

## Original Article

# Brazilian research and the skills necessary for the pedagogical practice of teachers who work in distance education

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## Abstract

The aim of this study was to analyze whether the Brazilian research that investigates the competences necessary for the pedagogical practice of teachers who work in EaD address the competence mapping, with the characteristics postulated by Behar, Schneider and Silva (2013). To this end, a qualitative, descriptive research was carried out. As for the technical procedure, the bibliographic research carried out on the portal of the Brazilian Institute of Information in Science and Technology was chosen, and 18 researches were selected for analysis (13 dissertations and five theses). At the end of the analysis, it was found that all 14 competencies listed by Behar, Schneider and Silva (2013) were present in these surveys (11 directly and three indirectly). It is believed that these 18 researches can contribute to the understanding of the necessary profile of the EaD teacher, through the mapping of their competences, and it is also possible to reflect on the roles required of them, through the avalanche of changes registered in EaD in recent years. These are changes imposed by new social relationships, driven by digital technologies and their use in education.

**Keywords:** Distance Education. Teacher Education. Competencies.

## 1. Introduction

Distance Education (EaD) in Brazil is booming. Data from the Analytical Report on Distance Learning in Brazil 2018/2019, produced and published by the Brazilian Association of Distance Education (ABED), point to a growth in the offer of enrollments in the country. CensoEAD.BR reaches its 11th edition and shows that the number of enrollments reached a total of 9,374,647. Of these, 2,358,934 correspond to students enrolled in fully regulated distance courses; 2,109,951, to students enrolled in blended courses; 3,627,327, to students who participate in open courses; 1,278,435, to students of corporate courses (ABED, 2019).

As can be seen in the data from CensoEAD.BR, growth is happening gradually, demanding trained professionals to work in this new educational context. Teachers with specific training to teach in virtual learning environments are still rare in the country's educational institutions. It should be noted that the term distance education is defined as “planned learning that normally takes place in a place other than the teaching place, requiring special techniques of course creation and instruction, communication through various technologies and organizational and administrative arrangements” (MOORE ; KEARSLEY, 2007, p. 2).

Therefore, it requires skills and mastery of the complexity that makes up the formatting of distance courses. The main issue is the growing demand and quality assurance of courses. The simple transposition of the work carried out in person to virtual environments is a mistake. It is not possible to simply reproduce what is done in traditional classrooms, in a physical environment, in distance education. For this reason, it is necessary to qualify teachers who are able to teach in this type of education.

In a survey carried out in the second half of 2019, via the Ministry of Education (MEC) portal, to the National Registry of Higher Education Courses and Institutions (e-MEC) system, based on the search for distance education teaching, it was found that existence of 46 postgraduate courses aimed at the specific training of teachers to work in distance

education. In Minas Gerais, the state in which the research was carried out, eight courses were found.

These results reveal a gap for distance education, as the teacher in distance education is faced with a new way of transmitting knowledge. The emergence and incorporation of the internet with new technologies as a support in education and teaching imposed changes in the profiles of the actors involved. Behar, Schneider and Silva (2013, p. 152) warn “that there are particularities of distance education, which require knowledge, skills and attitudes from its actors, which can be identified as specific competences”.

In view of this context, the question arose: have the necessary competencies for the pedagogical practices of teachers working in distance education, according to Behar, Schneider and Silva (2013), been addressed in Brazilian research that investigates competencies? To answer this question, the objective of this study was to analyze whether Brazilian research that investigates the skills necessary for the pedagogical practice of teachers who work in distance education deals with the mapping of skills with the characteristics postulated by Behar, Schneider and Silva (2013).

It is worth noting that this article is an excerpt from a research developed in 2020-2021 in the Postgraduate Program in Technological Education of the Federal Center for Technological Education of Minas Gerais (CEFET-MG), which addressed teacher training for the modality of distance education (VITAL, 2021).

## 2. Theoretical reference

### 2.1. Teaching skills in distance education according to Behar, Schneider and Silva (2013)

The teacher's profile, especially in distance education, is constantly changing, mainly due to the evolution of technologies. This idea is reinforced by Pavanelo, Krasilchik and Germano (2018, p. 7) when they

highlight that “the challenge for distance education theorists of this century is to consider the increasing variety of existing technologies and, mainly, a change in the values of actors involved”.

