
Estudio de caso: aplicación de Prezi

Case study: application of Prezi

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Resumen: Las tecnologías de la información y las comunicaciones (TIC) han revolucionado los procesos educativos, sin embargo, aún se observan en algunos docentes insuficiencias en su empleo desaprovechando las potencialidades que brindan, y en particular la aplicación Prezi para el logro de un aprendizaje significativo. En tal sentido se realizó una investigación descriptiva en el Colegio Nacional "Machala" para caracterizar la situación del empleo de este software en el proceso de enseñanza-aprendizaje del octavo año. Se realizaron encuestas y entrevistas a docentes y estudiantes. Se arribó a la conclusión de que existen limitaciones de orden subjetivo y objetivo que interfieren en el adecuado uso de esta plataforma didáctica.

Palabras claves: Prezi; Proceso de enseñanza-aprendizaje; Tecnología educativa; Investigación descriptiva

Abstract: The Information and Communication Technologies (ICT) have revolutionized the educational processes; still, some teachers are not dexterous in their employment, and miss the advantages they offer and their potential, in particular the Prezi application for meaningful learning. In this sense, a descriptive research was carried out at the National College "Machala" to characterize the employment situation of this software in the teaching-learning process of the eighth year. Surveys and interviews were carried with teachers and students. It was concluded that there are subjective and objective limitations that interfere in the proper use of this didactic platform.

Keywords: Prezi; Teaching-learning process; Educative technology; Descriptive research

Introduction

Information and Communication Technologies (ICT) and students establish a relationship of great significance, based on an articulation of cause and consequence, an evident equation that strengthens the purposes of the teacher and the student needs of learning.

At present it is necessary that teachers take advantage of the potential of these technologies in the constant updating of content and the development of teaching processes for the benefit of students. However, some teachers are unskilled in their use; as a consequence, they miss the potential they offer (in particular the Prezi application) for the achievement of

meaningful learning. In this sense, a descriptive research was conducted at the National School "Machala" to characterize the situation of employment of the software in the teaching-learning process in the eighth year. The results obtained demonstrate that there are still some objective and subjective limitations in the use of ICT in the teaching-learning process.

Development

1. Epistemological construction around ICT in education

Before talking about Prezi, it is pertinent to refer to the fact that computer science has developed software technologies that have become important tools to carry out the teaching and learning process according to the current times. So the knowledge and skills for handling resources, procedures and techniques constitute a challenge for the teacher.

Administratively, they allow for systems that improve the management of information regarding registration, support, publication, communication and interaction with the community (Villegas, 2013).

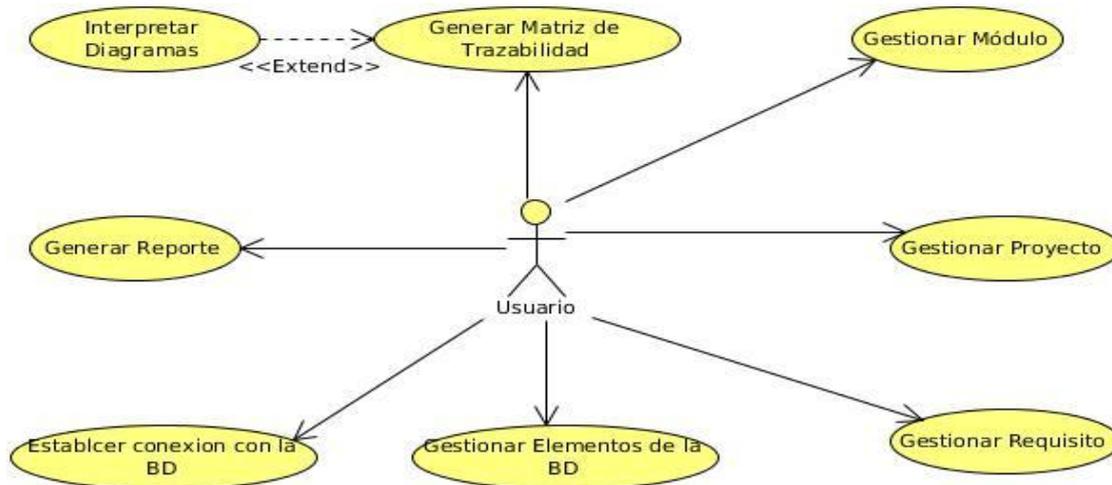
In today's society, also known as the "Knowledge Society", the transformation of information into knowledge is vital, even more so if the knowledge generated becomes obsolete in a short time, considering the need for resources that allow the management of that knowledge, information, understanding, the search in diverse sources, selection, treatment of the sequenced and ordered data, faithful or approximate notions of the reality, applying the critical, rational and reflective use of the global information, distributed by the different means (Gisbert, 2000, Delgado, 2005, Prendes, 2011).

