The university teacher in the digital age

El maestro universitario en la era digital

O professor universitário na era digital

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ABSTRACT. The research analyzed and reflected on the future of university teaching in a globalized-digital world. The study problem shows that a small percentage of teachers have managed to adapt to technological means, mainly in third world countries. In this sense, the objective of this study is to outline ideas to strengthen the profile of the university teacher through the responsible domain of technology. For this, we propose as a thesis, constant teacher training in digital didactics and pedagogy, which inserts us into a new university scientific era. In conclusion, university pedagogy is forced to changes that favor humanity, so thinking today of university teaching without digital technology seems wrong.

PALABRAS CLAVE

RESUMEN. La investigación analizó y reflexionó sobre el futuro de la docencia universitaria dentro de un mundo globalizado-digital. El problema de estudio, muestra que un pequeño porcentaje de docentes han logrado adaptarse a los medios tecnológicos, principalmente, en países

KEYWORDS

digital competence, educational cyberculture, university teacher, digital era, teacher profile.
1. INTRODUCTION

The digital teacher is one who is at the forefront of new methods of communication and teaching through technological science consistent with the context. Under this premise, Suárez et al. (2021) state that becoming a digital teacher depends on the initiative shown to change the traditional for the innovative. However, this must be accompanied by practical and systematic training that facilitates the conversion of the teacher.

For his part, the professor is the one who "creates horizons to transform policies and practices based on professional development" (Suárez et al., 2021, p. 44). In this sense, he is a political-social leader who tries to make possible solutions through a science twinned with technology and its numerous supports from the academic field.

The panorama of the digital university teacher worldwide is clear. The pandemic has speeded up technology in educational centers, with it, the teacher in all its areas and levels. The teacher has acquired new teaching-learning strategies, on the latest, controlling, for example, the addictive use of students to devices and technological means is a problem that is intended to be counteracted by incorporating technology into the educational system as it occurs in advanced countries. (Medina, 2021).

It is known that, in the old world, the "European Higher Education Area" was established, initiated in Bologna, which presents a Technological Commission that is in charge of techno-digitalizing university education and gives as objectives:

- improve the employability of graduates, encourage mobility –including between the academic world and industry– and promote transparent and high-quality information on the possibilities of study, research and results of the institutions […] originating the promotion of the acquisition of different transversal skills and multilingualism for better educational communication between nations by promoting the CLIL methodology (Content and Language Integrated Learning) and ICT skills (Gil-Serra & Roca-Piera, 2020, pp. 2-3 ).

However, this university modernization must be accompanied, as Reis et al. (2021) by better computer-digital skills of the teacher, which are related to a set of skills, knowledge, attitudes, and dispositions of teacher adaptability in the globalized environment, where information can be located, evaluated and used in different...
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ways. So, university techno-digitalization policies, accompanied by better digital skills of the teacher, make university education a didactic, innovative, and futuristic pedagogy.

Thus, it is intended that the university teacher sees beyond the present and reflects on the future and his education as part of the system of social evolution, thus speaking of future cyberculture, where knowledge changes are in accordance with historical time and are not delayed as a result of past university teaching in method and resources (Lévy, 2000). The university cyberculture that is proposed then is also a means of teaching support, where they find increasingly diverse and relevant information; through it, they can generate new scientific knowledge.

The transformation and professional perfection is a constant process according to the new times and their advances. Technology has changed ways of life and presents new paths to progress. Universities must assume digital paradigms that contribute to science, reconfiguring the teaching role towards the future and new opportunities for development through cyberculture.

Since the last century's end, technology use has been growing gradually. However, the Covid-19 pandemic intensified this scenario enormously, involving education in its fullness, "triggering a rethinking of the provision of educational services at all levels. The intensive use of all kinds of platforms and technological resources to guarantee the continuity of learning" (Giannini, 2020, p. 6).

