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The virtuality of students in the rural area

Ubety Del Carmen Cedeño Cantos

Pontificia Universidad Católica del Ecuador, Sede Manabí, Portoviejo, Ecuador
<http://orcid.org/0000-0003-1005-7644>

*Corresponding author email: uceden9064@pucesm.edu.ec

Esthela San Andrés Laz

Pontificia Universidad Católica del Ecuador, Sede Manabí, Portoviejo, Ecuador
<https://orcid.org/0000-0003-3462-8528>

Email: esanandres@pucem.edu.ec

Abstract--- The health emergency due to COVID-19 that affected the world, forced each of the governments to take measures that allowed protecting the health and integrity of its inhabitants, Ecuador, as a result of the declaration of a state of exception in the Educational Units of the country, adopted measures to meet the needs of the students, one of them the modality that from its application presented advantages and disadvantages for the educational community, this method was used. teaching-learning method, where teachers taught their virtual classes, improving their professional practice, with new strategies in the use of technological tools. The objective of the research is to identify how virtual education affected the learning of students in rural areas, through argumentative research, with bibliographic review strategies through documents, scientific journal articles. The study was carried out in the Educational Unit "Guaranda No. 43" of the Chirijos rural parish of the Portoviejo Canton, it was obtained as a result that the educational plan implemented by the Ministry of Education for the health emergency evidenced the educational reality in the country where the Virtual educational practice was negative due to the impact caused and the problems exposed.

Keywords--- virtuality, teaching modality, educational process, digital platforms, health emergency.

Introduction

The outbreak of a globally problematic disease caused by a virus called Coronavirus, created as a consequence that on March 16, 2020 through Agreement No. 00126-2020, the President of the Republic declared a state of

health emergency and mandatory social isolation, interrupting thus, face-to-face classes in Educational Institutions and the 2020-2021 school year will begin virtually, with the help of Information and Communication Technology tools to give continuity to the educational process and that it does not affect the abilities and skills of children, girls and adolescents. Virtuality is the access and use of pertinent information produced by humanity and used in all areas of a society, among the most notable or every day is the use of software, digital platforms, simulators, among other technologies that go hand in hand of the educational process, either in the country or in the whole world, having an essential role since 2020 in the form of teaching-learning, symbolizing an important change, due to the COVID-19 that spread in the world, the authorities modified many activities of our daily life, and as a consequence, teachers were encouraged to fulfill their working hours through teleworking, the school year began with the use of technology and everything that it implies; As for the rural area, it was not the exception, however, there are many limitations and inconveniences, but the teaching and learning process was not paralyzed.

In the development of this modality, many disadvantages have been found in the urban-marginal area, with a higher incidence and problems in the rural area, since many families saw the need to allow their children not to continue studying due to lack of economic resources, the inaccessibility to technological tools or the lack of internet services, this is due to the existence of communities where they do not have a telephone signal and internet; Likewise, another of the factors that influenced this decision is the loss of work that many parents suffered, and that suppressed the economic income of the home, many parents lost their jobs due to the abrupt closure of businesses, companies or lack of demand in the commercialization. In relation to the disadvantages that have been mentioned, they are complemented by the lack of knowledge of parents and students about the use of technological tools and digital platforms, which has limited the effectiveness of virtuality applied in educational establishments, this is reflected. problem in the little mastery and knowledge of ICT at the school level, in the rural area it is limited by lack of telephone coverage and internet service. According to Alva (2020), virtual education or virtuality refers to the development of the teaching-learning that is carried out virtually. There is an educational format in which teachers and students can interact differently from the face-to-face space, the classes can be taught by the teacher in an environment where the student is involved in a safe and collaborative way, where the collaboration of the entire group exists. in activities of the educational process, resolution of doubts about topics taught.