Managing information includes the ability to know how to search for information in different sources and, more important, to know how to select it. In this way, the resources or means of satisfying the needs are articulated with the technology, to enable the practical use of scientific knowledge.

Between the technological resources and the users or clients, a need of engineering requirements is established, and it includes the set of tasks that lead to understanding what the impact of the software will be, what the client wants and how the clients or end users will interact with it (Belloch, 2012). Meeting the engineering requirements is a process that

involves a software specification, an action that, when translated into an order, intends to communicate the customer's needs to the system's developers.

Graphic 1: Requisites



Source: The author

The graphic represents the actions that can be made using the engineering technique of requisites that, if applied to teaching, is a guiding model that comprises the possibilities for the management of knowledge through information. This reveals that while ICT and in the particular case multimedia technology are known by most teachers, its use is not reflected in current education either because they do not believe it is a determinant in learning or because of lack of knowledge about its benefits. This has led to a scarce technological application by the teacher in the subject he has designed, where the student does not develop skills in the technological computing field.

In this regard some authors suggest that ICT will give a more active, autonomous and participatory role to the student, leading to a greater interest in its use and domain. From the perspective of Cognitive Theories of learning, according to Aznar (2005), the implementation of Constructivism, to learn to cope with ICT through daily experiences, favors the interaction of the individual with the media, allowing the construction not only of knowledge, but also the appropriation of skills for the manipulation of these technological resources.

1.2. The Prezi platform

Prezi is a technological resource that is part of this implementation as a free online service, and offers the possibility of making presentations collaboratively and online, either synchronously or asynchronously, with which one or several people can work on the preparation of the same presentation, that is, it radically changes the way the user is aware of the information. In this sense we have the application of on-line presentations, using a single window, as an infinite canvas, where you can locate texts, images, videos and other objects (Molina, 2014).

The use of this tool as a didactic resource contributes to the development of skills and abilities in the students and at the same time improves their learning, since it adds to the teaching process an updated didactic material and a graphical interface that helps and motivates the students.

In the process of teaching, the teacher conceives the direction of learning through the establishment of didactic strategies that allow creative interaction with students (Mañalich, 2012), through technical methods and support tools. The teaching process observed as a set of systematic transformations of the phenomena in general, explains the series of gradual changes that take place inside. In response to these changes is that Prezi bases its effectiveness as an online application based on flash, and it allows very dynamic and non-linear presentations with which to zoom in and out visual maps containing links, images, videos, words, determinants of reflective attitudes in the student (Arenas, 2014).

In this way as a consequence of the teaching process it is caused a successive and uninterrupted change in the cognitive activity of the student with the participation of the teacher in their work towards the domain of knowledge, skills, habits and behavior consistent with the scientific world view, which will lead in their existential practice to a consistent approach of the material and social reality, all of which necessarily implies the stepped transformation and the redimensioning of the capacity to respond successfully to the personal and social demands of an activity or any task in the context of professional practice (Rué and Martínez, 2005).

The use of teaching resources provides information while awakening interest in the student to know the content of it, becoming a guide for learning, as it helps the teacher to organize

the information he wants to transmit, as their intention to facilitate the function of orientation to be a didactic resource of the educational context, and that also helps the formation of ideas.

The Prezi tool operates in this direction for its diverse potential as an online tool to create colorful multimedia presentations (Carballeiro, 2012), which favors the aesthetic training of students; among the transcendent advantages of the tool should be located the fact of being able to publish directly on the Internet the presentation, which together with its compatibility with many operating systems (Fonseca, 2015) makes it a very effective didactic procedure.

Technological resources can be useful for those who have to do academic tasks or for those who want to work in a virtual environment at a distance. Prezi creates the conditions to perform actions for learning from home, using this tool based on the route between the elements available in the presentation, a path to be followed by the presentation (Mora, 2012). Its qualities show how unnecessary it is sometimes to think of large investments to have highly efficient technological resources.

Due to its capacity to store a large amount of data, computers can be used as study and consultation tools for any subject, which shows the need for a broad orientation of the student's conscious activity in the individual order. The information contained in the web is a wealth of knowledge that guarantees the interest of students to be able to evaluate their reality through the materials published on their context. In this regard, some authors consider that a teaching practice oriented in this sense allows to develop structures of thought in students to favor the reflection of their environment (Hernández, 2011), overcoming the limitations of classical teaching by establishing a dynamic dialogue - machine to adapt this process to the particular needs of each person according to their learning speed.

