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The Information Society: Digital Knowledge, Contemporary Cultural Profiles And Pandemics

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Abstract

The purpose of this paper is to discuss the digital knowledge emerged in the context of the information society and that has introduced new cultural profiles in young people, called digital natives by the academic literature. It is approached according to hermeneutic theoretical and methodological principles where, through the analysis and reflection of different research experiences, it was possible to unveil these digital knowledges in the teacher training processes to respond to the learning styles of contemporary student profiles. The study allows to conclude that there is a great opportunity for the construction of contemporary cultural profiles, both of university teachers and students, as well as of the university community itself, with an impact on the educational processes when making decisions, in their training from the appropriation of a culture and the good use of information and communication technologies and experiences that have left the pandemic by the COVID-19. This adaptation and innovation have allowed to create and recreate family, academic and work life, looking for alternatives of constant change and where this stage of emergency has been an opportunity for growth in knowledge in science and technology, together with public policies as part of the training processes.

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The search for strategies to improve the quality of higher education and the challenge for a reunion of diversity of digital knowledge, practices and daily experiences ever unimaginable leave traditional schemes for the new educational transformations needed by the present and future society.

Keywords: Media skills, digital natives, contemporary cultural profiles, digital knowledge.

Resumen

El propósito del presente artículo es realizar una discusión sobre los saberes digitales que han emergido en el marco de la sociedad de la información y que han hecho visibles nuevos perfiles culturales en los jóvenes, denominados de diversas formas en la literatura académica, entre ellas, "nativos digitales". Se aborda atendiendo a principios teóricos y metodológicos de corte hermenéutico donde a través del análisis y la reflexión de diferentes experiencias investigativas se lograron develar estos saberes digitales en los procesos de formación docente para responder a los estilos de aprendizaje de los perfiles estudiantiles contemporáneos. El estudio permite concluir que hay una gran oportunidad de construcción de perfiles culturales contemporáneos, tanto de docentes como estudiantes universitarios, como de la misma comunidad universitaria, que impactan en los procesos educativos a la hora de toma de decisiones, en su formación a partir de la apropiación de una cultura y el buen uso de las tecnologías de la información y las comunicaciones, experiencias y vivencias que ha dejado la pandemia por la COVID-19, donde esta adaptación e innovación han permitido crear y recrear la vida tanto familiar, como académica y laboral, buscando alternativas de cambio constante y donde esta etapa de emergencia ha sido una oportunidad de crecimiento en conocimiento de la ciencia y la tecnología, junto a las políticas públicas como parte de los procesos de formación, la búsqueda de estrategias de mejoramiento de la calidad de la educación superior y el desafío por un reencuentro de diversidad de saberes digitales, de prácticas y experiencias cotidianas jamás imaginables, dejando esquemas tradicionales por las nuevas transformaciones educativas que necesita la sociedad presente y futura.

Palabras clave: Competencias mediáticas, nativo digital, perfiles culturales contemporáneos, saberes digitales.

1. Introduction

This article seeks to contribute to the reflection and discussion on the importance of digital knowledge in teacher training processes as a strategy to respond to the learning styles of contemporary student profiles. This reflection is proposed as part of the research process developed in the framework of the project "The training of educators from public policies in information and communication technologies in the Colombian educational context", registered with code SGI 2610 before the Research Department of the UPTC.

The methodological approach of this study is based on the historical-documentary research method with a hermeneutic approach where, as a result of a rigorous literature review and processes of debate and reflection by the researchers, the new contemporary profiles of the information society were unveiled.

Undoubtedly, the development of this work is relevant at a time when the pandemic has revealed the need to master digital knowledge as a strategy for the development of media skills that allow

interaction with remote and virtual training scenarios that have emerged in the context of a pandemic that forced education systems to move their classes to other scenarios with completely adverse conditions to those available in the face-to-face.

A series of challenges can be glimpsed based on these experiences, starting from the thread of discussion in a scenario of information and communication technologies (ICT). An example of this is the case of the approach to a reality, but also to some challenges that demand attention at the university level, the look at the information society, which promotes transformations from the interaction in the educational processes, where life, academia and society itself are highlighted. In this case from the perspective of the pandemic, where a stage of uncertainty and complexity is shown, but also of opportunities with experiences in the light of the formative processes with the support of the advances of science and technology, gaining relevance the visibility and recovery of digital knowledge and contemporary cultural profiles in these times, where the preponderant role of university teachers and students is highlighted. They adapt, lead and carry out significant processes in university life, assuming an open and transforming academy, overcoming the expectations of the present and projecting in prospective.