The role of the teacher who works in distance education “is seen as multifaceted, transforming him into a collective being” (PAVANELO; KRASILCHIK; GERMANO, 2018, p. 15), whose knowledge in specific areas of training is not enough. For these authors, the EaD teacher also has to be clear about the teaching and learning process, the use of digital technologies, who the students are, as well as full involvement with the work team.

This reflection was already present in the studies by Grassi (2006), who, through a field research with teachers of the distance modality, established a relationship of competences that appear as fundamental in the teaching practice in distance education. These are necessary skills for the teacher who proposes to work in Virtual Learning Environments (VLE). For Grassi (2006), three blocks of skills are necessary for teaching practice in distance education: pedagogical, communicative and technological (Table 1).

**Table 1 — EaD teaching competences**

Pedagogical skills	Technological skills	Communicative skills
<p><b>Team work:</b> in distance education, it is necessary; therefore, the existence of teams responsible for the production of materials, for communication with students, for the organization of teaching resources, among other functions.</p> <p><b>Motivation:</b> You need to motivate students, keep up with the work, make sure they don't feel alone, and often plan opportunities for social interaction.</p> <p><b>Mediation:</b> the distance teacher needs to be attentive to the learning situations, as well as to what happens with the student. It is necessary for the student to know that he has a teacher mediating learning.</p> <p><b>Affectivity:</b> charisma and affection are materialized in the teacher's ability to identify, as much as possible, who the students in distance education are, always seeking to pay attention to their peculiarities.</p> <p><b>Management of differences between students:</b> it is necessary to manage the progression of learning, because human learning cannot be programmed like the production of industrial objects. It is impossible due to the diversity and autonomy of the subjects.</p> <p><b>Objectivity:</b> the teacher will need to be clear in communication, as he is not able to clarify doubts in the hallway or in the physical room, after a face-to-face class.</p>	<p><b>Preparation and construction of pedagogical-technological material:</b> it is the art of mobilizing didactic, pedagogical, technological, theoretical and practical skills in favor of suitable material for the distant student. The teacher needs to learn to work with various technologies, the simplest and the most complex.</p> <p><b>Forms of synchronous and asynchronous interaction:</b> in synchronous communication tools, the chat feature can reproduce the dialogue environment in the classroom. The teacher, during a chat, must be very agile and attentive in the way of interaction, so as not to leave the student waiting for an answer or answer several times to the same question asked by several students. Normally, when chatting, time is timed and limited, with every second being very important. In asynchronous (non-real-time) tools, such as a forum or e-mail, the teacher must speak up after the student so as not to convey the impression that he or she has abandoned the student.</p>	<p><b>Audio-visual:</b> it is the one in which the teacher presents the information through the image, the audio and, also, the verbal expression. It encompasses both the moments of recorded or live transmissions and the occasions of the teacher with the distant student, knowing how to comfort in situations of uncertainty, anguish for being spatially separated or, also, in the mediation of learning.</p> <p><b>Writing:</b> many forms of interaction take place through the resource of writing. In addition to having specialized knowledge about the contents of the subject, the teacher also has to develop written communicative competence.</p>

Source: Adapted from Grassi (2006).

For Grassi (2006), it is necessary, in addition to improving technologies, technical and specific training for the exercise of the activity. The specifics of teaching mediated by Digital Information and

Communication Technologies (TDIC) require teachers of a distance course to know the peculiarities of a modality in constant and permanent change. Behar, Schneider and Silva (2013) carried out research to map the skills necessary for teachers and tutors to work in distance education (Chart 2). It is noteworthy that the three blocks of competences by Grassi (2006) are present in Table 2.

