

Empowering Education: Sustainability through Technology

Ligia Rosa Martínez Bula^{1*}, Marisela Restrepo Ruíz², Mario Gándara Molino³, Julián Hernández Contreras⁴, Jhon Anaya Herrera⁵

¹*English department, University of CECAR, Colombia <https://orcid.org/0000-0002-5369-8970>*

²*English department, University of CECAR, Colombia <https://orcid.org/0000-0003-0551-1371>*

³*Sustainability department, University of CECAR, Colombia <https://orcid.org/0000-0002-3095-2323>*

⁴*English department, University of CECAR, Colombia <https://orcid.org/0000-0003-2363-9387>*

⁵*Sustainability department, University of CECAR, Colombia <https://orcid.org/0000-0002-9900-8410>*

Abstract

Learning English as a foreign language is a fundamental axis in Colombia as in the rest of the Latin American countries since it allows all subjects to obtain great work and academic opportunities related to SDG goals. The increasing access to technology has promoted the inclusion of technological tools in the classroom, which, from our perspectives, represents advancements as well as challenges. In that line, the need for knowing the perceptions of teachers and students regarding the use of technology in the teaching and learning process of English arises. In the quest for delving into perceptions, a semi-structured interview was applied to 300 students from the Caribbean University Corporation, a private institution in Colombia, in a mixed approach, guiding the study toward a descriptive, cross-sectional, and longitudinal research. Results highlight that, from the students' perception, the interactive role of technology allows the integration of different learning styles, which widens the possibilities to learn through different lenses and approaches beyond the mainstream classroom. From the teachers' perspective, technologies support student learning and allow the diversification of the pedagogical strategies. Conclusions suggest that the use of technology in the foreign language teaching and learning processes would require to understand factors such as the role of the student, their learning styles, and the importance of the selected technological resource, their support for learning, teacher's role and teaching approach, as well as their SDG pedagogical strategies to intertwine throughout the process.

Keywords: -English Language Teaching, Sdg Pedagogical Strategies, Teaching-Learning Processes, Ict.

1 Lifelong Education

Nowadays, higher education, beyond functional literacy, is a fact since lifelong learning has provided it with meanings. In agreement with Aguilar (2015), in a modern society, the school system must educate and contribute to the democratization of information and will try to guarantee to all citizens a basic training (Méndez and Bonilla, 2016) that responds to the needs of the collective. In the same vein, Sanz et al. (2009) argue that the expression "lifelong education" designates a global project aimed at restructuring the existing educational system and developing training possibilities outside it. Nonetheless, it concerns all people, regardless of age, and refers as well to all areas of knowledge. It also aims at delving into the integral development of the person and helps recognize the multiple ways of providing education. In addition, Medina (1980) stated that when addressing problems of the group under study, in relation to the educational process, there were several topics that tried to distort their intellectual capacity, learning skills, possibilities of assimilation, flexibility and change. Nowadays, the belief that intelligence decreases drastically with age has been largely overcome.

With this group, it is necessary that the typology of teaching-learning strategies used and directed to engagement is aimed at helping students, so that they can overcome different obstacles in their learning process. In fact, it is essential to reinforce them to keep their attention, mainly by giving meaning to the act of learning from experience and its projection in everyday life. It should not be forgotten that, in "normal" situations, people learn if they are encouraged to do it.

Thus, if education in the Republic of Colombia is in constant adaptation, the operative actors of its substantive functions, particularly in teaching, would require permanent training and update of processes that contribute to guaranteeing the achievement of academic purposes, implying that the principle of lifelong education not only

acquires meaning but also evidences of its unpostponable nature and, as the declaration points out, there is a need to contribute to the development and improvement of education through the training of students' competencies that serve them to adapt to the needs of today's society. Therefore, permanent innovation in curricula and teaching methods should be promoted to guarantee the continuous improvement of the quality of research and student learning.

These activities related to research are complemented by actions that teachers and students perform through teaching and learning strategies to improve their pedagogical learning skills of the teaching and learning processes that occur in the classroom through computer assistance regularly titled as applications and with the support of Information Technology and Communication that hereinafter we will call ICT.