Consequently, the teacher has had to rethink his academic activity to strengthen himself in digital matters and provide a new educational face to his students. The university as a scientific center must show new tools that facilitate learning in the face of new demands. From this reality arises the need to propose a cyberculture in which teachers present themselves as educational leaders and guides of the new digital teaching.

2. METHOD

This essay followed a qualitative hermeneutical approach because we chose to follow the methodology of understanding, analysis and reflection of the subject matter in order to provide a solution or clarify the panorama on it.

As for the materials, we went to world leaders in the field of scientific dissemination, as well as to academic works that appeared in important academic repositories such as Scopus and Web Of Science. In the same way, we use bibliographic analysis sheets to order the ideas exposed in the present.

3. ESSAY’S BODY

3.1 Problems and scope to train digital teachers

The pedagogical practices of the past still show solid structures that are hard to be abandoned by teachers, this being facilitated in their educational actions by maintaining an education by repetition and not by discovery. Thus, finding digital masters is a problem that is related to their reflection and their regret at entering the modern world, which is why various academic works, such as that of Hernández et al. (2018), request that:
Teacher training must be comprehensive from a perspective that integrates technology as a resource for teaching and obtaining student learning. This leads to the training of a teacher with reflective, constructivist, and evaluative management in obtaining new products (p. 682).

Thus, we must know that ensuring the optimal performance of the university professor, producer of knowledge, and researcher is a fundamental task of universities that, in some cases, seem to limit themselves to transmitting the information. Quality education is required, where research and teaching production go hand in hand, relying on technological tools that encourage future scientificity.

The professor then must present himself at the forefront of research, guide, and train competent university students for future problems from a quality science, where the globalization of knowledge is a reality through technology, which means, according to Walker (2020), creating severe scientific paths in accordance with other social realities that strengthen academic work and institutional ties in favor of large-scale, regional and global scientific collaboration.

Figure 1

*Characteristics of the scientific teacher*

A university teacher is, therefore, a constant reader and learner. Reading is a means to continue learning and allow ourselves to open new debates, criticisms, and reflections. The university teacher must focus on this activity to constantly renew his pedagogical process and show new content to his students. In this sense, we speak of a strategic reader who capitalizes on his learning and guides his students to follow the line to broaden academic perspectives.

Now, this reading also allows the teacher to constantly innovate, not only from the theoretical but also from the didactics and its new digital mechanisms. We know that didactics facilitates student learning. For this, the teacher must have and master resources that facilitate their teaching process. Therefore, they must always show a positive and exploratory attitude towards technology and its pedagogical value, which allows the processing of information in a clearer and faster way, generating new academic environments within the globalized world.
Wolfram (2018) says that teaching digital didactics allows us to discuss "some experiences and achievements to date, which may be relevant for the future development of digital media in higher education. In addition, we will focus on its implications for a future 'digital university" (p. 2). Clearly, the information coming from technology, such as the Internet, does not guide itself. It is the teachers who, through their conscious management, adapt digitization to the university environment as a didactic tool.

3.2 Some characteristics of the new university teacher

Resilient and creative

University students are predisposed to innovate and create tools and programs that contribute to their environment. However, this attitude can decline if they do not find a creative and resilient teacher to support their projects. Clearly, creativity is related to innovation and technology. Therefore, the creative teacher has the ability to coexist with technological tools and their concepts to transform them into new applicable knowledge in society; consequently, managing resilience and creativity is essential for the teacher who intends to rebuild and reformulate education (Siemens, 2006).

This resilience and teaching creativity must be presented according to the 21st century and its rapid advances that often reconfigure the way of teaching, and learning, as well as the problems and their scope, so the teacher must be willing to reorient their activities.

Leader and manager of emotions

Undoubtedly, emotional intelligence is a critical factor in knowing how to manage any human group and becoming a leader. When we talk about a teacher guide, we also frame his handling of emotions towards himself and others, facilitating an effective educational process involving being with the academic and in this way, achieving, according to Duque et al. (2017) united teamwork by developing skills for better interpersonal management and sufficient capacity to understand the consequences that their particular actions have on the rest.