**Table 2 — Necessary Skills for EaD Teachers**

	Competence	Descriptions
1 <sup>a</sup>	Digital fluency	It is related to the use of technology so that the subject feels digitally a participant in technological advances. Fluency enables not only the use but also the creation and production of content. Those who have this competence like to tinker, search, select and produce.
2 <sup>a</sup>	Autonomy	It relates to the act of leading one's own life. Those who have this competence have the following attitudes: they have self-control, are self-critical, proactive and committed, in addition to enjoying making decisions, analyzing data and anticipating problem solving.
3 <sup>a</sup>	Reflection	It is based on abstraction to critically reflect and analyze situations, activities and ways of acting. The attitudes present in this competence are: proactivity, criticality, consideration and self-control.
4 <sup>a</sup>	Organization	It relates to ordering, structuring and systematizing activities, materials and groups. Those who have this competence like to create strategies, systematize, order and classify, in addition to presenting engagement, proactivity, persistence and ease in the decision-making process.
5 <sup>a</sup>	Communication	It is based on the clarity and objectivity of oral, gestural and written expression. Those who have this competence have the following attitudes: they are expressive, empathetic, cautious and articulate.

6 <sup>a</sup>	Time management	It is based on meeting the agenda, reconciling activities with commitments for the management of activities, achieving priorities, goals and objectives. Those who have this competence have the following attitudes: they are proactive, focused on goals and have the skills to use time efficiently, set limits, set deadlines, delimit priorities, order actions, identify goals.
7 <sup>a</sup>	Teamwork	It is based on interpersonal behaviors, on the ability to interact with other people, bringing benefits to the participants in the moments of interaction. Those who have these skills are able to make distinctions in other people's moods, intentions, motivations and feelings. Is concerned with achieving the common goals of the team, open to criticism and suggestions, knows how to listen to others.
8 <sup>a</sup>	Motivation	It is based on the establishment of conditions to maintain motivation among people. Those who have this competence are able to welcome the difficulties of the other, encouraging them to stay and complete an activity. He is also capable of dealing with his own difficulties and has the following characteristics: high self-esteem and self-confidence, willingness, engaged, welcoming, open to exchanges, empathetic, receptive.
9 <sup>a</sup>	Planning	It is based on setting priorities and objectives. Who has this competence has the following attitudes: proactivity, objectivity and is methodical.
10 <sup>a</sup>	Interpersonal relationship	It is based on empathy, cooperation, transparency, and focus on human beings. Those who have this competence know how to behave, follow rules of etiquette and social norms, are open to exchanges and know how to put themselves in the other's shoes.
11 <sup>a</sup>	Pedagogical mediation	It is based on the way the teacher acts, placing himself as a facilitator, encouraging student learning, aiming at the construction of knowledge. Those who have this competence have the following attitudes: they are respectful, welcoming, responsible, attentive, proactive and flexible.

12 <sup>a</sup>	Give and receive feedback	It is about understanding the students' work, posting messages in the interaction tools of digital resources, giving feedback, in a welcoming and respectful way, throughout the learning process. Those who have this competence have the following attitudes: they are welcoming, respectful and responsible.
13 <sup>a</sup>	Didactics	It is the ability to use teaching methods and techniques to achieve pedagogical goals. Those who have this competence build their own pedagogical practice in a critical and creative way; establishes the relationship between student experience and new knowledge; plans activities taking into account the students' profile and learning styles; mediates the teaching and learning process. It is reflective, proactive, critical, responsible, autonomous, welcoming and motivating.
14 <sup>a</sup>	Academic management	It refers to planning and organizing the various stages of a course development process. Those who possess this competence are attentive, responsible, committed, have initiative, self-control and discernment.

Source: Adapted from Behar, Schneider and Silva (2013).

As can be seen, the first competencies (from 1st to 10th) are of a broad spectrum and involve technical issues, through behavioral ones, to management and strategic ones, but which will indirectly influence the teaching and learning process. The following competencies (11th to 14th) are directly related to the teaching and learning processes. However, all of them are fundamental in the activities of the teacher in the distance education modality and must be taken into account for the success of the teaching work.

### 3. Methodology

This study, carried out in the second half of 2020 and in the first half of 2021, had a qualitative approach. As for the objective, a descriptive research was chosen, and the technical procedure adopted was the bibliographic research carried out in the Digital Library of Theses and Dissertations (BDTD), of the Brazilian Institute of Information in Science and Technology (IBICT). For data collection, master's dissertations and doctoral theses, the following descriptors were used: teacher training for distance education, teacher training for distance education, teacher training for distance education and teacher training for distance education. The time frame for the search was five years: from 2016 to 2020, resulting in 1,404 researches (924 dissertations and 480 theses). After reading the titles, abstracts, keywords and, in some cases, the entire study, 1,386 were discarded, because they did not address the skills or profile necessary for teachers in distance education and/or because they appeared in duplicate in the search. The total number of studies selected for analysis was 18 (13 dissertations and 5 theses).