Information society and education

The reality faced by humanity as a consequence of the COVID-19 pandemic is evidence of the relevance of technologies in the functioning of societies as a means to generate social welfare, sustainable development and productivity. Human beings are inserted in the information society driven by globalization, which is why technologies contribute to the production, distribution and processing of information that favor the effectiveness and transparency of people's social, economic and cultural activities.

In the economic sphere, for example, information has transformed the market by facilitating transactions, agreements and exchanges of goods and services between producers, distributors and consumers under the free play of supply and demand, a situation that generates conditions for the efficient allocation of finite resources, according to Mayer-Schönberger & Ramge (2019). A good information system is also conducive to equity and is an instrument for decision-making. For the market to function well, information needs to flow easily, and the market is conducive to economic transactions that contribute to social interactions.

The information society emerged in the mid-1970s. However, it was not until the year 2000 when the G-8 countries, meeting in Okinawa, Japan, decided to intervene concretely in this field, pointing out the role of information technologies in social life and the leading role of the private and public state sectors in the development of the aforementioned society. According to Valderrama (2012), this political and economic development commitment was consolidated by the Genoa Summit in 2001 and the World Summit on the Information Society in Geneva 2003 - Tunis 2005, a United Nations conference led by the International Telecommunication Union, whose purpose was to develop a global framework to address the challenges posed by the information society.

According to Crovi (2002), the information society is characterized by a communicational mode of being that crosses all activities, a situation that turns information into a resource of great importance and expression of wealth of nations, at the same time that generates a growth of ICTs as tools oriented to manage information and that affect all activities developed by human beings, since they are the

engine of changes accepted by societies. This panorama reflects progress in modernization, in terms of innovation in the productive process and in technological developments, driven by developed countries, without also meaning progress in modernity in developing countries, since this concept implies changes in values and ideas, mobilization (expressed in the migration from the countryside to the city), differentiation (reflected in the division of labor and advances in education) and secularization in reference to the separation of church and state.

In general, the information society leads to the generation, updating and dissemination of knowledge, while influencing social behavior, economic and business practices, political commitment, the media, education, health, leisure and entertainment. The information society is characterized by self-learning, self-management and horizontal relationships, to the extent that ICTs contribute to the formation of networks to create and manage knowledge, purposes for which there must be interdependent structures that involve multiple organizations, totally or partially, where there is no subordination, but there are common objectives and minimum rules, both formal and informal, for the operation of such networks.

The true meaning and effectiveness of ICTs materializes to the extent that such tools are linked to people, both natural and legal, since technology helps them to establish relationships between the tangible and the intangible, the tacit and the implicit, the known and the unknown, according to Riesco (2006). ICTs are an instrument in the fight against poverty, as well as a prerequisite for progress toward economic, environmental and social development. This trilogy supports the sustainable development model, understood as development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Economic development implies economic growth, macroeconomic equilibrium and structural changes expressed in advances in income distribution, social advancement, urbanization and industrialization. For an economy to function sustainably, productive factors must be combined in such a way that they do not affect natural resources and serve the greatest number of people. This combination of productive factors must be reflected in profitable economic activities with a future that guarantee sufficient income, full employment and a solid productive apparatus, adapted to the environmental supply of the territory.

Environmental development is reflected when there is low or zero levels of air, soil and water pollution. In order for economic and social activities not to deteriorate or pollute the environment, they must be adequate to the environmental supply. It is then when activities that mitigate, replenish, restore, decontaminate, protect and preserve the environment must be carried out in accordance with the economic sector and the natural resource affected.

Social development is expressed in the effectiveness of social rights such as education, health, pensions, public utilities, housing, nutrition, among others, that is, in the materialization of human development. Such development implies access to the minimum conditions of well-being: food, decent housing, clothing, universal education, health, physical education and recreation, as well as access to and enjoyment of culture. In addition, human development incorporates cognitive, moral, socio-affective, communicative, artistic, labor and physical-sports development.

In this context, it is appropriate to point out that the 2030 agenda approved in 2015 by the United Nations Organization, made up of 17 purposes, known as sustainable development goals or global

goals, is currently being implemented. This agenda aims to put an end to poverty, protect the planet and ensure that all people enjoy peace and prosperity, for the materialization of which ICTs are very helpful tools.