Materials and Methods

In the development of this research, a reflexive and analytical methodology was used from the experience and events experienced in virtual education to continue the educational process in the rural area, the advantages for students with connectivity possibilities according to technological and economic resources and ICT knowledge. A survey was applied to 17 teachers and 19 students from the "Guaranda N°43" Educational Unit, from the Chirijos Parish of the Portoviejo Canton, to find out how the virtual learning teaching method created advantages or disadvantages in the teaching process and learning, its difficulties and

achievements acquired through virtuality. In addition, a bibliographic review was carried out, consulting the positions of various authors who scientifically argue the research and thereby strengthen the analytical criteria used in each of the reflections.

Analysis and Discussion of the Results

Virtuality

The word Virtuality comes from the origins of Plato when he comments that knowledge is generated through ideas and images that man captures from his context. Yes, man can imagine and contextualize reality; then the word virtuality means that through the imaginary process it allows man to enter another process that is learning; through it we can transform reality and in turn understand it (Martínez, Leyva, Félix, Cecenas, Ontiveros, 2014). According to Aveleyra, Ema E., & Rossi, David S, (2021) they assure that virtual classes are a means that allows the teacher to connect with the students and be able to offer them the class live, in addition that the use of the classes is favorable, this is due to the reception of the information communicated by teachers; Disagreement with virtual classes was an event that arose at the beginning of this modality, but as teachers and students adapted to this teaching-learning modality, this complication disappeared; but in many areas, especially rural areas, there are no possibilities of having means of communication that enable the student in this new reality, so the teaching modality had to be approached differently for such cases.

Virtuality establishes a new form of relationship between the use of space and time coordinates (Lévy, 2016), overcomes space-time barriers and configures an environment in which information and communication are accessible to us from perspectives to now unknown at least in terms of volume and possibilities, while for the author Josep Duart (2008) virtuality is an appearance of reality and is defined as an imaginary process; For this reason, what we learn from a computer system appears to be real because it is studied from reality, but it is not real because we are not in real time; this is what we call virtual reality. The virtuality that occurs in the spaces of interaction is made up of people who can feel and always manifesting themselves, above all having responsibility and ethical values. In this relational space, people communicate, interact and exchange information. If we look closely at these relationships, we can see that people act in virtuality in a similar way to how we develop our actions in other spaces of our lives, since virtuality in itself does not make us different, it is an appearance of reality and is defined as an imaginary process; therefore, what we learn from a computer system appears to be real because it is studied from reality, but it is not real because we are not in real time; this is what we call virtual reality. The COVID-19 pandemic has generated rapid and significant changes in all aspects of life, as people have had to adapt to the new dynamics of society. Education has not been immune to this phenomenon and educational processes have been transferred to the home, where students, parents, teachers, administrators, and directors have made their best effort to continue and guarantee the right to education. Figures 1 and 2 show the advantages and disadvantages in the rural area (Sosa, 2021).

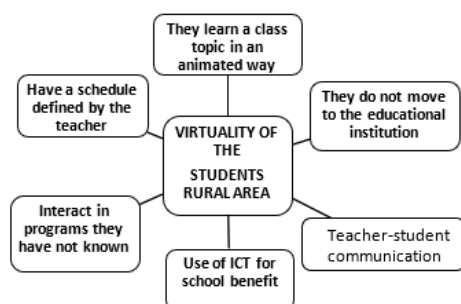


Figure 1. Virtuality. Students zone

rural (advantages)

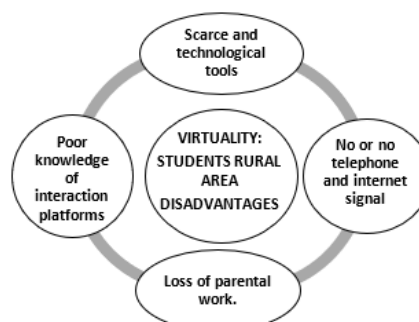


Figure 2. Virtuality. Students

rural area (disadvantages)

As seen in Figure 1, the advantages offered by virtuality to students in rural areas in times of pandemic are described, compared with Figure 2, which shows the disadvantages of virtuality for students in rural areas, this It indicates the inconveniences that to a certain extent prevent the normal development of the teaching-learning process. One of the problems that arose in times of pandemic implemented by the Ministry of Education, is the Educational Plan Let's Learn Together at Home, the same one that did not consider the educational reality in the rural area, in table 1, the results of the survey. In the diagnosis made to teachers and students through a survey, the results shown in table 1 are presented, related to the educational reality of students in rural areas.

