REVISTA KRONOS



Principles of Andragogy and English Language Teaching in Ecuadorian Higher Education

Anabel Paulina Portero López | iD Instituto Tecnológico Internacional Universitario (Ecuador) Fidias Gerardo Arias Odón | iD Universidad Católica Andrés Bello (Venezuela)

ABSTRACT English language proficiency in Ecuadorian higher education is related to the efficient use of technological tools and equipment, self-instruction, access to information, and social interaction for the personal, academic, or professional purposes of learners. The objective of the present study was to explain the influence of the Andragogy Principles application on proficiency in the English language. The research was carried out under the pragmatic paradigm, mixed methods design, quantitative-qualitative approach, and descriptive-explanatory scope in language centers of third-level educational institutions of the Higher Education System in Ecuador. The participants included were legally enrolled students and legally hired teachers. The research was divided into two stages: First, during the quantitative stage, the online questionnaire PALS consisting of 40 items was applied to determine if the principles of andragogy were known and used; in addition, the online SET test was aimed to establish the English language proficiency of participants. The most outstanding results were: a teacher-centered model and low to very low levels of English language proficiency of the students. Second, in the qualitative stage, teachers were con-vened in several discussion groups, along which it was evident that the social actors (teachers) showed limited knowledge regarding the fundamentals of teaching and learning processes, Principles of Andragogy, students' characteristics, and teaching methods and strategies. After the triangulation, it was concluded that teachers did not apply the princi-ples of andragogy, which could be considered an outstanding factor for the level present-ed by the participants; in addition, it was established that the characteristics of the students were not considered but a workbook as the base when planning syllabi or lessons, and it reinforce the concept a teacher-centered model limiting the student high-level proficiency.

KEYWORDS Principles of Andragogy, English language teaching, English language learning, Mixed Methods.

fecha de recepción 28/11/2023 fecha de aprobación 30/04/2024

Principios de la andragogía y la enseñanza del idioma inglés en la educación superior ecuatoriana

RESUMEN El dominio del idioma inglés en estudiantes de educación superior en Ecuador está estrechamente relacionado con el uso eficiente de herramientas y equipos tecnológicos, la autoinstrucción, el acceso a la información y la interacción social para el desarrollo personal, académico y profesional de los estudiantes. El objetivo de este estudio es explicar la influencia de la aplicación de los principios de la andragogía en el nivel de dominio del idioma inglés. Bajo un paradigma pragmático, diseño de métodos mixtos, enfoque cuantitativo-cualitativo y alcance descriptivo-explicativo; este estudio se realizó en centros de idiomas de instituciones educativas de pregrado del Sistema de Educación Superior del Ecuador. Los participantes fueron estudiantes legalmente matriculados y docentes legalmente contratados en estas instituciones. La investigación se dividió en dos etapas: en la cuantitativa se aplicó el cuestionario en línea PALS, que consistió en 40 ítems para determinar si se conocían y aplicaban los principios de la andragogía, así como la prueba en línea SET para establecer el nivel de dominio del idioma inglés. Durante la etapa cualitativa, se convocó a los docentes a diversos grupos de discusión, en los cuales se evidenció que los actores sociales (docentes) presentaban conocimientos limitados en cuanto a: fundamen-tos de los procesos de enseñanza y aprendizaje, principios de la andragogía, características de los estudiantes, métodos y estrategias de enseñanza. Los resultados más sobresalientes fueron: modelo centrado en el docente, niveles de dominio bajo y muy bajo del idioma inglés de los estudiantes. Después de la triangulación, se concluyó que los profesores no aplicaban los principios de la andragogía, en consecuencia, podría considerarse un factor

decisivo para el nivel actual presentado por los participantes. Además, se estableció que no se tuvo en cuenta las características de los alumnos al planificar los programas o las clases, es decir, un modelo centrado en el docente y atado al texto de trabajo que limita la consecución de un nivel de dominio alto del idioma inglés.