For technologies to contribute to social welfare, sustainable development and productivity, societies must be equipped with technological infrastructure and have the knowledge that will enable them to take advantage of the benefits of these instruments in their daily activities, for which, it is also important that the resources provided by technological convergence can be used in a democratic context, a situation that implies active citizen participation. According to Crovi (2002), states should promote conditions that contribute to closing the digital divide, including making legislation more flexible and allowing foreign investment, as well as formulating and implementing a public policy for digital literacy aimed at generating social equality.

In the case of Colombia, the conditions for consolidating the information society are based on the State's obligation to recognize access to and use of ICTs, the deployment and efficient use of infrastructure, the development of content and applications, the protection of users, the training of human talent in these technologies and their cross-cutting nature, according to Article 3 of Law 1341 of 2009, norm that defined principles and concepts on the information society and the organization of ICTs, defined as the set of resources, tools, equipment, software, applications, networks and media that allow the compilation, processing, storage, transmission of information such as voice, data, text, video and images, in accordance with Article 5 of Law 1978 of 2018.

With the purpose of massifying the use of ICTs and favoring the closing of the digital divide, Law 2108 of 2021 was issued, which establishes Internet access as an essential service with the purpose of promoting universality and ensuring the provision of the service in an efficient, continuous and permanent way, allowing the connectivity of all inhabitants of the national territory.

The above is in line with the National Development Plan 2018-2022, "Pact for Colombia, Pact for Equity", approved by Law 1955 of 2019, which established, in the field of ICTs, the digital transformation of society as a fundamental mechanism to implement economic development models in the framework of the fourth industrial revolution, as well as to increase public and private productivity, improve competitiveness and close social gaps in the population.

In this sense, the National Science, Technology and Innovation Policy 2022-2031 was issued through the National Council of Economic and Social Policy Document (CONPES) 4069 of 2021, whose objective is to increase the contribution of science, technology and innovation to the social, economic, environmental and sustainable development of the country with a differentiated, territorial and participatory approach, in order to contribute to achieve cultural changes that promote a knowledge society. This policy is based on seven strategic axes and eight principles, built from the analysis of previous policy documents and the contributions of the actors of the National Science, Technology and Innovation System.

The diagnosis, as an element of the science, technology and innovation policy, indicates that in Colombia there is low development and transfer of knowledge and technology to the productive sector, as well as a lag in the adoption of technologies due to a low capacity for technological adoption in business production and limited access to and low use of ICTs.

In view of the above, the policy, within the framework of the specific objectives, seeks to improve the capacity to generate scientific and technological knowledge, the scientific and technological infrastructure, and the capacities of knowledge-generating institutions and support entities, in order to increase the quality and impact of knowledge in Colombian society. It also proposes to improve the capacities and conditions for innovation and entrepreneurship; the transfer of knowledge and technology to the productive sector and society in general, as well as the conditions to favor the adoption of technologies and increase the country's levels of innovation and productivity.

Technologies are the driving force of opportunities and have favored important advances in different sectors such as education, health, security, justice, public administration, infrastructure and industry, among others. With regard to education, it is pertinent to point out that the generation and dissemination of knowledge is important in the information society, even more so today, a time of constant change, when the educational process is facing generations that are emerging within the framework of the aforementioned society, a situation that implies new dynamics. In this sense, ICTs are of great relevance in the teaching and learning processes, under the different training modalities, by contributing to strengthen pedagogical, didactic and evaluative strategies; promoting communication and collaboration; as well as eliminating distance barriers.

ICTs contribute to the transformation of the educational process, i.e., they are convenient, but teachers and students cannot be dependent on these tools, i.e., they must not fall into the dictatorship of technologies.

According to Sánchez et al. (2020), ICTs are a means to materialize the right to education, to the extent that they contribute to the generation of educational quotas, conditions of access to education, permanence in the educational system, efficiency, better opportunities to learn and contribute to the quality of education, for which technological infrastructure and digital literacy of both teachers and students are necessary, since a computer helps in the teaching and learning processes, as long as the person has knowledge of what to do with the machine.

ICT undoubtedly plays a leading role in teaching and learning processes by allowing innovation in education where the results obtained as a result of the scientific impact contribute to the solution of educational problems useful for development, according to Hernández (2017). In addition, ICTs contribute to the development of that activity of human beings whose purposes are to achieve their transformation, to learn to live in society and, of course, to create possible relationships called education.

