengthen communicative skills in function and meaningfulness.

Serrano (2016) (as cited in Torres & Cobo, 2017) states that it is possible to implement technology in education based on the communicative approach. Therefore, Cabrero (2003) mentions that educational technology can be conceptualized as "an integrating, living, contradictory and significant discipline of education" furthermore, it is considered that currently, it has become a necessity to incorporate technology in education due to so many changes and risks that society goes through, education has been forced to have a preparation for possible virtual classes, where technology and its branches play the fundamental role.

Based on Solér (2008) indicates that information technologies play an essential role in education for teachers, students, and family that is also part of education, the personal use of having access to information to solve various problems raised in their educational process and turn, acquire adequate knowledge about the different topics that are taught in the classroom. Including technology in education generates excellent results in the teaching and learning process of students, besides being a more dynamic and appealing way for them to work.

Brovetto's theory, 2011, indicates that technology provides new forms of interaction between people and facilitates different ways of working in a face-to-face or virtual way; in turn, technology can develop education. Buxarrais & Ovide (2011) indicate that the possibilities opened by Web 2.0 now make it possible to implement educational pedagogical theories that have been well-known for many years, such as social constructivism. Currently, technology is present in most academic scenarios, and its use has allowed education to be more active and efficient for those using it.

Based on statistical data from INEC (2019) (as cited in Oviedo, 2021), 37% of families have Internet access, and only 9.1% of rural families do. Of the 37% mentioned above, 24% have a computer, and families in the countryside only 8%. Emphasizing the

ideas of Brítez (2020) (as cited in Cedeño-Solorzano et al., 2021), the way of teaching in Ecuador during the pandemic left owing much because teachers were deficient in the management of the platforms, the collapse of the same, parents and most students lacked knowledge about the mastery of computers.

Valdivieso and Gonzales (2016). (as cited in Mendoza-Bozada, 2020) states that Ecuador lacks the budget to invest in technology in education, and with every day that passes, the situation worsens. Science and technology are meaningless in development, especially when the contribution of scientific research is needed to make innovation more productive and competitive.

Namely, the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the Inter-American Development Bank (IDB) (2020) (as cited in López et al., 2022) state that "at the initial, basic and high school education levels, it has been estimated that the loss of learning is 40%; that is, students are learning a maximum of 60% of what they would have learned if they were in face-to-face classes".

Due to the above, the difficulties, and the growth of technology, nowadays, several interactive pages and technological applications are used in the classroom to develop the same; teachers use them to maintain a more dynamic and participatory class. A clear example is the Liveworksheets application (2022), which indicates that it is a page that transforms traditional worksheets into worksheets with self-correcting exercises, also called interactive worksheets. In turn, it allows students to complete the worksheets online and send the answers to the teacher, which is considered suitable for the students because it sounds motivating, for the teacher because it saves correction time, and for the environment because it saves paper.

These cards take advantage of new technologies applied to education since they can include sounds, images, videos, drag and drop exercises, join with lines, multiple choice, and audio recording, among others; all these features fully help the development of communicative language skills.

Garzón (2020) indicates that through the game, the learner's skills can be perfected through playful activities that are performed unconsciously, indicates that the game is the most excellent motivator in the process of teaching and learning the English language and, in turn, mentions that the virtual platform Liveworksheets and its implementation helps dynamically and entertainingly, for this reason, the valuable role of the virtual platform is emphasized by combining these two elements such as the game and teaching so that learners get great learning.

Franco and Garcia (2019) indicate that the Liveworksheets virtual learning environment positively impacts learners by providing additional practice to improve the four skills associated with learning English, such as grammar, listening, speaking, and writing. Livework sheets are a technological application that not only helps to reinforce the knowledge acquired in class but also greatly aids in the development of communicative language skills.

Along the same line, Mora (2022) mentions that the Liveworksheets application is widely used because it consists of a digital space that can be used online and offline; it contains a series of self-modifying interactive worksheets with various exercises, where students, after completing them can send them to their teachers to proceed to be graded automatically, the platform allows listening, writing and interacting through the exercises to motivate students.

Based on the experience of Machado and Orozco (2021), using new technologies enriches and innovates the educational learning environment in an interdisciplinary way. As an improvement strategy can be used in different fields, it favors learning in all areas of knowledge, including languages. Nowadays, different areas of knowledge can be developed effectively and productively through technology and the different elements that it facilitates.