## 4. Presentation of results and analysis

### 4.1. Themes explored in the analyzed researches

Table 3 presents the themes explored in the 18 studies analyzed.

**Table 3 — Topics highlighted in selected publications**

Themes	Occurrences
Presence and use of DICT	18
Acquisition of new skills/skills	16
Mediation/interaction with the student	15
Activity planning	12
Importance of specific training	12
Teamwork	12

Source: Search data (2021).

It is observed that the use of TDICs and their impacts on the conception and constitution of the teacher's profile for distance education was the theme explored in all the analyzed researches. The reason for this may be related to the application and use of TDIC in distance education being a condition for the effectiveness of this type of education. As for the teaching work mediated by TDIC, the research authors were categorical in stating that distance education presupposes the use of new technologies combined with more traditional educational practices.

In addition, it was noticed in these researches that, in distance education teaching, the assumption of the use of TDIC is imperative and issues of literacy and digital literacy were addressed, terms previously used only to express reading and writing skills.

When dealing with this domain of technologies and their pedagogical possibilities, Mercado et al. (2012) list the possible forms of interaction through VLEs, namely: online meeting, collaborative challenge, virtual seminar, online debate, evaluation, online guidance and tutoring, research, case study, virtual diary, interview and life stories, interactive stories, treasure chest and WebQuest. Thus, the use of TDIC in distance teaching and learning processes redefines the teacher's roles regarding the improvement of their own knowledge for a modality with many specificities.

The second most discussed topic in the studies was the need to acquire new skills or abilities by teachers who intend to work in distance education. Teacher self-development is aimed at the teacher himself and enables his progress in relation to the work that must be carried out. It arises from the teacher's need to deal with something new, such as exercising pedagogical practice in a VLE, which requires specific skills, such as: using flexibly, practices and technological resources or, still, exercising creativity, adapting to new situations.

It is expected that the teacher who works in distance education is innovative, autonomous, competent, creative, responsible and committed to the student's learning, who seeks and uses various didactic resources in the teaching and learning process, since, in virtual classrooms, there are several possibilities for the use and application of these resources.

Teachers prepared to acquire new skills or abilities will be able to guide teaching and mobilize the student's desire, becoming a kind of mirror and reference for the student to also acquire new knowledge.

Belloni (2008) highlights that prior training is not common for distance education teachers, who, not infrequently, learn to do by doing. Mill (2015) reinforces the idea, stating that the training of the teaching profession in distance education has been developed by meta-formation; for the author, the term means to learn by doing or to form forming. In this way, teachers are learning to be teachers in the teaching activity, acting in many moments through trial, error, revision and success.

Mediation or interaction with the student was the third most present theme in the analyzed studies. For researchers, the teacher is a mediator of learning. In this way, it must offer necessary and adequate conditions to the student, so that he/she feels pedagogically supported and succeeds in distance learning.

The teacher's main role would then be to advise the student, in an individualized way, by monitoring the performance of each one, using and indicating the best paths and technological resources in order to facilitate access to content, information and other knowledge for a favorable performance, being present in the discussion spaces and providing permanent communication.

This competence involves recognizing the uniqueness of each student. By developing the ability to listen, the teacher becomes able to identify the main opportunities and gaps in the individual process of teaching and learning at a distance. In addition, it understands cultural, social and individual diversity, which makes it possible to detect pedagogical problems and also helps to favor student protagonism in the learning process. Mediation is the teaching competence that most puts the student in evidence, as the main actor in the teaching and learning process.

The planning of activities in distance education, the importance of initial and continuing teacher training and teamwork, together,

were the fourth most discussed topic, with greater occurrence in the analyzed studies.

By planning, we understand the managerial dimension of the teacher's practice in distance education. He must be able to plan activities and set deadlines, reformulate strategies to solve problems, have a certain degree of autonomy in decision-making and the ability to mediate possible conflicts. From the approaches brought in the research, it was noticed that different roles may be required from the teacher in distance education, according to the pedagogical project and the configuration or proposal of the course.