According to León (2007), education is a process that involves preparation and training aimed at increasing knowledge, giving sagacity to thought, learning from experience and learning from others. However, the educational process has to move from repetitive to creative, collaborative, communicational and critical thinking, i.e., education must move from the scenario of transmitting to the transactional scenario, which involves building knowledge and applying it to real situations, to then move to the scenario of transformative education that requires creating conditions for change, unlearning, addressing multiple perspectives and reflecting on experiences, among other aspects.

In this context, creativity refers to the materialization of innovation and the solution of problems that arise in the teaching and learning processes, in addition to fostering uncertainties. Collaborative refers to the ability to work with the different members of the educational community, since the educational

process is a matter of human beings and all learn from each other, in a framework of solidarity and coexistence in exchange for competence.

The communicational in mentioning that the process of integral formation is achieved in a more effective way through the use of the appropriate language. Finally, critical thinking in relation to argumentation, in the sense that what is observed in the reality allows to establish conclusions and constitutes an instrument for the solution of problems, in addition to contributing to social transformation and the emancipation of human beings, where autonomy and happiness of both teachers and students in the educational process must prevail.

In order to be acceptable, the educational process must be adjusted to the cultural conditions of the social groups, that is, the pedagogy must be adequate to the knowledge, ideas, values, traditions and customs of a community. This is what is called ethno-education, the purpose of which is to prepare people to know how to be. Teaching and learning processes should also privilege informality, a situation that implies making the process flexible, where mistakes and asking innocent questions are assumed as rights. Hence, the school should be the place and the time to make mistakes, ask innocent questions and generate personal growth.

According to Calvo (2016), informal educational and ethno-educational processes must be holistic in nature. The development of such processes is carried out as a whole and not only through the parts that compose it, since all have properties that the parts do not have, for whose materialization it is necessary to adapt the educational system.

3. Profile of the contemporary student

In recent years, there is a new generation of students that has emerged in the context of a digital village, so that young people now expect different, dynamic training processes, distanced from the classic teaching practices, where participation and shared reflection are the basic premises for the construction of knowledge.

The review of different texts recognizes the existence of a new cultural profile in young people, alluding to their marked affinity and talent with the use of information and communication technologies, since it is pointed out that today's young people create, inform and communicate in a different way, where their entry into the information society is privileged. “Young people now have gradually changed their ways of creating, informing and communicating, conceiving the network as an interconnected universe where learning is achieved through exploration and networked experience, building open, active, participatory and immediate networks, with instant responses and proposing new architectures of participation and a collective autonomy, based on common interests” (Saavedra et al. 2018, p.3).

In this sense, it is clear that today's young people are clear about the possibilities they have with the integration of ICT in their learning processes, so they expect teachers to support their teaching with technological mediations that encourage motivation, autonomous learning and co-creation among users. In this way, they will be able to develop technological competencies to bring to the classroom optimal integration processes that students can take advantage of. In addition, it is important to have the necessary technological infrastructure to guarantee access, use and appropriation of information and communication technologies.

According to Diaz Barriga (2013), "Young people of the current generation, which some technologists call digital natives, have grown and developed from these instruments. They are not afraid and they have developed an ability to touch any part of the equipment looking for a reaction and, in this way, they have learned to relate to them on a daily basis" (p.5).

In the context of the student population, the pandemic generated a series of difficulties mainly in students who entered from first semester 2020 to second semester 2021, there were 4 semesters of difficulties in attention, showing a critical situation that demonstrates in many cases forced withdrawals due to socio-economic situations of their parents, cancellations of subjects and semester, low motivation, difficulties in learning and low quality of education, as shown in the UNESCO/IESALC research (2020: p. 16).) with short, medium and long term impacts, which was evident in the issues of ICT, connectivity, social isolation, difficulties in communicating with peers and teachers, problems with schedules and times of academic activity, anxiety, stress due to Covid 19, loss of family members and economic crisis. This reveals difficulties also in the teaching processes, the same self-control in the educational processes, a difficulty that must be overcome after the arrival of face-to-face teaching.

Meanwhile, to speak of cultural profiles associated with students in times of pandemic has multiple interpretations. Due to the cultural dynamics that are handled, they are populations that must continue with their daily lives, maintain personal, family and social development within the framework of the possibilities of improvement, adapt to new processes and continue with the great challenges.