At times when the web is an environment of interaction, multiple services to share and edit resources together, as occurs with the Prezi presentation editor, that has a service where the elements are placed in subsequently organized routes and visions, replace the typical slides with an interactive mural in which we move in real time.

The proposal consists of putting all the slides of a presentation on a single surface. Once this is done, the different slides are shown in the order that we indicate. The user interface is very intuitive and easy to use and is designed to create presentations in a short time. Prezi in this way includes the management of a schematic presentation in the form of a network of ideas, where you can navigate more dynamically and in a more free and non-linear way (Cruz, 2011).

Among the main features of Prezi are:

- Texts, images, tables, video, animations and documents can be added in PDF format.
- There are several levels of styles to apply to texts.
- You can add frames to texts or images.
- It allows turns in the journey from one point to another.
- Objects or texts can be zoomed in and out.

The Prezi editor assumed as an educational procedure changes the way of viewing the contents of the slide presentations. Its flow of objects brings versatility and movement. The use of the presentation tray facilitates sharing these materials with other students, colleagues or teachers through the network.

For teachers, it represents designing activities with the purpose that students produce presentations in a system that has been designed for creation: in an attractive, dynamic way, with great space for the imagination, in which we can include: images, PDF documents, videos, maps, sound, music (Viera, 2014). It has the feasibility of generating a narrative fable which allows to emphasize with the zoom elements required an underlined scheme that guarantees visualizing the content in a chromatic sense. A high connection is present in Prezi, useful for the student, since it makes it possible to summon friends to the presentation and thus raise the level of dialogue. In addition, as this editor saves the elaborated presentations, you can have access to a bank of presentations of diverse themes.

The tendency to create, use and share various content and resources generates great benefits for education, while encouraging a more active role by users. These advantages are supported in the fact that it presents an accelerated learning curve, and presents spatial

transitions that develop skills among which are the improvement of the capacity for synthesis, the increase of creativity, which is easier to expose face to the public, and of course the improvement of ICT control (Carmona, 2015).

Among the main benefits offered by the use of the Prezi service, are:

- The basic version has no economic cost;
- All changes made to a presentation under construction are stored online. They are saved automatically;
- The possibility of approaching and moving away from the elements included in the presentation makes it possible to emphasize the desired ones;
- Presentations can be shared through an electronic link, so that other people can see them, if the author so wishes;
- There is also the possibility of placing a presentation directly in spaces such as blogs, wikis and virtual learning platforms, to see them without having to enter the site.

Despite these benefits when thinking about the Prezi as a means of support for the teaching-learning process, the following disadvantages must be taken into consideration:

- In its free version, Prezi requires working directly connected to the Internet, which can be a limitation for users who lack connection;
- It is not always feasible to convert slide presentations into Prezi presentations.

Methodology used

The assumed methodological strategy systematizes the constructive sources of ICT and contextualizes them in the field. Surveys were applied to the students and interviews to the teachers. Bibliographic and statistical review methods were also used for the planning, collection, processing and analysis of the information, providing the results through absolute and relative frequencies in tables and graphs of the descriptive statistics. It was concluded that there are subjective and objective constraints that interfere with the proper use of this didactic platform.

For the application of the surveys and interviews, a sample composed of 10 teachers and 50 students of the eighth year of the Machala National College was selected using the simple random method.

Discussion and analysis of results

The instruments used to validate the research demonstrated arguments that describe the presence of the theoretical assumptions analyzed above.

By means of the interview to the teachers and the randomly selected students' survey, the following information was obtained; it characterizes the employment situation of the ICT and in particular of the Prezi platform in the teaching-learning process of the eighth year of the Normal School "Machala".

The table below shows the self-evaluation of teachers regarding the domain of ICT as a teaching means.

Table 1. Knowledge and skills on ICT as a teaching means

8th year Teachers. National College "Machala"

| Level | Amount | % |
|------------------|--------|-----|
| High | 2 | 20 |
| Intermedi ate | 7 | 70 |
| Low | 1 | 10 |
| Total | 10 | 100 |

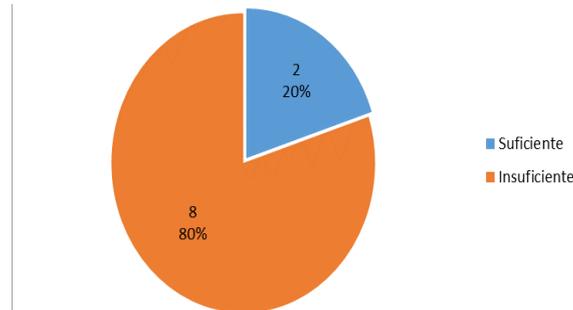
Source: The author

70% (7) of the teachers interviewed consider having an average level of knowledge and skills for working with ICTs as a means of supporting the teaching-learning process. 20% consider having a high level and only 10% (1) estimation is low. It reveals the existence of an adequate level of knowledge and skills in the teachers.

