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ORIGINAL

Incidence of virtual education in front of covid-19 in the tilipulo neighborhood during the school year 2020- 2021

Incidencia de la educación virtual frente al covid-19 del barrio tilipulo en el año lectivo 2020- 2021

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ABSTRACT

In 2020, Ecuador faced significant challenges due to the impact of COVID-19, which forced the government to suspend face-to-face activities, including classes, and implement virtual education as an alternative. This abrupt change evidenced technological, economic and social barriers, especially in rural areas such as the Tilipulo neighborhood in Cotopaxi province. Only 37% of Ecuadorian households had internet connection, while in rural areas this access was reduced to 16%, which led to a high student dropout rate. Students faced difficulties related to connectivity, lack of technological devices and the instability of internet service, factors that limited the effectiveness of virtual learning. According to the surveys conducted, 50% of the students did not attend classes regularly due to these problems, and 58% knew someone who had dropped out of school. Despite these limitations, e-learning helped protect the health of students and their families by preventing the spread of the virus. However, it did not guarantee meaningful learning, as many students lacked knowledge about the use of digital platforms. The study concluded that, although virtual education was a solution to the pandemic, it revealed structural inequalities in access to technological and educational resources in Ecuador, highlighting the need to implement strategies to improve the quality of and access to virtual education in the future.

Keywords: Virtual education; COVID-19; Student dropout; Digital connectivity; Rural area.

RESUMEN

En 2020, Ecuador enfrentó desafíos significativos debido al impacto del COVID-19, lo que obligó al gobierno a suspender actividades presenciales, incluidas las clases, e implementar la educación virtual como alternativa. Este cambio abrupto evidenció barreras tecnológicas, económicas y sociales,

especialmente en zonas rurales como el barrio Tilipulo, en la provincia de Cotopaxi. Solo un 37% de los hogares ecuatorianos contaban con conexión a internet, mientras que en áreas rurales este acceso se reducía al 16%, lo que provocó una alta deserción estudiantil.
Los estudiantes enfrentaron dificultades relacionadas con la conectividad, la falta de dispositivos tecnológicos y la inestabilidad del servicio de internet, factores que limitaron la efectividad del aprendizaje virtual. Según las encuestas realizadas, el 50% de los estudiantes no asistieron a clases de forma regular debido a estos problemas, y un 58% conocía a alguien que había abandonado sus estudios.
A pesar de estas limitaciones, la educación virtual contribuyó a proteger la salud de los estudiantes y sus familias al evitar la propagación del virus. Sin embargo, no garantizó un aprendizaje significativo, ya que muchos estudiantes carecían de conocimientos sobre el uso de plataformas digitales.
El estudio concluyó que, aunque la educación virtual fue una solución frente a la pandemia, reveló desigualdades estructurales en el acceso a recursos tecnológicos y educativos en Ecuador, destacando la necesidad de implementar estrategias que mejoren la calidad y el acceso a la educación virtual en el futuro.

Palabras clave: Educación virtual; COVID-19; Deserción estudiantil; Conectividad digital; Zona rural.

INTRODUCTION

At the beginning of March 2020, Ecuador took measures against SARS-CoV- 2, which caused the Covid-19 disease that began to spread, incurring a massive contagion, in the first instance, claimed the lives of thousands of Ecuadorians, collapsing the health system and reaching social chaos in the main cities of the country, This forced the Ecuadorian government to take drastic measures, among which was the cessation of all types of classroom activities, including classes at all levels, leading to total confinement and a stoppage of classes, which in due course were resumed virtually and would become a problem that members of the educational community and government authorities did not expect.

In the educational field, students encountered technological and economic barriers, which caused them to stop their studies in many cases since virtual education requires internet connectivity, which is a service that in the rural sector is unknown or only a few have access; in the urban sector even though most of them have this service connectivity is not stable, and this is because Ecuador is still in the process of improving the technological equipment that is years behind compared to first world countries. Faced with these facts, this work aims to analyze virtual education through the search for information in bibliographic sources to know how it has coped with the Covid -19 specifically in the Tilipulo neighborhood during the year 2020 -2021.

The increase in deaths due to COVID-19 and facing a possible return to the classrooms has generated concern in the educational community; alternatives are needed to avoid contagion in the classrooms. Faced with this situation, this descriptive case study was conducted, whose importance is to present alternatives for access to education in the virtual environment in the Tilipulo neighborhood, located in the province of Cotopaxi.

The world has undergone major changes, including the daily lives of people, since last December 31, 2019, the World Health Organization received information of an unknown outbreak of pneumonia in Wuhan, China, that happened in a very short time spread and became a pandemic, which was identified as a new strain of coronavirus that came to cross borders to several countries, and Ecuador was no exception.