1.1 Introduction

It is pertinent to determine that, from the perspective from which this problem is approached, the existence of an education based on competencies is assumed, demanding a particular view from the different entities that regulate or attend to it. With the above caveat, it is important to limit somewhat the scope on which the study is focused, since education in general has many and varied elements that may influence its sustainable quality. The purpose of this research paper is born from a doctoral thesis that aims at analyzing and unmasking the dynamics in which the learning of English as a foreign language is involved in the field of education of young people and adults at the higher level. To this end, the following specific objectives were set:

- 1) to determine what type of activities are carried out during the implementation of this research interest.
- 2) to discover the didactic strategies applied in the teaching-learning process as well to reveal the type of contents developed.
- 3) to inquire about the use of didactic resources and reveal the spatial organization and ICT sustainable tendency in the grouping of the classroom.

Setting the ground for foreign language education, García (2007) asserts by saying that the learning of second languages is perceived as a need by adults, implying that the concern is reflected in the case of English. Nevertheless, in the Spanish context, in a study carried out on the continuous training of workers, languages are demanded by almost 30%, with English standing out. In fact, citizens are increasingly experiencing different problems in the "digital society" related to work, communication, or the search for information because of a lack or deficient commands of the English language. This means that, although there is currently a greater number of resources available, especially those associated with ICTs, it is still difficult for teachers to teach a foreign language and for students to develop functional skills.

Learning English as a foreign language is difficult and often causes anxiety (Delicado, 2011). However, adult learners recognize that its acquisition offers the advantage of facilitating many professional opportunities (Arenas, 2011). Possibly, because of the benefit, classes most demanded by both young and adult students are computer science and English (Colom, 2005). In general, when learning a foreign language, the fundamental obstacles encountered by students derive from the teaching style and the teaching method. Despite the existence of a great diversity, the use of innovative methodologies or methodologies that are attractive to students is not frequent.

Among the best-known methods for the development of the teaching-learning process of a foreign language are the following (Sánchez, 2002):

- 1) Grammar-translation or traditional method, paying special attention to the instruction of grammatical rules. The teacher's explanations are based on the mother tongue or the official language.
- 2) Direct method, based on the direct connection of the foreign word with the reality it represents. It favours oral expression and memorization of vocabulary.
- 3) Audiolingual method, which prioritizes the use of spoken language (oral expression and listening) through reproduction or repetition.

Other methods that are becoming increasingly relevant for foreign language teaching are those supported by alternative didactic strategies and ICT (Alcalde, 2011). In this sense, we can refer to those that advocate globalized learning and language learning in community. Ibáñez and Castillo (2012) would say that "another example, not very widespread for the teaching of English, of which there are some experiences, is that supported by the hermeneutic method with the support of ICTs, which allow encouraging motivation, autonomy and the production of texts in the foreign language with young people and adults, as well as promoting their understanding of the language" (p. 26). Likewise, innovative teaching initiatives, associated with the promotion of foreign language learning should be strengthened to consolidate their use as a good teaching practice. According to Sequero (2015), the application of teaching resources goes hand in hand with the teaching method used. Currently, with any of the didactic approaches used in English language learning at the present time, the

inclusion of new technological media must be specifically considered. In fact, according to Lawley and Martin (2006), ICT has enhanced the opportunities for English language learners to learn both inside and outside the classroom. In that manner, it is sought that the students advance with more desire and that the way to explore the world after graduation is even easier, since having training based on ICT, in more than two languages and being modernized with comprehensive training and standards of other countries lead to forge excellent professionals, which would allow them to defend themselves in a world that is increasingly hungry for knowledge.

As a result, an inductive hypothesis is born, in which the directly proportional solution to this problem is to build a bilingual subject capable of developing themselves in higher education. In order to reach this objective, it is necessary to study, in-depth, the language policies in relation to bilingualism to corroborate their impact on the educational system, as well as to make a thorough analysis of the use of the appropriate concepts of second and foreign language in order to construct a bilingual subject who must be knowledgeable of the specific language as well as its use in the context and who would be able to comply with national tests where not only the specific language component is evaluated but also the applicability of the policies to have the ideal subject with the addition of ICTs, empowering bilingual and technological policies

1.2 Methods

In many countries, the concern for the improvement of basic, middle, and higher education is a priority within the educational reforms. Today, the world changes and with it, education has new needs to meet, challenges to assume, and better educational practices to rediscover to keep up with an increasingly demanding world. Therefore, this section seeks a critical documentary analysis with an international and national background to support with feasible and measurable results our interests to revisit and challenge mainstreamness in education. In this way it can be included in curricula and make a social impact in this context.

