

El nuevo rol del profesor universitario en la etapa postcovid: formación y desarrollo de competencias docentes

The New Role of the University Professor in the Post-COVID Stage: Training and Development of Teaching Competencies

O novo papel do professor universitário na fase pós-covid: formação e desenvolvimento de competências docentes

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Resumen

Este artículo de revisión sistémica constituye un análisis del cambio de roles que han tenido que enfrentar los profesores universitarios en el desempeño de su labor docente antes, durante y después de la pandemia del covid-19. Por tanto, el objetivo es identificar las competencias docentes que los profesores universitarios deben desarrollar para responder a los retos y desafíos de la etapa postcovid. Al respecto, se debe tomar en cuenta que estos profesionales tuvieron que transitar abruptamente del modelo educativo tradicional a uno totalmente en línea, lo cual los obligó a reconfigurar su práctica educativa. La metodología utilizada fue la sugerida por autores que han realizado revisiones sistémicas, por lo que se emplearon técnicas y criterios de búsqueda, de inclusión y procesos para el análisis de datos, así como un protocolo interno de cribado. Los resultados obtenidos son los rasgos bibliométricos de la literatura analizada, así como una propuesta en donde se clasifican las competencias básicas, disciplinares, pedagógicas y digitales indispensables para el nuevo rol docente en la etapa postcovid. Finalmente, se analizan las implicaciones de los cambios de roles de los profesores universitarios durante la pandemia del covid-19, así como los retos y desafíos que tendrán que enfrentar para responder a las nuevas demandas de servicios educativos, lo cual les



permitirá desempeñar de la mejor manera posible su quehacer académico, independientemente de la modalidad educativa.

Palabras clave: profesor universitario, educación superior, competencias docentes, postcovid, educación superior.

Abstract

This systemic review article constitutes an analysis of the change in performances that university professors have had to face in their teaching work before, during, and after the COVID-19 pandemic, highlighting the importance of the training and development of teaching skills. Therefore, the objective is to identify the teaching competencies that university professors must develop in their new teaching role to respond to the challenges in the post-COVID stage. Remembering that university professors abruptly transitioned from the traditional educational model to a completely online one, having to reconfigure their face-to-face educational practice to a virtual education format derived from the COVID-19 health contingency, the methodology used was the one suggested by authors who have carried out systemic reviews, in such a way that search techniques and criteria, inclusion criteria and process for data analysis, as well as an internal screening protocol, were used. The results obtained are the bibliometric features of an analyzed literature, and a proposal where the basic, disciplinary, pedagogical, and digital competencies are classified and essential for the new teaching role in the Post-COVID stage. Finally, we conclude by analyzing the implications of the changes in the performances of university professors during the COVID-19 pandemic, as well as the challenges they will have to face to respond to the new demands for educational services in a post-COVID stage seeking at all times to continue empowering their academic work, regardless of the educational modality.

Keywords: University Professor, Higher Education, Teaching Competencies, post-COVID, Higher Education.

Resumo

Este artigo de revisão sistêmica constitui uma análise da mudança de papéis que os professores universitários tiveram que enfrentar no desempenho do seu trabalho docente antes, durante e depois da pandemia de covid-19. Portanto, o objetivo é identificar as competências docentes que os professores universitários devem desenvolver para responder aos desafios da fase pós-covid. Neste sentido, há que ter em conta que estes profissionais tiveram de fazer uma transição abrupta do modelo educativo tradicional para um modelo totalmente online, o que os obrigou a reconfigurar a sua prática educativa. A metodologia utilizada foi a sugerida por autores que realizaram revisões sistêmicas, portanto foram utilizadas técnicas e critérios de busca, inclusão e processos para análise dos dados, além de um protocolo interno de triagem. Os resultados obtidos são as características bibliométricas da literatura analisada, bem como uma proposta onde são classificadas as competências básicas, disciplinares, pedagógicas e digitais essenciais para a nova função docente na fase pós-covid. Por fim, são analisadas as implicações das mudanças nos papéis dos professores universitários durante a pandemia de covid-19, bem como os desafios que terão de enfrentar para responder às novas exigências dos serviços educativos, o que lhes permitirá desempenhar o papel de da melhor maneira possível para o seu trabalho acadêmico, independentemente da modalidade educacional.

Palavras-chave: professor universitário, ensino superior, competências docentes, pós-covid, ensino superior.