4. Profile of the contemporary university teacher

The profile of the university teacher in times of pandemic by Covid 19, mediated by a professional training according to their area of performance, in each academic program, who has been trained in public and private universities, endowed with diverse intellectual capacities, with diverse teaching styles, some with experience in ICT and others with little practice and with difficulties in assuming this digital knowledge.

Taking into account the panorama of health emergency and social isolation in the years 2020 and 2021, in higher education critically impacted the educational processes and made it necessary to transform the way of directing the university's mission axes, guaranteeing continuity in the training of professionals and making use of ICT allowing access to education as part of the fundamental rights to education, as Barrón (2009: p.76), when he warned that the university teacher has the ability to adapt to the educational processes and to commit to the new challenges demanded by society and the times, as an important part of the great analysis and experience that are discussed today is the way in which this reality was assumed, generating alternatives for improvement in each educational process, in learning to approach in a decisive way even with difficulties towards the student population, which reveals a great capacity for adaptation and management of university teachers classes in times of pandemic.

From UNESCO (2020a) and UNESCO (2020b), the need to strengthen access to information and communication technologies and digital resources in each context was raised, mainly from the beginning of the pandemic, looking at the needs of communities, in order not to lose sight of the sequence in the educational processes of society and the continuity of education systems in each country, which shows a concern for digital bets and mediations in educational processes, maintaining

support for teachers, students and thus achieve maintain teaching in institutions with the improvement in the quality of education.

In fact, this allowed the university teacher to see the need to put into practice these dynamics and exercises from digital tools pointing to a reality that was not expected, because the changes generated by the pandemic have definitely impacted the educational processes, the university community, specifically, the university teacher, who assumes the fundamental changes in the process of accompanying his students, their formal educational scenario and the teaching-learning processes in the conventional pedagogy and didactics for remote work alternatives, as proposed by Silas and Vázquez (2020), as part of a stage of uncertainty but also of possibilities, which surprised the university community, a time of transition that also generated a diversity of terms that were not so deeply rooted in the processes of face-to-face teaching.

According to the above, the university teacher lived experiences from these terms: a remote work, virtual modality, blended learning, among others; from the board, from the video to the computer, to the screen, to the Tablet, to software programs for connectivity, zoom browsers, google meet, google teams, for video conferences and synchronous and asynchronous class meetings, among others. The dissemination of data online, from the virtual systems of the universities converted into document repositories and evaluation systems shows a significant advance in the use of information and communication technologies, as evidenced in the studies of Ruiz (2020) as in Mexico, mainly at UNAM, teachers have sought significant alternatives in teaching and learning processes, where ICTs are present in the contents of programs from the transversalization of educational processes in a creative way, work that accelerated with the pandemic.

According to the above, the analysis from the complexity of the pandemic times by the same urgency with which the training process has been given and has left large gaps at the level of the quality of education, which is imminent to conduct studies to deepen the needs of appropriation of digital knowledge when performing a teaching exercise, which leads to reinvent and innovate in the educational process, mainly in universities, to bring to this context a high level of teaching qualification where these experiences are present and the preparation for any event or circumstance is not a surprise but an important contribution to society.

According to the Colombian university observatory, in the Time blog, Bernal (2022) states how the pandemic has generated great challenges whose impact has permeated the structures of society, unprecedented, both for students and teachers, in the context of training processes and the aftermath of mental health, among others, very complex situation, which affects academic life and the quality of life of the university community. On the other hand, it highlights the importance of the advances of the tics, being an important contribution, but it leaves glimpses of problems that were presented in that interaction teacher and student, behind the computers, the experiences have not been investigated in depth, but it does leave the concern for mental health studies, for what was left to do, in a normal presentiality, both the virtuality and the pandemic has left gaps in these generations, difficult to overcome in the short term.

In this sense, university teachers have been able to impact educational processes through their own capacity to adapt, within their own daily work, by taking accelerated refresher courses, university training, use and contribution of their technological information systems, after the health and social emergency with the student, who immediately transformed their family scenarios into academic

spaces. Their academic and work life hand in hand with family life, changed their didactic strategies, the use of ICT as part of their means and mediations as Barbero (2003: p.xxi) in that reality between culture and communication, but where technology became that interconnection at a universal, social and cultural level.