The importance of learning a new language is always based on the individual's need to enrich their work, to strengthen their profession or just for the desire to speak another language. Despite this, when the student tries to learn, there are many factors that demotivate them such as the teacher not explaining in the best way, or the absence of dynamism, or even a blockage when learning and sometimes teachers and students do not find the need or what is relevant for them to learn, among others. For this reason, the way of teaching a new language is crucial. Based on this, a study carried out by Lin (2008) where paradigm shifts for English language teaching is highlighted. According to Yin,

"Paradigm shifts in knowledge in these disciplines also lead to changes in knowledge and perspectives on second and foreign language pedagogy and curricula. In the design of any language curriculum (or curriculum in general), two central questions naturally arise: what should be included in the curriculum and how should this content be taught (e.g., in what sequence and with what teaching methods)? (p. 26)"

To emphasize this study, it is worth mentioning that teaching by the different stages should be considered. For example, language teaching at an early age should consider the profile of the teachers, the students, the hours to be taught, the type of material used in classes that does not deviate from what a child of this age should learn. Considering this, Mercau (2009) recommends that a teaching program should be designed and conceived as a flexible tool. It is also relevant to point out that preschool children are taught all courses in their mother tongue and when learning a new language, they do not perceive the need for it and that this is a new language for them, they only learn through their context. Mercau (2009) states that for this reason it is essential that the course be attractive and interesting so that they feel the desire to participate in the activities. By teaching in a timely, appropriate, and attractive way, the child will start to like and have a positive impact on the ability to learn, develop, and use foreign languages.

Subsequently, the teaching of English to primary school children is carried out in a more enjoyable way, considering what Halliwell (1992; as cited in Caballero, 2019) highlights as the following skills:

1. The child's ability to grasp meaning.
2. The child's creative use of limited linguistic resources.
3. The child's capacity for indirect learning.
4. The child's instinct for play and playfulness. The role of imagination." (p. 96).

With this, we can affirm that a child tends to learn a new language more easily, when certain actions are carried out that motivate the learner to acquire a new language. Without leaving aside the fundamental role that a teacher plays in teaching this language. For this reason, it is very important to highlight the objectives proposed by Caballero (2019) in his study listed as follows:

-To create in children the necessary confidence so that they can feel at ease in the study and use of the English language.

-To develop in children the desire to want to use and learn said language while maintaining a positive attitude and thus, as a result, promote motivation to learn English.

-To demonstrate to children that learning English can be interesting, motivating, and meaningful.

-To involve the children so that they can work in a great diversity of uses of English in different situations.

From another point of view, we seek to know the teaching of students in secondary school to have a broader perspective of the types of methodology in the different cycles of knowledge. Therefore, Centeno (2018) emphasizes the following:

"It is necessary to appoint teachers with certified linguistic proficiency, in bands B1, B2 and C1. Not only for tenured positions, but also for interim positions. Doing this is relevant because of the proposed exit profiles for students in new programs of study, as well as the benefits of exposure to a quality level of English." He also highlighted the need to continue training and preparing teachers, since once this program has been developed, new alternatives and evaluations that help strengthen the language can be analyzed" (p. 14).

In line with our context, the Colombian Ministry of Education (2005) mentions the following:

"In higher education, recently graduated students are expected to be able to understand complex texts that are within their area of knowledge and to be able to express themselves with a certain degree of fluency when communicating with other people in English, for such reason Higher Education Institutions must guarantee compliance with a basic number of hours and quality in the chairs that are taught".

As a nexus with the global language requirements, and according to the Common European Framework for Reference, the university student of any undergraduate obtains a B1+, although the graduates in the English language must leave with a B2 and the teachers when working with this profile must have a C1. In today's reality, universities, regardless of their social type, do their best to organize the time of students, to have excellent profiles, to observe the classes and check that the stipulations of the government are fulfilled. However, the term bilingualism is a term with multiple meanings contributing to it, it is not possible to sustain with exactitude which the result to define this term will be, despite this, in this work, this concept will be explained from the first theorists until the last reference to landin an approximation of this conceptsince this work seeks to demonstrate the importance of the subject and the necessary recognition to take hold of its conceptualization. For many in society, this term is considered as something new and even more in communities where only one language is spoken, this conceptual relationship can be considered as something new.

The first person to speak on the subject was the pedagogue Bloomfield (1933) who considered that the term bilingualism is a mastery of two languages just like a native speaker. That is to say that a subject can speak, for instance, Spanish and English as native languages. This implies that a bilingual person is one who writes, reads, listens, and speaks two languages with a relevant proficiency. Based on this concept, it could be affirmed that only people who obtain the needed score in both languages in international certificates are considered bilingual. Although Haugen (1953) maintains that a bilingual person can use complete expressions with meanings in different languages. According to this author, the person who can maintain a conversation or a written document and make a simultaneous translation in several languages can be called bilingual regardless of whether they are 100% fluent in the language.