PALABRAS CLAVE Principios de la andragogía, enseñanza de la lengua inglesa, aprendizaje de la lengua inglesa, métodos mixtos.

1. INTRODUCTION

Globalization entails command of the English language at an acceptable level because it allows adult students to self-instruct, self-evaluate, and establish objectives for their personal and professional development, as well as, interaction for social, academic, and even business purposes at a global level. In Ecuador, the Reglamento de Educación Superior (CES, 2022) established as a requirement for graduation in third-level careers to have approved levels A1, A2, and B1 at the technical, technological and undergraduate levels respectively (Consejo de Europa, 2020), in contrast, in the year 2022, according to a report by Education First, English Proficiency Index (EF, EPI, 2022) Ecuador ranks 82nd out of 111 countries worldwide. The average of 466 in provinces such as Guayas (521), Tungurahua (492), and Pichincha (482), is low; however, in provinces such as Esmeraldas (365), Galapagos (342), and Napo (312) the level is very low in English language proficiency, as set in the Common European Framework of Reference for Languages (Consejo de Europa, 2020).

Therefore, the levels established for adult students in the third level of higher education in Ecuador could not have been reached. This document explains the teaching model that is currently applied and the factors that influence to achieve a level of English language proficiency that fits the levels, interests, and needs of facilitators and learners, as well as to reach the level required by the Reglamento de Educación Superior (CES, 2022).

2. DEVELOPMENT

2.1. THEORETICAL FRAMEWORK

The United Nations Educational, Scientific and Cultural Organization (UNESCO, 2015) recommends that the government promote research, communication, and collaboration among legal adults to achieve success in the world of work and higher education so that they can transmit and generate opportunities for the development and growth of the collectivities and societies to which they belong, with the implementation of activities and processes for the acquisition, recognition, exchange, and adaptation of competencies, knowledge, and skills in the cultural, labor and educational fields.

Currently, information and communication technologies (ICT) allow learning at any time, place, and pace that student deems appropriate. The immediacy of digital communication in the 21st century, in addition to mastering the English language, facilitates the teaching and learning processes, which opens doors and opportunities for autonomous and self-directed learning. In 2024, 52.1% of digital content was available in the English language, therefore, proficiency favors access to information and content in all areas; however, only 26.2% of network users speak English at an acceptable level (STATISTA, 2024).

In this vein, English became the most popular language for web content on 59% of sites in January 2023; while Russian ranked second, with 5.3% of web content, followed

by Spanish language, with 4.3%. Also, the number of Internet users worldwide reached 5.16 billion. The United States and India, the countries with the most Internet users after China, are the largest English-speaking markets in the world. The Internet user base in both countries combined, as of January 2023, reached over 1 billion people. This confirms that most online information is available in the English language, which is convenient even for non-native speakers (Petrosyan, 2023).

Therefore, landing in the Ecuadorian higher education field, second language learning seeks to provide learners with a useful tool to interact with technology and use it to learn or develop skills and competencies. In addition, using the English language at an acceptable level contributes to the intuitive utilization of platforms aimed at academic improvement and professional training; consequently, the user benefits from both (Portero, 2022) using technology to learn the language and practicing the language when working with technology. Thus, it is essential to incorporate English language proficiency as a transversal axis of undergraduate academic training, for the use of information and communication technologies, learning for the development of education, science, culture, and the construction of a knowledge society (UNESCO, 2001).

In this order of ideas, Knowles (2007), postulates that the knowledge and application of the Principles of Andragogy are fundamental pillars for meaningful learning; which guide adult learners towards autonomous and self-directed learning that promotes the formulation and achievement of individual objectives. Adult learners take responsibility for the design and execution of personalized learning plans that respond to individual needs and interests since it will be the learners who evaluate their progress concerning the objectives set, through self-questioning, with a view to continuous personal improvement. In other words, the Principles of Andragogy place in the hands of the learner the door and the key to self-directed learning, mediated by self-control, self-motivation, and self-evaluation of the goals set.