Patiño-Quizhpi et al. (2020) point out that the main advantage of
Liveworksheets is to transform the traditional spreadsheets pdf, jpg, doc, and others.

Into interactive pages of self-correction, including multimedia such as video, audio, and images. Among other things, it is a free platform teachers can send students
assignments. On the other hand, the only disadvantage identified is that each account has a limit of one hundred students, so teachers must create other accounts to work with all their students or pay premium subscriptions to increase the number of students in the same account.

### **Materials and Methods**

During the pre-professional practices and the contact with the students in a virtual way, some questions about ICTs and language learning arose, which motivated us to study and deepen the subject and, consequently, to carry out this research using several types of field instruments.

This research is qualitative because it details descriptively the information collected through instruments such as interviews, observation sheets, and surveys. The interview, according to Astudillo (2015), "is a dialogue in which the person (interviewer) asks a series of questions to another individual (interviewee), to know his ideas, feelings, and way of acting. "The observation sheets, according to Blaxter et al.

(2000) (as cited in Fernández, 2005), "the researcher participates by observing, recording and analyzing the facts of interest." As postulated by Pimienta (2000), "is a method for receiving information from a population of objects. Surveys are results of a given moment, so they cannot be considered in future research".

In correspondence with the above, the qualitative method, through its instruments, allows the researcher to participate in the research with the object and subjects of study. Therefore, the qualitative level of this research was action-participatory since it made known the problem that arose in the place of study and, in turn, acted by analyzing and proposing improvements to transform the reality where the research was carried out.

Therefore, the population consisted of 200 students in the first year of high school at the Educational Institution "Amazonas" of Chone, from which a group of 23 students was taken as an intentional sample for the application of surveys and observation sheets since they were the students with whom we worked in virtual classes during the COVID 19 pandemic. Of equal importance, 6 teachers of the English area were obtained as a population for the application of the interview and survey, of which 6 teachers were taken as a sample for the interview and to know how they used the technological applications and what was the effect that the use of these had on the students since they taught classes at the level of students that inspired to carry out this scientific work. The 6 teachers were part of the survey conducted.

In the present research, a review of the literature of the last decade was carried out, which was of great importance in allowing the authors to analyze the various ways in which language learning has been approached with the use of technologies, specifically with the use of the technological application Liveworksheets, where several authors mentioned that it is of great help in the process of teaching and learning English

for teachers and high school students due to great support for the practice of the knowledge previously taught during the virtual classes in pandemic time.

## **Results**

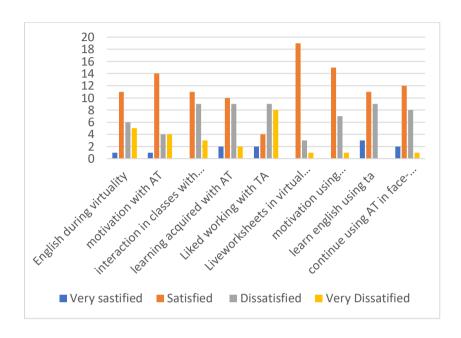


Figure 1. Student Survey

In the survey applied to 23 students of the Second Parallel High School "G" of the "Amazonas" Educational Unit about the use of technological applications, specifically Liveworksheets in virtual classes during the Covid-19 pandemic, 80% of the students indicated that they were satisfied with the teaching-learning process during the pandemic and worked with this modality despite the various difficulties and inconveniences that arose, such as access to connectivity and technological applications.

Regarding the interaction the students felt they had, 70% indicated that it was satisfactory. In comparison, the other 30% felt uncomfortable interacting with classmates and their teachers since communication in virtual classes was, to some extent, limited and complex.

Using technological applications for developing English classes was to their liking because it was a new learning environment where, despite the social distance, they could be in contact with their teachers and classmates. Regarding using the Liveworksheets application in virtual English classes, they mentioned that they used it in 80% of the types and felt motivated by its use.

With the above mentioned, the learning acquired during the virtual classes was positive with the technological applications. Seventy-five percent of the students consider that the English language can be learned through technological applications and that they are interested in using these technological tools in the face-to-face modality. They mentioned that the technological applications mostly used were WhatsApp, Zoom, YouTube, and Live worksheets.

