Since education and communication are concepts that cannot be dissociated; now, more than ever, institutions are making intense use of technological resources in order to turn information into knowledge in virtual teaching environments. Hence, the main activity yet to be developed by educators is to advise educational institutions on the use of New Technologies of Information and Communication as a didactic support, promoting and spreading their educative applications inside and outside classrooms. This process belongs to a cycle that is based on the assumption that new technologies applied to education would solve all time, distance and transport issues, although never dissociated from the traditional teaching methods. In the educative communication context, the focus is on language acquisition and enrichment as well as on communicative competence. Communication is not seen simply as a helping tool anymore, but as a basic pedagogical and methodological component to be used in both teaching and learning. In this sense, we discuss the contributions of platforms of e-learning to the online education.

**Keywords:** E-learning, Education, Interaction, Collaboration.

**Introduction**

The virtual environments can be considered as one of the factors driving the transformation of mass media, associating new forms in network communication and making the information more accessible to any person that has access to the worldwide network of computers, promoting the production and dissemination of information in science and technology for teaching and research in all areas of knowledge and different sectors of society. According to Castells (2009), it is fundamental to think of communication as a necessary element of sociability, understanding the act of communicating from its symbolic nature and inherently cultural. Lévy (2010) adds to that, asserting that the Collective Intelligence is a determining factor in competitiveness, creativity and human development in a knowledge based economy, or in an information economy in the “Network Society”.

Communications technologies allow for the annihilation of distance and for globalization - the potential for rapid, synchronous and asynchronous communication also changes the relationship to time (Castells, 2000a). This is because communication technologies, such as the Internet, allow for
decentralization of operations and focusing of control, increasing the effectiveness of networks relative to hierarchical structures (Castells, 2000b). To Dennis Macquail (2010, p.4), “the term mass communication was coined along with that of mass media, early in the twentieth century to describe what was then a new social phenomenon and a key feature of the emerging modern world that was being built on the foundations of industrialism and popular democracy”. Today, the mass media (newspapers, magazines, cinema, television, radio) developed rapidly to reach formats of virtual media on the network society, providing new supports of communication.

Thereby, emerges the concept of Glocalization as one of the main aspects of media convergence (mass media to net media). “Glocalization is essentially a hybrid of globalization and localization. Glocalization is likely to empower local communities through strategic linking of global resources to address local issues for positive social change and to balance changing cultural interests and community needs” (Mendis, 2007, p.2). However, it was the ability to connect these technologies together, giving rise to such networks, which expanded and integrated the individual and groups into a wider setting and new standards of globalization. As regards education, it is considered that this new configuration allows communication to expand the territory of the local school to deterritorialized areas of knowledge, enabling viewing school as a true learning community (Silva, 2002).

These new interfaces brought facility of access to communication by the increase of storage capacity of news and by the processing speed of information in real time, promoting their educational applications inside and outside classrooms, with the possibility of sharing and storing contents in audio, video, image or text. When it comes to net media that develops “sociocultural activities” for informal and non formal education, they almost always include formal programs when oriented directly to the school’s curriculum. The relatively recent development of the digital era has spawned interest in what has come to be called “virtual reality” and in delineating what this means for learning and creation of virtual learning environments (Weiss, 2006). Therefore, communication gains a major role in knowledge building, turning the educational act into something more dynamic and appealing. In this sense, arise a new model of virtual communication based on “Mother of all models” of Shannon and Weaver (1949):