The teacher tends to improve as a leader and manager of emotions that, when presented in class scenarios, significantly improves the comprehensive academic development of the student body and the institution, generating an optimal climate to insert themselves in an integrated education in science and soul.

Possessor of a universal culture

It is known that human problems and needs are not delimited in geographical space. They are always related in more global contexts that have repercussions in each fragment of the world. Thus, the teacher must manage a global culture that allows him to focus well on problems and enables a broader view of the events to be solved.

This process of global culturalization finally makes it possible to turn the chair into “a deep interactivity, an openness to feedback, the sharing of resources and knowledge, and a willingness to collaborate and provide ostensibly vast support to a large number of contemporary everyday practices” (Knobel & Kalman, 2018, p. 24).

However, this transdisciplinarity that originates from a universal culture and that all university teachers must take into account should not prevent the teacher from achieving expertise in a particular discipline that allows them to stand out, which implies, as Harari (2018) proposes, train as a critical teacher of the specialty who intends to communicate and collaborate in a better and new way with the social and academic community, this for a better way of life through highly developed skills over time on a particular topic.
Digitally competent

Technology is a valuable contemporary academic resource that has recapitulated the ways of storing, processing, and transmitting knowledge from the teacher to the student (Orosco et al., 2021). Thus, it must be managed by someone competent who handles the technology in an ethical and consistent manner with the social environment.

We speak of the teacher as digitally competent, who enables education in different spaces, modalities, and times with this medium. Being technologically competent implies being consistent with the digital progress of the environment and not forcing them to use new devices that do not solve their local needs in the first place.

Thus, it is important that ICTs are managed according to the context, taking into account that, if any place lacks technological tools, synchronous education systematically processes its methods towards digitization that facilitates and improves teaching gradually and without forcing the fields. Now, it is clear that asynchronous education still has a long way to go due to the significant social gaps that make it impossible for a considerable amount of the population to have technological tools and services that enable them to take quality classes remotely.

This problem (virtual-face-to-face) means that the teacher develops an ability to manage their classes remotely or face-to-face with the same efficiency. However, we know that the management of face-to-face classes is favorable for the teacher who intends to get to know his work group and strengthen socio-affective ties; We talk about developing soft skills that allow for better university education. However, the virtual pedagogical capacity is a recent process for which it is necessary to start betting since education is directed to the online world that requires another form of dealings and new mechanisms of knowledge to the other.

Within these problems, the teacher has also had to reinvent himself and emphasize asynchronous teaching as a result of Covid-19. Therefore, he must correctly handle any tool that allows him to get closer to his students, redesigning his methods toward digitization and contributing to the formation of a new curriculum according to the context and its new scientific needs.
Globalized and hyperconnected teacher

It is clear that the new trends of innovation and technological change cannot get away from the educational field; the renewed ways of collecting information and processing it through technology and hyperconnectivity facilitate student self-learning (Sancho et al., 2018, p. 213). Obviously, globalization leads to educational evolution and a teaching challenge that must be shown at all times hyperconnected in communication and information that improves its educational quality.

This hyperconnectivity also implies investigating and understanding the movements and concerns of contemporary university students, that is, knowing their academic actions are highly related to the digital. This knowledge leads the teacher to a new academic stage in which he immerses himself in the digital world, trying to understand the pedagogical utility that can be given to this tool that is totally rooted in young people. University science, then, not only starts from the knowledge and adequate technological management but also from knowing the university student and his relationship with the digital.
3.3 How to train digital teachers in universities

Figure 3

*Digital teacher training*

More than a continuous training of the universities for the teacher and his pedagogical digitization, his training depends on the reflection that he carries out in favor of a globalized and international education. Clearly, there is a need for new communication between teacher and student, so this need could also become a mechanism for digital-pedagogical teacher training.

