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M-learning: Estrategia para la promoción del aprendizaje electrónico móvil en instituciones de educación superior

M-learning: strategy for the promotion of mobile e-learning in higher education institutions

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ABSTRACT

The review article was focused on analyzing M-learning as a strategy for promoting mobile electronic learning in higher education institutions in Venezuela. The approach was created from an analytical perspective, developing a reflective process by the researchers and using a type of documentary research. It is evident that M-Learning by no means represents a substitute for traditional training since both can coexist perfectly depending on the needs; in addition, given the dizzying rise of new technologies, it can be said that students are well aware of the different computer media but educators (teachers, tutors and facilitators, among others) are the ones who handle cognitive technology, considering that its mission is to teach them how to optimize and use such mobile devices or instruments but for academic purposes; hence the challenge they must face.

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Keywords: Computer assisted instruction, computer uses in education, educational technology, multimedia instruction (Words taken from UNESCO Thesaurus).

INTRODUCTION

The Internet associated with the incorporation of new electronic media has brought about a substantial change in all social spheres, by radically modifying many daily practices and activities. In effect, the digital mobile era has been promoting dynamism in Information technology through the imposition of changes in the business, social and educational environment. Consequently, it is imperative that society, in the face of these evident reforms, put pressure on the educational sector to take an active part in such a process. (Perozo Martín & Chirinos Martínez, 2019).

On the other hand, it reflected a break in the traditional paradigms of the educational sector because the technological revolution has opened up other structures that have affected education; being at the forefront of nascent business modalities, and promoting the satisfaction of the business market. In this context, the new affected scenarios has been organized by the coexistence of information, since its sources are an essential element for decision-making; therefore, new technologies will become means which can provide the necessary support for higher education institutions that will contribute to the development of attitudes - aptitudes in individuals (Anderson, & Andara, 2017).

Besides, the current diverse use granted to virtual learning environments has led to the integration of more students every day; in this way, it can allow a solution to the problem of physical space by reducing it, considering time management, and adapting to the globalized world in education to generate praxis of a flexible, collaborative and cooperative curriculum. (Peche Cruz, & Giraldo Supo, 2019).

In this sense, the new ways of knowledge promote its assimilation transfer by means of the generalized use of ICT and the use of materials that facilitate learning. In other

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words, education clarifies the concern of how the teaching-learning process is improved by investigating through the use of virtual environments in practice. (Mero Chávez, Fernando Pazmiño & San Andrés, 2019).

Hence, there is a better use of the time dedicated to the development of some individuals' skills in order to apply those moments to the deepening and study of concepts, that is, with processes that involve the solution of certain problems (Aldana Zavala, 2019). By virtue of the idea previously stated, this research was oriented to analyze M-learning as a strategy for the promotion of mobile electronic learning in higher education institutions in Venezuela.

METHOD

The approach was conceived from the analytical perspective, developing a reflective process by the researchers (Aldana Zavala, 2019), using a type of documentary research. In this sense, (Palella and Martins, 2012) define it as that which is exclusively specified in the collection of information in various written or oral documentary sources, having as study population: texts, scientific articles and official documents, complementing itself in a descriptive study. (Arias, 2012) indicates that it refers to the characterization of a fact, phenomenon, individual or group, which is based on a bibliographic design and the application of the content analysis technique to structure the various categorical analyzes.

ANALYSIS AND DISCUSSION OF RESULTS

E-learning

For Cabal, Martínez et al. (2010), electronic learning also known as e-learning due to Anglicism can be defined as the teaching-learning process that takes place through the use of networks, the Internet, as well as the use of electronic means. On the other hand, Xiao & Benbasat (2007), comment that this can be defined as a learning modality within

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distance education in which data networks are used as means (Internet, Intranets, among others), tools or hypertextual applications as support (Email, web, Chat, among others) as well as content and / or online learning units.

From another perspective, (the United Nations Organization for Education, Science and Culture UNESCO, 2019) indicates that it is a concept more related to the semi-face-to-face modality and it is also called b-learning '(blended learning). Similarly, it warns that e-learning is the cornerstone for building inclusive knowledge societies. In this sense, UNESCO, in its unique mandate, has played an essential role in the World Summit on the Information Society to promote the free circulation of ideas and knowledge, since its contribution incorporated the ethical, legal and socio-cultural aspects of the information society, in addition to the advantages that offer ICTs, by placing the human being at the center of the approach.

Based on the ideas presented, it can be argued that e-learning infers the role of teaching by using electronic equipment, such as computers, email, the www network and CD-ROM technology; reason why it offers a new possibility of training giving rise to a globalized society that requires quick learning of new techniques in addition to other types of information, for facing effective competitions.

Mobile e-learning

To address this point, it is necessary to specify some terms in order to avoid confusion due to the use of similar terminologies. Hence, mobile learning, also known as M-learning, refers to learning environments based on mobile technology, aimed at improving and promoting teaching and learning processes. In this way, it can be seen that mobile learning is related to education outside the classroom; that is, distance education.

In this sense, Hernández & Morales (2010), maintain that the term distance implies a geographical change where the contents reside; that is, the place where they are taken,

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always maintaining a physical connection among them. By contrast, in M-Learning the term distance implies that retrieval or access to content can be done into the move making the most of the time available regardless of the location.

From another view, Kinshuk (2009) warns that it is a trend due to the proliferation of current communication systems. For his part, Quinn (2010) conceives it as the confluence between mobile computing and electronic learning, but with accessibility to the required resources, as well as effective learning support. According to Brazuelo Grund & Gallego Gil (2011), the M -Learning is presented as a support for mobile educational processes, which requires high interactivity in the development of learning, with integration of content and ubiquity in cognitive activities.

