La sociedad del conocimiento y la sociedad de la información como la piedra angular en la innovación tecnológica educativa

The Knowledge Society and the Information Society as the cornerstone in educational technology innovation

A sociedade do conhecimento e a sociedade da informação como a pedra angular da inovação tecnológica educacional

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Resumen

El objetivo de este documento es presentar una reflexión en torno a los conceptos *sociedad de la información* y *sociedad del conocimiento* para entender la importancia que estos tienen en el ámbito de la innovación y la tecnología en la educación. Para ello, se realizó una indagación de tipo documental en diversas fuentes (medios electrónicos de libre acceso, bibliotecas digitales, libros y revistas indexadas de reciente publicación). A partir de esto, se explica que la sociedad de la información, apoyada en el uso de tecnologías en el ámbito de la comunicación, ha provocado una significativa evolución en nuestra vida cotidiana. Este auge tecnológico supone una transformación en diversos contextos, como el educativo, familiar, social, cultural y político. En efecto, la relación que existe entre sociedad de la información y sociedad del conocimiento crea escenarios propicios para emprender investigaciones y producir conocimiento con el fin de lograr mejores estándares de calidad que promuevan el desarrollo tecnológico y la innovación para el bienestar y progreso de las instituciones educativas, conducentes a una alfabetización digital de mejora continua que demanda el ámbito de la enseñanza-aprendizaje.

Palabras clave: modelo integral de educación, tecnologías para el aprendizaje y el conocimiento.

Abstract

The aim of this document is to think about information society and knowledge society concepts with different authors support, to have enough elements to understand the significance they have in educational innovation and technology scope. The study is theoretical and descriptive. It was made through a documental research in various sources in free access electronic media and digital libraries, from books and recent publication indexed magazines. The sources of reference provide explanation of terms with no universally accepted definition, so authors think about them to get a wide vision of the topics and set the relationship and influence they have on each other. Information society, supported by the use of technologies in the field of communication, has caused a strong evolution in our daily life, this technological boom involves a transformation in different contexts: educational, familiar, social, cultural and political. The relationship between information society and knowledge society creates favorable scenarios to generate research and produce knowledge, in order to achieve better quality standards that promote technological development and innovation, for the welfare and progress of educational institutions, conducive to a digital literacy of continuous improvement, which demands the teaching-learning field.

Keywords: Integrated model of education, technologies for learning and knowledge.

Resumo

O objetivo deste documento é apresentar uma reflexão sobre os conceitos da sociedade da informação e da sociedade do conhecimento, a fim de compreender a importância que eles têm no campo da inovação e da tecnologia na educação. Para tanto, foi realizada uma pesquisa do tipo documental em diferentes fontes (mídia eletrônica de acesso livre, bibliotecas digitais, livros e periódicos indexados de publicação recente). A partir disso, explica-se que a sociedade da informação, apoiada pelo uso de tecnologias no campo da comunicação, tem causado uma evolução significativa em nosso cotidiano. Esse boom tecnológico supõe uma transformação em diversos contextos, como educacional, familiar, social, cultural e político. Com efeito, a relação existente entre a sociedade da informação e a sociedade do conhecimento cria cenários propícios para realizar pesquisas e produzir conhecimento, a fim de alcançar melhores padrões de qualidade

que promovam o desenvolvimento tecnológico e a inovação para o bem-estar e o progresso das instituições. educacional, levando a uma alfabetização digital de melhoria contínua que demanda o campo do ensino-aprendizagem.

Introduction

Information society and knowledge society are two expressions that in the field of education refer to the use of digital devices to facilitate learning and consolidate an integral model of education that meets today's techno-pedagogical objectives. In this sense, the introduction of technologies in the classroom and the increase of online courses have opened new horizons to improve the quality of education and have influenced the transformation of educational models based on technological infrastructure and the Internet. to process and transmit information.

