EDUCATION AND NEW INFORMATION AND COMMUNICATION TECHNOLOGIES (NICT)

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Introduction

Technology is a powerful tool that can support and transform education in many ways. It facilitates teachers' work to create instructional materials to enable new ways to learn and work together. With global coverage of the Internet and the ubiquity of smart devices that can connect to it, we already have a new era of education. All that is needed is training specialists and educational technologies to make the most of the opportunities offered by technology to change education so that effective education is available to all.

New information and communication technologies have invaded the social space. They have become indispensable for all activities, being almost ubiquitous in the world of work, in administration, in education. Meanwhile, these levels are positioned in a certain way compared to current technologies. Therefore, the school must also take note of them, preparing students in the perspective of their assimilation and use.

It is known that among the current objectives of the school are - for example - lifelong learning, lifelong learning, learning to learn, axiological autonomy of the person (knowing how to select, signify, explore, etc.). These objectives are favored by the widespread introduction of new technologies in education. Their emergence cannot but change important components of the educational exercise downstream (learning theories) or upstream (school policies, school curriculum, methodical arsenal, the size of teacher training).

New information and communication technologies

The introduction of NICT in education systems involves multiple shifts in emphasis in terms of goal setting and resource allocation. The learning process itself is reconfigured with a series of priorities such as:

• Learning to learn and use this skill throughout life;

• Learn to experiment, correct mistakes and solve problems;

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• To learn to deal with an enormous information mass, to show critical spirit and valorizing competence;

• To learn to materialize the principle of change and to live in an environment that is constantly changing;

• Learn to cooperate with others in performing intellectual tasks with a collective purpose.

According to some analysts, the introduction of new information technologies in education has hidden ideologies, meant to position social actors in a certain way in relation to today's world. The valorization of NICT in the educational field aims less at a modernization of the school, than at the production of a new conception of the institution in which the finalities would no longer consist in the social emancipation of the subjects but their incorporation in the capitalist technical-economic complex[2]. Through codification and standardization systems, promotion policies and advertising strategies, overt competition, subsequent legal frameworks, ICT promoters create bridges of access to benefits, which, far from being accessible to all, create or deepen inequalities. Therefore, one of the prerequisites for the virtualization of training lies in reducing the gaps, in creating the premises for equal access to such tools.

The emergence of new frameworks consisting of media devices (Internet, CDs, video conferencing, etc.) will lead to a recontextualization of the education system. The school space must be permissive and prepared to reconvert what is valuable in court or environment for training. „The new information and communication technologies are levers, for the teacher and the student, of a new perspective on the structuring actions, both of the learning act and of the teaching. The space of this co-organization is suddenly delimited by the specificity of the instruments at stake but also by the whole structuring process of the two types of actions"[3]. He must be open and prone to self-organization - when circumstances require it.

The neo-capitalist school, in the post-industrial society, is relativized, shattering in several parts, by relocation and asynchronization, generating a reduction of expenses for the training of efficient and well-oriented workers, especially from a material point of view. He forgets, somewhat, that the school must form plenary people, individuals not only for others but also for themselves. NTIC has a great contribution in the "post-industrialization" of the

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[2] Stephane, Thellen, *L'école aux prises avec les idéologies de l'informatisations sociale*, GRICIS, Globalisme et pluralisme, Montréal, 2002 în www.er.uqam.ca/nobel/gricis/actes/bogues/Thellen.pdf

[3] Séraphin, Alava, *Enjeux réels ou virtuels des technologies éducatives*, 2005 în http://perso.wanadoo.fr/alava/TIC2002/alavacours1.htm, accesat in 22.04.2019

educational field. They facilitate the inclusion of education on the line of industrialization, placing learning at the forefront of the world training market.