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Introduction

The role played by the university professor in higher education institutions (HEIs) is fundamental, given that he or she represents a central actor in any educational process. Its primary function lies in guiding student learning with the aim of promoting the development of skills, aptitudes, abilities and skills that contribute to the enrichment of their professional training through quality educational practice. In fact, today, the figure of the teacher is no longer limited solely to the transmission of knowledge, but is mainly recognized as a professional who guides, guides and accompanies the student in the construction of their own knowledge. Therefore, the teacher's performance is closely linked to the skills and competencies that he or she possesses and applies to enhance the learning of his or her students (García, 2017).



In the face-to-face modality, the university professor carries out master presentations with a specific group of students in the same space and time of interaction. To do this, he uses resources such as the blackboard and his voice to offer information and is in charge of the evaluation, monitoring and feedback process within the classroom.

According to Sotelo *et al.* (2017), in the face-to-face modality, the teacher's profile is characterized by a traditional vision of teaching, in which academic planning, teaching-learning methodologies, didactic strategies, as well as the selection of resources and evaluation, are They are carried out through conventional formats, so great importance is given to the management of time and space to physically interact with students.

However, in the current digital age, the role of the university professor changes drastically (Durán Chinchilla *et al.*, 2021). Unfortunately, there are few universities that have invested in the training of their teachers, and even fewer are the teachers who have been trained individually to face the new educational challenges that have arisen as a result of the presence of covid-19. In this context, the role of the university professor becomes complex, since it involves the important task of creating the appropriate conditions within the teaching-learning process, as well as possessing the necessary skills and abilities to practice their profession effectively. This can only be achieved through the continuous training that teachers receive, which will allow them to acquire and apply a set of disciplinary and pedagogical knowledge, as well as technological and didactic skills to carry out their teaching work with excellence and strengthen their academic work.

In other words, continuous training plays an indispensable role in becoming competent, which encompasses the use of a wide range of educational resources, such as platforms and digital media to interact and collaborate with colleagues, other institutions and even other countries (Garnier, 19 July 2022). Therefore, HEIs must provide training programs to ensure quality teaching and prepare them for future educational experiences, which is especially relevant given that education will undergo significant changes after the pandemic (Garnier, July 19, 2022).

In the words of Amaya *et al.* (2018), “the teaching professional will always be a key figure in the educational process, regardless of the educational modality in which they operate, whether in face-to-face, hybrid, online or distance settings” (p. 106). This raises the need to reconsider in HEIs the importance of teaching training and specialization dynamics, as well as the value they have for university professors to acquire the necessary skills to effectively carry out their work in any educational environment.

For this reason, it is crucial to analyze what happened during the Covid-19 health contingency, a time in which the demands on university professors were greater, since they had to develop digital skills not only for teaching, but also to communicate with students and develop teaching materials for digital media, compared to the traditional academic approach, where the master class was dominant before the pandemic.

In this regard, it is important to highlight that face-to-face educational processes differ significantly from online educational processes in various aspects, such as the way of teaching classes, the design of teaching-learning strategies, the selection of content and teaching resources, the management of instructional methods, as well as synchronous and asynchronous communication processes, and the modalities of attention, monitoring, feedback, and evaluation of students' academic performance (Amaya *et al.*, 2021).

In fact, the emergence of covid-19 has made clear the inevitable need to reconfigure face-to-face educational models to give rise to educational innovations, through the design and implementation of digital educational strategies. Therefore, it is essential that educational flexibility, learning systems and unconventional methodologies are present to address the current challenges of higher education (Tejedor *et al.*, 2020).

According to García (2021), during the pandemic, university professors made a considerable effort when going from the warmth of face-to-face teaching to the coldness of the screen, suddenly and forcedly transforming from face-to-face teachers to online teachers. In many cases, this change occurred without prior technological preparation, so that a temporary solution had to be improvised for a situation of utmost urgency.

Therefore, Amaya *et al.* (2021) emphasize the crucial importance of university professors acquiring digital skills, especially in the context of the covid-19 pandemic. In addition to mastering the contents of the subject and possessing pedagogical and instructional knowledge, it is necessary for teachers to adopt technologies and innovate in teaching strategies to strengthen their confidence in their teaching work in any educational environment.

During and after the pandemic, the 21st century teaching profession is expected to adopt a different role than the traditional one (Garnier, July 19, 2022). This will be manifested through virtual learning environments, where space and time will not be limitations for the performance of its function, since the educational process will be based on the use of technological platforms and methodologies adapted to formats mediated by screens (Tejedor *et al.*, 2020).