In our country and around the world, measures were adopted in response to the crisis, such as the suspension of face-to-face classes, the development of distance learning modalities through the use of a variety of formats and platforms, the support and mobilization of educational staff and communities, and attention to the health and well-being of students. ECLAC, UNESCO (2020, August)

Many students nationwide have difficulty accessing education, given the suspension of face-to-face classes, the lack of smartphones or Internet, and the lack of income and training impede the normal education of millions of students during the pandemic. The Ministry of Education implemented the virtual platform Plan Educativo.

COVID-19 "Aprendamos Juntos en Casa" (Let's Learn Together at Home) through pedagogical cards. All this situation imposes the need to collaborate with alternatives to strengthen virtual education, making the situation more passable and favoring the permanence of students in the educational system.

Virtual education is a tool that has facilitated the continuity of people's daily activities worldwide, even more so since 2020 due to the SARS-CoV-2 pandemic. That said, despite being a solution in many countries considered as developed, for Latin America and the Caribbean, it has been a problem that remains to this day, given the barriers and difficulties of certain countries regarding access to the Internet and technological means, all this due to socio-economic conditions or intellectual barriers.

In Ecuador, the case is very similar; only 37% of households have an internet connection, which suggests that 6 out of 10 children dropped out of school because they are in virtual mode. However, according to UNICEF, the reality is even more overwhelming in rural areas, where only 16% of households have access to the means described above. In the province of Cotopaxi, in the city of Latacunga, specifically in the Tilipulo neighborhood, being a rural sector, virtual education has meant that many students have left their studies due to socio-economic conditions to access internet services and, on the other hand, intermittent learning according to the plan "Let us learn together at home" which empowers the teacher to use any virtual media and adapt to the reality of the students according to the sector where they live and the means available to them. The following problem is formulated from the above-mentioned: How has virtual education developed in front of Covid-19 in the Tilipulo neighborhood in the years 2020- 2021?

General objective

To analyze virtual education through the application of research techniques in order to know how it has coped with COVID-19 in the Tilipulo neighborhood in the year 2020 - 2021.

METHODS

This chapter will describe the procedures that align with the research in progress.

The present case study is descriptive, which “seeks to specify the properties, characteristics, and profiles of persons, groups, communities, processes, objects or any other phenomenon subjected to analysis” (Sampieri,2014, p.92). In this approach, data collection and analysis are used without worrying too much about their quantification; observation and description of phenomena are carried out without emphasizing measurement.

According to Paitán, Valdivia, Palacios, and Romero (2018), “The purpose of descriptive research is to reconstruct reality, to discover it, to interpret it; therefore, the method is not Popperian verification, contrasting or falsification, but understanding, interpretation or hermeneutics” (p.141).

It is also a type of bibliographic research because it is a process based on the search, recovery, analysis, criticism, and interpretation of secondary data, that is, data obtained and recorded by other researchers in documentary sources: printed, audiovisual or electronic, as in all research, the purpose of this design is the contribution of new knowledge (Arias, 2006, p.27).

Under these arguments, the present work has a qualitative approach in order to obtain a general vision of the behavior and perception of the people who are the object of study and a bibliographic nature since information will be obtained from primary and secondary sources that will allow the construction of the conceptual framework.

On the other hand, according to Arias, Villacís, and María (2016), the study population is "a set of cases, defined, limited and accessible, which will form the reference for the selection of the sample, and which meets a series of predetermined criteria" (p.202).

Also, according to Tamayo (2006), the sample is "the set of operations that are carried out to study the distribution of certain characters in the totality of a population universe, or collective, starting from the observation of a fraction of the population considered" (p.176).

Having said the above, the population of the present study corresponds to the inhabitants of Barrio Tilipulo in the city of Latacunga, from which a sample of 25 people will be taken and to which the pertinent instrument will be applied using the research technique such as the survey, which is the questionnaire.

The questionnaire, which will be conducted virtually using the Google Forms platform, will be applied to the students of the Tilipulo neighborhood of the Latacunga canton.

Bernal (2010), the survey "is a technique for acquiring information of sociological interest, through a previously prepared questionnaire, through which you can know the opinion or assessment of the subject selected in a sample on a given subject" (p.21).

Likewise, Bernal (2010), the questionnaire is:

It is a set of questions designed to generate the necessary data to achieve the research project objectives. It is a formal plan to collect information from the unit of analysis that is the object of study and the focus of the research problem. Generally, a questionnaire consists of questions regarding one or more variables to be measured; the questionnaire also allows for the standardization of the data collection process (p.250).

The technique and research instrument will allow the collection of the necessary information to approximate the reality of the problem being studied, which will later be analyzed and interpreted in the following points.