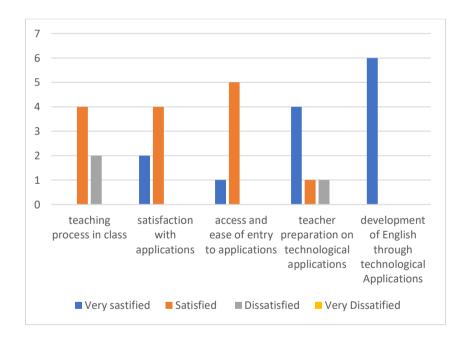


Figure 2. Teacher Survey

In the survey applied to 6 teachers of the English area of the "Amazonas"

Educational Unit regarding the use of technological applications, specifically

Liveworksheets, in virtual classes during the Covid-19 pandemic, 70% of the teachers

indicated that the teaching-learning process during the pandemic was satisfactory, despite the various difficulties and inconveniences that arose, such as access to connectivity and technological applications. The other 30% wanted more from the work modality.

Regarding working with technological applications, 25% of the teachers indicated they were delighted. In comparison, 75% indicated they were satisfied with working with the technological applications during the virtual classes, with both favorable and positive results. In turn, 10% of the teachers indicated that they were delighted with the accessibility with which they were able to access and make use of the different technological applications, and the other 90% were satisfied; both results agreed that it was easy to access and make use of the applications.

According to the teachers' training for virtual teaching with different applications that can be used, 50% strongly agree with this decision, 25% agree, and the other 25% slightly agree with this statement; the teachers believe that for better teaching of classes virtually it is essential to have a previous preparation.

Finally, suppose teachers agree that the English language can be developed effectively using technological applications. In that case, 100% fully agree that it is possible and are very satisfied with this statement since technological applications facilitate many activities for developing language skills.

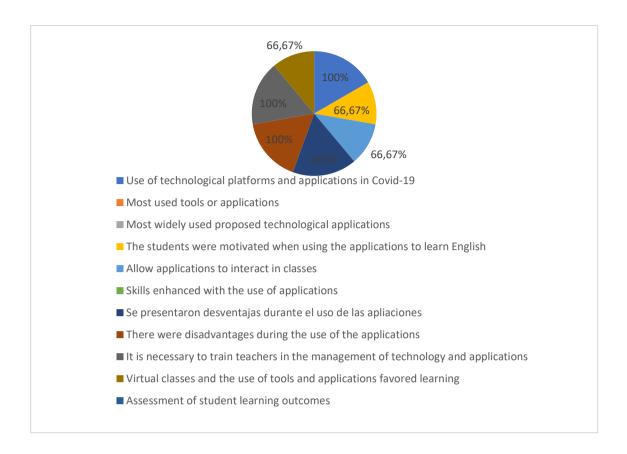


Figure 3. Teacher Interviews

The interviews were conducted with three high school English teachers of the "Amazonas" Educational Unit. Once the interviews were conducted, each of the answers obtained was analyzed, and the results showed that 100% of the educators used regular applications to connect to classes and communicate, such as Zoom, Microsoft Teams, and WhatsApp; 67% of them delved into the search for and implementation of technological applications for teaching classes, the most used being Liveworksheets since it allowed students to develop activities in line with the topics of the classes while strengthening their communication skills and interacting with each other.

However, there was a problem that 100% of the teachers had connectivity problems with their students; students with limited resources needed the necessary technological devices to receive the classes, and many of them needed internet service, especially those living in rural areas. Nevertheless, despite these difficulties, with the

use of the Liveworksheets application, students could practice when they had internet, without needing to be connected to classes and from other people's devices, whether they belonged to family or friends.

99% of the teachers share the idea that training on technological applications is necessary so that in the future, if they were to return to virtuality, they would have the necessary knowledge on the management of these tools since some only knew the applications to connect to the classes and made excessive use of them, a fact that changed when they used other applications such as Liveworksheets to complement learning, generating the participation of all students.

#### Discussion of the results

The results of the instruments applied to students and teachers on various characteristics of the use of technological applications in virtual classes during the Covid-19 pandemic showed that the teaching-learning process during the pandemic was moderately satisfactory to work with this modality due to the various difficulties and inconveniences that arose, such as access to connectivity and technological applications. The interaction that the students and student-teachers felt was pleasant since communication in virtual classes was limited and complex to some extent. The use of technological applications for the development of English classes was more liked by the teachers than by the students since the students did not feel more motivated to use them because it was a new learning environment they did not handle with total security. For that reason, they did not feel more motivated to use them.