This means that the traditional school, in the context of information and knowledge societies, has undergone evident transformation, since knowledge can now also be produced and fostered in virtual or blended environments, which has led to the construction of a educational model more broad and attractive for students, with programs that best meet their academic and social expectations.

Based on the above, this paper attempts to answer the following questions: how does the information society work? What is the scope of the knowledge society? How do these concepts relate to each other? Are their main components? What role do these types of societies play in educational innovation and creativity supported by technology?

The information society in everyday life

The information society facilitates the activities of millions of individuals around the world, as it offers solutions to problems of different nature (daily, academic, cultural, social, economic, etc.) through the creation, access, management and exchange of electronic content. On this construct, currently different definitions are handled, some of which are presented below. For example, Méndez, Figueredo, Goyo and Chirinos (2013) point out:

> The information society is represented by information and communication technologies, which play an important role in the face of the new realities experienced by the university institutions in relation to teaching, extension, research and management activities; (and) in relation to its possibility and ability to store, transform, access and disseminate information, where human talent is a fundamental factor, for which permanent learning processes should be promoted that allow modifying work habits and leading to face success present and future challenges (p. 74).

In contrast, Valderrama (2012) argues:

> The reductionisms and technological determinisms that underlie this project lead to a kind of technological totalitarianism that beyond the instrumental use of certain technologies to exercise policing controls both in the face and virtual world, refers to the imposition of a unique model of technologies of communication and information (ICT) and the generation of a production model of technological subjectivities (p. 14).

Finally, Tubella (2012) considers:

> In the information society, the communicative action and the mass media as a whole (the media) acquire a renewed decisive role in the process of building power. Since the discourses are generated, disseminated, debated, internalized and incorporated into human action, in the field of socialized communication around local-global communication networks, communication networks and our action in and from them, will be key in the definition of power relations in our days (p. 99).

According to the above, it can be affirmed that the information society has caused a technological dependence on people, which has transformed its nature and has caused a strong subordination, as well as a change of habits in the daily life of the human being. This has led to the emergence of a new information culture that does not respect borders and leads to a different and informed world with the incorporation of ICT and its main input: information, integrated into daily life and generating power.

This is evident, in the specific case of Mexico, in the substantial increase in Internet users, which went from 20.2 million people in 2006 to more than 70 million in 2016. To this must be added that in the country 7 of each 10 Internet users have access to this technology since the last eight years (Internet Association, 2017).

Undoubtedly, with the arrival of the information society, a new epoch has begun to be lived in contemporary history, which has been characterized by the vertiginous technological evolution and the exponential increase in the levels of information generated and disseminated through of ICT. This boom has become an important part of people's lives, which means a transformation in all areas of human activity. In this regard, Verón (2016) states that "the information society is not limited to the Internet, although it has played a very important role as a means to facilitate access and exchange of information and data." (p. 879).

The society of knowledge and its scope

On the knowledge society, Pedraja (2017) considers:

> [This] imposes increasing demands on nations, organizations and people. In effect, the intellectual preparation needed to perform with social efficiency in a digital society and of networks that interact in a systematic and uninterrupted way is becoming increasingly high. (p. 145).

For its part, Pescador (2014) states that "the knowledge society, among several alternatives, can be characterized as that society that has the capacities to convert knowledge into a central tool for its own benefit" (p.6).

In this order of ideas, it is possible to say that the main characteristic of this concept is the construction of knowledge as a means of development, with the aim of producing knowledge with a broad social sense. In other words, knowledge in our times can not be limited solely to the academic sphere, since all the elementary contexts of a society are involved, which implies a change in the scope of knowledge.

New professional trends, therefore, create favorable scenarios for the emergence of knowledge societies with the sole objective of achieving the well-being of citizens, by training students and teachers in the use of tools that improve their skills and competitive advantages; Likewise, they motivate the generation of research that seeks to integrate their results into academic, social, cultural and productive transformation, with repercussions on higher standards of quality of life.