In the context of the application of Andragogy Principles in adult learning, Wang and Storey (Wang, 2020), conducted a study in 18 universities to determine the use and application of Andragogy Principles in teaching English as a foreign language in China, for which they used the instrument: Principles of Adult Learning Scale (PALS) by Conti, (Conti, 1998), which contains 7 factors closely linked to the principles formulated by (Knowles, 1980), including 1) learner-centered activities, 2) personalized instruction, 3) relationship to experience, 4) assessment of students' needs, 5) building learning climate, 6) participation in the learning process, and 7) flexibility for personal development. The results of the study determined that the level of English language teaching was low and that the Principles of Andragogy were scarcely known and not often used.

Therefore, this study aims to explain the influence of the application of the Principles of Andragogy on the proficiency in the English language of undergraduate students in the higher education system in Ecuador, from the point of view of the social actors, students, and teachers, who were the object of this study, which was carried out with the application of mixed methods.

2.2. PROBLEM

The importance of English language proficiency for immediate communication, self-instruction, access to information, social, business, and academic networks mediated by the use of information technology; furthermore, the mandatory requirement to achieve levels A1, A2, and B1 is a must for graduation in the higher education system of Ecuador (CES, 2022), contrasts with the current level of English language proficiency in Ecuadorian adults aged between 19 and 26, who were part of the study conducted by Education First (EF, English Proficiency Index, 2022), in which the results showed an average of 467/1000 points, that is equivalent to a low level of proficiency in this language. At this point, learners would have been limited to understanding the content and information available on the network, which, in turn, restricts the possibilities of personal, academic, and even professional growth in the current globalized world, whose official language is English, both for communication and self-instruction (Northrup, 2013).

2.3. METHOD

This study aims to explain the influence of the application of the Principles of Andragogy on the English language proficiency level in undergraduate students from the Ecuadorian higher education system. This research was carried out under the pragmatic paradigm, mixed design, quantitative-qualitative approach, and descriptive-explanatory scope. The investigation had quantitative and qualitative stages.

First, the quantitative phase had to do with the application of two instruments: a) the Principles of Adult Learning Scale questionnaire (PALS) (Conti, 1998) and b) the English Situational Test (EF, SET, 2022); both instruments were administered online. The participants were enrolled students of language centers in higher education institutions (HEI) in the Republic of Ecuador. The data processing sample consisted of 552 participants.

In the quantitative stage, following the action methodology, it was aimed to determine whether the English language teaching process was teacher-centered or learner-centered. First, the PALS instrument (Conti, 1998) was applied which contains 44 items classified into 7 factors associated with the principles of andragogy were analyzed: 1) student-centered factors, 2) personalized instruction, 3) course-previous experiences relationship, 4) assessment of student needs, 5) development of the climate within the classroom, 6) participation in the learning process, and 7) flexibility for personal development.

Once the relationship between Principles of Andragogy and English language proficiency was established, it proceeded to calculate the central tendency (mean) of the 7 factors that reached a total of 103.67, which, in Conti's words, typifies that second language teaching in language centers of higher education institutions in Ecuador is teacher-centered. In Conti's words, mean values higher than 145 correspond to a student-centered teaching model; however, in this study, the mean was 103.67, consequently, it was determined that the principles of andragogy are scarcely known and applied in the teaching of English language in adults in language centers of third level educational institutions of the Higher Education System of Ecuador. The application of the PALS instrument (Conti, 1998) is detailed in table 1 (see Table 1).