In short, there is a need for multi-platform education, given that educational scenarios will be affected by uncertainty about the evolution of new pandemics. Therefore, this systemic review article aims to identify the teaching competencies that university professors must develop to adapt to their new role after the covid-19 pandemic.

Methodology

Method and materials

This review article was carried out using a systemic literature review approach, as indicated by several authors (Guirao, 2015; Martin, Ahlgrim-Delzell and Budhrani, 2017; Perdomo and Morales, 2018). This approach allows us to offer a transparent, exhaustive and structured view of the reviewed literature. According to Guirao (2015), the systematic review is characterized by being explicit and precise, for which a outlined, standardized and replicable protocol is followed that guarantees the quality, consistency and transparency of the review process.

Search techniques and criteria

Once the method was established, the search strategies were defined using the Google Scholar search engine, which is designed to locate scientific and academic articles from various sources, such as university publishers, professional associations, preprint repositories, universities and other academic organizations.

To optimize the search, search descriptors grouped under specific terms were used. The search combinations included terms such as “university faculty competencies” and “university professor competencies.” In addition, filters available in the search engine were used, such as specific date ranges, sorting by relevance, language and type of article.

Additionally, the following search criteria were considered:

1. Date of publications: from 2013 to 2023.
2. Primary sources (research articles and literature reviews published in refereed and indexed journals, books).
3. Content: Competencies of university professors.
4. Educational level: Higher.
5. Country: Latin America and Europe.

Inclusion criteria and process for data analysis

The inclusion criteria were the following:

1. Publications written in English or Spanish.
2. Extracted from refereed and indexed journals.
3. Research related to the competencies of university professors.
4. Methodology: studies of any approach and design.
5. Periodicity of publication from 2013 to 2023.

It is worth mentioning that an internal screening and analysis protocol was followed to reduce the presence of biases, as follows:

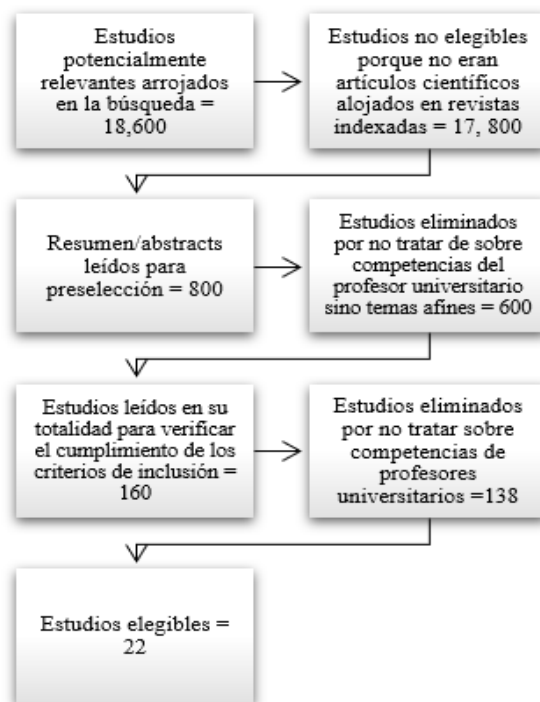
1. Scholar search engine were read.
2. Those that contained the selected keywords and descriptors were copied into an Excel document.
3. *abstract* was read with the intention of verifying that the topic was within the scope of competence.
4. It was verified that they were refereed and indexed journals.
5. Only articles selected according to the aforementioned criteria were kept in a Dirve folder.
6. Finally, each article was read completely to proceed with the formation of categories.

In addition, a qualitative analysis plan was carried out to record bibliometric information, as well as quantitative information, analyzing data with the Excel tool through dynamic tables.

Results

This systemic review article presents, first of all, the results from the screening process of the documents analyzed, which is detailed in the following figure:

Figure 1. Document screening process.



Source: self made

Secondly, a quantitative analysis was carried out based on the 22 selected articles with the aim of obtaining an overview of observable trends and providing bibliometric information. Thirdly, based on this analysis, an additional contribution is presented in the form of a proposal for the competencies that the new role of the university professor must consider in their teaching practice to face the challenges of higher education in the subsequent stage. to covid-19.

Bibliometric features

Regarding the data analysis derived from the systemic review, the articles were classified considering the years of publication, the language and the subject of the journals selected by the authors for the publication of these investigations. This analysis allowed us to observe the trend of publications. In this regard, it is highlighted that the majority of the research was published in 2018; The second most frequent year of publication was 2016, and in third place were the years 2014 and 2017 (Table 1).