According to Freixas et al. (2022) another way to train digital professors is by letting them know through population studies the modernization gap that exists between them and their students, who must urgently engage with the new communication mechanisms so as not to systematically move away from the new social commitments that they will assume the learners.

4. DISCUSSION

The new times demand new pedagogical mechanisms that accommodate social and academic needs. University teachers must clearly be oriented towards academic digitization that allows them to relate to their students in another way and point towards a new scientific era. Traditional education must therefore disappear to open the doors to the globalized world, where the teacher handles technological tools in a didactic, responsible and ethical manner that enables new educational experiences.

This technological need has evidently increased as a result of the pandemic (Covid-19). Physical distancing has forced the search for other educational alternatives in which institutions, teachers, and students have had to engage massively. We, therefore, live in the era of hyperconnectivity where it is impossible to exclude...
Pedagogical digitization allows teachers to acquire new academic skills such as a better relationship with their students and, therefore, a better educational climate, constant training through the different information found online, and the ability to adapt and properly manage the tools technological.

Likewise, regarding the information found on the Internet, the teacher must be prepared to synthesize and pass judgment on the contents, where the student identifies and imitates the critical attitude of the teacher in all scientific and advanced university institutions on all academic content.

Many believe that technology aims at the dehumanization of the individual and the separation of man from his environment. This is a negative or pessimistic approach to technologization if we consider that this same technology can bring enormous social benefits through its incursion into education. The discussion of both positions presents its foundation, but the truth is that the globalized world favors the use of technology as a social facilitator according to our times.

However, we have to bear in mind that “to integrate ICTs in education successfully, is not only investment in equipment and resources necessary, but also a training deployment [...] in which teachers carry out an updating exercise in topics adjacent to ICTs” (Fuentes et al., 2019, p. 36). We are talking then about educational programs that should be financed and promoted by university institutions and the state if the aim is to achieve a modern education that transcends the national context.

Automatic criticism then arises of the slow university transformation in countries, above all, third world countries that do not invest in tools that shorten the time and improve academic quality. Universities must take off to the new world under the action of the teacher as leader and guide responsible for the use of technology in the higher academic field, understanding that the role of teachers is to redefine the future, relying on any contemporary tool that is found to facilitate the teaching-learning process.

They are known as technological tools because their information or findings do not present an absolute truth. They must necessarily be analyzed and interpreted by someone capable and technologically apt. For this, the university teacher must constantly prepare and integrate into the globalized world aware of the context and trace new goals according to the professional and social needs of the university environment, where the teacher discusses academic concerns and their progress toward the future (Weinstein, 2018).

5. CONCLUSIONS

Technology has grown enormously in recent years, encompassing all human actions from recreational activities to the most complex scientific tasks. Thus, technological resources have become essential for modern man, so university centers do not escape this trend by incorporating all technology on their campuses, hoping for better, more accurate, and comprehensive academic results.

However, what is perceived is that there are still a considerable number of professors who refuse to take the qualitative leap into the future and persist within a traditionalist education, thus making it impossible for the arrival of cybertculture to modernize education on a large scale. It is here that the power of teaching reflection stands out to change perspective and show a new pedagogical face toward the future.
With these problems, what is proposed in the first instance is to intensify economic resources towards digitized education from the government, passing through private and public university educational institutions to the business sector, which will finally be favored with greater effectiveness at work through innovation and scientific-technological improvement.

Finally, the main proposal revolves around the university teacher, who must receive constant practical and reflective training that allows him to see other ways of seeing education, where digitization is part of it and can easily communicate with his students, presenting himself according to time, and the circumstances.

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- David Auris Villegas: Conceptualización, curación de datos, análisis formal, investigación, metodología, recursos, software, supervisión, validación, visualización, administración del proyecto, escritura -preparación del borrador original, escritura -revisar &amp; edición.
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