

# Análisis de la implementación del portal de servicios educativos: EducarEcuador

## Analysis of the implementation of the educational services platform: EducarEcuador

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#### Resumen

Este artículo presenta el análisis sobre la implementación de la plataforma educativa EducarEcuador en el sistema de educación nacional, además, la importancia del uso de las plataformas virtuales en la actualidad. Es necesario recalcar que existen zonas que por su ubicación geográfica y económica no disponen de acceso a tecnologías de la información y comunicación (TIC). La investigación nos permitirá conocer el estado de la implementación de la plataforma virtual EducarEcuador. Esta investigación se realizará a partir de una revisión de diferentes fuetes bibliográficas, se indagaron experiencias y resultados de investigaciones sobre la plataforma EducarEcuador. También se usaron los resultados obtenidos del análisis de documentos estadísticos del Ministerio de Educación y del Instituto Nacional de Estadísticas y Censos (INEC). Sin embargo, las investigaciones encontradas son a nivel institucional, cantonal o provincial. Lo cual no permite conocer el estado real de la implementación de la plataforma EducarEcuador en todo el ámbito educativo ecuatoriano. La investigación busca evaluar el índice de la incorporación de la plataforma virtual en las instituciones educativas del país. A Entre los resultados se percibe que la implementación y el manejo de las herramientas de la plataforma ha tenido una mayor acogida en la jurisdicción fiscal. Además, se percibe la falta de infraestructura tecnológicas en el país. En consecuencia, la ausencia de infraestructura limita al manejo de la plataforma educativa. No obstante, no limita solamente a los usuarios sino limita fuertemente la implementación de esta plataforma.

### Palabras clave

EducarEcuador, gestión escolar, MinEduc, servicios escolares.

#### Abstract

This article presents the analysis of the implementation of the EducarEcuador educational platform in the national education system, as well as the importance of using virtual platforms today. It is necessary to emphasize that there are areas that due to their geographical and economic location do not have access to information and communication technologies (ICT). The research will allow to know the status of the implementation of the virtual platform EducarEcuador. This research will be carried out from a review of different bibliographic sources, and experiences and research results on the EducarEcuador platform were investigated. The results obtained from the analysis of statistical documents of the Ministry of Education and the National Institute of Statistics and Censuses (INEC) were also used. However, the investigations found are at the institutional, cantonal or provincial level. This does not allow knowing the real status of the implementation of the EducarEcuador platform in the entire Ecuadorian educational environment. The research seeks to evaluate the rate of incorporation of the virtual platform in the country's educational institutions. Among the results, it is perceived that the implementation and management of the platform's tools has been more well received in the jurisdiction. In addition, the lack of technological infrastructure in the country is perceived. Consequently, the absence of infrastructure limits the management of the educational platform. However, it does not only limit users but it strongly limits the implementation of this platform.

#### Keywords

EducarEcuador, educative management, MinEduc, school services



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## 1. Introduction

This article aims to analyze the level of implementation of the EducarEcuador educational platform. This platform was developed and implemented by the Ministry of Education to improve the quality of educational service in the country. In this regard Cabero (2005) says "These programs allow to carry out a series of activities such as: locating different types of documents texts, images, web addresses, computerized collective presentations...)" (p. 8). Therefore, educational platforms seek to help and facilitate processes for the educational community. However, after its implementation, shortcomings were disclosed within the operation and accessibility to the educational platform EducarEcuador.

For the preparation of this article, the search for information has been one of the main obstacles, since the EducarEcuador page filed errors on the servers, which made it difficult to extract the information necessary for the article. In addition, the scarcity of bibliographic sources was a limitation since, there are not many studies about the analysis of the virtual platform in the different types of educational institutions. The challenge is intended to determine the level of implementation of the educational platform at the national level, in addition to determining the difficulties presented by the educational community, students, teachers, parents, when accessing the virtual platform EducarEcuador, in the different regions of Ecuador.