According to the given theories, it can be seen that mobile electronic learning offers modern methods to support the teaching-learning process through the use of mobile devices; such as: Tablet-PC, Personal digital assistant (PDA), MP3, smartphone, mobile phones, laptops, among others. In summary, it can be noted that mobile e-learning is presented as an element invariably linked to any handheld device that has some form of wireless connectivity, becoming a common tool in the lives of many people; as a result, it is becoming a solution to the problems facing the educational sector.

In this sense, the intervening parties in the teaching-learning process are supportive, since, in this way, the instruction can be carried out anywhere and at any time. Consequently, the use of mobile devices, as well as new technologies, contribute to formal and informal instruction due to it has great potential to transform educational performance and training; that is why, it is importance for this study.

M-Learning in higher education

For several years, the educational model based on the use of mobile devices has been based on different types of learning, which can vary depending on the characteristics of

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each one. However, they are not exclusive and you can integrate and match mixed patterns that combine the best to create a more comprehensive one.

Hernández (2010), for his part, comments that the use of M-Learning in the classroom facilitates the understanding of knowledge; it includes multimedia and is focused on the environment, it also encourages attention to diversity, and favors learning centered on the student and the context. On the other hand, it encourages interaction and communication in addition to allowing the exchange of data between members of the educational community (students and teacher), and provides direct publication of content and comments, among others.

In the same way, Hernández (2010) emphasizes that M-Learning is a virtual scenario where the construction of knowledge constitutes an active process considering that dynamic development of a social nature is generated from the experience of students and online tutors but with academic relevance. Consequently, the monitoring or follow-up strategies must be evaluated; therefore, M-Learning methodology represents an excellent tool in order to maintain control of the virtual classrooms providing records to measure students' performance. In this sense, with this application, the educational institution seeks to achieve continuous improvement. In this instance, the academic and technological pairing constitutes an active process in this methodology where the intervening parties (higher education institution, tutor and students) play a dynamic and reflective role.

Moreover, Herrera (2012) notices that the application of M-Learning is very effective for problem solving and for the acquisition of skills in field of work, in exploratory studies, among others. From another perspective, Marqués (2013) argues that this mobile learning methodology supports formative and summative assessment in addition to increasing student's motivation. In summary, mobile e-learning represents a technological window for the educational modality, which contributes to the construction of knowledge, to the resolution of learning problems, as well as the increase in a set of

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attitudes and skills, which facilitate autonomous and ubiquitous access thanks to the use of portable mobile devices.

Social learning tools

“Social learning tools” have become those resources used in the teaching-learning process with andragogical and pedagogical purposes, managing social software or social media with the purpose of facilitating learning in the interaction between people and systems. Furthermore, González (2014) states that social networks and edublogs as collaborative learning tools have shown new virtual environments for learning through the use of active technologies, the use of the internet as the great socio-cultural phenomenon and the development of the web, together with a diversity of tools. All these elements have opened up a multitude of possibilities for different aspects such as training, the use of constructivist models in teaching-learning models, innovation and improvement processes, as well as collaborative learning.

In this perspective, Visa (2014) considers that collaborative learning and the use of technology are two trends that are in force in all the educational stages of the individual, that is, from primary to university stage. Considering this, it implies a multitude of applications and virtual platforms that are being implemented and improved in a spectacular way to acquire the content implicit in a subject while promoting interaction between teachers, students, as well as collaboration between students (UNED, 2018).

From another perspective, Cerezo (2008) cited by Martínez (2014) expresses that the interest in social networks does not lie so much in the content as in their ability to establish connections and add value, since the growing importance resides in the nodes interconnected versus individualized knowledge. Martínez (2014) states that the potential mashups applied to the educational context lies in the way to make it possible and reach new conclusions or discern new relationships through the union and combination of large amounts of data, from different sources, in a manageable way. So,

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there are some tools that provide an immersive environment that can be integrated from virtual worlds to allow the user access an exhibition, a video or a wiki in the same space. Those tools are: There, Active Worlds, Olive and Second Life, which permit the interaction of applications and resources.

CLOSING REFLECTIONS

In today's society, the educational reality is closely linked to technological advances and innovations since M-Learning or electronic learning and the promotion of mobile electronic learning are possible through the use of computer platforms, which represent an advantage; since knowledge in social practice must be considered by the different highly relevant sectors. Hence, the current challenge for the parties involved in this issue, demands the satisfaction of business requirements coupled with the training of a human being with a superior preparation that contemplates the practice with telematic means, as well as the use of technological platforms to the transmission and generation of knowledge.

Returning to the aforementioned, the researchers agree that the use of the M-Learning or mobile learning methodology jointly contributes to the partnership between society and educational institutions; since they provide solutions to the problems of the globalized society.

In the same way, it not only attends and responds to the problem of physical space, but it can also be used successfully in the face of any global crisis or contingencies. Besides, it provides benefits for time optimization, economy in physical spaces, and reduction of costs that are originated from the distances and frequent movements of the intervening parties. Hence, both e-learning and mobile e-learning offer valuable support in the education sector, among other reasons. It is a modern and effective way for the generation and transmission of knowledge that favors the evolution of today's information and communication society.

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Finally, the researchers warn that M-Learning, clearly, in no way, represents a substitute for traditional training since both can coexist perfectly depending on the needs. Also, given the dizzying rise of new technologies, it can be said that the Students know the different computer media well, but teachers (professors, tutors and facilitators, among others) are the ones who handle cognitive technology. Furthermore, their mission is to teach them how to optimize and use these mobile devices or instruments for academic purposes; hence, it is the challenge they must face.

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