Table 1. Distribution of articles by year, language and topic of the journal of the published research.

Year	N	Language		Magazine theme					
		English	Spanish	AN D	ED	Q	INNE	TEA	INVE
2014	2		2					2	
2015	1		1				1		
2016	6	1	5	2		1		1	2
2017	2		2				1		1
2018	8	1	7	4	1	1	2		
2019	1		1					1	
2020	1		1					1	
2021	1		1		1				

Note: E= Education, ED= Distance Education, P= Pedagogy, INNE= Educational Innovation, TE= Educational Technology, INVE= Educational Research.

Source: self made

On the other hand, in Table 2, it was observed that the number of authors ranges between 1 and 5 in the analyzed publications. Publications with 1 author and 3 authors are those with a higher frequency of participation.

Table 2. Number of authors per article

Year	Number of authors per article				
	1	2	3	4	5
2014	2				
2015			1		
2016	2		3		1
2017		1		1	
2018	3	1	3	1	
2019		1			
2020	1				
2021			1		

Source: self made

In relation to the countries of origin of the studies, Table 3 highlights that the majority of the research was carried out in Spain, followed by those carried out in Mexico. Low production on this topic is observed in other countries.

Table 3. Distribution of articles by country

Year	Distribution of articles by country						
	AND	M	CO	C.U.	E.C.	h	N
2014	2						
2015	1						
2016	6						
2017	1	1					
2018	3	1	1	1	1	1	
2019	1						
2020							1
2021	1						

Note: E= Spain, M= Mexico, CO= Colombia, CU= Cuba, EC= Ecuador, H= Honduras, N= Nicaragua.

Source: self made

Likewise, in Table 4, the methodological characterization of the studies was carried out, which revealed that the majority of the research analyzed adopted a quantitative design approach and documentary reviews, followed by studies of a descriptive and qualitative nature.

Table 4. Methodological characterization of the studies

Year	Quantitative	Qualitative	Descriptive study	Document review	Systemic review	Critical review
2014	2					
2015	1					
2016	1		2	3		
2017		1	1			
2018	1	1	1	3	1	1
2019		1				
2020				1		
2021	1					

Source: self made

The importance of changing the roles of the university professor

As we enter the third millennium, the impact of ICT on students' knowledge acquisition is undeniable, underscoring the urgent need for innovation in the academic profession. However, many teachers face difficulties in adapting to these educational changes, which requires a significant effort to integrate educational technologies in an increasingly globalized world (Clavijo, 2018).

Therefore, it is crucial to highlight that in this era the role of the traditional teacher is no longer conceived in the same way, since technologies are deeply rooted in the educational process. This transformation has led to an evolution in learning environments towards educational innovations supported by ICT, with a focus on virtual and collaborative spaces, which surpasses the traditional conception of the classroom as the only place for knowledge transfer.

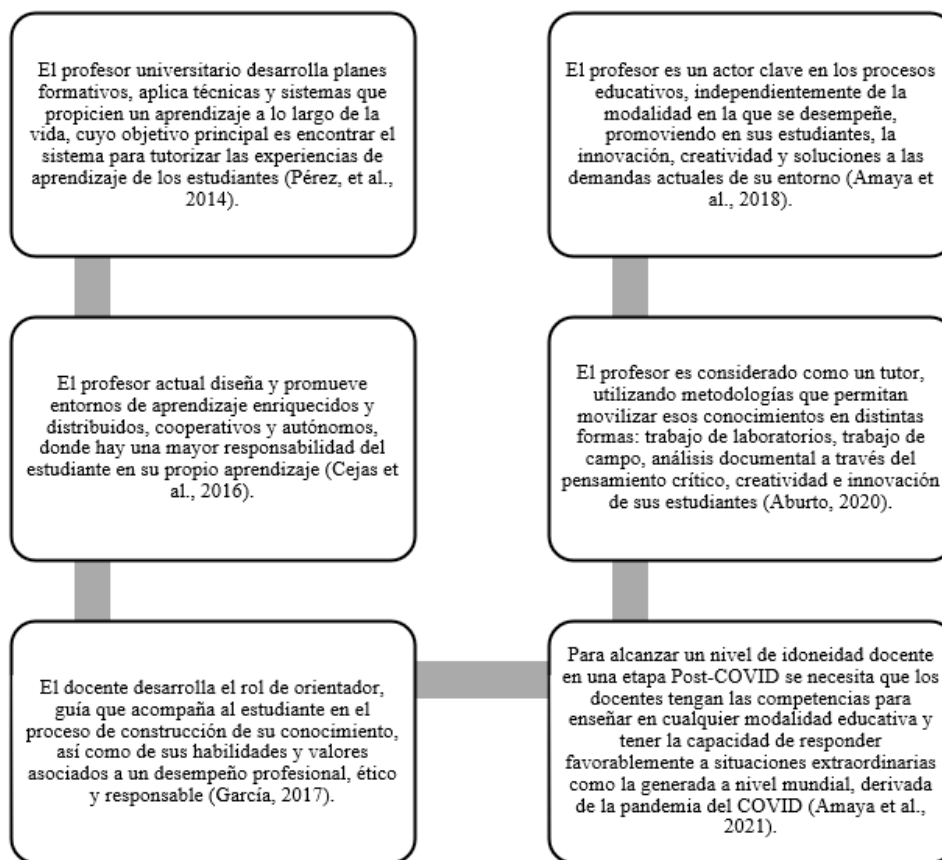
Indeed, previously, in the face-to-face context, the incorporation of ICT in the educational practice of the university professor was optional. This decision was subject to the professor's discretion and academic freedom and was made with the objective of guaranteeing meaningful learning for students. However, this educational perspective has undergone a significant change after the pandemic.