If wanting to improve the teaching-learning process through the use of educational platforms, it is essential to know it in depth. According to Taipe (2016):

The virtual education platform has been one of the fundamental pillars in the construction of knowledge, in training through the Internet, collaborative learning can be facilitated by synchronous or asynchronous tools such as chat, email or distribution lists and forums (p. 24).

It is very important to know about these tools, since it will help improving the learning teaching process; it is important also important to know the advantages and disadvantages that the use of the platform has. In addition to the factors that influence the external and internal use of the EducarEcuador platform.

With the analysis of the educational services platform EducarEcuador, it is intended to determine the main access shortcomings for users such as: students, parents, teachers and the educational community in general. In addition to its implementation at the national level in order to get a diagnosis to provide an objective opinion of what the possible solutions may be for the platform to be as successful as other educational platforms. Ecuador needs a stable and user-friendly platform in order to modernize the current education system, thus this analysis is necessary.

The objective of this article is to carry out an analysis of the educational services platform EducarEcuador, in order to identify the functions and services provided by that platform to the educational community, in addition to identify the difficulties that arise when accessing the virtual platform EducarEcuador in rural areas of the country. It is necessary to determine the behavior of the platform both on the coast, mountains, east and island region of the country, hence the idea is to answer the following questions:

- What is the implementation level of educational institutions by school period to the EducarEcuador platform?
- What are the difficulties for the educational community in rural areas when accessing the virtual platform EducarEcuador?



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This research is focused at the national level, since EducarEcuador platform is developed and implemented in the education system by Ecuador's Ministry of Education. This covers the education system for both the coast and the mountains. The difficulties that arise to use the EducateEque platform in certain educational sectors such as rural areas could be an obstacle to the development of a modern education. Thus, the purpose of the article is to show the shortcomings presented by the educational platform of the Ministry of Education (EducarEcuador), conducting a technical and comparative analysis with other educational platforms.

The article is structured in six sections. The first section refers to the introduction of the article. The second section introduces the concepts related to the virtual platform EducarEcuador. The third section discusses a variety of bibliographic sources that present results and conclusions related to the EducarEcuador virtual platform. The fourth section presents the methodology used to develop this article. The fifth section discloses the results obtained about the analysis of the virtual platform EducarEcuador. Finally, the sixth section determines the conclusions based on the results of the analysis of the EducarEcuador educational platform.

## 2. Related concepts

#### 2.1. ICTs in Education

The implementation of information and communication technologies (ICTs) within a knowledge society has caused changes. Education is one of the main users of ICT and has made a major improvement in the teaching -learning process. According to Hernandez (2017) "one of the areas with more influence of technology is in school, and this in turn in the teacher, being technology an essential part of school daily life" (p. 5). Hence, it can be understood that the inclusion of ICTs into the educational field is meaningful to a significant progress for both the student and the teacher. ICT tools play a facilitator role between the student's relationship with knowledge acquisition, as well as facilitating the teacher's work with their tools.

The degree of importance in ICT management is not yet known. There is no doubt that technology plays a very important role in the education system. The technology facilitates the teaching process either virtually with the management of platforms or using devices such as projector, computer, calculator, internet, etc. However, Vinueza-Vinueza y Simbaña-Gallardo (2017) states that "Ecuador has delays in the use of ICTs and communications infrastructure, a situation affecting national productive development and job creation for young people entering the labor market" (p. 7). Over the years, access to computer tools, such as computers or the Internet has increased, however, there are areas of the country where they people do not have access to them as in the case of the internet. This is due to the lack of infrastructure and the technological levels in the country.

#### 2.2. Educative virtual platforms

The use of virtual platforms in the education system has innovated not only the organization of data, but has also presented as a pedagogical aid for both teachers, students and parents. In addition, such platforms such as: Caroline, Moodle, etc, facilitate the display of information that teachers consider important. Taipe (2016) states that "virtual learning environments have the great advantage of being a tool to bring new innovation options for these processes" (p. 3), suggesting that virtual platforms are useful in educational processes, in addition to the use of ICTs in education, computer tools are presented in an innovative way thanks to globalization and the development of technology.