This profile of university teacher in times of pandemic made that the culture of digital systems is today in the hand of the professional, who has transformed its curricular contents adapting them to the priority use of digital bibliographic databases, with the interaction of academic networks and the diffusion of more open knowledge, more flexible from the scenarios of inter and multidisciplinary activities, which technology approaches the global community in a faster and more effective way.

On the other hand, the conditions of the university teacher made their times change and the intensity of work intensified, as well as the interaction with students, which evidences a critical stage at academic and professional level for university teachers, but also comes a stage of reflection on the role of universities, already in post-pandemic stages to direct greater efforts in the quality of education, the management of technological processes in universities and progress in the use of digital tools by teachers as a contribution and balance in the use of teaching strategies hand in hand with the contributions of digital media and technological tools that enable a culture of university teaching in the management and appropriation of ICT in each learning scenario.

It has been an opportunity to improve these alternative learning processes, that these teachings left by the pandemic allow a more communicative society, more connected with reality and a higher level of literacy in higher education, investing in human talent from ICT enables a culture of digital knowledge fundamental for what society of the XXI century should really know and live together. An important stage is coming for university teachers as proposed at the National University of Colombia, as a stage of possibilities where society cannot return to traditional schemes. A stage where the presence is of interest to all, where research and extension is strengthened, where human interactions are more intense, where life at the university is of challenges and challenges, and where the collaborative, learning from experiences, problem solving, meaningful practices are achieved, from a reality felt by some experiences that enable the transformations that society needs, thus strengthening a culture for citizenship (UNAL, newspaper, June 2020).

5. Digital knowledge and pandemic

Digital knowledge has been conceived as the mastery of certain technological assumptions that allow people to use hardware and software tools to promote their digital literacy. According to Ramírez & Casillas (2017), ten digital knowledges are contemplated in two types: informatic and informational; and they are classified as follows:

> ...eight are computer literacy and refer to device management, file management, software and specialized information sources, text and rich text, data, media and multimedia, communication, and collaboration and socialization. The remaining two skills are informational and address the topics of digital citizenship and digital literacy. Informatic knowledge refers to three aspects: relations with systems administration; skills for handling, editing and creating digital content; and knowledge related to communication and socialization. (Ramírez &Casillas 2017, p.20).

From this context, and in the light of what happened in pandemic, where the open school was experienced from the crisis, it was possible to observe the need to develop digital knowledge in both students and teachers; however, in the face of the emergency, teachers adopted foreign methodologies, which were not fully adjusted to the context, since the lack of technical knowledge and the absence of an optimal infrastructure, limited in many scenarios the teaching and learning processes. This made it evident that "the rigidity of the school institution has hindered the rethinking of the socialization models that are considered hegemonic, in terms of the production and reproduction of academic knowledge, and in terms of the social relations established in this space. It is understandable that it happens, since there is the possibility that by rethinking such models, the role of the subjects that constitute this institution and, therefore, its social function will be questioned" (Trejo-Quintana, 2020, p.123). In sum, rigid educational systems became evident, with little capacity for resilience; however, the teacher as a subject of pedagogical knowledge was given the task of exploring the limited tools and knowledge available to him to keep the academy open despite the confinement.

This situation meant that many of the teachers had to begin to take part in this technological circuit that they had long been unaware of, so that in the context of a new improvised classroom system, there was no other option but to adopt the new technologies and enable the continuity of the academy. Indeed, this experience summons the school's protagonism to anticipate challenges and try to provide situated solutions that recognize the reality of the contexts. In this regard, Saavedra et al. (2019) point out that "Contemporary theoretical bets must be the baton that guides teachers with old teaching traditions, since today's teacher faces a changing and diverse scenario, where young people converge who have been labeled as emerging generations, who come to implement old strategies in new scenarios that are clothed in diversity. The contemporary era demands a new technological profile for teachers and it is indispensable that nations develop updating and initial training capabilities for teachers with a strong technological content" (p.90).

6. Results and discussion

COVID-19 undoubtedly put the curriculum in crisis and showed the need to break the link with traditional practices and adopt new ways of teaching and learning to generate other knowledge experiences. However, social, technological and didactic inequalities were not long in coming, so, in the eagerness to offer reactions to the educational situation presented by students and teachers, they threw themselves into the ring to implement a remote pedagogy, little explored, but in which they had to quickly become experts.