It is important, in this sense, that the EaD teacher pay attention to the two main dimensions that permeate his work: the technical and the pedagogical. He must have the ability to set goals well and plan the work to achieve them. The isolated use of technological or didactic resources, with strictly instrumental thinking, does not allow the work of an efficient teacher, capable of exercising autonomy, exploring his creativity.

According to Belloni (2008) and Mill (2010), the organization of work in distance education follows a model logic based on the division of work, which presupposes planning and division of tasks. Functions become segmented in a process of planning and execution of teaching work, divided into time and space. Mill (2010) draws attention to two other relevant aspects of DE work, which are the “interdependence between team members and the fragmentation of the work process” (MILL, 2010, p. 30). All collective work requires the teacher to plan and interact with the team.

Regarding the need for initial and continuing education for the exercise of distance teaching, the research highlights that the process of building the teacher's knowledge is continuous and requires professional development. That is, they must always be up to date with regard to formal, scientific knowledge and personal development, with regard to values, beliefs, thinking, worldview, morals and ethics and emotional development, to be able to understand the student. as a being that has potential, but that can also present some difficulties.

Still on teacher training in distance education, “teachers learn by doing, since, in most cases, they did not experience specific training processes for teaching” (CUNHA, 2006, p. 262). This becomes an aggravating factor in the distance education modality, since, linked to this fact, there is also the issue that most teachers who are currently working are not trained in the teaching modality in which they work.

With regard to teamwork, in distance education, the teacher assumes a fundamental role in articulating the actions necessary for the modality. In this process, the teacher is a key player. Kenski et al. (2009), when discussing the training of teachers to work in distance education, highlight the importance of the global view of the process that this professional must have: “The skills required for a teacher in a distance learning course are so many that one cannot think about its isolated performance” (KENSKI et al., 2009, p. 12). Consequently, the complex work requires, in distance education, the performance of a multidisciplinary team.

Mill (2014) clarifies that the teacher in face-to-face teaching is often directly responsible for various functions, such as designing and teaching classes, evaluating students, while, in distance education, the functions are fully distributed. Teachers end up taking on parts of these distributed roles, for example, the different teaching roles, according to the purpose and objectives of the distance teaching and learning process, among them that of teacher/author, teacher/trainer, teacher/tutor, in addition to those assigned to professionals who are not necessarily teachers.

There are also other responsibilities that must be assumed by the teacher in distance education, such as course management, updating and qualification for the modality, coordination of disciplines, coordination of tutors, documentation, evaluation of processes, control workload and other activities ancillary to teaching practice.

For Belloni (2008), the pedagogical, didactic and technological dimensions present in the teacher's activity in distance education must be built through a teacher training appropriate to contemporary times. Therefore, it must be an updated, contextualized training, taking into

account aspects related to polyteaching. Mill (2010) states that teacher training for distance education has certain peculiarities that deserve attention. One of them is the need to train a professional with a collective profile. The teacher, in this perspective, should be able to share knowledge and teaching practices, which should result in cooperative teaching.

## 4.2. Results found in the analysis of research and skills necessary for distance education teachers according to the proposal by Behar, Schneider and Silva (2013)

When analyzing the 18 selected researches, one can see the presence of the 14 skills necessary for distance education teachers, as proposed by Behar, Schneider and Silva (2013). Next, we list how these competencies were treated in the surveys.

*1st competency — digital fluency:* is related to the use of TDICs and their application to distance education situations. It was the competence that appeared in all the publications surveyed. It is, in fact, a consensus among academics in this area that the ability to manipulate and use TDIC in the planning and execution of activities is an essential condition for the success of the teacher in distance education.

*2nd competence - autonomy:* it refers to the independence that the teacher must have in relation to his own activity. Through the analyzed researches, it was possible to observe that the authors characterize autonomy when they approach the teacher's functions as the person responsible in distance education for the social, moral and intellectual organization, acting as a mobilizer, organizer and facilitator in the discussions. Autonomy is also understood as triggering the desire to improve other skills. The autonomy of thought goes beyond the mere teaching, leads to a reflective and permanently innovative practice. For the authors, the collaborative tools present in VLEs, such as forums and seminars, among others, can contribute to the achievement of independence and autonomy, as they enhance exchanges between teacher and student, student and teacher, student and student. , as well as the

sharing and production of content in the systems used to offer courses.