Consequently, university professors will need to develop digital skills for teaching through electronic media, which is why the United Nations Educational, Scientific and Cultural Organization (UNESCO) (2016) highlights the following:

Relevant teaching and learning methods and content that meet the needs of all learners and are taught by appropriately qualified, trained, remunerated and motivated teachers, using appropriate pedagogical approaches and supported by information technologies are essential. adequate information and communication (p. 30).

Based on the above, figure 2 presents definitions of the university professor with the purpose of analyzing the changes in teacher roles before, during and after the covid-19 pandemic.

Figure 2. Change of roles of the university professor



Source: self made

With respect to the analysis of the previous definitions, it is highlighted that the role of the university professor consists of promoting meaningful learning that contributes greatly to the professional development of his students. This requires not only imparting the knowledge necessary to practice their professions, but also providing training that encourages self-study, self-regulation and critical thinking among its students.

Likewise, it is significant to recognize that teachers of the future must be prepared to face the educational demands resulting from rapid changes in the educational field, which are increasingly mediated by technology. Therefore, the university professor must be prepared to address the current challenges derived from the covid-19 pandemic.

Training and the importance of teaching skills

Currently, universities face challenges related to the continuous training of university professors. In this sense, Herrero Tejada *et al.* (2020) point out that teachers need greater support from their institutions to continue their training, since teaching work becomes increasingly complex due to constant educational changes that demand continuous updating not only in terms of knowledge. for teaching, but also in methodologies, pedagogy, didactics and technology.

In accordance with this idea, Barajas and Cuevas (2017) emphasize the need to integrate ICT in the teaching-learning process and highlight the importance of university professors being willing to acquire skills in this area to strengthen their professional profile and develop new teaching strategies. However, they also point out that they face problems related to the level of technology required in the design of courses and the effectiveness of training methods for teachers to acquire and apply technological skills in their academic practice.

On the other hand, Rivadeneyra *et al.* (2016) add that universities have a very diverse teaching staff in terms of areas of knowledge and, sometimes, professionals face teaching without having the necessary bases to develop effective teaching. This highlights the importance of supporting these professionals in developing skills that allow them to have a positive impact on the educational process.

Furthermore, Ulloa and Hernández (2019) highlight the importance of continuous training so that the teaching professional can learn, acquire and master pedagogical, didactic and technological skills and competencies, so that they can stay updated. For this reason,

they consider that technological competence is vital in the educational process to train teachers and facilitate the transfer of these competences to their students.

On the other hand, Amaya *et al.* (2018) highlight the lack of emphasis on promoting continuous training for teachers, despite being essential to meet current educational demands. In this sense, they argue that through continuous training, teaching professionals will not only increase their confidence and empowerment to improve their teaching practice, but they will also improve their capacity as educators, which will allow them to be prepared to face various scenarios (Amaya *et al.*, 2021).

For all this, of course, it is necessary to establish the foundations of what continuous training entails to analyze the elements, attributes and values that define teacher training. This allows us to understand how, through continuous training, university professors acquire and develop skills to enrich their educational practice, regardless of the educational environment in which they find themselves.