Subsequently, Weinreich (1953) delimits his concept by stating that the practice of using two languages alternatively is called bilingualism and the people involved during the process are considered bilingual. He focuses on the fact that to be or to self-recognize yourself as bilingual, you must be in constant practice with the two languages, mastering them in parallel. Continuing with this order of ideas, an important reference is Weiss (1959) who affirms that bilingualism is the direct, active, and passive use of two languages by the same speaking subject; understanding by active when it is spoken, and passive when it is received or understood. Making it clear that the subject uses two skills to understand and make use of two languages to develop in a community regardless of the degree of similarity between them.

However, another author mentions bilingualism as the appropriation that an individual has in one of his or her skills regardless of the rest of these. As Macnamara (1967) states, bilingualism is the ability to develop some level of competence (e.g., speaking, reading, understanding, writing) in a second language. With this definition, the subject would only be concerned with developing one skill to be called bilingual.

In contrast to this, Mackey (1976) asserts that bilingualism is the quality of a person or a population that makes current use of two languages without a marked aptitude for one language more than the other, that a bilingual person uses both languages at the same time and maintains the same level in both. In relation to this idea, Blanco (1981) exposes that a bilingual person is one who can encode and decode any time in both languages, increasing his or her level of linguistic competence. On the other hand, Masso (1986) changes the conception of this term since he affirms that bilingualism consists of the speaker's ability to use two languages indistinctly. By extension, it refers to the sociolinguistic condition whereby a community uses two different languages to cover the same collective and private communicative tasks.

According to a study conducted by Bermúdez and Fandiño (2014), they define the types of bilingualism according to different characteristics: When competence in both languages is achieved, two types of bilingualism are mentioned, which are balanced and dominant, taking as a reference that balanced bilingualism is that person who achieves competence in both languages. Likewise, Fishman (1971) calls this component ambilingual or equilingual bilingualism due to the Bermúdez and Fandiño (2014) statement. According to Fishman, while dominant bilingualism is when the individual is proficient in two languages, the superior proficiency is predominantly in the mother tongue. This definition is closely related to the population to be used in this study since, in Colombia, the English language is not practiced constantly, most Colombian families use Spanish and rarely use a foreign language to communicate with each other. These two types of bilingualism are in the linguistic dimension.

On the other hand, in another classification we find the relationship between language and thought. In this section, three types of bilingualism are developed, which are composite, coordinated, and subordinate. It is worth noting that for a bilingual to be called composite, it has two linguistic labels for a single cognitive representation as mentioned by the linguist Haugen (1953), that is, the speaker has a single meaning for two meanings and is not able to recognize the difference in the languages, therefore he needs to use the two languages to think and communicate with others.

In coordinated bilingualism, the speaker has different cognitive units for the linguistic units of the two languages. To summarize this definition, it is mentioned that the speaker develops two equivalent linguistic systems, i.e., the individual can use each language as if they were a native speaker in both languages without the need to think in the other language or carry out any transfer to make themselves understood. Another important definition is subordinate bilingualism, according to Paradis and Libben (1987), the speaker presents a language imbalance in which the mother tongue predominates, and the other language is in development, always having to be in constant translation to understand language learning. Placing these concepts in the cognitive dimension.

In a different way, subtractive bilingualism refers to a negative definition, since the social context intervenes, but it maintains that when acquiring the input of another language to the linguistic and cognitive process, it affects the child's identity. Because of this negativity, the learning of another language becomes much more difficult to learn, resulting in the subject not developing either language adequately. For this reason, it should be noted what Labra (2011) defines in terms of teaching strategies:

"Didactic strategies as that ordered and systematized sequence of activities and resources that teachers use in educational practice as the main objective to facilitate student learning. Strategies determine a way of acting and are based on methodological principles as hallmarks of a specific educational situation, it can be said that they are actions that allow differentiation from other types of actions; it depends on the moment in which the teaching-learning process is found, the group-class to which they are addressed and the nature of learning". (page 10)

Consecutively, Peralta (2016) in the quest for providing a solid conceptualization of bilingualism, affirms that the act of approaching an extra language would conclude in a process seen:

"As the set of decisions made by the teacher to guide teaching in order to promote student learning. It is about general orientations about how to teach a disciplinary content considering what we want our students to understand, why and what for".