RESULTS

The following is the data obtained after applying the survey to students in the Tilipulo neighborhood of Latacunga Canton. Based on question Nº1 of the 100% of those surveyed, 100% affirm that they have Internet or data package in their place of residence, continuing, for the question, Nº2 with 53% of the students affirm that they continue attending classes in a virtual way with normality in the platforms that each educational institution has chosen to use. Meanwhile, 40% do not virtually continue with their classes because of connection problems or the lack of resources. Thus, they are part of the segment that deserted the educational system, and only 1% do not attend classes frequently due to the factors described above or others. In question 3, 53% of the students know the use of different platforms for virtual education that exist today.

In comparison, a considerable percentage of 33% do not know the use of these platforms, and 13% are unsure if they know the use of platforms for virtual education. For question Nº4, 80% of the students have used platforms such as Facebook, Zoom, WhatsApp since the beginning of classes in isolation situations and, 13% have not used them, and 7% sometimes have. In question 5, 53% of the students said they knew a family member, classmate, or acquaintance in the sector who had left their studies because they did not have the necessary resources. This same percentage represents a latent truth since Ecuador is a developing country, and its provinces, cantons, cities, and sectors still have areas where the Internet is unknown, preventing hundreds of students from leaving their studies. Regarding question Nº7, which is an open-ended question about your experience as a student changing from a face-to-face education to a virtual one? Based on the answers obtained, it can be deduced that it has not been very favorable because, given the social and economic situations that each student lives in and the sudden change due to the restrictive measures of the government, which caused a great change in education that most students were not used to or ready for since many are still technologically illiterate and virtual. Finally,

question Nº8 asks whether virtual education guarantees your learning. The vast majority of students say no because virtual education does not guarantee their learning since classes through virtual platforms have many complications, either by connectivity, audio issues, or the same teaching method of the teacher that prevents meaningful learning by each of the students, but despite these considerations are aware that virtual education has been an alternative in order to safeguard the integrity and health of students and their families helping to contain the SARS-CoV-2 virus.

Analysis of the results

Once the survey was conducted, it was determined that 100% of respondents had Internet or data package; of the total number of respondents, 50% did not continue to attend classes virtually normally; however, 42% did attend classes normally, and the remaining 8% may have attended classes virtually.

Attended virtual classes normally. In terms of whether they know how to use the different digital platforms, there is an equivalence between those respondents who answered affirmatively and negatively with 42%, meaning that most of the total population is not yet able to use these virtual platforms, and 17% have little knowledge of their use and functionality. Of the total number of respondents, 75% mentioned using platforms such as Facebook, Zoom, and WhatsApp since the beginning of classes in isolation, and only 17% have not used these platforms, assuming that they have paused their studies or due to lack of resources to access classes and only 8% have rarely used these platforms. A total of 58% of respondents claim to know a family member or classmate who has left their studies, and 42% claim to know people who have chosen to postpone their studies or have dropped out, which is a considerable percentage at the provincial or national level, confirming a high number of students who are out of the educational system.

Of students who are outside the educational system. Concerning question 7: What has been your experience as a student in the change from face-to-face to virtual education, the respondents affirm that it is not a very good experience since it is not possible to grasp the learning imparted by the teachers in addition to the internet connection which is unstable and irregular, which prevents having a continuous class without interruptions. Concerning question 8, Do you think that virtual education guarantees your learning? The respondents agree that virtual education is very different from face-to-face mode and does not guarantee significant learning, and the technological means are used for other purposes, less for the learning process during classes.

CONCLUSIONS

After the pertinent analysis, it was determined that virtual education had faced COVID-19 from a stage of adaptability towards students, forcing them to self-prepare in some cases for the use of technological tools and platforms to continue with their studies, given the pandemic situation that is going on all over the world and that in the Tilipulo neighborhood brings us closer to the reality of the sector.

The conceptual basis was investigated, identifying the positive and negative aspects of virtual education, which, together with the survey, allowed us to determine that virtual education does not guarantee significant learning for students and, at the same time, has caused some students to drop out because they do not have the resources to continue their studies.

It was determined that one of the advantages of virtual education over COVID-19 is that it protects the health of students and their families by not exposing them to the virus. Moreover, one of the biggest disadvantages is that in Ecuador, there are areas where they still do not have internet service, they do not have the technological resources, or the internet is not a quality service that allows them to maintain their education. In the Tilipulo neighborhood, even though most of those surveyed have internet service or a data package, a higher percentage do not grasp the knowledge taught in class by teachers due to an unstable connection or external factors that prevent them from maintaining a continuous class.

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FINANCING

None.

CONFLICT OF INTEREST

None.