Therefore, it is essential to define the terms “train” and “training”, which, according to the Royal Spanish Academy (2020), refer to the action of making someone suitable or enabling them for a certain activity, as well as the action and training effect, respectively. If we apply these definitions to the context of teaching performance, we can affirm that the university professor must be adequately trained and prepared to carry out his professional work in an excellent manner, using his knowledge, skills and attitudes efficiently to obtain significant results.

Based on this premise, the teaching professional must acquire and develop skills, abilities and competencies to reach a level of suitability in their teaching practice through continuous training. According to Andrade *et al.* (2020), this continuous training must be provided by the institution and be aligned with institutional projects to improve teacher performance. These authors also consider that continuous training goes beyond the mere transmission of knowledge, since it involves strengthening and integrating elements of value in the training processes to create significant and innovative environments, conditions and learning experiences. In short, to carry out an activity, whether in a work or educational context, the development of skills is crucial.

According to the National Council for Standardization and Certification of Labor Skills (CONOCER) (2018), competencies “are individual knowledge, abilities, skills and attitudes, that is, those skills that make them capable of developing an activity of excellence in their working life.” (para. 2) . In the educational field, the pedagogical approach focuses

on the acquisition and development of knowledge, skills and abilities, which translate into competencies that the teacher must apply in their academic practice. However, complete training cannot omit the mastery of technologies, which contribute significantly to improving educational processes.

Regarding the competencies necessary for teaching performance, Zabalza (2003, cited by Cejas *et al.*, 2016) points out the following:

A competent university professor plans the teaching-learning process, selects and prepares disciplinary content, offers information and makes understandable explanations, handles new technologies, designs the methodology, organizes the space, selects the method and has communication skills. Furthermore, he reflects and investigates about teaching, identifies with the institution and works as a team (p. 105).

For their part, Bozu and Canto (2009, cited by Sandí Delgado and Sanz, 2018) offer a formal definition of the professional competencies of university teachers, where they highlight that they are composed of a set of attributes typical of the teaching profession that guarantee effective, which serve the teacher to face educational challenges.

In conclusion, to stay professionally updated and acquire the teaching skills necessary to face the new challenges of higher education derived from covid-19, university professors must undergo intensive, dynamic, comprehensive and systematic continuous training. This should allow you not only to develop digital skills for teaching through digital media, but also to know unconventional and innovative instructional methods that combine teaching techniques and strategies for hybrid or mixed education.

In this sense, García (2021) shares a typology that shows the mastery of digital and pedagogical skills of teachers who carried out their educational practice through digital media during the covid-19 pandemic:

1. “Teachers who had never incorporated technologies into their teaching work and replicated their face-to-face academic practice with unconventional methodologies, not being successful in their performance.”
2. “Teachers who declared themselves the new discoverers of distance methodologies, selling models and methodologies as the new discovery in the educational field.”
3. “Traditionalist teachers valued the advantages of distance education to enrich their teaching work by combining both teaching methodologies.”