*3rd competence - reflection:* this competence is based on the teacher's capacity for abstraction to critically reflect and evaluate situations, activities and actions. The possibilities for reflection on the practice of distance education are present in the experiences provided by the application of strategies, that is, in the resources and teaching and learning processes themselves. This competence was perceived in some researches that studied the practice in distance education and the reflections about it regarding teaching in the VLE.

In this sense, it is worth mentioning that the use of VLEs, with the various resources of interaction, communication, among other sharing technologies, motivates reflection on the mental processes that are established in the exchange of experiences between teaching pairs and among students. With diversified activities, reflection becomes a mandatory skill for the teacher, who needs, at all times, to analyze and interpret facts and situations.

*4th competence - organization:* the researchers analyzed this competence by referring to the personalization characteristics of distance learning courses. The customization of modules or disciplines, through organized support, only becomes viable and provided by the teacher when he develops the ability to create strategies for systematization, ordering and classification of the contents and activities developed. Academic issues, for example, interaction and support in accessing content in the VLE, presuppose a high level of organization. It is one of the most demanded skills of the teacher in distance education.

*5th competence - communication:* it was observed that, for researchers, this competence is fundamental in the educational practice of distance education, since it is based on the clarity and objectivity of oral, gestural and written expression. It is highly necessary and requested by the teacher in the use of interaction tools available in VLEs, such as chats, forums, diaries and other means of interaction. The work in distance education, supported by tools in the VLE, is carried out, especially, through records in written communication.

*6th competence - time management:* the hypotheses raised in the research went beyond the lack of a distance education culture in the country, the problems were linked to the teacher's organization, both in terms of the amount of tasks to be carried out and the management of time, more specifically, in the use of digital resources. To acquire this competence, the teacher needs to learn to use time efficiently, establish limits and deadlines, as well as delimit priorities.

*7th competency – teamwork:* was one of the most discussed competences in the analyzed surveys. As highlighted in them, the teaching work in distance education is planned, organized and built collectively. The various DE actors, including teachers, must develop the ability to work in multidisciplinary teams; and the construction of the entire conception of a distance course is collective, from the definition of the work team, the guidelines that will guide the type of training that will be offered and made available to the student, as well as the development of didactic material, classes and activities, in addition to support for the student, which will be necessary for the smooth running of the course until completion. Pavanelo, Krasilchik and Germano (2018, p. 23) also perceive teaching in distance education in this way; for the authors, “accustomed to working alone in the preparation of their discipline, it will be up to the teacher to relearn both how to work in groups and even how to manage the work developed”.

*8th competence - motivation:* it was observed that this competence was not directly evidenced in the researches. However, indirectly, it was possible to verify its presence in some studies that touch on the theme about the conditions to keep the teacher in constant movement in the search for the determined results, defined in the work planning. This is in line with what the term itself says: it is what motivates, encourages, encourages, stimulates, encourages and encourages the teacher's work.

*9th competence - planning:* this competence was directly verified in the analyzed surveys. In education, and even more especially in distance education, the necessary conditions are considered to create solutions and apply teaching and learning strategies.

This competence is closely linked to time management and

organization, requiring the teacher to rethink the prior planning of activities, as unforeseen or new demands may arise during the process of interaction with the student, requiring adjustments or changes in the script. The students' profile influences and sometimes can determine the need for adaptations or changes in planning and application. The foundation of pedagogical planning, with regard to organizational aspects, includes the purposes of the teaching and learning process at a distance, the organization of time and expectations regarding the participants' performance.

*10th competence - interpersonal relationships:* in research, this competence was evidenced by studies on the profile of teachers who work in distance education, as well as in analyzes that dealt with the necessary competences to work in this type of education. It was found that the interpersonal relationship is based on empathy, pedagogical mediation, facilitation of teaching and learning processes, cooperation, transparency, focus on human beings, in addition to the proper relationship between partners.

For the acquisition and development of this competence, knowledge is needed about how to behave in different groups, rules of social etiquette, the most used codes in each of the EaD centers, as well as social norms. From an attitudinal point of view, the teacher is asked to be open to exchange experiences with other DE actors, to be empathetic, receptive and to be available to others. The teacher must be able to put himself in the position of the next.

