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Effects of New Technologies on the Teaching-Learning Process

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***Abstract*---**The research aims to analyze the effects of new technologies in the teaching-learning process. For the development of this work, the third-year high school students of the Sucre Mieles Educational Unit of the Cojimíes parish, Pedernales canton, have been taken as a reference. This means that technology should not only be a learning tool, but a mediation to implement educational quality of life in which students are the center of attention. The analysis carried out has taken the students of the educational institution in question as a perspective and the proposed temporary cut considered is the 2021-2022 school period. From a qualitative, descriptive methodological approach and from a bibliographic-documentary approach, this study has investigated how new technologies have innovated the academic training of students to the point that virtual learning environments and other platforms have served to that the academic process does not stop even in the worst crises. In this context, the incorporation of new technologies has made it possible to redesign the scenarios where teaching and learning processes take place and even more so since the emergence of the pandemic caused by Covid-19.

***Keywords*---**new technologies, teaching, learning process, COVID-19

Introduction

New technologies in the educational field have become essential. The use that both teachers and students make of them has made it possible to advance in the teaching and learning process even in times of the pandemic caused by Covid-19. The importance of this type of resources lies in the fact that they result in multiple benefits for the teaching-learning process; For example, they allow online

training using various strategies that the virtual tutor can propose based on academic content in combination with the technological tools provided by the platform and other tools. In this way, new technologies play a preponderant role at all educational levels.

The relevance of this research lies in the fact of its approach, considering new technologies as a series of media ranging from hypertexts, multimedia, Internet, virtual reality, or satellite television. A common characteristic that defines them is that these new technologies revolve interactively around telecommunications, information technology and audiovisuals and their combination, such as multimedia. In other words, the development of new technologies has been a modernizing factor throughout the history of humanity, not only in the productive sectors, but also in society and, of course, also in education.

According to Granados (2019), new technologies have even led to interactive learning scenarios, since they constitute an environment where all the factors that exist in the traditional classroom are found, but some of them, such as the students and the teacher, are separated both in time and place. As time has passed, the way of teaching students in the classroom has been changing from the traditional way to a more interactive teacher-student way, with the development and implementation of new technologies already immersed in education. , the possibility of using innovative resources appears, which is also a new way of motivating students in a more dynamic way. However, it should be considered that the adequate introduction of new technologies in education must obey an educational project and must be guided by clearly defined objectives.

It is for this reason that through this research the procedures, usefulness, operation, difficulties and characteristics of new technologies in the teaching and learning process are determined so that they become essential learning scenarios and very particularly in the high school students from the Sucre Mieles Educational Unit of the Cojimíes parish, Pedernales canton in the 2021-2022 school year. In Latin America, there are countries such as Guatemala, Nicaragua and Paraguay where low percentages of teachers prepared in new technologies are estimated, compared to Chile, Peru, Colombia and Costa Rica, in which the educational personnel is prepared at a high level with respect to technology. evolution that technological processes are having (Rivera et al., 2018).

In other investigations it has been highlighted that in more advanced countries are those that tend to give rise to new technologies; especially, virtuality, since their experiences serve as an example to developing countries. Therefore, it is important to mention that, in countries like Mexico, in the XXI century there are still limitations in rural areas due to lack of teachers and technology, which prevents students from accessing a guaranteed and inclusive level of education (Toca & Carrillo , 2019). In Uruguay, the use of technology has been implemented for more than a decade, facilitating the adaptation of new educational literacy programs, through policies carried out by the state, which have allowed educational access and technological tools to many families in the country, expanding inclusion to a large majority of Uruguayans of all ages and socioeconomic backgrounds (Carabelli, 2020).

Other academic works point out that in addition to applying new technologies to education, new educational scenarios must be designed where students can learn to use and intervene in the new educational system. However, for all this to become possible, it must go through countless phases until it reaches the desired end and overcome various obstacles that this insertion represents. The innovative technological resources are necessary to revolutionize knowledge, the teacher must make use of all of them so that the student comes to understand his class in a dynamic way, the transmission of knowledge through the use of technologies has provided more knowledge, since this is dispersed in the cloud, and helps to solve problems when something is not understood (Barrera and Lugo, 2019).

Regarding technological tools, several teachers use ICTs as support in the teaching and learning process, implementing various learning strategies in the classroom, in order to promote dynamic and motivating educational scenarios that facilitate the development of autonomous learning of students. students. (Guerra, 2013). Over time, new technologies have been gaining ground in different fields, especially in educational processes where virtual education models have been carried out, strengthening collaborative learning between teachers and students. In this sense, new technologies constitute one of the fundamental pillars in the construction of knowledge, configuring current training in the academic world, combining face-to-face and virtuality in all its forms, in addition to virtual ones. (Martinez & Jimenez, 2020).