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Educational virtual platforms work efficiently, so these platforms present numerous applications for all kinds of activity whether informative, submission of assignments or evaluations, as to facilitate the educational management of both teachers and students and those involved in the educational system. In this regard, Sánchez (2016) says "the term platform encompasses a wide range of computer applications installed on a server, whose function is to make it easier for teachers to create, administer, manage and distribute courses on Internet" (p. 218). Hence, through virtual platforms students can work in real time and communicate.

Just as there are numerous advantages of educational virtual platforms, there are also certain disadvantages, since not all students have access to the internet; therefore, it would represent financial expenses in computer centers or transportation to go to a library. In addition, students need to be committed to the activities they develop, since it depends on their willingness to obtain an effective work.

There are 3 types of virtual platforms which are used for different types of jobs. Each of these three types have different characteristics and their functions are specific to each of them, which are shown below:

- **Commercial platforms.** These are platforms that require a prepayment before using and thus be able to access the information. This type of platform does not allow its users to modify the system. Sánchez (2009) says "they are tools for which we have to pay an installation and/or maintenance fee". (p. 8). Other than being very useful in the educational process, maintenance is fast and efficient, as is the technical service that this software offers, allowing the software to be comfortable and to be of pleasure for users.
- **Free Software Platforms.** Such platforms are free of charge, i.e. no payment is required to access the information. In addition to making modifications to the system, Sánchez (2009) says "in most cases there is no payment for updates or number of licenses" (p. 222). Therefore, it is confirmed that such platforms provide a free service.
- **Own Software Platforms.** Own software platforms are developed for the internal use of an educational institution; their purpose is to meet a specific need for the institutional community; therefore, such platforms are not for public or commercial use. In this regard, Sánchez (2009) says "they are not usually publicized or sometimes offered to the Internet community for responding to specific educational situations". (p. 220). Therefore, this type of software is developed for the school's own use.

#### 2.3. Virtual platforms and their importance

Due to the current health crisis experienced due to COVID-19, there are different global drawbacks in different areas, such as: economic, political, educational, etc. Therefore, today there are different platforms created by private and public institutions, which contribute to social, work and educational development. According to Cevallos et al. (2019) "an important number of public and private sector organizations are promoting the design and implementation of virtual computing tools and virtual learning objects" (p. 69). Therefore, virtual platforms are the main tools used today for different purposes, whether work, social or educational as an alternative to the impossibility of attending jobs, schools and universities.

However, virtual platforms have both disadvantages and advantages. There are users who use such platforms to share erroneous information, causing other users to get confused. In this regard, Cevallos y Villanueva (2019) states that "the advantages in digital handling can be taken into account, however, it should not be overlooked that, thanks to digital advancement, some users disclose irrelevant information" (p. 3). Therefore, the idea is that virtual platform is used in



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order to share information that is useful for the society and for the performance of different functions.

There are different advantages offered by virtual platforms. The correct use of the virtual tools currently helps the continuity of work and studies, in addition to keeping the communication among the different users, as stated by Jaime (2019):

Web pages are means of communication that allow the user to communicate with a content and also comment and interact with other people. If the person does not have encyclopedias nearby and need to search for instant information without getting into the content, the person can search for information on web pages, and this is a great advantage since the information is obtained quickly. People can enter at any time and from any computer (p. 10).

Thus, it can be said that the correct use of virtual platforms is very useful, whether in the social, economic, social and educational spheres, because it contributes to the progress of society.