Table 1
Educational Plan implemented by the Ministry of Education considered the educational reality of students in rural

Variables	Teachers	Students
Totally agree.	1	1
Okay.	5	4
Disagree.	8	7
Strongly disagree.	3	6
I don't like it		1
Total	17	19

The trend in the responses of teachers marks that 47.1% consider that they disagree with the Educational Plan implemented by the Ministry of Education since the educational reality of students in the rural area was not considered, 29.4% agree with what was implemented by the Ministry of Education, 17.6% strongly disagree with the Educational Plan implemented by the Ministry of Education since there were inconveniences in the application of virtuality in rural areas, 5.9% are in total agreement with what is implemented by the Ministry of Education, which demonstrates the educational reality of students in rural areas, while in the responses of students 36.8% disagree that virtuality is the only modality of study, 31.6% strongly disagree that virtuality is the only modality of study, 21.1% agree that virtuality is the only modality of study, 5.3% agree that virtuality is the only modality of study and another 5.3% do not like that virtuality

is the only modality of study. Virtuality in countries and cities have developed strategies based on Information and Communication Technologies (ICT) and have forced schools, suddenly and abruptly, to get involved in what is now called Digital Transformation, Sosa (2021) assures that virtuality is understood "as a process that aims to improve an entity by activating significant changes in its properties through combinations of information, computing, communication and connectivity technologies".

Teaching modality

As a result of the events that have occurred since 2020, in Ecuador and other parts of the world, they were forced to adapt to a new modality that radically transformed the learning that students received. Virtuality has given unimaginable consequences within the educational sector, for example, students become familiar with electronic devices, use new tools, learn through inquiry and understanding of the teacher. In virtuality not everything was positive, the courses and teaching teams adapted to new educational formats, being a clear disadvantage for the educator; In addition, the classes have a shorter duration, so the itinerary and the study plan were reduced or simplified. Table 2 shows the results of the impact of educational practice in virtuality.

Table 2
Impact of educational practice on virtuality

Variables	Teachers	Students
Yes	0	12
No	10	4
Sometimes		2
Almost always		1
Maybe	7	
Total	17	19

58.8% of teachers consider from their teaching practice that virtual education is not the best educational strategy, while 41.2% considered that it may be the best educational strategy, since the parish is located in a geographical area where there is little telephone signal and therefore the internet service is relatively poor, in the most distant places there is no They do not have any of these services, for these and many other reasons that were experienced, they assert that it is not the best educational strategy, while 63.2% of the students considered that the teachers were prepared to teach virtual classes, 21.1% considered that teachers were not prepared to teach virtual classes, 10.5% estimated that sometimes they were prepared to teach virtual classes, 5.3% considered that almost yes They were already prepared to teach virtual classes. The abrupt change in the teaching-learning modality revealed the lack of skills that both teachers and students have in the use of technology. López & Acuña (2020) assert that the perception that both teachers and students have of its impact in both online and combined contexts, which show that educational practices have not changed substantially.

Educational process Educational

Processes are the stages in which knowledge is issued and, therefore, knowledge is transmitted that builds the academic process that is formalized in the interaction of the student in education that he receives. The virtual means of learning benefit aspects that face-to-face limits or does not contemplate. For example, one of the most relevant advantages is associated with avoiding the barrier caused by distance; likewise, the ease of distributing educational time, added to the possibility of combining it with the other occupations that everyone's lifestyle entails (Moreira-Segura, Cristian, & Delgadillo-Espinoza, Brenda, 2015). In education, communication is essential, and virtuality has prevented having direct correspondence with students, preventing the teacher from specifying the ideal atmosphere that a classroom has and with a constant accompaniment in the activities that are developed. For this, it is necessary to define a communication protocol, which must be carried out based on the purchasing power of the families that make up the institution; but without losing the use of technological resources that are available to teachers.