Based on the above, the Organization for Economic Cooperation and Development (OECD) presents perspectives of the scenario that young people will face in 2050, among which the need to prepare them for life in the cities stands out. According to this projection, 9 out of 10 young people will live in cities and face the challenges of that lifestyle, which are related to the availability and care of water, mobility, urbanism and communication, to name a few. (OCDE, 2016).

The information society as a support for the knowledge society

Mansell y Tremblay (2013) they consider that the information society is the foundation of the knowledge society, while Araiza (2012) points out that on both concepts some precisions must be made:

> First, they are sometimes used as synonyms, but they are not, although they are intimately linked and are therefore treated together. Second, there is a convention that states that the information society is a condition of the knowledge society, that the former has more to do with technological innovation and the latter with a broader dimension of social, cultural, economic and political transformation; or, in other words, that the information society is a preliminary stage of this new type of society that will finally take us to the stage of knowledge (p. 36).

In other words, the manufacture and accelerated introduction of new information technologies and their scope in today's world create the conditions for information and knowledge societies to oblige governments, companies and universities to take measures to promote the incorporation of knowledge in production, in administrative processes, as well as in the provision of public services.

Barroso (2013), referring to both concepts, states that in the knowledge society everyone "has the skills and competencies to be active members in the social construction of knowledge, [while the information society is linked to] the possibilities of dissemination of information offered by the digital environment "(page 64).

On these terms, however, it can be said that more is promised than is currently being considered, since what really characterizes our society is the incursion of new technologies, as well as the large quantity and availability of information. This means that the most appropriate denomination should be an information society, which can be applied to anyone who has the necessary technological resources to access and obtain information on the Internet; In other words, the information society and its constant innovation are part of the knowledge society, which is in permanent construction.

In this context, within the knowledge society, innovation is considered an essential factor for the hegemony of the economic system, since it is the main element to provide solutions to problems and demands of today's society. Knowledge, in a nutshell, is the main engine to drive innovation.

On the other hand, the information society is related to the knowledge society because it supports the relationships that are woven in today's society, which is linked to the possibilities that allow building knowledge through technologies. Therefore, it is possible to affirm that the information society is essential for the knowledge society. In addition, the latter requires the individual abilities and abilities of people to channel them towards the manipulation of technological resources linked to the information society, so that the construction of knowledge is achieved.

However, the difference between both concepts is that the existence of the information society does not guarantee or endorse the existence of the knowledge society, because this, in fact, responds to an evolutionary process of human development. On the other hand, the information society is a support for the knowledge society, characterized by the use made of ICTs, as well as by the rise of information in human practices.

An example of this reality is observed in the trends of educational platforms towards personalization. This allows users to incorporate elements available on the Web, such as social networks, news channels and sites related to their area of study to have everything within reach in one place, although there is also an important tendency to leave the institutional platforms and build from different spaces, a task that implies a challenge for the academic management of higher education institutions at present.

Science, technology and knowledge in the knowledge society

In relation to science and technology, different authors present opinions that show the contribution of both concepts for the formation of the knowledge society. In this regard, Gómez (2017) states:

> In the contemporary world, science and technology are a structural part of their dynamics. The transforming capacity that they have demonstrated in the last decades in infinity of fields, make them essential to guarantee our cultural infrastructure, our way of life and the daily mediations (p. 11).

On the other hand, Granados and Calvo (2017) point out that "the management of policies linked to science and technology encloses an important space in the functional structure of the modern State and generates important problems for political actors involved" (p.12) . Faced with this panorama, the new knowledge society works in accordance with principles aimed at seeking scientific and technological expression, since they allow acquiring a competitive advantage in the development and generation of opportunities for human well-being and progress, by building a new reality in a society eager to establish new relationships with the scientific and technological future.