Figure 1. The Communication Model of Virtual Universe
In the 60’s and 70’s, computing was developed in research universities and labs, which were a privilege for a few ones. Thus, in these research centres, some selective visionary and enthusiast programmers groups were established, such as Robert Noyce, Steve Jobs, Steve Wozniack and Bill Gates, the so called Silicon Valley residents. In 1960, Theodor Holm Nelson brings about the computing “eureka moment” through the Project Xanadu (theoretical basis to the World Wide Web and network communication). Inspired by Memex, a work by scientist Vannevar Bush, in 1963 Ted established the terms “hypertext” and “hypermedia”, which were published in 1965 in “Complex information processing: A file structure for the complex, the changing and the indeterminate”. In the hypertext, he clearly paraphrases Memex ground basis in order to make up for human memory limitations through informational trails interrelated by association in words, terms, acronyms and ideas in a non-linear way. In its turn, hypermedia, as an extension of the hypertext concept, is a combination of multiple media elements (text, audio, video and image) sustained by a computational structure and mediated by synchronous and asynchronous digital communication systems. In the following years, the terms “link” and “hyperlink” emerged to refer to an electronic hypertext document or to a specific element within another different document (Teixeira, 2012).

In 1970, the counterculture movements interpreted hyperlink principles as a way of unite people through communication by preaching non-violence (caused by Vietnam War). At the same time, the international Oil Crisis and the Watergate scandal motivated media technological development and, once again, the global communication for the exchange of information and news between geographically dispersed countries. Coincidentally, Barbosa and Canesso (2004) point out that at this time a civic motion arises aiming at the creation of network communities in North America. From 1972 to 1974, some movements sprang up in Berkeley and San Francisco (California), such as “Computers for the People” and “Community Memory”, respectively. The latter was intended to create a network of shared information, similar to an electronic bulletin board without a central control, where people could enter information (Wiki prototype) or read it in the most convenient way to each of them (Torres, 2011). To do so, they used a terminals network spread throughout the Pacific States, i.e. Alaska, California, Hawaii, Oregon and Washington. This project represented the development of alternative media that could be used by the community to produce information related to their common needs and interests, i.e. an attempt to use computer communication effectiveness to serve the community (ibidem). In addition, as pointed out by Barbosa and Canesso (2004), it became a model for network communities around the world, usually established to make easier the free exchange of information, such as libraries and philanthropic entities, which exchanged information through e-mails, forum debates and texts writing (collective authorship). Cyberculture flourishes in this scenario, being its genesis influenced by the first network communication movements.

The philosopher Lévy (2009) understands that the World Wide Web universe favors a collective intelligence, producing a cyberculture on the information society. “Virtual reality is a phenomenon that captivates people of all ages and all levels of technical expertise. It appears on the Internet and in computer games, and is used, among other places, in high-tech software for doctors, engineers, and scientists. But, is it really something new? And how does it affect us? Examining the social and cultural impact of new digital technologies, Levy tackles the concept of "the virtual", demonstrating how it has always been an enduring component of the human mind. He shows how the body, the text, and the economy, are made virtual. He then reveals how the Internet and web sites are now transforming the virtual into a "collective intelligence" linked to digital communication” (Plenum Trade, 1998 resume about book of Pierre Lévy, 1998 - Becoming Virtual: Reality in the digital age). In fact, the virtual universe not only amplifies the formation of social communication fields as a “media”, but is capable of creating new cultural and social constructions, acquiring its own life in cyberspace. However, it was the ability to bring these technologies together, giving rise to such networks, which expanded and integrated
the individuals and groups into a wider setting and new standards of globalization. Thus, it is necessary to understand the contemporary changes at a social, political and economic level and the way they affect human relations in all society spheres. But, if you don’t know how to use this technologies? You’re part of the community info-excluded. Congratulations and welcome to the digital evolution.

**Knowledge Society**

In the late 80’s and early 90’s, a new sociocultural movement, originated by young professionals in big American cities and universities, reached a global dimension, and with no agency to limit that process, the different computer networks developed in the 70’s joined together, while the number of people and computers connected to the network grew very fast (Vanassi, 2007). Thirty years of continuous growth of society and collective intelligence virtualization led to the Millennial Generation (or Generation Y), going from the operating system ENQUIRE development, by Timothy John Berners-Lee, and following Ted Nelson’s Xanadu and Hypertext principles to culminate in the World Wide Web, in 1989. Progressively, the Web evolved from a static guideline (1.0) to a collaborative one (2.0), and after that to a guideline of contents portability, information connectivity and programming languages integration (3.0). Experts already talk about an artificial intelligence Web (4.0), as foreseen by Anandarajan and Anandarajan (2010). At the same time, numerous interactive resources are developed for the Internet and media digitalization.