Likewise, a foreign language is defined as one that is learned in a context in which it lacks a social and institutional function Gargallo (1999; as cited in Manga, 2008). Indicating that the learning of a foreign language is one where most citizens do not practice this language among themselves, where culture is closely related to the mother tongue, then to achieve this language, it becomes a little more demanding for the teacher, that is when ICT starts to revolve things around. On this side, Cobo (2011) defines ICTs as technological devices that help to:

"Edit, produce, store, exchange and transmit data between different information systems with common protocols. They integrate computer, telecommunication, and network means, enable interpersonal and multidirectional (one-to-many or many-to-many) communication and collaboration. They play a substantive role in the generation, exchange, dissemination, management, and access to knowledge". (page #)

In contrast, Vivancos (2013) defines ICTs as a set of digital codes and devices involved in the stages of encoding, processing, storage, and communication of information in its different forms: alphanumeric, iconic and audiovisual. Meanwhile, Roblizo and Cózar (2015) define ICT as a revolutionary, shocking, and changing phenomenon, which encompasses both the technical and the social and permeates all human, work, training, academic, leisure and consumption activities. To conclude with the historical, Guijarro (2016) says that the generalization of Information and Communication Technologies, as well as global interconnection, offer great potential to accelerate human progress, reduce the digital divide and develop knowledge societies.

In this regard, a mixed methodology will be used considering the participatory action research with the help of participatory observation, interviews with open-ended questions, surveys structures to reach an excellent result in this research study. In order to know in-depth the object of study of this research, it is relevant to know the type of study design to be selected in order to carry out a detailed study. The exploratory design is taken into consideration because the natural conditions are carried out without any manipulation. In addition, it is descriptive because it will detail the categories, subcategories and conditions of the object of study of the students, and it is cross-sectional since a longitudinal term is performed.

The population used in this research is as indicated by the author Morone (2013) who defines the universe as the total set of elements that constitute an area of analytical interest.

In the research being conducted, the universe was taken as the population of 300 students of the virtual English degree program and 10 teachers and 10 managers of the same program who are the main authors of the teaching of this language.

The sample is 110 students from all semesters of the bachelor's degree program as mentioned above who are the focus of this research. In addition to this, 5 teachers and 5 managers who will detail and counteract the information collected through an interview to give a deeper sense to this research study.

1.3 Results

The results obtained are derived from the data provided, which were first recorded with a quantitative instrument determining the frequency, percentage, and cumulative percentage to cross a qualitative analysis. The interview was a purely qualitative instrument to help deepen the analysis and contributions to this research work.

In relation to gender, 83 (75.2%) belong to the female sex, while only 27 (24.8%) refer to the male sex, with this result it can be inferred that in the program there are more women than men learning a new language in a third world country. Continuing with the age range, the majority of the respondents are located in the second category (19-25) showing a result of 40 (36.7%) and the lowest age range in which the students are located is (16-18) with a frequency of (6) and a percentage of (5.4%); showing that they are students who appreciate their time and recognize the importance of why they are pursuing this career.

Of the students surveyed, 27 (24.5%) are doing their undergraduate project. It is also relevant to mention that students from the sixth to the eighth semesters show a sense of belongingness to their degree and are the most active in the continuous improvement of their academic process. On the other hand, the lower semesters show that very few students showed interest in answering this survey and did not yet distinguish the importance of virtual spaces in duality with a language.

In the analysis of the questions related to attitudes and experience, a survey was conducted with a range of questions for which there were different answers for the 110 respondents using the following variables: always, almost always, sometimes, rarely and never, according to the different types of digital tools that are a motivating factor for them. In relation to the above described, the following information was obtained:

In the first item, it was found that 60 students always use these tools, 32 of the respondents say almost always, while 7 state that sometimes and 3 of them say rarely and only two say never. With this relationship it is analysed that most students, apart from the office tools, use English applications demonstrating that they do use digital tools to improve their level. Adding to this, in the second item it was found that 59 students always perform this action, followed by 40 of them and decreasing with a 6 in sometimes, a 4 in rarely and only one student who never does it. This can be countered with the previous question since most students point to the use of technology support to strengthen English language learning. Likewise, in the third item, it was observed that most students (44 of the sample) always review, implement and self-evaluate the English courses for their own learning, following 39 of them, although it is important to note that 21 of them sometimes review their own self-study and a minimum sample of 4 rarely do it and 2 never do it.