Therefore, it is important to point out that in our times knowledge is the transversal axis in scientific evolution, which concludes in the need for the technological development of today's society, which implies a greater and better information so that citizens can play a role transcendent and the main objective is the construction of knowledge through scientific-technological progress in higher education institutions.

In this regard, Levine and Marcus (2010) consider that the construction of practical knowledge is based on the processes of collaboration and cooperation between information and knowledge societies. In this regard, the growing demand for scientific knowledge in our times has marked a milestone in the scientific-technological evolution, which is why societies are being generated to identify, obtain, generate, transmit and use information in favor of human development. Knowledge, therefore, has become the main asset for organizations and societies in general.

Indeed, in the context of the knowledge society, the development of science, research, education, technology and culture move towards a process of continuous improvement to create scenarios capable of facing economic and global growth, fundamental pieces in socio-economic progress. Therefore, the scientific production of the academics of a higher institution can account for the scientific boom. An example of this is the University of Guadalajara (Jalisco, Mexico), an institution that in 2016 registered 569 articles in Scopus, 294 books and 2035 academic articles (Bravo, 2016).

Creativity, technology and innovation: factors of the knowledge society

The main factors for the development and progress of the knowledge society are innovation and creativity, factors that have caused changes at all structural and operational levels by transforming processes, introducing technologies, offering new services, etc. The current society would not have survived or would be in a complete setback if these variables were not counted, because the knowledge society is generated from exchange, accumulation, management and the way knowledge is produced. Therefore, if there is agreement on the premise that humans are immersed in a society of truth -whose fundamental characteristics are knowledge, its implications, compatibilities and relationships with the different fields of study and sciences-, then it is possible to talk about an innovative, technological and creative society.

Summo, Voisin and Téllez (2016) refer that creativity "faces a real challenge, since apart from not being seen yet as an essential value in the personal formation of the human being, it must be disseminated in a society marked by the use of increasingly developed technologies "(p.86). This means that today creativity, technology and innovation are inseparable concepts within the information and knowledge societies, which generates new demands in the educational field, which justify other requirements to achieve practical learning, focused on Collaboration and cooperation processes that contribute to educational improvement.

ICT and technological education innovation

The information society, linked to technological educational innovation, is characterized by the use of ICT to access and manipulate large amounts of information, which contributes to enhance the construction and development of knowledge. At present, innovation has facilitated access to a large amount of information through the Internet, in a continuum of enrichment and consolidation of the knowledge society.

In this sense, innovation in educational institutions, especially in universities, does not occur in isolation, but is concretized through a multidisciplinary team and is developed in a collegiate manner to carry out an integral planning with creative proposals. For this reason, it can be pointed out that educational innovation is a construct that is used to indicate "changes that allow improving the learning and learning processes and that those changes are sustainable, transferable, effective and efficient. Some of these changes are achieved by incorporating information technologies, new trends, new processes or new approaches "(Fidalgo, 2014, p.1). On the other hand, Sein, Fidalgo and García (2014) comment that "educational innovation is an interdisciplinary area that integrates technological and pedagogical knowledge, but to be effective it is necessary to know and identify good practices generated by the teachers themselves" (p. 4).

Based on the above, it can be pointed out that although universities are committed to society, innovative technological educational tools are still required to facilitate student learning. Educational innovation, therefore, should promote continuous improvement in training processes, which is achieved by promoting the interest of students, so that better results are

achieved not only in their educational performance, but mainly in the construction of knowledge of the different areas of knowledge through the incorporation of digital technologies.

The technological transition: from information technologies to learning and knowledge technologies

Currently, learning and knowledge technologies (TAC) have also assumed a leading role in educational development, when searching for new alternatives to integrate in the context of teaching. Thanks to technological progress and its inclusion in education, pedagogical value is assigned a plus in the process of integral academic training, since digital didactics are used in the educational field to promote greater interactivity in the classroom and achieve better learning. This is how Perez, Partida, Pérez and Mena (2016) put it:

> It is common for teachers to require training in the use of ICT to incorporate them into the teaching and learning processes, however, in addition to their technical management and the services they provide, it is convenient to associate the pedagogical aspect to improve the quality of education , mainly at the level of higher education, where these technological advances are the invaluable complement for the development of the professional skills of teachers and students (p. 93).