In Ecuador, it is considered that there is a society open to the technological system, where the use of new technologies has begun to be promoted, providing motivation in the educational community, so that it becomes interested in the interaction that being part of virtual education entails, offering tools , ideas and creative digital models that attract the attention of the student, that facilitate the incursion into this field, in addition, to make the follow-up and closeness to the teacher of the activities that he sends daily regarding the subjects he teaches more bearable (Pérez et al. al. 2018). In the Sucre Mieles Educational Unit of the Cojimíes parish, Pedernales canton, the use of new technologies has been started for years both in its laboratories and in its classrooms. This process had small technical difficulties, but despite that they were able to be overcome, resulting in the understanding of the activities and a good handling of tools associated with technological resources (Macías & Chávez, 2017).

The aforementioned studies served as the basis for establishing the present investigation. Based on the foregoing, it can be determined that new technologies have effects at a productive, economic, social and cultural level, but also at an educational level. It is, in any case, the incorporation of innovative tools that improve educational processes and also promote good interaction between members of educational processes beyond a definitive physical space. For all the above, the need to train students with new skills and greater capacity is underlined, to successfully face technological paradigms in current educational contexts.

Method

To analyze the effects of new technologies in the teaching-learning process, this research work bases its methodological perspective on a qualitative, descriptive approach and from a bibliographic-documentary approach. At this point it is pertinent to determine that, according to Bernal (2010), the qualitative method is a non-mathematical process of interpretation, carried out with the purpose of discovering concepts, relating them to the data and then organizing them in a theoretical explanatory scheme. Together with the qualitative, this research uses the descriptive method, whose purpose is to have a first knowledge of reality as it emerges from the direct observation made by the researcher and the knowledge that has been acquired through the indirect information obtained (Hernandez & Mendoza, 2018).

Finally, the proposed methodological triangulation is complemented by the bibliographic-documentary method that allows gathering the existing theory on the proposed object of study. According to Hernández (2014), this approach allows the analysis of various useful documentary sources for the conformation of the theoretical foundation and contributes to a greater understanding of the methodological issues of the investigation. The technique for obtaining data is the survey, which was applied to 50 high school graduates from the Sucre Mieles Educational Unit in the Cojimíes parish, Pedernales canton, Manabí province. This technique is an instrument that allows gathering general information and points of view from a group of people

Discussion

As a result, the aim is to determine the effects of new technologies in the teaching-learning process. For this purpose, the third-year high school students of the Sucre Mieles Educational Unit of the Cojimíes parish, Pedernales canton, have been taken as a reference. In this context, it is pertinent to point out that the purpose of new technologies is to improve the teaching and learning of students, since they allow the construction of new knowledge, skills and abilities autonomously, using criticality and building meaningful learning through new experiences. generated in virtual interaction. In this way, in order to obtain the expected results, the survey instrument was applied to 100 third-year high school students of the Sucre Mieles Educational Unit of the Cojimíes parish, Pedernales canton. In this case, a sample was not used, but the total population of the students in question was considered.

Preparation about virtual education

With the introduction of new technologies in the teaching-learning process in the third year of Baccalaureate of the Sucre Mieles Educational Unit of the Cojimíes parish, different changes took place, so the students were consulted if the new technologies have had a positive impact on the teaching-learning process.

Table 1
Positive impact of new technologies on the teaching-learning process

Variables	Students	Percentage (%)
Yes	80	80
No	20	20
Total	100	100

The hundred students consulted for this work have diverse criteria in relation to this question. 80%, that is, the vast majority, state that new technologies have had a positive impact on the teaching-learning process, while the remaining 20% stated the opposite. In the context of new technologies, the role of the teacher contemplates the planning and monitoring of the student's learning process to ensure that the objectives of the subject are met. In this sense, the student must be able to facilitate and encourage the use of the media ecosystem in which they operate, such as social networks and digital collaborative environments. Taking advantage of these interactive platforms and online activities for educational purposes can be a very successful strategy if you know how to handle them.

About the learning resources used

Students were asked about the types of resources used with new technologies.

Table 2
Types of technological resources used to receive classes today.

Variables	Students	Percentage (%)
Digital platforms	60	60
Email	20	20
Instant messaging such as WhatsApp	20	20
Total	100	100

In this question, most students surveyed, that is, 60% stated that they use digital platforms such as Zoom; 20% indicated that they use email and a similar percentage indicated that they use instant messaging such as WhatsApp. These are several of the strategies used in the educational field due to the pandemic crisis.

On the use of resources

Table 3 shows the way in which students use technological tools in the academic process.

Table 3
Use of new learning resources used by students

Variables	Students	Percentage (%)
Very satisfactorily	60	60
satisfactorily	30	30
Not at all satisfactorily	10	10
Total	100	100

In this question the students Those consulted indicated that the new learning resources in times of pandemic are used in the academic process in a very satisfactory way in 60%, in an unsatisfactory way in 30%, and in an unsatisfactory way in 10%. It is to be considered that the home has become a school. The links, the fears, the anxieties, the games, the moments, also education and learning. Therefore, the use of new teaching resources is essential in the academic training of children and young people.