Table 1.7 Factors for adult learning summary PALS

Factors	1	2	3	4	5	6	7	Total	
Media	12,3	25,48	20,62	14,52	14,97	11,74	4,03	103,67	Teacher- centered model
Desv. Standard	14,62	11,35	7,48	5,82	4,84	6,33	5,45	55,88	
Total	6779	14042	11360	8001	8251	6470	2221	57124	

Table 2 contains a comparison between the results of the PALS instrument developed by (Conti, 1998), in which the average value of the 7 factors is 145 or higher, which indicates

a student-centered model; in contrast, the results of this study show an average of 103.67, from which a teacher-centered model was determined (see Table 2).

Table 2. Comparative	results (Conti and	language	centers	in Ecuado	or

Levels	EF S	SET	Language centers in Ecuador			
CEFR	Classification	Level	Frequency	Percentage		
A1	<450	Very low	326	59,06	79.62	
A2	450 - 499	Low	108	19,57	78,63	
B1	500 - 549	Moderate	60	10,87		
B2	550 - 599	High	18	3,26		
C1			14	2,54		
C2	600+	Very high	26	4,71		
Total			552	100		

The dependent variable, language proficiency, was determined by the application of the online test (EF SET, 2022), which measured proficiency in the levels of Oral Comprehension and Written Comprehension established by the CEFR (Consejo de Europa, 2020). The results were compared with those obtained by EF, EPI (EF, English Proficiency Index, 2022), which places Ecuador in second to last place in Latin America, in position 18/20.

Table 3 shows that 59.06% of the participants were at a very low level, 19.57% were at a low level, and when both results are added together, 78.63% is the total, which implies that 434 students obtained less than 500/1000 possible points. This is similar to the results presented by EF, EPI (2022), which classified Ecuador at a very low level according to CEFR. On the other hand, 10.87% of participants achieved a moderate level reaching 550/1000 possible points, less than 500 were obtained, this result is presented in table 3 (see Table 3).

Table 3. Language centers students' proficiency levels

Levels	EF S	SET	Language Ecu		
CEFR	Classification	Level	Frequency	Percentage	
A1	<450	Very low	326	59,06	79.62
A2	450 - 499	Low	108	19,57	78,63
B1	500 - 549	Moderate	60	10,87	
B2	550 - 599	High	18	3,26	
C1			14	2,54	
C2	600+	Very high	26	4,71	
Total			552	100	

Second, the qualitative stage was based on focus group interview technique. The social actors were professionals legally hired in the HEIs, working for more than one year as teachers. The interviews were conducted using the Zoom platform (Zoom, 2021). The instrument used was an unstructured questionnaire, designed to determine the perceptions, feelings, and ways of thinking of the social actors regarding the knowledge and application of the Principles of Andragogy and the development of the English language proficiency of undergraduate students. This stage was dedicated to answer the research question

posed for the study: How does the application of the Principles of Andragogy influence on adults' English language proficiency?

The depth of the data analysis was descriptive-phenomenological, and ethnomethodological, characterized for including criteria of representativeness, significance, and heterogeneity concerning the problem under study: the social actors were male and female teachers in functions, owning graduate and postgraduate degrees, with one year or more of work experience in English language teaching in third level institutions of the Higher Education System of Ecuador.

The sample was not determined at the beginning of the study, since it was sought to obtain sufficient information with the necessary sessions and groups until it got saturated (Arias, 2006). The sampling method used was avalanche or snowball, starting with the first group of teachers, who summoned other teachers with the same characteristics, thus ensuring voluntary participation, consequently guarantying responses directed toward the significance of the problem for the participants under study (Del Pino & Martínez, 2022).

To learn and deepen a topic through dialogue and conversation, which resulted in a directed discourse in which information was examined and exposed through the description of ideas and interaction of the participants to achieve a discourse (Callejo, 2001). A total of 18 sessions were conducted and 6 to 10 participants attended. The groups were approached through virtual sessions using the Zoom platform. The researcher took the role of moderator, who informed the purpose of the discussion, and at the same time, sought to probe into meanings and details, keeping participants focused on the topic (López, 2013). During the sessions, the focus groups answered the research question uncovering issues related to the foundations of teaching and learning processes, Principles of Andragogy, learner characteristics, English language proficiency, and the foundation of foreign language teaching methos and strategies.