On the other hand, Pinto, Cortés and Alfaro (2017) assert that with the TAC can "design, implement and evaluate activities and tasks that go far beyond the instrumental use of artifacts, systems and processes, to appropriate a scenario that favors the interest and the management of learning, exercising, illustrating, proposing to interact and exemplify "(page 39). However, the words of Ruiz and Abella (2011) should also be taken into account, who emphasize that "the transformation of ICT to TAC will be very difficult if there is no change in teaching practice" (p.57). For this reason, it is necessary to notice the following:

It is essential that these teachers are digitally literate promptly and appropriately, focusing learning on the knowledge of the TAC, learning technologies and knowledge, including ICT, plus the necessary pedagogical training to know how to use them and generate with them a renewed methodology, more adjusted to the characteristics of our time (Enríquez, 2012, p.1).

Therefore, it is essential, from the teaching perspective, to exploit these technological tools focused on learning and teaching both in the classroom and in virtual teaching, as TACs have opened a new horizon towards a formative use that affects the teaching-learning process. The objective is to learn more and better through the appropriate use of technology, which facilitates the management of information and access to knowledge.

In the personalization of learning, TACs are an essential element because with them not only can active, inclusive and interactive methodologies be diversified, but students can also be allowed to choose the tools they consider most relevant to their own process. , such as blogs, e-books, i-pens, social networks, logistic support (Google Drive, Dropbox), video support (YouTube), virtual whiteboards, projectors, computers, digital games applied to learning, m-learning, classroom presenter , web-conferencing, didactic material for the network, video recordings, wikispace, gamification, web 2.0 and personalization of the curriculum strongly supported by technology and simulators.

To conclude this section, it is pertinent to point out that the evolutionary process of ICT to TAC is associated with the management of knowledge in the different educational modalities, which has transformed the way of relating and accessing information for pedagogical purposes. However, by promoting the use of these technologies in teaching-learning processes, educational models have been transformed with the use of flexible digital teaching contents that offer multiple advantages by encouraging more meaningful learning; In this way, with the impact of ICT in education, an even more marked approach towards the knowledge society has been created. Proof of this is the trend that occurs at the national level, where the number of students in unconventional modalities is shown in Figure 1:

Figura 1. Estudiantes de educación superior en programas educativos no convencionales en México (1989-2014)
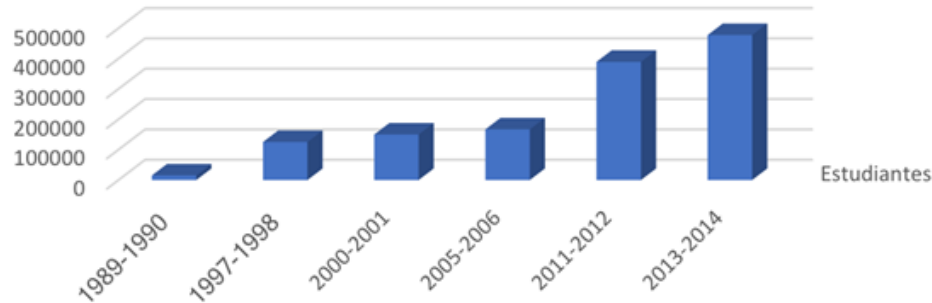
Fuente: Elaboración propia a partir de Zubieta y Rama (2015)

The Internet in the information society and the knowledge society

The technological object that initiated the takeoff of the computer revolution was the computer. Subsequently, other technologies such as the Internet emerged, as well as new easily accessible computerized structures characterized by offering a more agile and independent communication of traditional media, such as television, radio or newspaper. On the role of ICT in our society, Sacristán (2013) refers:

> At present, ICTs assume an unavoidable role, since they have a fundamental importance in the constitution of information societies and, from them, knowledge societies. Without information and communication technologies, neither one nor the other type of society would exist. But that does not mean that information and knowledge societies are produced or determined exclusively by ICT (...). The technique is a component of the social and, therefore, factor and result at the same time of the processes of 'production and reproduction' of real societies: there is no society without technique, or technique without society. Technologies are within the complex of the social, mixed with its many other members, although they exert a powerful influence on the social whole (pp. 41-42).

This means that the evolution of ICT is based on a broad information platform (called the Internet) that has contributed greatly to foster development conditions (cultural, educational, etc.) derived from the transfer of information and knowledge that produce the current media and the actors involved in that process. Therefore, the Internet and all its technological infrastructure

favor a more efficient management of information, thereby consuming a social service. In this regard, Ortega (2015) considers:

> The internet has been incorporated into the daily life of people, because it allows to generate meeting spaces, arouses aspirations, originates needs and at the same time creates products that satisfy them. The educational field is not the exception; thus, in the last 20 years, the influence that the network has had in all areas of human activity has been exponential (p. 177).

Consistent with this idea, De Araújo and Andreu (2017) add the following:

> Today with technological development, we have the opportunity to greatly reduce the distance that separates us from the world of knowledge and information. The search for the freedom to know or ICT makes it possible for us to use the internet. So we continue the search for knowledge, access and use of new information and communication technologies for our human development (p. 19).

It is important to highlight that although information is only considered as the raw material to generate and transmit knowledge, the facilities provided by technologies in information and knowledge societies make the Internet tend to become the central element in our society for facilitating mass communication and information exchange.

Virtual platforms as a cause of educational technology innovation

In the context of information and knowledge societies, virtual platforms and web applications can not be ignored, tools that strengthen teaching and learning. Its incorporation has generated a great impact in the developed and underdeveloped countries, since most of the universities use some of these technologies in their educational offers.

Likewise, in so-called digital socialism, information and knowledge are distributed in such a way that printed books are gradually abandoned to use resources such as digital libraries and an infinity of educational devices available for everyone free of charge. In this context, the emergence, improvement and expansion of virtual platforms places the social construction of knowledge in the forefront of digital literacy.

Indeed, with the emergence of the Internet, technology contributes to education, since it fosters virtual educational scenarios that serve to deposit materials and provide remote support in an interactive manner in the construction of knowledge, in addition to serving in the management of teaching and as support in face-to-face educational activities. For this reason, Valenzuela and Pérez (2013) consider that there are innumerable "the advantages and benefits offered by information and communication technologies (ICT) in education. It is as well as the impulse that has given internet has made possible, for example, the virtual education, which has revolutionized the form in which teaching is imparted" (p. 70).

All this has prompted a rethinking of teaching-learning methodologies by allowing the incorporation of technologies in the classrooms, as well as the proliferation of online courses held in educational platforms that are made up of spaces for information exchange and knowledge construction. Technologies have highlighted these changes by intensifying the phenomenon of digital globalization and access to all types of data in digital environments in the new information and knowledge societies configured by ICT.

In this context, we can not fail to mention the role of the teacher as a mediator of this training process, since the closeness, involvement and follow-up of the teaching staff with the students is the main key of the modern educational model. For this, however, it must break with the departmental model by subjects and take advantage of the technological dependence of people to form more creative and critical human resources, with the capacity to generate new digital content, as well as resources to contribute to the solution of problems .

Likewise, one of the biggest omissions of virtual education should be considered, which has to do with the fact that until now the theoretical training careers (considered "cheap") have been attended mainly because they do not require the use of laboratories, as it happens with experimental races. For this reason, more open learning spaces and more attractive career offers that include all areas of knowledge are required.