In order to analyze these questions related to the methodologies used in the teaching of English as a foreign language by teachers under a traditional model, important information was found, which is related below:

In the first item, it should be noted that 55 students have sufficient experience in the use of e-mail, while only 6 of them are at a basic level in the use of this tool. Therefore, they are very interested in receiving training. In the second item, 61 students are at an advanced level of experience using the different chats, while 28 students know this at an intermediate level and only 5 students have a basic level. For this reason, 13 students request to be too interested in taking a course with this section and the rest which are 3 students do not request information. In the third item, 57 students have deepened their academic process in lectures with video and audio, other students are at intermediate and basic level, but only one student does not know anything related to this tool. In addition to this, 11 students requested a course related to this tool and 3 of them are not interested in any theoretical and practical fundamentals related to it.

The detailed analysis of the pedagogical strategies used by teachers to improve the level of English through ICT is reflected in the multiple responses to the survey, which will be explained as follows:

In the first section 104 students, that is to say, most of them relate that they identify, use, and appropriate the basic ICT tools to be used in any context, while only 6 students do not have this basic training. In the second section, 90 students know the different productivity tools available for academic management, presentation, and access to information. Only 20 of them still need to achieve this goal. In the third section, 86 students know when, where and how to use ICT in English language learning processes, helping them to select and distribute their teaching and learning processes. But 24 of them still do not identify how to select when to perform this action.

1.4 Discussion

By carrying out the instrument applied to the students and performing in detail the whole process of characterization of the results, it was possible to identify a range of actions that are closely related to the importance of implementing these pedagogical strategies mediated by ICT to strengthen the teaching of the English language.

It should be considered with all these findings that are too interesting and determinant for this research that many students are motivated to learn the language they are studying to be future graduates with different pedagogical strategies. However, they must know how to use and integrate them in their academic process. Along this process, it should be determined that ICT is a powerful tool that students do not manage to understand nor even understand its importance and its use in the teaching and learning processes. In any case, different aspects to improve were found where the student requests to know, learn, and take advantage of the use of this tool.

Therefore, it is essential to reevaluate the needs of all students, instruct each of these in the difference of using the concept of ICT and really give the true academic use to achieve the digital skills that must be had in today's globalized world. For this reason, the university must hire thematic experts, i.e. teachers that in this case are called tutors who have a certified high level of foreign language and in turn accredited academic courses of high quality in digital skills to have sufficient mastery not only in language but in technological skills.

Then, all 44 courses of the study plan should be reviewed together with trained thematic experts and with the instructional designer so that each course according to what the student should achieve is considered at the time of its creation, recognizing that this program is virtual and therefore, all courses should be aimed at using of technological tools. On the other hand, it should be constantly evaluated how the students carry out their courses and how the teacher applies the duality of learning a foreign language and the use of technology and how the students demonstrate it through their activities, assignments, or pedagogical practices, which are the main results when creating a course. In addition, students should evaluate their teachers considering this aspect.

1.5 Conclusions

According to the research that demonstrated this research paper, it privileges an extraordinary result in the actions to improve and strengthen the foreign language (English) through processes of SDG pedagogical strategies through ICT in the students of the Corporación Universitaria del Caribe. Mainly it can be affirmed that these strategies in the teaching and learning processes are valuable and should be included in a more active and influential way changing the way of thinking, acting and forming of these young university students. In this way, students would face any obstacle presented in this competitive world, breaking paradigms, models, and ideals that would change the educational system of Colombian universities to directly reach the objectives presented in these, thus achieving that the educational quality complies with the academic SDG standards.

Adding to this, the negative patterns in the teaching of a foreign language begins with the teachers who are one of the main authors in the academy. Therefore, the lack of new technological trends in virtual scenarios cause students to become accustomed to discouraging and demotivating videoconferences or virtual classes due to the use of the same outdated, archaic, and traditional references that teachers use for their synchronous encounters. This causes a notable lack of attendance and low commitment in the activities, assignments, and exams to be presented. Not only this is enough, but the disinterest also attracts desertion and students do not reach the levels they should have according to the Common European Framework.

The low academic performance is presented firstly by the classes as mentioned above, secondly by not having sufficient educational resources (computers, laptops, high-end cell phones or internet connection). Third, due to the lack of ICT-based knowledge which is a high trigger since the virtual student must recognize, know, and adequately use the technological means to learn the program he/she has chosen. However, this is striking and shows that the low average is not only due to not knowing a language, but that many students do not reach the levels due to lack of technological knowledge and not knowing in depth the meaning of virtuality. Finally, the suitability is not just to conserve the environment, if not to create sustainability educational models as it was demonstrated in this paper.

1.6 References

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