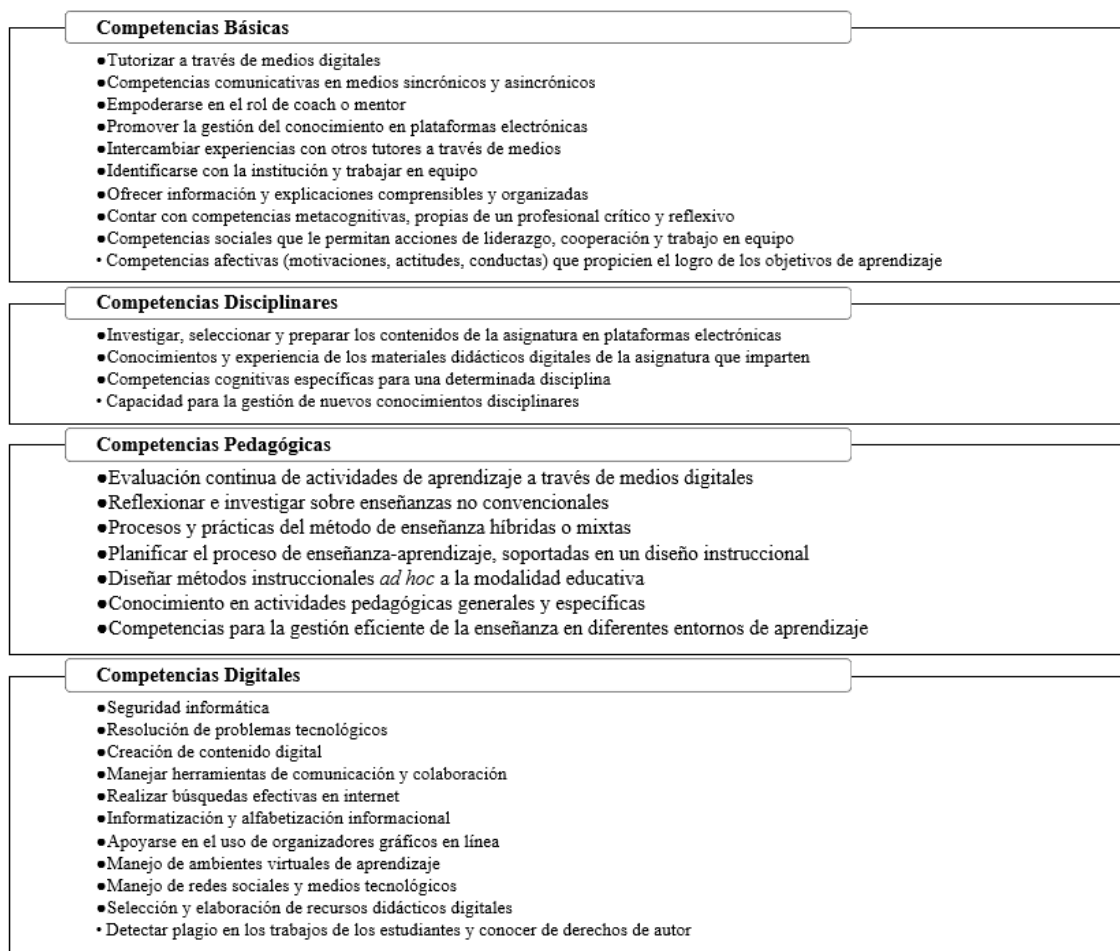
4. “Teachers who, even without widely mastering the technologies, appropriated them with such naturalness.”
5. “Teachers who already had experience in the use of technologies, so they considered they would not have any difficulties.”
6. “Innovative teachers who for years have researched and developed digital skills, generating technological and digital solutions to the educational field.”

From the above, it is evident that, regardless of the generational cohort to which they belong, teachers need constant technological updating, so that they can use them effectively for their own benefit and that of their students (Amaya et al., 2020).

Proposal for teaching competencies for a post-covid stage

As a result of the systemic review, Figure 2 presents a proposal that classifies the teaching competencies that the new role of the university professor in a post-covid stage must develop in their pedagogical practice to respond to the challenges of higher education.

Figure 3. Classification of teaching competencies for a post-covid stage



Source: self made

Figure 3 presents a set of basic, disciplinary, pedagogical and digital competencies identified as fundamental for the adequate performance of the university professor in his new role. These competencies, highlighted by various authors (Alejandre and Álvarez Ramos, 2019; Durán Cuartero *et al.*, 2016; Maldonado, 2018; Mirete, 2016; Prendes Espinosa, 2018; Ramírez-García, 2018; Santiago and Pérez, 2018) are considered essential given that the context generated by the pandemic has required a reconfiguration in the way in which professors address the present and future challenges of higher education.

It should be noted that the proposal of teaching competencies for a post-covid stage is based on the scientific contributions of various authors (Bozu and Canto, 2009, cited by Sandí and Sanz, 2018; Cabero, 2014; Cabero *et al.*, 2015; Martínez Gracés and Garcés, 2020; Morales, August 21, 2018; Morales, 2020; Zabalza, 2003, cited by Cejas *et al.*, 2016), who provide valuable elements so that the university professor, in his new teaching role, acquires

and develops a set of competencies that allow him to achieve an ideal profile for teaching, regardless of the educational modality in which it works. In this sense, it is recognized that in this post-covid stage the educational process is developed in both face-to-face and virtual modalities.

Finally, it is worth noting that the classification of teaching competencies for a post-covid stage shows the need for a set of competencies for the new role of the university professor. Likewise, it is important to keep in mind that this process has been reconfigured to incorporate innovative teaching practices through the use of technology.

Discussion

It is undeniable how the role of the university professor has evolved to adapt to the new demands of higher education. From simply being a learning guide and mediator between knowledge and students, you are now required to assume a broader and more complex role. In fact, in your new teaching role, you must possess a series of skills that support your suitability, and continuous training is presented as an essential way to acquire them.