But such a phenomenon, as Jean Baudrillard writes in his “Simulacres et Simulation”, does not necessarily represent the techno-cultural-communicative excellence. According to this work, reality does not exist anymore, and we are now living its representation, widespread by the media and mass media in post-modern society (Super, 2005). Being ironic, but well-reasoned, Baudrillard stands for the theory that we live in a time in which symbols are more important than reality itself. This phenomenon leads to the so called “simulacra” – bad reality simulations that, contradictorily, are more attractive to the audience than the imitated object itself (Ibidem) -, what, in the words of Haesbaert (2004), causes feelings of dispossession and multiterritoriality. Baudrillard’s philosophical critique particularly falls upon the consumer society and the media overvaluation, and he also rejects the Global Village concept, which he thinks is a distant and utopian reality (Teixeira, 2012).

Paralelly, Mark Bauerlein goes further in his “The dumbest generation: How the digital age stupefies young Americans and jeopardizes our future”, by accusing the digital era of stupefying and idiotizing American young people through anomy, isolation, addiction and cognitive overload. Other authors, like Oliveira (2011), do not agree completely with Baudrillard or Bauerlein, arguing that the digital generation has its pros and cons, as well as past generations and the current generation Z (the connectivity generation). Relations between humans, work and intelligence itself depend on the constant metamorphosis of information devices of all kinds: writing, reading, watching, hearing, creating, learning are captured by a more advanced informatics, and it is no longer possible to conceive scientific research without a complex tool, that distributes old divisions between experience and theory (Lévy, 2010).

In fact, the need of new sociability behaviours promoted new ways of technological development, changing, shifting and creating unusual relations between Man and information and communication technologies (Lemos, 2003). This was exactly what happened at the turn of the 20th century to 21st century when many revolutionary network communication electronic devices were developed. As a consequence of globalization and technological growth, the subsequent multiculturalism established a new social structure, consisting of different kinds of people and corporations, guided by interactions, collaborations and knowledge exchange in the newly adult virtual universe. On this matter, Paul Virilio calls attention to the temporal dispersion and the loss of sense of reality in cyberspace, some kind of an atopy to the digital natives, deeply absorbed by a great amount of endless information. On the other hand,
Howe (2009, p.10) writes that, raised on the basis of social media and always connected to the Internet, digital natives are simultaneously engaged in numerous projects; they easily and spontaneously work together with people they have never seen in their lives and, above all, they create media with the same enthusiasm that previous generations consumed them: “It is a crowdsourcing community, a crowd perfectly adapted to the future in which online communities will overcome the conventional corporations”. Therefore, it is almost impossible to bring the digital natives to a “less virtual or technological” life, as they were already born in an information and knowledge society.

In due course, in 1985, William Gibson publishes the science fiction novel «Neuromancer» in which he describes cyberspace as an electronic universe where billions of people get together, establish relations and interact through communication devices connected to the worldwide network. Since then, “Cyberculture & Cyberspace” has been a prologue of sociability in a network communication in the virtual world, such as the knowledge socialization phenomenon that occurs at a global level in an environment of sharing experiences, information, entertainment, business and collaborative learning.

Since the late 90’s the introduction of ICTs in education is accepted by school systems all over the world as an epitome of development in human history, and national governments have been massively investing in equipment, software and teacher’s continuous training, as “innovative technology resources” appear. In an opposite way, the country is labelled as a poor and info-excluded nation by the “International Bureau of Education”.