Modern educational models and the knowledge society

The evolution in the techno-social environment and education in the context of the knowledge society have come to cover an essential gap in the integral need for learning. This is a new framework that articulates the way of facing the scenarios and the different environments that have modified higher education throughout the world, which have also conditioned the structural stability of traditional higher education institutions because they have forced them to promote the digital literacy of future professionals. On the importance of educational models, Marín, Moreno and Negrete (2012) state:

> The knowledge society requires new ways of understanding, ordering and undertaking the learning processes that are carried out in educational institutions. Higher education must be committed to this need for change, which is fundamentally due to the development and improvement of ICTs, as well as the need to understand and incorporate the educational potential of these technologies. In this sense, the transformations in learning processes in higher education from the use of ICT demand educational models that adapt to a training context that must change and evolve to adapt and respond to the social and educational transformations that are generated precisely because of the development and improvement of technology itself (p. 2).

The initiatives that have been carried out to offer virtual or blended learning programs have allowed teachers to reflect on the demands of interaction and the construction of knowledge in information and knowledge societies, where training and teacher management processes are enriched in relation to the pedagogical uses of technology, which has transformed teaching. From this perspective, the teacher stops being a simple transmitter of knowledge to become a collaborator in the creation process, where students and teachers contribute to the educational process.

This means that in the knowledge society must be transformed, first, educational institutions, always supported by techno-pedagogical tools to continue working in favor of the educational quality of all students. Also, to enable new learning to face complex situations, where the production of innovations and creativity link future professionals with economic

development, so that knowledge can be converted into a qualified tool for the jobs they have to perform. Therefore, it should be foreseen that the majority of students who assume educational technology as an active pedagogical method will probably study and work in educational programs that do not yet exist.

The generation of knowledge, in short, is fundamental for the development and transformation of today's society, as it becomes an implicit priority of a model of integral education, in which the student is the protagonist of his own learning. This should be interpreted as a claim of society by well-educated people who generate and promote research.

Conclusions

From the reflection presented in this document, we can point out the new role that educational institutions should play in the scenario of information and knowledge societies. In this sense, universities must be modernized to guide and encourage learning through resources that promote knowledge. This change should have as its focal point to provide students with opportunities to develop and promote research in today's society.

Likewise, and in spite of all its strengths and advantages, in the new scientific context that involves both societies, training methods that focus mainly on knowledge, information and technology must be accentuated; In this sense, the educational improvement requires pedagogical-formative processes as essential values to achieve change in human behavior, so that the people involved reach an exponential growth of their cognitive functions.

On the other hand, and in relation to educational technological innovations, it can be said that there has been a change in teaching, which has been transformed from a face to a more diversified and expanded dynamics, which breaks down the barriers imposed The time and the distance. Even so, more work has to be done to change the educational offer, so that new careers are included, in addition to the theoretical ones. It should be considered, therefore, that the educational modality is an administrative process, and that learning is a holistic conception.

It is true that optimization in scientific and technological advances has driven the evolution of the human species by transforming the way people relate to each other. However, it is also important to point out that the incorporation of ICTs to education and access to information

in a more expeditious manner does not per se convert a group of people into a well-informed society, since it also requires fostering a critical attitude. The intention is to cultivate knowledge that serves to transform them into knowledge and to find solutions to everyday problems.

Universities, therefore, can not ignore the construction of information and knowledge societies in their transformation processes, since the educational model established with the support of technology can contribute as a key tool to generate high standards of knowledge , and in this way achieve a more meaningful formation in the participants.

Therefore, the information and knowledge societies are necessary conditions to promote a quality education. For this, however, it is required that the structural and technological stability of educational institutions be constituted in a pertinent education, focused on progress and modernity, with the sole purpose of responding to the requirements of today's society. In this way we will be able to advance in the changes that are needed to face the problems and uncertainties of our time.

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