

Artigo Original

Study on the creation of affective links by professors In the EAD modality

Estudo sobre a criação de vínculos afetivos por professores da modalidade EAD

Estudio sobre la creación de enlaces afectivos por profesores en la modalidad EAD

Simone Soares Echeveste¹ e Simone Loureiro Brum Imperatore²

Abstract

Distance learning has been gaining space in education related publications due to the new scenarios and roles assumed by educators and students. Methodological challenges abound; the theories are built on collaborative learning, offering autonomy to students and educators. In light of this paradigm shift brought to the learning process by distance learning, one of the most relevant factors for its success consists of the student-educator relationship in an online setting and how the development of connection is determined in this process. This study aims to identify the use of methodological actions and procedures that could be carried out by distance learning educators in order to connect with their students, observing the way educators conduct their classes with the purpose of fostering a mediation relationship that values fundamental human dimensions. The study is characterized by a quantitative research carried out with a sample of 85 professors in the 100% distance learning modality, through a structured questionnaire. Among the

¹ Universidade Luterana do Brasil (ULBRA), Av. Farroupilha, 8001. Bairro São José, Canoas (RS), Brasil. E-mail: simone.echeveste@ulbra.br.

² Universidade Luterana do Brasil (ULBRA), Av. Farroupilha, 8001. Bairro São José, Canoas (RS), Brasil.

main results obtained, it is worth highlighting that 54,1% of the professors under analysis had been working with distance learning for over 9 years and 70,6% of them possessed specific training to teach through distance learning. It was observed that communication between professor/student was the dimension that needed the most attention, that professors still faced obstacles due to personal and technological skills to communicate in audio and video, and that professors who had already had experience as a distance learning student favored more affectivity in class. The study was able to conclude that it is up to the educator to rethink their role in this new context, shedding conventional methodologies used in presential classes and taking on the role of mediator in the teaching-learning process, developing new pedagogical architectures in order to create socio-cognitive, affective, and emotional connection, for only then will professors make it possible for their students to learn in a meaningful manner.

Keywords: Pedagogical mediation in distance learning, Affectivity in the learning process, Distance learning

Resumo

A modalidade de Educação a Distância (EaD) tem merecido destaque nas publicações relacionadas à educação devido aos novos cenários e papéis assumidos por professores e alunos. Os desafios metodológicos são inúmeros; as teorias constroem-se em alicerces constituídos de aprendizagem colaborativa, oferecendo autonomia ao aluno e ao professor. Diante de toda esta mudança de paradigmas que a EaD traz no processo de aprendizagem, um dos aspectos mais relevantes para seu sucesso são as relações entre professores e alunos em um ambiente virtual e como se determina a criação de vínculos indispensáveis nesse processo. O presente estudo teve como objetivo identificar o uso de ações e procedimentos metodológicos que pudessem ser realizados pelos professores da modalidade EaD para a criação de vínculos afetivos com seus alunos, observando de que forma os professores conduzem suas disciplinas com o propósito de fomentar uma relação mediadora que valoriza as dimensões humanas fundamentais. Caracterizou-se por uma pesquisa quantitativa, realizada com uma amostra de 85

professores universitários que atuavam na modalidade 100% a distância, por meio de um questionário estruturado. Dentre os principais resultados obtidos, destacam-se que 54,1% dos professores investigados atuavam há mais de 9 anos na EaD e 70,6% possuíam alguma formação específica para lecionar na modalidade a distância. Observou-se que a comunicação entre professor e aluno foi a dimensão que mais precisava de atenção, pois os professores ainda enfrentavam barreiras devido a habilidades tecnológicas e pessoais para a comunicação por meio de áudio e vídeos, e que o professor que já tinha a experiência de ser um aluno EaD favorecia uma maior afetividade no desenvolvimento de suas aulas. O estudo pode concluir que cabe ao professor repensar o seu papel nesse novo contexto, despir-se das metodologias convencionais utilizadas em suas aulas presenciais e assumir a posição de mediador no processo ensino-aprendizagem, traçando novas arquiteturas pedagógicas com vistas à criação de laços sociocognitivos, afetivos e emocionais, pois, apenas assim, este viabilizará a aprendizagem significativa de seus alunos.