The qualitative stage was based on in-depth interviews, and legally hired teachers with more than one year of experience in English language teaching in language centers of the Higher Education System of Ecuador were convened. Along the sessions, an unstructured questionnaire was applied to foster social actors' anonymous and spontaneous responses. The participants' answers coincided in categories that include the fundamentals, method the teaching and learning processes, the application and knowledge of the principles of andragogy, the characteristics of the learner, and the ability to communicate and use the English language in daily life.

According to the social actors, mastering the fundamentals of the teaching influences the development of the learners' English language proficiency. In addition, teachers stated that they are limited when teaching their lessons since they do not know in depth the principles of adult learning and even less the needs and interests of the students, who hardly apply what they have learned in the context of their daily lives. English language learning remains in the classroom without allowing an adequate personalization and contextualization of content to contributes to the academic and professional development of the learners.

The in-depth interviews revealed the strong dependence on the use of the worktext, which, according to the interviewees, must comply with because the established syllabus goes around it; furthermore, its design is constructed without consensus or input from students or teachers, which also does not allow the integration or elimination of topics that benefit the interests of students and the application of this knowledge in real contexts. Table 4 summarizes the main categories identified along the focus group interviews with the social actors aborded (teachers) (see Table 4).

The English language proficiency levels set by the Common European Framework of Reference for Languages (2020) A1, A2, and B1 are established as compulsory in

Table 4. Categories influencing the English language students' proficiency

Categories	Temas
Fundamentals of English language teaching and learning processes	Fundamentals
Principles of English language learning for adult learners	Andragogy
Characteristics of the adult learner Learning	Learner
Ability to communicate and use the English language in daily and professional life	Proficiency
English language teaching focused on a worktext, that, does not allow to develop teaching methods or strategies	Teaching

the Ecuadorian Higher Education Regulations (2022) for undergraduate technical and technological career students respectively, as a requirement for graduation; however, the Education First report, English Proficiency Index (2022) (EF; EPI) reported a low level of English language proficiency among adult students taking the English language proficiency test (SAT) (2022). Even more, the Education First study, English Proficiency Index (2022) (EF; EPI) reported a low level among adult students who took the English Language Proficiency Test (SAT). The SAT results were corroborated by the test applied to 552 students of language centers of the Higher Education System of Ecuador, from which it can be seen that 59.06% are at the very low level and 19.57 at the low level, the two percentages reach an average of 79.63%, the scores were lower than 499/1000, which is located at level A1 (CEFR, 2020).

In this order of ideas, the results of the Principles of Adult Learning Test, PALS (Conti, 1998), showed that the model applied by the teachers of the language centers of institutions of the Higher Education System of Ecuador is teacher-centered; the average reached was 103.46, according to the scale of (Conti, 1998) a value lower than 145, constitutes a teacher-centered model.

The results of the in-depth interviews conducted with the social actors (teachers) highlight a limited knowledge of the fundamentals of the teaching and learning processes of the English language, as well as the lack of knowledge and scarce application of the Principles of Andragogy (Knowles, 2007). The mentioned is related to the insufficient understanding of the characteristics, interests, and needs of the learners, which is affected, even more, by an almost non-existent interaction between learners and a real context that allows applying the knowledge acquired in the classroom in sporadic situations, less when they can use the knowledge to interact with technology and technological tools and use them to learn the second language (Portero, 2022). Another factor that affects the students' English language proficiency is the dependence on the textbook that must be fulfilled as part of the syllabus of the language centers, in which neither teachers nor students are considered for its elaboration or adaptation to real students' needs.