*11th competence - pedagogical mediation:* was addressed in all studies analyzed. For researchers, among the various tasks of the teacher in distance education, pedagogical mediation is one of the main conditions for effective student learning. It presupposes conditions to encourage and mobilize exchanges between students, organize groups, guide actions, problematize positions and understandings about the content in question, manage conflicts, carry out negotiations, aiming to bring the student closer to the content in an active and collective way, aiming at knowledge construction.

Pedagogical mediation is related to personal relationship skills,

motivation, teamwork and communication. It is a competence that requires from the teacher attitudes of respect, acceptance, responsibility, attention, proactivity and flexibility in interactions with other DE actors.

*12th competency — giving and receiving feedback:* it was observed that this competence was not directly evidenced in the researches. However, it was present indirectly when the authors addressed topics such as communication activities between students and teachers in VLEs.

*13th competence - didactics:* this competence is present in many teaching routines, as it is what sustains the teaching practice and is revealed in the teacher's action in distance education. Furthermore, it is considered as a systematic reflection of pedagogical practice. It presupposes educational action in a historically determined society, the ability to select and apply procedures, methods, techniques and resources to the contents, through the determination of pedagogical objectives and purposes. It requests from the EaD teacher scientific knowledge and diversified teaching methodologies, as well as the application of different technologies in education. It is the knowledge of how to apply a certain resource or technology, according to the pedagogical purpose. To this end, the teacher must know the different educational contexts and the available structures.

*14th competency - academic management:* it was observed that this competence was not directly evidenced in the research, but it was present indirectly, as it is understood that academic management is the basis for the organization of classes and, in the case of distance education, it involves knowledge of the entire process.

Finally, based on these results, it can be said that, in distance education, the teacher is very demanding and there is no room for improvisation. In view of this, Behar, Schneider and Silva (2013) state that the work needs to be well planned, with support materials developed with discretion and care.

The teacher must understand who the student or group of students is, in addition to developing pedagogical activities and, at the same time, managing other variables. The task is multiple and complex. Behar,

Schneider and Silva (2013) add that the main challenge of the EaD teacher is to strengthen the development of the ability to reflect on their own actions from the interaction with various objects of knowledge. Among these, the technological resources, with the tools and applications that compose them.

Interdisciplinary activities involving the other actors of distance education become a crucial alternative, taking into account the importance of offering comprehensive training to the student, with the perspective of developing skills. Knowing the multiple options available for the resources provided by the TDICs will lead the teacher to different possibilities for the student's teaching and learning process, transforming the teaching practice into something attractive and innovative.

## 5. Final considerations

This study originated from the question: have the necessary skills for the pedagogical practices of teachers working in distance education, according to Behar, Schneider and Silva (2013), been addressed in Brazilian research? To answer this question, it was analyzed whether the Brazilian research that investigates the competences necessary for the pedagogical practice of teachers who work in distance education deal with the mapping of competences with the characteristics postulated by the aforementioned authors.

When analyzing the works found, the answer to the guiding question of this study was affirmative, since all 14 competences listed by Behar, Schneider and Silva (2013) were present in the analyzed studies (11 directly and 3 indirectly).

It is believed that these 18 studies can contribute to the understanding of the profile necessary for the EaD teacher, through the mapping of his/her competences, making it possible to reflect, also, on the roles requested of him in the face of the avalanche of changes registered in

the EaD in the last few years. years old. These are changes imposed by new social relationships, driven by digital technologies and their use in education.

Therefore, the role of the teacher is revisited in distance education. In this context of changes caused by the insertion of new technologies in education and new demands to meet the needs and expectations of the student, the teacher is not simply the one who teaches content, he becomes the one who mediates learning, that teaches the student to learn. It is not a mere transmitter of information, it is the one that creates the necessary conditions for the student to acquire the ability to seek the desired information. He is not the one who conducts the best lectures, he is the one who promotes and organizes situations in which the student has the opportunity to build his own knowledge, and these functions require adequate and continuous training from the teacher.

This study provokes reflection on the training of professionals working in distance education and the knowledge necessary for teaching activities in current times, leaving a concern about the small number of research carried out on specific teacher training for distance education, since this type of education keeps with countless particularities, without adaptations or improvisations.

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