Similarly, misuse of virtual platforms causes confusion and delays in work and studies, because erroneous or unimportant information can be transmitted, so the commitment of users is also to be responsible when using them, equally a significant disadvantage lies in the interest that users give to such platforms. In this regard, Jaime (2019) expresses:

Anyone in the world can upload information that is not true simply because it benefits it in some economic or social sense. Isolation between human beings, eliminating physical social interaction requires technical equipment and resources. The files are stored on the server of the institution or company that offer computer tools, becoming vulnerable to users. It can become a problem; it can be evidenced if it is not guided correctly and if strict control is not maintained in its use (p. 11).

According to the statement, it can be said that misuse of technological tools can cause different problems to the community.

#### 2.4. EducarEcuador Plataform

It is an educational platform that invites the community to be part of the automation of services in a process of continuous improvement with the aim of providing quality services to the citizens and getting closer to it, through the use of technological tools available to the entire educational community.

It is the educational platform that facilitates the monitoring and control of educational management to contribute to the continuous improvement of the quality of education through the implementation of virtual services such as: school control management, teacher management, citizen formalities, etc. According to the Ministry of Education (2009):

EducarEcuador offers its online educational services to the different actors of the educational community: students, teachers, authorities of educational institutions, parents and community that are part of the public education system, as well as the service for the collection of pensions, tuition and educational services for private and public educational institutions (p. 1).



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As stated above, the virtual educational services platform EducarEcuador, generates facilities of access to citizens and satisfies the demand of a modern institution that is at the forefront of the use of information technologies.

## 3. Related works

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In 2018, a study was conducted which studied the management of the EducarEcuador platform to 132 teachers belonging to the school "Santo Domingo de los Colorados", and it was observed that 74% of teachers knew about how to use the virtual platform, while 26% did not have any knowledge about how to use the platform. Therefore, the authors conclude that training workshops should be held for those teachers who do not efficiently manage the virtual platform, and then evaluate them again (Mora-Zambrano, Bonilla-Jurado, Núñez-Freirere y Sarmiento-Saavedra, 2018).

A study was conducted in 2018 at Dr. Leónidas García Ortiz, Riobamba on the EducarEcuador platform to evaluate the difficulties of teachers in that school. The results determine that there are problems in the management of the EducarEcuador platform. Therefore, the author concludes that the problem lies in the lack of knowledge of technological tools, which makes the teacher feel unsafe to execute organizational and storage activities of information, content and data on digital platforms (Aliaga-Erazo, 2018).

In a study carried out in 2017, the use of the virtual platform EducarEcuador was diagnosed to 121 teachers from different public schools in the city of Calceta. The results show that approximately 66.4% of teachers manage the platform efficiently, while 33.6% would not handle the platform correctly. Therefore, the author concludes that the number of hours provided to teachers for the efficient use of the platform are not enough (Lopez-Alava, 2017).

In 2016, a research studied the use of the EducarEcuador platform of teachers' educational activities at the school "Mitad del mundo". The results yield a set of deficiencies such as: there is no control over the schedule set on the platform, teachers do not have the adequate knowledge to send or locate the tasks uploaded by their students, inconveniences aroused in the academic performance, they do not have sufficient knowledge for the management of the office packages of the platform (Barrionuevo-Murminacho, 2016).

In a study in 2016, a research was carried out to the educational institutions corresponding to the cantons of Balsas, Marcabelí and Piñas in the province of El Oro, which make up the 07D04 district of Education. The results determine that a small number of teachers use the Educational Platform EducarEcuador, especially because of the lack of knowledge and training received for the use of teaching tools. It highlighted the need for a training plan aimed at acquiring the knowledge and skills in the use of the teaching tools of the Educational Platform EducarEcuador so that they can be applied in their teaching work (Urgilés-Paredes, 2016).