The new type of school becomes an element of the educational market - which is no different from any good that moves freely - and makes the educated a simple consumer. Whoever does not resist this pressure dies by himself through a kind of "natural" selection, enthroning those who are resistant and permissive to the new reconfigurations. The school - says Thellen[4] - is experiencing an "existential crisis", it is called to transform and revise its vocation to form free thinking, beyond ideological and mercantile determinations. "In the name of technical and economic imperatives - the Canadian sociologist continues - it has come to be forgotten that the modernity of the school is closely linked to its long-term commitment, and not to a systemic adaptation to fashion effects." Even if this were the case, the change of perspective on new technologies is more desirable than a neglect or "defense" against such developments - to an objective and natural extent.

Moreover, the subsequent normativity of the new information technologies forces the normativity of the school to fold or reconfigure in relation to its specificity, determining a change of the traditional functions of education. If the school currently escapes the demands of performance or competition, they will permeate new educational policies. Who does not operatively adopt this technological and normative framework, tends to isolate himself from the new appearance of the system, going as far as abolition and exclusion.

New information and communication technologies have an obvious influence on global training approaches and educational policies. Here are some evolutionary accents[5]:

- structuring specific training contents (electronic courses, redefining some teaching subjects, increasing modularity of learning sequences, etc.);

- stimulating interactions between people, students, teachers, tutors, network administrators, etc. (through electronic tutorial, virtual learning communities, forums, etc.);

- structural and institutional innovation, by implementing partnerships, networks or consortia specialized in ICT (multimedia workshops, skills bases);

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[4] Stephane, Thellen, Op. Cit, p. 103

[5] Jean Michel, , *Nouvelles approches de la formation par les nouvelles technologies et le multimédia*, *La démarche de l'école nationale des ponts et chaussées, Communication faite au Colloque organisé par Le Journal du Multimédia à Paris, les 13 et 14 octobre 1999* în http://www.enpc.fr/~michel-j/publi/JM321.html, accesat in 18.02. 2019

- strategic and managerial approach aiming at positioning on new sectors of the training "market" globally, globally.

The knowledge society requires a more obvious connectivity between individuals and communities. As the reality of knowledge is dynamic, so must the realization of contacts. The ability to find information is the new quality of the educated of our century. You need to be permanently connected to others in a network to be safe. Mastering new technologies has become a matter of individual security, personal or collective progress.

At the same time, ICT facilitates progress and innovation in education, manifested in at least the following directions:

a) new didactic devices, integrated for an audience either classical or coming from the new economic evolutions (change of the training route, complementary, polyvalent training, etc.);

b) new institutional structures, agreed by the society, materialized in distance training formulas, self-training, adult education, virtual universities, much more flexible and personalized than traditional institutions and much more permeable to the evolutions of the labor market.

While the first direction envisages the creation of skills to use new technologies to access information and functions as a complement to traditional education, the second aims at a restructuring of learning methods in the spirit and under the determination of ICT.

Current pedagogies are designed on the assumption of co-presence and synchronous teacher-student interaction. There is no distinction between physical and cognitive or affective interaction that allows a certain virtualization and temporal desynchronization. "The notion of teaching contract shows today that beyond the actual presence, there is a certain virtualization of teaching and media actions that are played in the teaching-learning process. In this case, we are dealing with a self-construction of communication, affective, representational, cognitive conditions specific to distance learning situations or media devices"[6]. A self-forming universe is born, the result of the contextualized and context-creating systemic process which, through the actors and their interactions with the device, produces an extensive space of self-formation, endowed with internal devices with self-regulatory functions. The educated person does several things simultaneously: he detects information, builds and supervises his path and detects new strategies of interaction with knowledge, of advancing in the informant universe. The notion of

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[6] Séraphin, Alava, Op. Cit. P. 61

distance is not the same as geographical separation, and the approach is not achieved automatically only by the co-presence of the participants.

There is institutional or subjective distance even in the presence together, as there is closeness in time-lagged and long-distance interactions.