Aviram (2000), a globalized stigma was generated which co-relates the technological apparatus of school, university and learning centre education quality, synonymous with skilled labour, though there is no scientific evidence to support the argument that information and communication technologies are conclusive to the young and adult people’s learning process. Wouldn’t they be helpers? The author suggests that the most significant development resulting from ICTs revolution happens outside the school, thus, indicating the great amount of students who neither study at home nor belong to any formal education system (common practice in the United Kingdom). Bearing in mind the English case, the author states middle class people believe that the chances for their children’s educational progress are better at home (helped by didactic tools and support groups on the Internet) than at school. The same happens at the universities with thousands of students attending upper level online courses. It is a fact that cyberspace allows self-learning, eases interactivity and encourages the exchange of information and knowledge, but it does not assure the success of learning, commonly discouraged by the lack of incentive. That is why school and teachers play an important role as mediators of the knowledge to be developed, together with teaching strategies, teaching materials and teaching methodologies.

At the same time, certain unknown or disregarded particularities sometimes make the difference when we “link” education to cyberculture. Having this in mind, André Lemos (2003, p.2), suggests new possibilities of knowledge socialization through three cyberculture laws: a) Law of Transmission Pole Liberation; b) Law of Connectivity; c) Law of Reconfiguration. The first refers to a change in the communication model, i.e. from a massive unidirectional model (from one to everyone) to an interactive-collaborative model, a post-massive multidirectional model, whose maxim is “you’ve got everything on the internet”, “you can everything on the internet”.

PLATFORMS OF LEARNING

The growing interconnection between digital communication devices enlarges the exchange of information between men and men, men and machines and, also, between machines and machines. Finally, the third is opposed to a mere replacement of the practice and favourable to its remodelling given the new possibilities rendered operational by cyberspace, thus avoiding the logic of replacement or the annihilation of old models, since, as Lima (2011) perceives Lemos (2003), the various expressions of
cyberculture are ways of reconfiguring practices, media forms and spaces, without replacing their respective antecedents.

There is an urgent need in education to change traditional teaching, secularly institutionalized, by reconfiguring educommunicative methods according to the new socio-technical context in vogue, given the emergency of new ways of interactive communication (from many to many) and the myriad of information content on the network. From now on, to go along with the media evolution and to use old and new communication resources is a great challenge, due to all specificities of each educational context (circumstantial situations resulting from changes in collective consciousness on the network). This is obviously in a figurative sense, since media literacy is not available to most of the world population. To the lucky “digital natives” it is possible to apply what has been mentioned, i.e. a virtual universe that motivates collective intelligence; hypertext; artificial intelligence; synchronous and asynchronous communication tools; virtual communities; design, production and distribution of products, information and services; mass collaboration; and interactivity in real time, in which people are linked and share knowledge (through pictures, videos, texts and audio) at a global level.

In other words, Aviram (2000) declares that abstention is not actually an option to educational institutions, teachers or educational managers, since the introduction of ICTs in education is part of a wider and deeper sociocultural revolution and it is changing the culture of the contemporary world. Those who wish to survive professionally to those cybercultural options have no other choice but to adapt to the time we live in; the new means of communicating, lifestyles, identities, entertainment, interactivity…, new ways of teaching and learning. However, this adaptation requires a strong strategy based on a clear understanding of the new emergent culture, explicit values and educational goals, in order to avoid the mechanical learning. Therefore, it is necessary to develop a previous computer literacy among teachers and students to improve their skills, knowledge, approaches and perspectives about the future of learning, which has been more and more collaborative.

The term e-learning comprises a lot more than online learning, virtual learning, distributed learning, networked or web-based learning. As the letter “e” in e-learning stands for the word “electronic”, e-learning would incorporate all educational activities that are carried out by individuals or groups working online or offline, and synchronously or asynchronously via networked or standalone computers and other electronic devices, says Naidu (2006). Romiszowski (2004) cited in Naidu (2006, p.12) considers some potentialities of the platforms of e-learning or Learning Management Systems:

* Individualized self-paced e-learning online refers to situations where an individual learner is accessing learning resources such as a database or course content online via an Intranet or the Internet. A typical example of this is a learner studying alone or conducting some research on the Internet or a local network;