About the strategies to be used

Table 4 shows the types of learning strategies used in the context of new technologies.

Table 4
Types of learning strategies used

Variables	Students	Percentage (%)
Collaborative work	50	50
Individual work	50	50
Total	100	100

In this question, there are divided answers. 50% indicated that they prefer to use collaborative work and the remaining 50% said that they prefer to use individual work. In this sense, it is worth considering that education is a universal human right, which must be guaranteed at all times and places. The new technologies put at the service of education and in emergency situations make it possible to ensure learning opportunities for all ages in safe spaces with qualified teaching staff, from the beginning of a crisis to recovery, ensuring physical, psychosocial and cognitive protection, for quality Learning. In the field of new technologies, virtual classrooms, for example, are a training modality that is applied in face-to-face and non-face-to-face education, which despite the distance facilitates communication between teachers and learners, incorporating many tools and resources in training to enrich learning, according to Area, et al. (2018). In addition, they have produced significant changes in education due to the implementation of new forms of knowledge transfer and that through information and communication technologies new paradigms are being created in the teaching and learning process. This means that virtual platforms have become a powerful tool in educational technology, being able to develop the independence of

knowledge in many cases and the virtual rapprochement between teachers and students (Barrera & Guapi, 2018).

For Jenkins, et al. (2020), with the new technologies applied to the educational context, it is intended to collectively build visions for a better tomorrow, together with the updating of change processes, based on the civic agency of people and, based on alliances of cooperation and solidarity, also of confrontation and economic, political, social and cultural contestation. According to the approach of Iglesias, et al. (2020) and Pando (2018), education with the resources offered by technology should be prioritized, since a diverse and rich set of strategies and actions should be collected aimed at favoring learning processes with meaning and personal value by students. apprentices. They distinguish between educational contextualization strategies based on the identification, reflection and work on the interests, needs, identities and decisions of the students; as well as linked to the organization of times, spaces and educational agents.

For Vélez (2020), educators have found a world of possibilities in the development of their teaching practice through integrating new technologies as one more resource in the teaching-learning process, which has allowed them to promote and facilitate a participatory and creative attitude. of students, the individualized teaching of interactive learning. Among the benefits generated by the use of new technologies in student learning, are the following: favors greater competitiveness, generates a culture in the use of new technologies to develop innovative teaching-learning models that meet the demands of society, provides technological tools to help and support the student and alternatives for teacher monitoring and control, promotes collaborative learning by having tools that allow the development of asynchronous activities complementary to face-to-face and distance teaching, through virtual tools adequate (López, 2017).

The implementation and use of new technologies in the educational context is of great importance, since it breaks the barriers of time and distance for access to information and learning. In addition, it is a motivating and easy-to-use tool for students because they are used to using technology as a means of communication (Quijano & Rodríguez, 2018). The teacher's way of teaching changes, since the intensive use of the blackboard and the spoken word as tools for communication is no longer necessary, all the necessary information is in the virtual classroom exposed in different ways; The teacher has the responsibility of managing the virtual classroom and its contents, carefully designing the learning objects that will be incorporated, as well as in the rebound and knowledge construction activities, clarifying doubts, inducing the performance of analysis, evaluation and creation of knowledge by the student (Acevedo, 2019). Many educational institutions have made large investments in technology, and now it is common to see computer systems that support administrative processes, the use of the Internet has become widespread. In several educational institutions for computer support to education, Moodle is used, a software for the management of educational resources with wide use worldwide through which teachers create and manage virtual classrooms (Suasnabas, et al. 2018).

Conclusion

Contemporary education begins interactivity between teacher and student, based on new technologies for the development of skills, abilities and skills, through new knowledge, obtaining significant learning and achieving the objectives set at the beginning of the teaching-learning process. The new educational technologies are a tool to strengthen teaching and learning, increase opportunities to access knowledge, develop collaborative skills or instill values, among other aspects. It is necessary to know that new technologies are synonymous with innovation, since they are currently characterized by designing versatile, potential, comprehensive learning scenarios, with diversity of content for the educational community, since through them it is possible to share a number of of original and important information in order to strengthen knowledge, increase skills, promote student learning and autonomy.

New technologies constitute one of the foundations for the generation of knowledge today. These have undergone changes since their appearance and have evolved gradually. This evolution represents amazing effects in learning, research and knowledge generation. It is understood that the design of activities with the support of virtual classrooms is a key factor for teachers in planning their courses, since it not only awakens motivation and interest in students, but also makes them autonomous in their learning by entering and participating in custom-made collaborative environments where reflection, interaction and creativity prevail.

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