Due to those mentioned above, the students consider that they did not learn enough during the virtual modality and the use of the technological applications; however, the teachers believe that the students reached half the knowledge intended to

be transmitted. The teachers and students consider that the English language can be learned using technological applications and that they are interested in using these technological tools in the face-to-face modality. They mentioned that the technological applications most used were WhatsApp, Zoom, and YouTube. Regarding the use of the Liveworksheets application in the virtual English classes, the teachers mentioned that they did use it in their classes; with the use of this application, they were able to motivate the students.

These findings are confirmed by the results obtained by Hurtado et al. (2022); within their research, 91.02% consider that student participation in virtual classes depends on interactivity. In the observed activities, participation was determined; however, the authorities found that teachers use permissive techniques in the interaction, but the desired effect of the operative is not the expected". In the case of the present research group, 80% of the teachers indicated that the interaction in the virtual classes between teachers and students was good. In comparison, the other 20% indicated that the interactivity needed to be improved, despite the limitations they had with the applications and technological resources; however, for the students, the level of satisfaction with the interaction they had in the virtual classes needed to be improved.

On the other hand, Zambrano-Hidalgo and Arroyo-Cobeña (2022) in their research indicate that "observing the results achieved on the digital tool Liveworksheets, teachers rely on the various teaching materials it provides as a resource to enhance the learning process of students to develop language skills ." In this research, 75% indicated that they used the Liveworksheets tool in virtual classes to make them more dynamic and interactive with their students; students indicated that they used this application with their teachers and that it was a new way to carry out class activities. Another 25% of the teachers did not know about this digital platform or did not use it.

Several technological applications were used in the teaching-learning process in times of pandemic. According to Castillo and Canese (2021), in their research from the results obtained by applications contributing to language skills, it was discovered that many applications help English teachers and students improve through practice. On the part of the present research, the teachers and students who participated in it indicated that it is possible to achieve an adequate acquisition of the English language through technological applications.

Regarding the English teaching-learning process, connectivity problems had too much influence because most students needed the internet or the equipment to connect, which delayed their training. Similarly, for Prieto and Ramírez (2020), in their research, the lack of connectivity and technological resources hindered coverage, prevented the desired impact, and reduced access to learning, especially for children in remote areas.

Teacher training on the use of technological applications was another cause that limited learning since the lack of knowledge about the tools and their use meant that teachers did not implement them correctly during their classes, which is why they suggested that they should be trained to be better prepared in the future for an event similar to that caused by the Covid-19 pandemic. The same is evident in the results of Gonzales (2020) that teachers, even with modern computers, need the applications and knowledge to adapt their methodologies to teach and develop specific topics.

## **Conclusions**

The theoretical systematization in the present work has allowed us to endorse the importance of technological applications in virtual classes during the pandemic times in teaching and learning English.

The technological application Liveworksheets contains a variety of interactive activities where language skills can be developed and, at the same time, allow the teacher to select the most appropriate ones for his students according to the subject taught and their needs.

The use of the technological application Liveworksheets showed a positive result in the students as it was a motivating and eye-catching application during the virtual classes, through the realization of various activities that, in turn, improved language skills.

Previous technological preparation for teachers and students for its use limited its effectiveness in the teaching-learning process with the use of technological applications.

#### Recommendations

Train and provide workshops to teachers on technological tools and applications related to education to provide better teaching to their students and, at the same time, have adequate management of the technological tools they would use.

Adapt the computer centers and facilitate internet access in the institutions so that teachers and students can use the technological applications that contribute to developing the English teaching and learning process.

Continue using the technological application Liveworksheets with its interactive worksheets where multimedia content and different didactic exercises such as joining with lines, completing, grouping, and others can be added in English classes to contribute to the strengthening of language skills, leaving aside the traditional worksheets to facilitate teachers to grade in a faster and more effective way.

## Reference

- Arteaga-Flores, R., Palacios-Briones, N., Mero-Mero, R., & Cruz-Mera, R. (2021).

