

MENDIVE



Translated from the original in Spanish

Technologies in Higher Education: need and print before the COVID -19

Tecnologías en Educación Superior: necesidad e impronta ante el COVID-19

Tecnologias no Ensino Superior: Necessidade e assinatura perante à COVID-19

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Since the end of the XX century, we are in the middle of a technological revolution that has given place to what many people call the society of knowledge or information, which referred to the development of science and technology as a key to understand some of the Features of the current epoch, with a high impact in the institutions of Higher Education, for the role they have taken faced with such a challenge.

In this context, the role of Information and Communications Technology (ICT) in the last decades has been an invariant that has marked the progress, given its implications in every area of knowledge, which becomes the center of attention of universities

and international organizations, generators of policies around them.

In the educative field, its use is made daily as working means of teachers, a teaching - learning means and management of knowledge, which has had changes in the design of the training process, from educational institutions in general, and the higher Education in particular. However, it is not always expressed in educational practice, which frequently remains immovable, with a traditional conception of teaching that, while recognizing the importance of ICT and its re signified its use ,it does not achieve the expected transformations.

In this regard, Tedesco (2000) believes that"... The Latin American education systems face this context with financial and Technological obstacles preventing to instrument them properly, but also social that involve that not all citizens can access the new technologies" in a space that, increasingly, advocates inclusion and access to education as a human right.

For all the above, we consider inevitable an approach to technology in Contemporary Gift and to try to elucidate the opportunities that it generates in the process of training professionals , from the purposes for which it is used .

The use of technology by teachers and students has become a focus in the training process, as the only alternative to the continuation of this pandemic situation, despite pending debts around the preparation for it and the availability of essential resources.

On March 11, the World Health Organization declared the outbreak of corona virus SARS - CoV-2, which causes the disease called COVID-19, as a global pandemic, so that led to countries and institutions to an immediate change in the daily actions, corresponding to the

epidemiological situation of each. Consequently, the majority of the governments in the world temporarily closed educational institutions in an attempt to contain the spread of the disease at first, and began to appear, with the support of UNESCO, the OEI and other international organizations, guidelines for the reorganization of processes, in order to give continuity to education for all, through learning with the use of ICT.

The pandemic of the COVID-19 adds a degree of complexity to the Higher Education in Latin America and the Caribbean, which comes to face from unresolved challenges, a time from a perspective that does not allow postponements, although we cannot have the necessary educational and didactic modifications to perform the transformation curriculum that is demanded, which would imply a change of teaching model and of the preparation of the teachers to mediate the process.

There are not doubts that all this has become more complex the existing situation, which has get much bigger before our eyes the idea about assuming the imprint of technology in education. In this context, UNESCO calls on the States to ensure the right to Higher Education of all people in a framework of equal opportunities and without leaving any student behind.

In this sense, it has recommended opting for the use of technological solutions based on energy and the type of Internet access that students have, as well as the level of digital skills that they and teachers have, for which it presupposes that equipment managers and teachers should meet virtually to determine which way to turn the programs online learning, joined with the need to provide teachers and students help in the use of ICT, with support and collaboration particularly referred to the

technology or platform, among others (UNESCO-IESALC, 2020).

Assuming the recommendations, the IESALC has recognized that in Latin America the student access to technologies and platforms required for distance education is approximately of the 76 % and the actual capacity of institutions in technological and pedagogical terms, to offer online education quality, leaves out 25 % of the students and institutions. It also states that although connectivity rates in homes are very different and extremely low in some places, there are high rates of mobile lines, a situation that must be taken into consideration by the institutions of Higher Education to in order to focus its efforts on technological solutions and content for use on mobile phones. Obviously, reality shows us that the possibilities of the use of ICT in education are much broader than we do of it today (UNESCO-IESALC, 2020).

Is the problem only in the lack of technological support? It would seem that talking about ICT in education limits its use to its existence, it is true that the objective condition in keeping technologies are essential, they are not enough; much more is needed than that. It is necessary, above all, to have the human resources capable of managing processes using them. This is to ensure training of those involved in the process, particularly for teachers. In this regard, Martin (2020) states that " ... we cannot assess the educational response from countries starting from teaching aids, for more sophisticated they are, and that all they provide; and we cannot omit teachers " (p.129). While for its part, Plá (2020) states that: "The pandemic shows that the centralist and authoritarian model that is being carried out will be detrimental to the social value of the school. To avoid this tragedy it is necessary to return the pedagogical voice and the educational responsibility to the teachers".