In this perspective, various academic contributions by authors such as Pérez *et al.* (2014), Mas-Torelló (2016), Cejas *et al.* (2016), García (2017), Amaya *et al.* (2018), Aburto (2020) and Amaya *et al.* (2021) agree in highlighting the importance of the teaching professional as a fundamental pillar in the educational process. In short, he is the one who promotes and responds to educational transformations, since he has in his hands the responsibility of educating and training students.

Without a doubt, continuous training becomes essential to address the educational transformations that the covid-19 pandemic has significantly accelerated. During the most challenging times of the pandemic, teachers found it necessary to redouble their efforts to adapt to the constantly changing educational context. In this sense, Barajas and Cuevas (2017), Rivadeneyra *et al.* (2016), Ulloa and Hernández (2019), Amaya *et al.* (2018) and Amaya *et al.* (2021) agree in highlighting that the continuous training of university teachers plays a fundamental role in their teaching work to promote the optimal development of basic, disciplinary, pedagogical and technological skills, and to diversify learning options for students.

The results of this exploratory and descriptive research emphasize the importance of teachers integrating a series of competencies to address the challenges of higher education in the Post-COVID stage. In this study, teaching competencies have been identified that range

from basic to disciplinary, pedagogical and digital, with a view to the new roles that university professors must assume.

In summary, the new teaching role must adapt to the demands of this digital era so that teachers can operate in hybrid educational models, which can be achieved by combining a set of teaching competencies such as those proposed in this research (teaching competencies 4.0 for a postcovid stage).

Conclusions

In this systemic review article, in addition to meeting the objective of identifying the teaching competencies that university professors in their new role must develop to address the challenges in the post-covid stage, it concludes by presenting the implications and demands demanded by the context of covid-19, since this health emergency forced us to rethink the role of the university professor, teaching methodologies and, consequently, the development of teaching skills.

Indeed, the experiences and learning derived from the presence of the covid-19 pandemic have been countless, and the educational field at all its levels has not been the exception. This learning, emerged in the context of the pandemic, has led the university professor to change the dynamics in terms of the ways of teaching. Therefore, he is no longer limited to giving a master class in real time in the classroom, but now uses Web Conference sessions to generate creative and innovative spaces for interaction with his students that allow him to maintain their attention and verify their learning.

It can be stated, consequently, that the university professor continues to be a key actor in the teaching-learning process, regardless of the educational model in which he or she operates. By being a guide, tutor and counselor, you have the power to transform your educational practice and innovate to obtain desired results, although the pandemic has highlighted the urgency of transforming face-to-face educational systems to incorporate new teaching-learning strategies, where digital media play a key role. a fundamental role in enriching educational practices.

Therefore, the covid-19 pandemic invites us to reflect on the actions that are being taken in higher education to develop digital skills in university professors and students. These competencies are necessary to face the new educational scenarios, which demand flexibility, the proper management of electronic platforms, non-conventional instructional methods, as

well as updated and structured content that provides the conditions for an effective and quality hybrid or mixed education.

When rethinking new ways of teaching, it is essential that the university professor not only possesses the required academic degrees (disciplinary competence), but also has the skills and abilities to design unconventional instructional methods (pedagogical competence), as well as an adequate command of electronic platforms (technological competence). This includes the use of communication and collaboration tools, the ability to access and manage information through networks, the creation, selection and design of digital educational resources, as well as skills to manage various platforms for the administration of learning and School Management.

To achieve all of the above, it is essential that HEIs design and implement dynamic and systematic teacher training and specialization programs, which must guarantee the development of disciplinary, pedagogical and digital competencies that allow enriching educational practice. In addition, these programs must promote a level of teaching suitability that allows them to teach in any educational setting and respond effectively to exceptional educational situations, such as the health contingency caused by covid-19.

In short, HEIs must change their traditional paradigms to adapt to new educational realities. This requires recognizing the value of distance education and adopting hybrid modalities that allow teachers and students to balance their work, family and training responsibilities throughout life, which will contribute to a more inclusive and accessible education.

Future lines of research

The present research provides a classification of basic, disciplinary, pedagogical and technological competencies that the new role of the university professor must develop in the post-covid stage. However, and considering that educational practice after the pandemic will be different, it is crucial to rethink the design and updating of training plans in institutions to incorporate updated and relevant teaching competencies, which will foster innovation in teaching.

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