  Virtuality And Its Impact on the Educational Processin the Face of Covid-19 in Ecuador. *Revista Científica FIPCAEC (Fomento De La investigación Y publicación En Ciencias Administrativas, Económicas Y Contables)*, 6(4), 320-335. Retrieved from https://www.fipcaec.com/index.php/fipcaec/article/view/484/845
- Astudillo, B. (2015). ¿Qué es la entrevista? Retrieved from DocPlayer: https://docplayer.es/52833728-Que-es-la-entrevista.html
- Bozkurt, A., & Sharma, R. (2020). Emergency remote teaching in a time of global crisis due to CoronaVirus. *Asian Journal of Distance Education*, *15*(1), 1-6. Retrieved from https://www.asianjde.com/ojs/index.php/AsianJDE/article/download/447/297
- Brovetto, C. (2011). Alcances y limitaciones del uso de tecnologías para la enseñanza de inglés en educación primaria. Retrieved from Universidad de la República y Asociación de Universidades Grupo Montevideo:

  https://revistas.unc.edu.ar/index.php/RDPL/article/download/8667/9524/0#page =37
- Buxarrais, M., & Ovide, E. (2011). *El impacto de las nuevas tecnologías en la educación en valores del siglo XXI*. Retrieved from Sinética: https://www.scielo.org.mx/pdf/sine/n37/n37a2.pdf
- Cabero, J. (2003). New technologies in a global age. *Comunicar*(21), 23-30. Retrieved from https://www.redalyc.org/pdf/158/15802104.pdf

- Castillo, M., & Canese, V. (2021). Criteria for evaluating language learning applications. *Revista científica en ciencias sociales*, *3*(1), 34-48. Retrieved from http://www.upacifico.edu.py:8040/index.php/PublicacionesUP\_Sociales/article/view/113/291
- Cedeño-Solorzano, V., Pico-Franco, L., Palacios-Saltos, L., & Niemes-Muñoz, P. (2021). The effectiveness of virtual education in the face of the pandemic in Ecuador. *Dominio de las Ciencias*, 7(2), 959-967. Retrieved from https://www.dominiodelasciencias.com/ojs/index.php/es/article/view/1839
- Cisneros, C. (2009). *Competencias Comunicativas* . Retrieved from 1Library: https://1library.co/document/zp632p7q-modulo-competencias-comunicativas.html
- Córdova, D., Muñoz, M., Pozo, D., & Castro, W. (2022). The development of linguistic competencies in the teaching of the English Language in higher education in the face of Covid-19. *International Journal of Innovation and Applied Studies*, 36(2), 320-328. Retrieved from https://www.researchgate.net/profile/Aruna-Jarju/publication/360400527\_ijias\_0036\_002\_1/links/627425f5973bbb29cc64a3 44/ijias-0036-002-1.pdf#page=21
- Fernández, L. (2005). ¿Cuáles son las técnicas de recogida de información? Retrieved from Butlletí LaRecerca:

  https://www.ub.edu/idp/web/sites/default/files/fitxes/ficha3-cast.pdf
- Franco, M., & Gracía, E. (2019). Influence of the use of a free platform in learning English in Babahoyo. *Dialnet*, *5*(2), 209-222. Retrieved from https://dialnet.unirioja.es/servlet/articulo?codigo=7343665

- García-Vera, A., & Alba, C. (1997). ¿Qué es tecnología educativa?: Autores y significados. *Pixel-Bit. Revista de medios y educación*(9), 4. Retrieved from Pixel-Bit. Revista de medios y educación:

  https://dialnet.unirioja.es/servlet/articulo?codigo=1410477
- Garzón, F. A. (2021). Implementación de estrategias para la enseñanza del idioma inglés desde la plataforma Live Worksheets para niños de primer año de educación básica. Retrieved from Universidad Casa Grande:

  http://dspace.casagrande.edu.ec:8080/bitstream/ucasagrande/2746/1/Tesis2908G

  ARi.pdf
- González, B. (2021). Use of ICT and attention to diversity in times of COVID. *Texto*Livre, 14(2), e33578. Retrieved from

  https://www.scielo.br/j/tl/a/3gNkTjt5fKnWJyFvRJMw8tF/?format=pdf&lang=e
  s
- Gooding de Palacios, F. A. (2020). Approaches to second language learning:

  expectations in English language proficiency. *Orbis Cognita*, 4(1), 20-38.

  Retrieved from

  http://portal.amelica.org/ameli/jatsRepo/213/213972002/html/index.html
- Herrera, J. (n.d.). *La investigación cualitativa*. Retrieved from Repositorio UDGVirtual : https://biblioteca.udgvirtual.udg.mx/jspui/handle/123456789/1167
- Hurtado, M., Saucedo, M. A., & Acosta, C. (2022). B-learning and its influence on teaching performance in the English area. *Revista Mapa*, *4*(27), 51–67.