The research of Pachakutik (2016) aimed to evaluate the level of incidence of the use of the educational platform EducarEcuador in the monitoring and academic control of students of the school "Milenio Intercultural Bilingüe "Chibuleo". The aim was to measure the incidence level of the use of the educational platform EducarEcuator of parents in the academic monitoring and control. Based on the results obtained after the survey of the parents, it is determined that the parents in an average percentage equivalent to 39% and low equivalent to 35% do not use the educational platform EducarEcuador. Thus, the researcher proposes a guideline for the use of the platform EducarEcuator for parents to improve academic monitoring and control (Guapizaca-Jinde, 2016).

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In 2016, research investigated the virtual platforms in the teaching-learning process of students coursing the 1<sup>st</sup> level of High School at the school "Atahualpa", Tungurahua province. The results of this research indicated that very few teachers know or are familiar with the usefulness of a virtual platform; students say that the teaching-learning relationship would improve if a virtual platform were used, which would act as a cross-cutting axis that would help improve their understanding; teachers say that using a computer tool such as the virtual platform would improve the student teaching relationship (León-Taipe, 2016).

In another research conducted in 2015 on the use of the EducarEcuador platform to teachers at the public-school Ochoa León, pasaje city, the results indicated that teachers are in a process of using the platform, since it is presented as an innovative strategy in the educational processes. The author concludes that the EducarEcuador platform serves as an aid for both teachers, students and parents in the different educational processes, thus achieving a change in education (Mejia-Herrera, 2015).

In 2012, a research carried out the evaluation of the educational platform EducarEcuador of teachers of the school "Consejo Provincial de Pichincha", and its impact on the approach of a reengineering proposal. From the results, it is obtained that 25.46% of teachers are satisfied with the availability of the resources and content. 56.52% of teachers are unsatisfied when using the resources or the platform. This observation must be given special attention in the reengineering of the platform (Ochoa-Saeteros, 2012).

## 4. Methodology

The following describes the steps used in this research:

- 1. **Selection of literature related to the research topic:** repositories were used with information about the EducarEcuador platform, in addition to the statistics presented on the platform.
- 2. **Evaluation of results from researches:** statistics and bibliographic documents were evaluated to determine the access of the platform. It will establish which institutions use the platform the most.
- 3. **Feasibility level of EducarEcuator platform**: the results were analyzed in order to establish the quality of operation and the skill of platform management by the educational community.

## 5. Results

Ecuador's Ministry of Education (2019) collects data from public, private, and municipal institutions (students, teachers, institutions) at the national and territorial level at the beginning and end of the school year. Information is available from 2009-2010 to 2018-2019. With the information obtained in the period 2018-2019, it is determined that the platform is used in 16200 educational institutions. There are currently two educational periods, the Costa school period, which covers the Galapagos, and the Sierra school period which covers the Amazon region. The Costa region is made up of 9484 institutions as can be seen in Table 1. The Highland period consists of 6716 educational institutions, as can be seen in Table 2.

Area	Public	Semi-private	Municipal	Private	Total
Rural	3682	52	13	98	3845
Urbana	3908	131	30	1570	5639



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Total	7590	183	43	1668	9484			
	Table 1. Coast school period. Fuente: (Ministerio de Educación, 2019, pág. 2)							
Área	Fiscal	Semi-private	Municipal	Particular	Total			
Rural	3145	153	11	320	3629			
Urbana	1674	216	61	1136	3087			
Total	4819	369	72	1456	6716g			

Tabla 2. Highland school period. Fuente: (Ministerio de Educación, 2019, pág. 2)

#### 5.1. Use index of EducarEcuador platform

EducarEcuador is an educative platform, for this reason various educational institutions do not use all its tools; however, it should be emphasized that all educational institutions use EducarEcuador platform to carry out the qualification process. Because of this, public institutions have had an increase in annual registration on the platform, see Figure 1.



Figure 1. By period and sustenance. Source: (Ministerio de Educación, 2019, pág. 1)

In public schools, the utilization rate has increased from 2009 to 2019, since in public schools it has increased 5.35% and in fiscomisional schools by 0.47% in the acceptance of the EducarEcuador platform. While in municipal schools the acceptance rate has declined by 1.17%; in private schools it has declined by 4.63%. Thus, it is assumed that the EducarEcuador platform is not 100% accepted in the national level.