Palavras-chave: Mediação pedagógica na EaD, Afetividade no processo de aprendizagem, Educação a Distância

Resumen

La modalidad de educación a distancia (DE) se ha destacado en publicaciones relacionadas con la educación debido a los nuevos escenarios y roles asumidos por profesores y estudiantes. Los desafíos metodológicos son numerosos; Las teorías se basan en fundamentos que consisten en el aprendizaje colaborativo, que ofrece autonomía al alumno y al profesor. En vista de todo este cambio en los paradigmas que la educación a distancia trae en el proceso de aprendizaje, uno de los aspectos más relevantes para su éxito es la relación entre maestros y estudiantes en un entorno virtual y cómo determina la creación de vínculos indispensables en este proceso. El presente estudio tuvo como objetivo identificar el uso de acciones y procedimientos metodológicos que podrían realizar los maestros de educación a distancia para crear vínculos afectivos con sus estudiantes, observando cómo los maestros conducen sus disciplinas para fomentar una relación mediadora que

valora las dimensiones humanas fundamentales. Se caracterizó por una investigación cuantitativa, realizada con una muestra de 85 profesores universitarios que trabajaron en la modalidad 100% a distancia, a través de un cuestionario estructurado. Entre los principales resultados obtenidos, cabe destacar que el 54.1% de los docentes investigados trabajó durante más de 9 años en educación a distancia y el 70.6% tenía alguna capacitación específica para enseñar en la educación a distancia. Se observó que la comunicación maestro / alumno era la dimensión que más necesitaba atención, que los maestros aún enfrentaban barreras debido a las habilidades tecnológicas y personales para la comunicación a través de audio y videos, y que el maestro que ya tenía la experiencia de ser estudiante de EaD favoreció un mayor afecto en el desarrollo de sus clases. El estudio puede concluir que corresponde al profesor repensar su papel en este nuevo contexto, desvestir las metodologías convencionales utilizadas en sus clases presenciales y asumir la posición de mediador en el proceso de enseñanza-aprendizaje, trazando nuevas arquitecturas pedagógicas con miras a crear vínculos sociocognitivos , afectivo y emocional, porque esta es la única forma que permitirá el aprendizaje significativo de sus estudiantes.

Palabras clave: Mediación Pedagógica en Educación a Distancia, Afectividad en el Proceso de Aprendizaje, Educación a Distancia

I. Introduction

The learning process is multidimensional, involving cognitive, socio-affective and historical-cultural aspects that must be mutually correlated. However, there is a prevalence of cognitive aspects in educators' work plans. This fact is evidenced in the production of materials (mass education plans, lack of experimentation, predominance of individual activities and purely formal interaction - forums of doubts, evaluative forums and notices), in the use of active methodologies with limited theoretical mediation (practicalism), in the insertion of digital technologies in an uncritical way (as an end, and not as a pedagogical instrument) and in the absence of monitoring the learning process in a personalized and, at the same time, systemic and systematic way, for example.

At this juncture, according to Moraes (2010, p. 219), the emerging educational paradigm requires a new cognitive ecology translated into learning environments “[...] that privilege the circulation of information, the construction of knowledge, the development of understanding and, if possible, the scope of wisdom aimed at by the evolution of individual and collective consciousness”. The author highlights the reflexive practice of knowledge construction that involves the processes of description-execution-reflection-debugging, through which we can reach the highest levels of consciousness and human development. This cognitive ecology explains the potential interaction between students and teachers / tutors, individuals and their context (socio-historical and cultural aspects), between theory and practice, action-reflection-action.

However, if on the one hand there is an overvaluation of the cognitive dimension in the learning process, on the other, there is a tendency to consolidate more integrated theories of the human being, which involves the emotional dimension, which is the object of the study of the educational phenomenon in cyberspace. The starting point for this work is the Vygotskian theories that ratify the inseparability between the emotional and cognitive dimensions, since thought originates from the motivation that contemplates needs, interests and affection, showing that the processes by which affection and intellect develop are rooted in their interrelationships and mutual influences (WERTSCH, 1990). So, when you want students to develop better or exercise their thinking more, you should make the proposed activities emotionally stimulated.