  Retrieved from https://www.revistamapa.org/index.php/es/article/view/328/476
- Liveworksheets. (2022). *About this site*. Retrieved from Liveworksheets: https://es.liveworksheets.com/aboutthis\_es.asp

- López, M., Herrera, M., & Apolo, D. (2021). Quality education and pandemic: challenges, experiences, and proposals from students in teacher training in Ecuador. *Texto Libre*, *14*(2), e33991. Retrieved from https://periodicos.ufmg.br/index.php/textolivre/article/view/33991
- Machado, A., & Orozco, D. (2021). Las TIC y la música como herramientas lúdicas en el aprendizaje del inglés como segunda lengua en el nivel de preescolar de la Institución Etnoeducativa Paraíso del municipio de San Jacinto Bolívar .

  Retrieved from Fundación Universitaria Los Libertadores:

  https://repository.libertadores.edu.co/bitstream/handle/11371/4574/Machado\_Orozco\_2021.pdf?sequence=1&isAllowed=y
- Mendoza-Bozada, C. (2020). Technology in Ecuadorian education achievements, problems, and weaknesses. *Dominio de las ciencias*, 6(3), 496-516. Retrieved from https://dialnet.unirioja.es/descarga/articulo/7539706.pdf
- Mora, H. (2022). El uso de herramientas digitales en la enseñanza. Retrieved from

  Universidad Pedagógica Nacional:

  http://repositorio.pedagogica.edu.co/bitstream/handle/20.500.12209/17610/Trab
  ajo%20de%20gradoUso%20de%20herramientas%20digitales%20en%20la%20ense%c3%b1anza%2
  0de%20ingl%c3%a9s%20como%20lengua%20extranjera%20en%20primaria%
- Moreira-Aguayo, P., & Venegas-Loor, L. (2020). Development of communicative skills in the English language. *Dominio de las Ciencias*, 6(4), 1292-1303. Retrieved from https://dialnet.unirioja.es/servlet/articulo?codigo=8638089

20-%20Heimy%20Mora.pdf?sequence=1&

- Oviedo, M. O. (2021). Education during Covid from Thomas Popkewitz's social epistemology. *SciELO*, 211-235. Retrieved from http://scielo.senescyt.gob.ec/scielo.php?script=sci\_arttext&pid=S1390-86262021000200211
- Patiño-Quizhpi, D., García-Herrera, D., Álvarez-Lozano, M., & Erazo-Álvarez, J. (2020). Ludic strategies will be applied to develop literary skills using the platform Liveworksheets. *CIENCIAMATRIA*, *6*(3), 408-427. Retrieved from https://www.cienciamatriarevista.org.ve/index.php/cm/article/view/408
- Pimienta, R. (2000). Encuestas probabilísticas vs. no probabilísticas. *Política y Cultura*(13), 263-276. Retrieved from https://www.redalyc.org/pdf/267/26701313.pdf
- Prieto, G., & Ramírez, A. (2020). The challenges faced by English teachers in Bogotá during the pandemic in the Colombian context. *Revista Boletin Redipe*, *9*(11), 130-141. Retrieved from https://repository.udistrital.edu.co/bitstream/handle/11349/26256/PrietoGuerrero GinaMaritza2020.Los%20desaf%c3%ados%20que%20enfrentaron%20los%20p rofesores%20de%20ingl%c3%a9s%20en%20Bogot%c3%a1%20durante%20la%20pandemia%20en%20el%20contexto%20colombiano.pd
- Solér, V. (2008). El uso de las TIC (tecnologías de la información y la comunicación) como herramienta didáctica en la escuela. Retrieved from Eumed.net: https://www.eumed.net/rev/cccss/02/vsp.htm
- Torres, P. C., & Cobo, J. K. (2017). Educational technology and its role in the achievement of educational purposes. *Educere*, 21(68), 31-40. Retrieved from https://www.redalyc.org/pdf/356/35652744004.pdf

- Zambrano, L., & Alirio, E. (2001). Aplicación del enfoque comunicativo a la enseñanza-aprendizaje del inglés en los establecimientos de secundaria en Neiva. *Entornos*, 2(14), 27-32. Retrieved from Entornos: https://journalusco.edu.co/index.php/entornos/article/view/364
- Zambrano-Hidalgo, F., & Arroyo-Cobeña, M. (2022). Digital narratives and their impact on literacy in second year basic students of the Sathya Sai Fiscomisional Educational Unit of Bahía de Caráquez. *Revista científica multidisciplinaria arbitrada YACHASUN*, *6*(11), 89-118. Retrieved from http://www.editorialibkn.com/index.php/Yachasun/article/view/241