#### 5.2. Assessment of accessibility

In order to evaluate the accessibility of the EducarEcuador platform, a bibliographic analysis is used, in addition to experiences that were shared by various people who are related to the educational system. According to the latest census conducted by INEC (2016), it is established that "36% of households nationwide have access to the internet, 13.5 points more than five years ago. In the urban area growth is 13.2 points, while in rural is 11.6 points" (p. 7). Ecuador is in a major back in the technology, information and communication infrastructure, and one of the most important indicators is internet access, in which until 2016 the country has only 36% coverage nationally, see Figure 2.



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#### Acceso al Internet según área

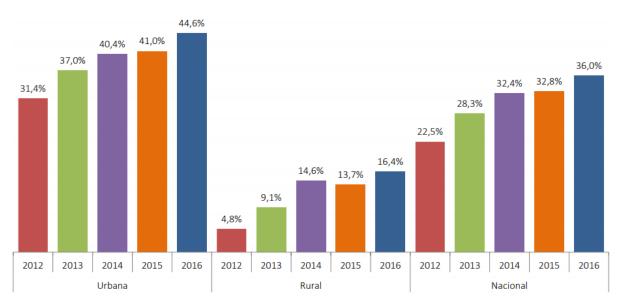


Figure 2. Internet access according to the area. Source: (INEC, 2016, pág. 4)

From this figure it can be corroborated the experiences that states that it is very difficult for students to manage the platform 100%, because not all students have internet in their homes or own a computer.

There are several drawbacks that hinder the accessibility and management of the platform, among these are internet access, home equipment, and even the skill of the users of this platform. Not everyone has the ability to manage technology, these include teachers, as there are many teachers who are even elderly and have difficulty managing technology. There are also cases where teachers have to mobilize from the community they are in, in order to have access to internet and upload their students' grades to the platform. However, the drawbacks are only on the part of users, and the ICT infrastructure also has an impact on technical problems of the platform.

The main problems observed are the collapse of the platform for several days and the noncompliance with the platform's enablement dates so that teachers can upload the student's grades; this is evidenced up to one week before the completion of the first term.

## 6. Conclusions

With the results presented in this research on the implementation of the educational platform EducarEcuador, it is shown that this platform has had a high utilization rate by the educational institutions of Ecuador. Thus, the educational platform is implemented in all schools at the national level. In contrast to the results, semi-private schools, municipalities and individuals also use the educational platform EducarEcuador, thus increasing the level of acceptance of the platform at the national level. This is demonstrated in the fact that private schools registered on the EducateEcu platform only to carry out the process of graduating their students, since it is a requirement validated by the Ministry of Education.



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There are certain limitations in rural areas to access the platform, either because of the lack of internet service, which causes users to move to another place to access the platform. In addition, the lack of technology management and access to it in rural areas cause teachers and the community not to become familiar with computer tools, which are the main problems for educators not to handle the EducarEcuador platform in an optimal way, the problem of platform management increases in older teachers, since they find it difficult to manage not only the EducarEcuador platform, but the computer tools.

This research proves, the necessity of technology in the field of education in Ecuador. In addition, it is observed that the educational platform EducarEcuador is a useful tool in the educational system. However, this tool is not fully exploited by teachers and students by factors such as limitations on internet access and ignorance of teachers in the use of the EducarEcuador platform. From the factors set out above, it can be said that the Ecuadorian education system does not show any advance in the technological field.

The importance of the use of virtual platforms today is reflected in the need of the different public and private institutions, in the production of work through virtual meetings and online works, as well as in the educational field, since various educational institutions have been forced to use educational tools, such as virtual educational platforms, with the purpose of reinforcing and maintaining academic continuity.

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