According to Vygotsky (2001), man's relations with the external world occur from his superior psychological functions and through mediating elements, categorized as instruments and signs. The instruments can be understood as elements external to individuals and that expand the possibilities of intervention in nature, being objects created for an end. Signs, on the other hand, act on the internal actions of individuals, from which it appears that both instruments and signs contribute to the construction of knowledge. In the proposed study, examples of instruments are the digital technologies applied to education that are configured in the resources of the virtual learning environment and signs, the different languages used in the development of trails / activities,

composed of static elements (texts, graphics, images) and dynamic elements (hypertexts, videos, audios, animations, gamification, interactive books, forums, chats, among others).

It is based on the understanding that the learning process implies the construction of new knowledge based on reflection / interaction with previous knowledge / experiences, mediated by the teacher through instruments and different languages. In the light of Vygotskian theories, in the student-student and student-teacher interaction, affectivity is a key pedagogical strategy for meaningful learning.

Piaget (1998) states that affectivity includes feelings, interests, impulses, will and values. It is configured as the energetic factor of the behavior patterns, in which those who establish an affective bond can establish a relational mold through which they learn. Thus, affectivity is an amalgamation of intellectual development, playing the role of propelling cognitive activity. Piaget's theory demonstrates the importance of the apprentice building his knowledge (constructivism) by his action before the object of knowledge.

The subjective essence of Piaget's theory emphasizes the structuring role of student intervention under the object of knowledge, because, according to the author "To know is to apprehend the world" (PIAGET, 1970, p. 14). Teaching mediation in Distance Education (DE), by stimulating research, active participation in the proposed activities and the construction of meanings for the studied phenomena (to the detriment of mere reproduction), is based on the interactions between subjects and the environment. From this perspective, the study environment should be planned, guided by intellectual autonomy, creativity, critical-reflective spirit and collaborative learning. Based on what was briefly exposed and considering affection and intelligence as inseparable poles in the learning process, according to the author, the challenge that is outlined to distance education teachers is to establish emotional bonds between teacher and student so that they can arouse their interest by objects of knowledge.

In Wallon's theory, affectivity is intrinsically linked to cognitive development, in which the construction of the subject and the object with

which he will build his knowledge depends on the alternation between affectivity and the way the individual will relate the object of study to his knowledge and pre existing experiences (CAETANO, 2013). Wallon argues that psychic life is composed of three dimensions: motor, emotional and cognitive, which coexist and articulate with each other. The author argues that human development depends both on the subject's biological capacity (genetic factors) and on the environment, which affects him in some way.

Reflecting on affectivity in the learning process, based on Vygotsky, Piaget and Wallon, is justified when it seeks to explain the connected functioning of intelligence and affectivity based on basic psychogenetic theories that enhance the understanding of the intimate relationship between emotion and cognition for the reach of meaningful learning.

In dialogue with the studied authors, regarding the context of distance education, it is observed, in some cases, a “hard”, “standardized” and “distant” communication, making it apparent to students that the teacher is a “machine”, a “robot” or an “avatar”. It is very common, in this type of education, to observe teachers importing the same resources and methodologies developed for face-to-face classes, showing that they have difficulties in measuring the impact of their performance on study routines and on the motivation of a virtual student (asynchronous / depersonalized forums, very low student-teacher interaction, lists of exercises / templates, randomized objective tests and underutilization of the potential of Information and Communication Technologies (ICTs), limited to the transfer of face-to-face content - textbook and video classes, with low feedback effectiveness - limited to response patterns). It is up to the teacher, therefore, to develop strategies that make it possible to pedagogically work the emotional dimensions from the technological resources made available in virtual learning environments (LONGHI et al., 2019).