3. DISCUSSION

The English language learning levels established by the Common European Framework of Reference for Languages (2020) A1, A2, and B1 are indicated in the Higher Education Regulations (2022) for students of third level technical or technological undergraduate level respectively, as a requirement for graduation, however, the Education First report,

English Proficiency Index (2022) (EF; EPI) reported a low level among adult students who took the English language proficiency test (SAT). The SAT results were corroborated by the test applied to 552 students of language centers of the Higher Education System of Ecuador, from which it can be evidenced that 434/552, 59.06% are at the very low level and 19.57% at the low level, the two percentages reach a total of 79.63%, the scores were lower than 499/1000, which means A1 level (CEFR, 2020).

The previous mentioned, this paper sheds light on a serious problem, which is the huge gap between the required levels of English proficiency (A1, A2, B1) for graduation in technical, and technological undergraduate degrees (CES, 2022) and the present low level of achievement by adults according to Education First report (EF EPI, 2022). This shows that there is a need for improvement.

The research carried out, is underpinned by well-acknowledged frameworks such as the Common European Framework of Reference for Languages (CEFR) on language proficiency and Andragogy principles as outlined by Knowles (2007). This theory builds up the analysis and provides an evidence-based approach.

In addition, the research uses a combination of quantitative data from surveys such as the Principles of Adult Learning Scale (PALS) by Conti (1998) and qualitative data collected through extensive interviews with teachers who are social actors. Credibility and comprehensiveness of findings are improved through triangulation of data.

This paper stresses the necessity to change the model from the traditional teacher-centered approach currently practiced in Ecuadorian higher education language centers, which was not merely identified as a problem existing, rather, it highlights the imperative nature of shifting from the current teacher-center approach in language centers in Ecuador's higher education system as revealed by PALS instrument application to a reorientation towards a learner-centered approach based on Andragogy Principles suggests hope.

The significance of the Principles of Andragogy has been established in the document, and it can be further enhanced if it delved deeper into how specific Andragogy Principles can be operationalized as practical teaching strategies within an Ecuadorian context, as a model based on Andragogical Principles to teach English language. Consequently, this might call for methods, strategies, activities, and assessments aimed at tailoring content to student goals, incorporating self-directed learning activities that promote learner autonomy, or fostering collaborative learning environments that build on adult learners' prior experience.

The complaint against excessive use of worktexts as the sole medium for teaching is considered as a straitjacket around which the syllabi, methodology, strategies, and activities go, pressuring to complete it. Even more, there are no other ways of teaching that are consistent with Andragogical concepts. That may include technology used for personalized learning, (Portero, 2022) and integrating authentic materials about adults' lives and professions.

4. CONCLUSIONS

The instruments applied: the PALS questionnaire, the SET test to students, and the unstructured questionnaire in the in-depth interviews clearly show that the current level of most of the learners is below the levels required in the Higher Education Regulations (CES, 2022) to graduate. The limited knowledge, understanding, and poor application of the Principles of Andragogy (Knowles, 2007) do not contribute to meaningful learning and the application of knowledge in daily life as well as the interaction with technology for learning is scarce.

The model applied is centered on the teacher, which does not consider the objectives, needs, and interests of the student, consequently, the syllabi and plans designed do not adjust to the reality of the students, contributing to the level presented by the learners of the English language centers in Ecuador. The above constitutes an explanation for the very low and low level that was evidenced in the results presented in this study. Based on the previous description, it is imperative to move away from the current model of teacher-centered instruction in language centers at Ecuadorian higher education as shown by PALS. The shift towards an Andragogy-based learner-centric model implies an alternative to focus on students' needs and interests.

CONTRIBUTIONS OF AUTHORS

Anabel Paulina Portero López: Formal analysis, investigation, methodology, visualization. Fidias Gerardo Arias Odón: Formal analysis, investigation, methodology, visualization.

ETHICAL IMPLICATIONS

The author states that there are no ethical implications.

CONFLICT OF INTEREST

The author states that there are no financial and non-financial conflicts of interests that could have influenced the current study.