* Individualized self-paced e-learning offline refers to situations where an individual learner is using learning resources such as a database or a computer-assisted learning package offline (i.e., while not connected to an Intranet or the Internet). An example of this is a learner working alone off a hard drive, a CD or DVD;

* Group-based e-learning synchronously refers to situations where groups of learners are working together in real time via an Intranet or the Internet. It may include text-based conferencing, and one or two-way audio and videoconferencing. Examples of this include learners engaged in a real-time chat or an audio-videoconference;

* Group-based e-learning asynchronously refers to situations where groups of learners are working over an Intranet or the Internet where exchanges among participants occur with a time delay (i.e., not in real time). Typical examples of this kind of activity include on-line discussions via electronic mailing lists and text-based conferencing within learning managements systems;
Such practices allow communicative resources to be inserted in the online educative environment, not only as didactic interfaces (educative technologies as platforms of e-learning) or objects of analysis (critical reading of the media) but mainly as a way to express oneself and to produce cultural practices. In this sense, the educommunicative paradigm demands a new way of thinking about the pedagogic models and new strategies to intervene in society; strategies that could respond to media and education contemporary processes. This demand is valid because both the technological development and the social and economic changes, as producers of new cultural patterns, have caused the school to realign itself regarding what is demanded from it: intentional actions that prepare people to insert themselves with a critical posture towards society. To Zhao Du, Xiaolong Fu, Can Zhao, Qifeng Liu and Ting Liu (2013), the platform of e-learning featured by active participation, interaction and collaboration of learners and educators is becoming more and more important in education both for learners and educators. While learning management system is the traditional approach to e-learning which is organized as courses; social software including blogs, wikis, social networking sites, and social bookmarking sites etc. are adopted by many educators to meet their emerging needs in educations. In order to satisfy the needs for participation, interaction, and collaboration of learners and educators in the cognition, construction, and socialization process of learning. Here, lets see the growing of platforms of learning until 2010 in figure 2:

Figure 2. The Growing of Platforms of E-learning


The growth of learning management systems are directly related to the increasing access to information and communications technology, as well its decreasing cost. The capacity of information and
communications technology to support multimedia resource-based learning and teaching is also relevant to the growing interest in e-learning. Growing numbers of teachers are increasingly using information and communications technology to support their teaching. The contemporary student population (often called the “Net Generation”, or “Millennials”) who have grown up using information and communications technology also expect to see it being used in their educational experiences, explains Naidu (2006). We can see the architecture of the Blackboard platform environment in Teixeira (2013):

![Figure 3. Blackboard Platform](image)

"Since students nowadays are digital natives who are accustomed to learn in an active learning environment, interactive and collaborative e-learning environment beyond traditional LMS is needed by both learners and educators. Under this circumstance, learning is a combination of cognitive and constructive process with social process. Social software involves shared wider participation in the creation of information, encourage more active learning, and supports better group interaction" (Z. Du et al., 2013, p.17-18).

**FINAL CONSIDERATIONS**

A new social conscience is created, which will be used by an net society, at local and global levels, crossing both communication contexts, constituting a collaborative e-interactive global network. In other sense, the geographical boundaries are diluted, the world today is interconnected by the simultaneity of the new information and communication technologies. Therefore, we conclude that new lifestyles are permeated by a global culture that enhances new sociability ways in the contemporary world through digital technologies. In other words, it is a cultural virtualization of human reality as a result of the migration from physical to virtual space (mediated by the ICTs), ruled by codes, signs and particular
social relationships. Forwards, arise instant ways of communication, interaction and possible quick access to information, in which we are no longer mere senders, but also producers, reproducers, co-workers and providers. New technologies also help to “connect” people from different cultures outside the virtual space, what was unthinkable fifty years ago. In this giant relationships web, we mutually absorb each other’s beliefs, customs, values, laws and habits, cultural legacies perpetuated by a physical-virtual dynamics in constant metamorphosis. This characteristics we find in plataforms of e-learning, characteristics we find in platforms of e-learning.

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