The following graph shows the opinion of teachers regarding the possibility of access to the Internet.

Table 2. Internet access

8th year Teachers. National College "Machala"



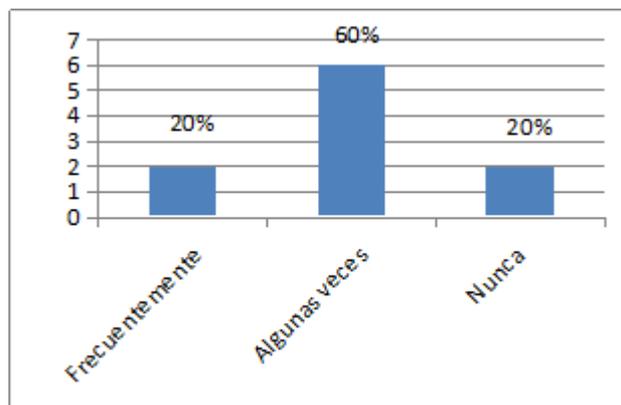
Source: The author

When asking about the possibilities of internet access for methodological preparation, training and as a source of resources for teaching their classes by using ICT tools, 80% (8) of teachers consider that it is still insufficient and only the 20% (2) consider it sufficient.

In the inquiry about the tools that the teacher can use in the teaching process it was possible to verify that the Prezi platform presents the situation shown below.

Table 3. Use of the Prezi platform

8th year teachers. National College "Machala"



Source: The author

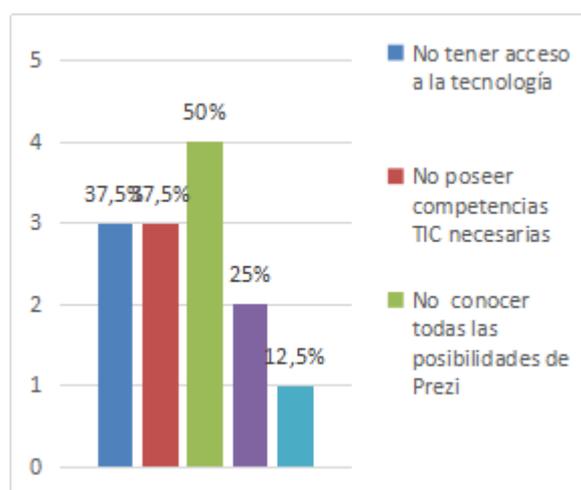
20% (2) of teachers use the Prezi frequently, 60% (6) sometimes and 20% (2) never; These criteria allow us to state that 80% (8) of teachers, in a general sense, somehow use the

potential of this software in their classes, although not in a systematic way, although there are others (20%) that underestimate these benefits.

When asking about the reasons why Prezi is not used, often the 8 teachers who use it sometimes or never, expressed what is illustrated below.

Table 4. Reasons for not using Prezi in the classes

8th year Teachers. National College of "Machala"



Source: The author

37.5% (3) consider not always having access to technology, as well as not having the ICT skills necessary for their optimal use, 50% (4) express not knowing all the possibilities offered by the Prezi for its use in classes, 25% (2) consider it is not useful and 12.5% (1) estimate that their employment in the classes is not a priority for the school.

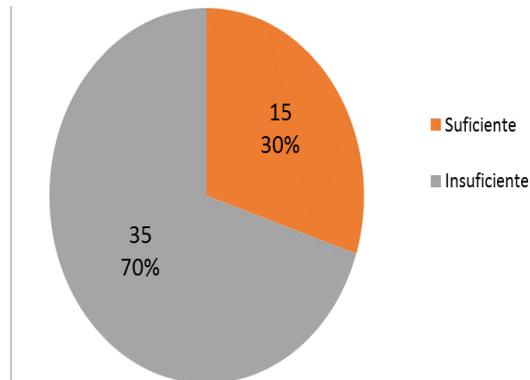
In addition, 3 (37.5%) prefer to use Power Point presentations for the development of the classes, which indicates insufficient knowledge of the didactic potential of the Prezi platform.

These results coincide with those obtained by García (2012) who determined that one of the factors that influence the non-use of the tools provided by ICT is the lack of knowledge on the part of potential users.