REFERENCES

- Arias, F. (2006). El proyecto de investigación. Episteme.
- Callejo, J. (2001). El grupo de discusión: introducción a una práctica de investigación. Ariel Practicum.
- CES. (27 de julio de 2022). Reglamento de Régimen Académico. Obtenido de RPC-SE-08-No.023-2022: https://www.ces.gob.ec/wp-content/uploads/2022/08/Reglamento-de-Re%CC%81gimen-Acade%CC%81mico-vigente-a-partir-del-16-de-septiembre-de-2022.pdf
- Consejo de Europa. (2020). Marco común europeo de referencia para las lenguas: aprendizaje, enseñanza, evaluación. Servicio de publicaciones del Consejo de Europa. Estrasburgo.
- Centro Virtual Cervantes. (2001). Marco común europeo de referencia para las lenguas. Obtenido de https://cvc.cervantes.es/ensenanza/biblioteca_ele/marco/
- Conti, G. (1998). Escala de los principios del aprendizaje adulto (PALS). Obtenido de http://www.conti-creations.com/PALS_Spanish.pdf
- Del Pino, R. & Martínez, J. (2022). Manual para elaboración y defensa del trabajo de grado en ciencias de la salud. Elsevier.
- EF SET. (8 de marzo de 2021). EF SET. Obtenido de https://www.efset.org/es/ef-set-50/

- EF SET. (2022). Exámenes de inglés. Obtenido de https://www.ef.com/wwes/certificados-ingles/efset/
- EF, English Profiency Index. (2022). El ranking mundial más grande según su dominio del inglés. Obtenido de https://www.ef.com.ec/epi/
- Knowles, M. (2007). Andragogía; el aprendizaje de adultos. Oxford University Press.
- López, A. (2013). *oea.uprrp.ed*. Obtenido de La entrevista y los grupos focales: https://cea.uprrp.edu/wp-content/uploads/2013/05/grupo_focal.pdf
- Northrup, D. (2013). How English became the global language.
- Petrosyan, A. (2023). https://www.statista.com/. Obtenido de Common languages used for web content 2023, by share of websites: https://www.statista.com/statistics/262946/most-common-languages-on-the-internet/#:~:text=As%20of%20January%202023%2C%20English,language%20followed%2C%20with%204.3%20percent.
- Portero, A. (2022). *Memorias Ritam*. https://www.researchgate.net/profile/Anabel_Portero/publication/374661867_Herramientas_Tecnologicas_y_el_Aprendiza-je_del_Idioma_Ingles_en_Estudiantes_de_Tercer_Nivel_de_Educacion_Superior/links/652825383fa934104b1b0d6c/Herramientas-Tecnologicas-y-el-Aprendiza-je-del-Idioma-Ingles-en-Estudiantes-de-Tercer-Nivel-de-Educacion-Superior.pdf pp. 68-92.
- STATISTA. (24 de enero de 2024). Languages most frequently used for web content as of January 2024, by share of websites. Obtenido de https://es.statista.com/grafico/7736/la-mitad-del-contenido-de-internet-esta-en-ingles/
- UNESCO. (2001). Las nuevas tecnologías de la información y la comunicación en el desarrollo de la educación, la ciencia y la cultura. https://unesdoc.unesco.org/. Obtenido de https://unesdoc.unesco.org/ark:/48223/pf0000122593_spa
- UNESCO. (13 de 11 de 2015). Recomendación sobre el aprendizaje y la educación de adultos. Obtenido de https://www.unesco.org/es/legal-affairs/recommendation-adult-learning-and-education
- Wang, P. (Marzo de 2020). Immediate psychological responses and associated factors during the initial sage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China. *National Library of Medicine*, 17(5). doi: 10.3390/ijerph17051729
- Zoom. (Marzo de 2021). Zoom: Video Conferencing, Cloud Phone, Webinars, Chat. Obtenido de https://zoom.us/