At the center of attention of the use of ICT in Higher Education teachers are, as active subjects who mediate in the teaching-learning process, making use of available technologies. Although there is not enough data, the approach to themed and inquiries made has enabled display that efforts have focused on using technological resources available to maintain the continuity of the learning process according to subjects and moments in which it was, as an expression of his commitment to the training of his students; even when they make use of ICT to achieve, it seems to continue using the face forms, only modified by the physical space and the decrease of the load of the content. Thus, a "transformation" of face-to-face teaching-learning forms to modalities with the use of ICT has been assumed, not always accompanied by a modification and/or curricular adaptation.

When referring to the impacts in this context, in IESALC's analysis of the effects of COVID-19 on Higher Education in Latin America and the Caribbean, it is pointed out that, from the pedagogical point of view, "... the step Distance education, far from being a previously planned solution and for which the capacities required in the different actors and in the systems as a whole existed, has actually been the only emergency solution to try to guarantee pedagogical continuity." (UNESCO-IESALC, 2020).

In our opinion, although this was a desperate option, it does not lack common sense, since it has its antecedents in online teaching models applied in recent years, although it requires levels of contextualization and training for teachers, to your assumption with quality.

We agree with Diaz (2010) in which not always the incorporation of new technology is whether synonym of improvement of the process of teaching

and learning. Likewise, when he refers that "... the use of technologies confronts us with new forms and tools for creating meaning [...] They are capable of breaking down space-time barriers allowing new forms of social organization of knowledge to emerge from virtual spaces" materialized "in the form of communities of shared knowledge" (p.40).

Significant is to refer to the opinion of Coll, expressed in the preface to Diaz et al (2011), when pointing : " The rapid expansion of education in virtual learning environments in the University level, raises the need to rethink the role of the teacher and identify the skills expected in teachers who teach in this educational modality" (Díaz et al., 2011).

Everything points to the fact that we need teachers with technological and teaching preparation and to assume a change in deemed, even, the gap in skills for use between students and teachers, who should be shortened by a continuous training process in an intentional and staggered manner.

In Cuban Higher Education, meanwhile, the use of ICT has passed its specificities, with the above criteria addressed. During this period pandemic training of professionals has happened since the conditions of each territory, with a high sense of social responsibility of the University in social problem solving, from the management of science and the realization of activities of high impact in support to strategic sectors and fundamentally health.

Furthermore, the need to maintain the training process for competent professionals in a consistent manner with the times in which we have lived continues to be the common interest of managers and researchers in education sciences, who strive to find viable alternatives to specify the intention manifested in the training plans. Without pretending multiple unequivocal alternative, have been

proposed innovative undertaken in the country, found as similarity using different technological devices, platforms of *software* free, for *ms online* and modes of study; from the own curricular flexibility of existing programs, which recognized the meaning of the teacher preparation and access levels to information of actors linked to the process .

In the University of Pinar del Río "Hermanos Saíz Montes de Oca", adapting the guidelines of the Ministry of Higher Education (MES) in coherence with the recommendations of international organizations and taking into account the experience accumulated in their work in the training of professionals using ICT, it has a pedagogical strategy that takes into account the bond of face to face with blended learning, as an alternative social distancing in the training of professionals , for which it has been necessary to make curricular adjustments , which focus on professional problems as a catalyst for them.

At the same time, conditions are created in virtual classrooms, serving three connectivity spaces: with full connectivity, with partial connectivity and without connectivity (MES, 2016); For this, it has been necessary to deepen the relations with territorial organizations and the pedagogical and technological preparation of the teachers, the latter becoming a premise and condition to achieve the effort.

Partial results have shown successes and failures in which it is a need for further deepening from the pedagogical and technological accordance with the existing conditions in the university community to keep the use of ICT in training of professionals, with the necessary curricula adjustments that will lead to transformations in

pedagogical models in an innovative way and, consequently, the necessary training for university teachers and tutors in work spaces, in a continuous manner, focused on the acquisition of knowledge, skills and values of the conceptions and educational practices that will emerge and be perfected.

The above arguments us allow to assert that, taking into account the role given to the technologies in the education some decades ago, and to its potential as mediators instruments, these should be seen as an alternative that came to stay in the Higher Education, given the need felt by governments, institutions and human resources (teachers in particular) in the face of the imprint generated by COVID-19; however, it is required to continue looking for options that join, both technological and teaching and research factors, to approach the intention to form competent professionals committed to social reality, into a new context that, in the our opinion, will be extended in the time.

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Author participated in the writting process of this work.



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