When corroborating this information through the opinion of the students, a survey was applied, obtaining the information that is provided below.

Table 5. Internet access

8th year students. National College “Machala”

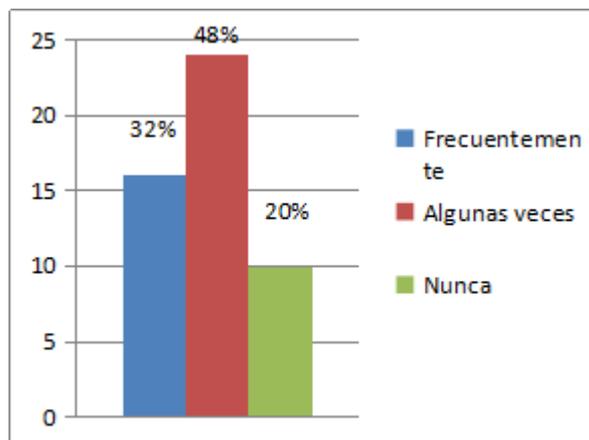


Source: The author

Of the 50 students interviewed 15 (30%) consider that Internet access is sufficient while for 35 (70%) it is insufficient. Information that corresponds to the opinion of the teachers. Table 6 provides information on the frequency with which students use the Prezi platform in the learning process.

Table 6. Use of the Prezi platform

8th year students. National College “Machala”

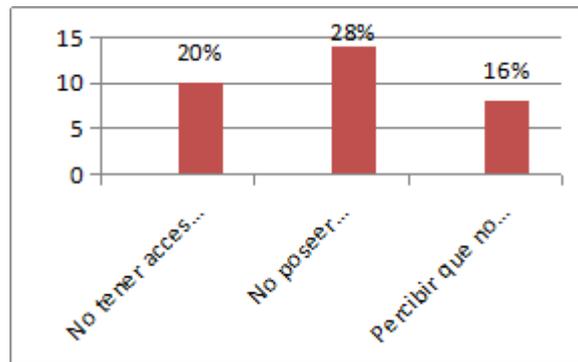


Source: The author

32% (16) of the students state that they use the Prezi frequently, 48% (24) only a few times and 20% (10) never. Information closely related to that is provided by teachers. The reasons why students do not use the Prezi platform are detailed in table 7.

Table 7. Reasons for not using Prezi in the classes

8th year students. National College de “Machala”



Source: The author

20% (10) of the students state that they do not use the Prezi because they do not have access to technology whenever they need it, 28% (14) think they do not have the necessary ICT skills to manipulate this software and 16% (8) appreciate it is not useful or prefer to use the Power Point; the rest consider employing the Prezi platform only in cases that are necessary.

When analyzing this information it can be observed that there is still ignorance of the application of Prezi by both teachers and students. However, among those who use it frequently, a different criterion predominates. Teachers consider that their employment fosters a participatory and dynamic environment; it is the ideal means to motivate and attract the attention of students. Similar results were obtained by Mejía (2011) who, in the conclusions of his research, affirms that the methodology that works best at the moment in undergraduate teaching is the face-to-face methodology supported by ICT.

While students and teachers believe that they observe improvement in learning and teaching with the application of the Prezi methodology, their use as a resource in the classroom contributes to the development of skills and abilities in the use of ICT. In this regard it is worth remembering that: "Communicating knowledge is not an easy task, it requires transmitting knowledge (be it of a theoretical, academic or practical nature) and knowing

how to do it" (Martínez, 2012, p 8). Similar results were found by Saez (2012) and Santoveña (2012) in their studies on the application of ICT in the teaching-learning process.

Conclusions

The use of ICT in the teaching-learning process of the eighth year, in the National School "Machala" is characterized by:

- Generally have a teacher with a high and medium level in terms of knowledge and skills for working with ICT.
- Access to the Internet is still insufficient to be used as a teaching resource.
- The Prezi platform is used as a means of support in the teaching-learning process, but even the exploitation of its potential is insufficient; 20% of the teachers and students interviewed and surveyed declared never having used this application. Among the reasons why it is not used, they include: not always having access to technology, not having the ICT skills necessary for its optimal use and not knowing all the possibilities it offers.

These results give a clear indication that there are still some objective and subjective limitations for the use of ICT in the teaching-learning process in order to achieve significant learning and in particular for the exploitation of the potentialities of the Prezi application.

It was found that despite these limitations, students have basic computer skills and when they receive classes where teachers use these technological resources, teaching is more creative, participatory and dynamic, fostering critical thinking.

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