The educational process has had a lot of variation for known reasons, which has been an impediment that marked current generations in the acquisition of knowledge, because it has shaped new methods in students, whether it is to investigate, compare information, receive the content of the topics, among other characteristics that virtual education has contributed. Despite these benefits, it is essential that the virtual tutor has a series of characteristics in his classes to guide and promote an active educational process and to induce the student in the socialized subject. The educational process can be used as a method of investigation of the different realities that occur in it or as an instrument for obtaining information about the students (Herrero, 1997), both about their learning process and attitudes, personality, problems, etc., while Naranjo, (2007) indicates that the characteristics and attitudes of people with high or low self-esteem and the factors linked to these influence cognitive distortions and of significant people in the construction of self-esteem and finally Emphasis is placed on the relationship between self-esteem and results in the educational process. In the diagnosis made to teachers through a survey, the following results are presented, shown in table 3, related to whether teachers and students agree that virtual education is the only modality of education implemented by the Ministry of Education.

Table 3
They agree that the only education modality implemented is virtual

Variable	Teachers	Students
Yes	16	5
No	1	14
Total	17	19

Of the 17 teachers, 94.1% consider that virtual education met the expectations of the students, while 5.9% consider that the virtual education did not meet the expectations of the students, in charge of the 19 students, it is observed that 73.7% assert that virtuality did allow them to acquire the same skills as in

attendance, 26.3% indicate that they did not acquire the same skills in virtuality as in attendance. The great socio-health transformations that have taken place in recent years make new formulas necessary to manage the educational process. Martínez (2020) assures that changes have been made in educational processes, resulting in virtuality allowing education to continue in the world.

Digital Platforms

New technologies have become a powerful agent of change in all cultures, the entire world is immersed in this generalized process of new learning due to the new language, as well as the ways in which our lives are organized ways of working, buying, resting and relating (Pérez, 2003), the author states that technology is a tool or agent of change that is globalized and allows an education with knowledge, research so that the teacher is a guide for the student that interacts, resolves processes that allow it to create its own concepts and develop its own criteria. Today it is necessary to assume the complexity of ICT, recognizing, multiplying, and promoting those learning experiences that they favor or improve in relation to traditional teaching practices ((San Andrés, Rodríguez, Pazmiño, & Mero, 2022).

These tools are related to new technologies, since they are a means of disseminating work, almost instantaneously. It is a methodological change to face new times, not only for the present, with examples of action such as the COVID-19 pandemic, but for the immediate future, because in the face of situations that arise, the educational community must be prepared to continue with the educational work that did not stop despite the ignorance of many actors in the Ecuadorian educational field (Galindo, 2021). . The scenario of the knowledge society unfolds during technology, the Internet, and telecommunications. Through the Internet, millions of data travel in the form of two by ones and zeros that are conjugated and transformed into information, there is not only one activity of the daily life of the human being that does not need updated information.

Information and communication technologies have covered all fields of action of the human being, where the quality of information, speed and accuracy allow success to be achieved much faster than before; habits and lifestyles have been transformed by the constant and unstoppable development of digital technologies and the Internet (Lagos 2018). Educators who have the necessary knowledge share their experiences with the less prepared and with their students, this allows them to exchange, share knowledge, build their own knowledge in different places and time. (Squirrel, 2011). Students complement these learnings with others stored in a network of information centers or libraries distributed throughout the world. Students and teachers evaluate the knowledge acquired. The meaning of training in a virtual environment goes beyond the demonstration of skills in the use of new technologies in the classroom, which should not be understood as mere tools for educators, but as an object of general reflection, regarding how knowledge will be accessed in the future. Table 4 shows the results of the tools used by teachers in virtual classes.