However, resistance appeared on both sides, as social isolation revealed how important the school is in the lives of students, teachers and parents. For this reason, the school had to get out of its static condition and react to an unexpected crisis. Therefore, teachers in their resilience capacity had to make it possible for education to continue, revealing the complexity of the school and the problems that teachers had in educational institutions at the level of resources, teachers' digital knowledge and traditional methodologies distant from those expected for the present time.

In this scenario, a disrupted school saw the need to rewind its practices, so an empathetic look towards technology emerged, perhaps something that years ago the digital natives were clamoring for, since their cultural profiles were closely linked to the use of technology.

The economic and social inequity in the population with respect to the possession of adequate physical resources, available to carry out educational processes, within families, has been evidenced, and this issue has already been addressed in international conferences, as quoted below: "however, there is a strong concern in different countries towards the fact that technologies penetrate all sectors, as noted in the 5th Ministerial Conference on the Information Society in Latin America and the Caribbean, held in Mexico City in 2015. (Cabero-almenara & Llorente-cejudo, 2020:26).

In this context, many educational and technological reactions emerged in the context of the pandemic. However, it is worth thinking about the scope of school renewal after this situation, where education policy will most likely make its transition and teachers and students will return with a different look on their teaching and learning processes. Therefore, it is pertinent to align the digital knowledge of teachers with that of students and make a social contract that does not allow the achievements of this pandemic to be abandoned at the level of infrastructure, teacher training, among other gains obtained as a result of the pandemic; however, while the technological lag continues, it will be difficult to take advantage of 100% of the benefits of the ICT and education binomial.

The invitation is to continue decanting all the lessons that the pandemic has left, without ignoring that "preparing for crises, such as the current pandemic, not only requires devising strategies to follow up on traditional productive activities, but also developing capacities for self-management of knowledge, exploration of creativity, physical and psychological self-care in the face of the undesired use of the same technologies, but also to foster solidarity, citizen participation and social responsibility. All of this is coupled with the ability to avoid technological dependence; that is, to learn to disconnect" (Trejo-Quintana, 2020).

From the university, redouble efforts to improve the quality of higher education and overcome the challenges in the exercise of the university's mission axes, recover teaching with contributions of digital knowledge, the good use of ICTs, from research, betting on the opening of more national and international academic networks, intensify information networks and achieve a true sense of university extension, achieve true leadership, bet on better financing and recover the human aspect in every scenario, among others, as stated in the newspaper of the National University of Colombia (UNAL, newspaper, June 2020).

7. Conclusions

This pandemic has summoned the creativity of all educators who recognized the didactic value of integrating ICT in their teaching practices; however, the educational benefits that digital knowledge brings to the teaching and learning processes depend on the teacher's ability to model the conditions, realities and situations that configure the act of teaching.

The pandemic showed the relevance of the dominance of digital knowledge in the profile of today's teacher, which does not ignore their disciplinary knowledge, but must now locate technological mediations that allow them to bring their knowledge to remote learning environments, since confinement has positioned itself as a new learning scenario.

Undoubtedly, research points to an important interaction between digital knowledge and the use of technologies as a contribution to a reality in higher education, a scenario where this relationship

between teacher and student is strengthened in the training process and in which this same reality allows an understanding, an adaptation and a vision of change, for the present and future society.

The same dynamics of consolidation of information and communication technologies, such as the use of digital tools to support the academy, after a presentiality, have generated challenges for university teachers and students, then it becomes a culture of knowledge, experiences and important experiences to continue with bets towards alternatives and emergencies in a society that needs urgent changes in the way of being and acting in this field of technological knowledge.

The reflections point to a stage of insertion of digital knowledge from the appropriation of knowledge in science and technology, hand in hand with public policies, which definitely affect the training of university professionals.

What the pandemic has left behind has been a life experience for everyone, without leaving aside the crisis generated at the human and health level, an unprecedented health emergency for humanity. The analysis of educational opportunities, which have an impact on the use of technologies and for the structural transformations of humanity, but also to generate a culture of knowledge and where a call for attention is made to the university teacher not to return to traditional schemes. On the contrary, it is necessary to change towards the use of new information and communication technologies, towards innovation, in retaking creativity and dynamism, allowing the interaction of knowledge and experiences, with a more human and argued communication alternating diversity of scenarios, so that the academy resurges after this crisis generated by the pandemic and recovers what is possible in diversity and difference, in order to achieve more quality in education, even in times of complexity and uncertainty.

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