Classical, traditionalist, standardizing, transmissive and teaching-focused training approaches must change their objectives in favor of activating, critical and learning-centered formulas. In a contextualized way, the educated person is required to be able to generate knowledge on his own and to supervise his own path to the truth. The student, in the context of virtual education, is simultaneously the one who learns, the one who navigates and informs himself in the most autonomous and responsible way possible. These three simultaneous actions involve the activation of several capacities of the educated[7]:

- to build a project; mediated learning requires the decantation of a project that is the goal pursued, but also the means of digital navigation; this project must allow interaction, the retrieval of relevant data and the cumulative construction of knowledge;

- to plan own learning strategies and tactics; the educated arranges his own learning time and space, taking into account the material, informational, environmental constraints, adjusting his course according to the landmarks arising at a given moment; the permanent use of different databases leads to the valorization of informational tactics regarding the fruiting of opportunities, unexpected but profitable meetings (since not everything is known in advance to what is reached);

- to structure and appropriate hermeneutics for understanding what is being grabbed as information; the educated must incorporate his knowledge in a structured way, the structures being generated continuously, progressively depending on the specifics of the information flow and the implicit ordering techniques latently transmitted by them.

New technologies transform some rules of formation, but do not bring happiness to the earth, making miraculous leaps of the educated in the universe of knowledge. Knowledge has a higher degree of diffusibility, but assimilation remains at the discretion of the educated. The knowledge made available through the virtual network is a pure potential, until its acquisition and significance by the receiver. The construction of knowledge is related to the interiority of the

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[7] Gaetan Tremblay, *Les campus virtuels, du siècle des Lumières a l économie du savoir*, 2004 în http://www.terminal.sgdg.org/no_speciaux/83/Tremblay.html,

subject, its effective reporting, through participatory effort and interpretive responsibility. Virtualization of training does not hinder the internal mechanisms of learning. The school does not turn into a media agora or does not make it an annex of the omnipotent communicative assembly. Not everything is in the computer. The mediated technical training devices are required to be "formatted" in principle in accordance with the psychological and pedagogical foundations of human learning. At the same time, the school also supports some reconfigurations, in accordance with a communication ecology that current modernity demands. It is of course natural that the multiplication of information and communication techniques should force the school to a pluralization of didactic ways of learning.

Conclusions

Digital learning and teaching tools and technology in primary, secondary and high school prepare students for higher education and the careers they will pursue, helping them to acquire specific skills, including familiarization with emerging technologies and self-motivation.

Online education is a new way of looking at the learning process, in which the basic elements remain the same, only the means of exchange and acquisition of knowledge changes. However, the use of the computer system for education means bringing new elements, related to the freedom to learn in the desired place and at the desired time. The roots of this educational system are found in distance learning, practiced in certain regions of the globe. Although the advent of computers was quite early, the high costs of technology hindered development in this direction. However, the production in significant quantities and the decrease in prices on the computer technology market have determined the promoters of online lifelong learning to put their projects into practice. Thus, the means of storing information on magnetic or digital media being available, universities were the first to adopt the new methodology.

Online learning platforms, or so-called e-learning platforms, support the individual learning process and allow users to access a range of information sources or online discussion environments on a variety of topics.

Digital competence is one of those other competences that educational institutions have included in the programs and plans for the educational process. Digital resources are becoming an increasingly used working tool to provide quality education that meets new pedagogical trends and children's interests.

For many teachers, looking for new methods with the involvement of digital resources, corresponding to the needs and particularities of the group of students, is a real challenge. and even if students seem more advanced than teachers in what we call new information and communication technologies, the Internet, the online environment, for them the challenge of facing such a volume of virtual information and new trends is much greater.

The online environment supports 21st century skills such as collaboration, communication and creativity. All over the world, schools need to prepare their teachers for change. As the culture of our society changes in response to technological innovations, institutions and teachers need to adapt.

Online learning opportunities and the use of open educational resources and other technologies can reduce the costs associated with training materials and allow more efficient use of teacher time. Today, we can talk about blended learning that combines face-to-face learning opportunities with online learning opportunities. The degree to which online learning takes place and how it is integrated into the curriculum may vary by school. The strategy of combining online learning with face-to-face school instruction is useful to adapt the various learning styles of the learners and to allow each learner to study at their own pace.

Online resources allow the revolutionization of the educational system, not only because they are convenient and accessible, but because they allow the whole teaching and learning process to become more interesting and adapted to the digital student, thus, a personalization of learning is achieved.

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