Table 4
Tools used by teachers and students in virtual classes

Variables	Teachers	Students
Computer	17	2
Telephone	15	16
Tablet	0	1
Digital	3	
WhatsApp	17	
Call	15	
Google Meets	0	
Apps	4	
Microsoft Teams	15	
Email	2	
Zoom	2	
None	0	
Total	52	19

Table 4 shows that 100% of teachers used the computer as a tool in their virtual classes, while 88.2% used the telephone as a means of communication in virtual classes. 88.2% used the Microsoft Teams platform as a work tool, 100% communicated through WhatsApp during virtual time with their students, 88.2% communicated through phone calls, for 23.5% the App was used in virtual classes, 17.6% used the digital whiteboard in virtuality, 11.8% used email as a means of communication Zoom for the virtual educational process. 84.2% of the students used the telephone as a tool in their virtual classes, 10.5% used the computer for their virtual classes and 5.3% used a Tablet to receive virtual classes, while it is evident in the same table that 84.2% of students used the telephone as technological equipment in virtual classes, 10.5% used the computer as technological equipment and 5.3% used Tablet as a technological tool. The so-called "Platformization" represents a significant change in a world like ours, increasingly digital in which we now have efficient and secure access to goods and services. This change has a lot to do with a vision linked to young people where access prevails over the purchase of goods and where the generation of trust is essential to weave global networks among strangers. Ferrer (2018) states that digital platforms are essential to access all areas in which information is handled.

Health

Emergency the health emergency of COVID-19 showed the deep social inequalities of the education system in the rural sectors of the country, achieving a great impact for the educational community that did not have technological means, prior knowledge of software, digital platforms, internet at home, technological tools among others. The distance modality, implemented to replace online education in urban areas, deepens the disadvantages of students in rural areas and demands independent learning with scarce educational resources. Authors such as (Olate&Cañas 2020), state that the virtual modality had disadvantages in rural areas due to the scarce educational and technological resources of the medium. There are few skills in the use of ICT, to which is added that most teachers lack technological infrastructure and internet access according to

Zambrano, (2020); also, that the teachers have fewer emotional strengths, and that there is a very low correlation between ICT management and EI Finally, it is highlighted that the WhatsApp application has been transformed from an instant communication medium to a learning platform. In table 5, difficulties presented by teachers and students in virtuality.

Table 5
Difficulties presented in virtuality

Variables	Teachers	Students
Economic		4
Technological		3
Living in a rural area		6
Others		6
A lot	8	
Little	7	
Nothing	2	
Total	17	19

Table 5 shows that 47.1% of teachers consider that virtuality greatly affected cognitive and interpersonal development in students, 41.2% assert that virtuality little affected cognitive and interpersonal development in students, while 11.8% consider that virtuality did not affect cognitive and interpersonal development in students at all, while in the same table it shows that 31.6% of the students their main inconvenience was living in rural areas and others, 21.1% the inconvenience was economic and 15.8% had technological inconveniences to receive virtual classes in a health emergency. Gómez and Saeta (2021) assert that due to the presence of the virus worldwide, a health emergency is declared with the first case of infection in the country, and it goes virtual in all levels at the national level.

Conclusions

- Virtuality allowed teachers and students to continue with the teaching-learning process, those who live in rural areas had difficulties and other factors that affect such as the lack of internet service, telephone signal, digital tools, knowledge of ICT, among others that are necessary and indispensable in the current process.
- In virtuality, the use of Information and Communication Technologies was of vital importance, the challenge of using digital platforms provided the update of knowledge of the educational community.
- The survey carried out showed the lack of knowledge of the use of technological tools, lack of implements and connectivity due to being a rural area, the plan that was implemented by the Ministry of Education did not consider the reality of the educational community, and therefore it was considered negative the impact of virtuality in this area.

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