The distance learning modality imposed on educators the need to rethink all pedagogical practices, learning methodologies and the way teacher-student relationships are established. A new generation of students, coming from an increasingly technological world, determined that new ways of teaching and learning should be established. In this

scenario, Virtual Learning Environments (VLE) emerged, characterized by tools capable of democratizing knowledge, breaking physical boundaries. The expectation of a collaborative and emotional learning process is based on interactivity as a stimulus to the formation of knowledge (gamification; pedagogical challenges; development of research groups and extension projects; integration with other platforms, social networks and software; personalized trails learning, synchronous and asynchronous communication, monitoring the student learning process, among others).

The resources and technological tools to be available in VLEs are indispensable in promoting the approximation of geographically distant subjects, based on the premise that the interaction between teacher and student is of paramount importance for the creation of emotional bonds, essential for the teaching- learning.

For Longaray, Ribeiro and Behar (2013), emotional phenomena are manifested in the VLE due to the subjects' actions in the various functionalities. An affective state is recognized, albeit in an involuntary way, from the way the subject places himself in the environment, the way he resorts to respond to tasks, the way he navigates through the environment or how he expresses himself in the messages provided in the VLE. Os fatores motivacionais, importantes nesse processo, podem ser monitorados por meio de algumas variáveis, como número de acessos, frequência e nível de participação, pedidos de auxílio, geração de mensagens, tempo de permanência na plataforma, realização de atividades e feedbacks.

Tenório et al. (2014) address issues of affectivity from the perspective of empathy. The authors point out that, by noticing the student's distress and placing himself in his position, the teacher could act more humanely, without neglecting his desires, indicating other resources, materials and learning alternatives. This procedure would show affection, in addition to promoting a climate of complicity. This action, combined with the habit of extolling the student's small achievements, can improve the student's initiative and development, in addition to setting up a stimulus to overcome personal difficulties. On the other hand, when the teacher puts too much pressure on students to carry

out activities, placing themselves in an imposing manner, it can have negative impacts, thus generating loss of motivation and a negative state of mind.

Tenório and Tenório (2016) highlight four factors indispensable to the teacher in the conduct of his virtual classrooms: acceptance capacity, cordiality, honesty and empathy. Acceptance corresponds to the teacher's ability to understand the heterogeneity of students' knowledge and make them feel they are an active part of the teaching-learning process. Cordiality refers to the promotion of receptivity, sensitivity, affection and respect, with the intention of stimulating students' self-confidence. Honesty includes ethics, seriousness, responsibility, commitment and humility, aiming at creating a teacher-student relationship based on trust and honesty. Last but not least, empathy represents the teacher's ability to identify and understand emotions, putting himself in the student's place and seeking to know the individual needs of each one.

In addition to the factors described, motivation is also an important aspect to be considered. Fiuza and Lemos (2017) highlight some practical attitudes that can transform and improve motivation:

- a. intensify the use of available media, such as email, telephone, videoconference and chat, in contact with students, creating a system of contact in each of the media;
- b. develop strategies for the use of other resources such as video and voice in contact with students - video chat, for example;
- c. take advantage of face-to-face moments with students to establish a bond of trust that allows online relationships to be more committed and fluid;
- d. develop a flexible system / scheme for sending personalized messages according to the course period in which the students are.

For Lorenzoni (2014), the teacher's conduct is what guarantees the success or not of creating bonds - everything will depend on the teacher's availability to build a particular and quality relationship with

each of his students. In this perspective, the great challenge of the teacher arises in expanding his virtual presence and establishing a bond with his students, in order to favor online affectivity, considered one of the pillars of education and extremely important for student learning. Thus, the present study sought to identify the use of methodological actions and procedures carried out by distance education teachers with a view to creating emotional bonds with their students, observing how teachers conducted their subjects with the purpose of fostering a mediating relationship that values the fundamental human dimensions.

2. Methodology

The present research is characterized by a quantitative descriptive study, carried out through a data collection instrument that contemplated the questions pertinent to the pre-established objectives. The non-probabilistic sample for convenience was composed of 85 university professors, from different Brazilian higher education institutions, invited to participate voluntarily through e-mails and WhatsApp groups in which teachers working in 100% disciplines participate. from September to November 2019. The data collection instrument was made available to participants through a Google Forms link, having been structured by the researchers containing sociodemographic variables and aspects related to the pedagogical practices adopted by the teachers in the planning and development of their classes in distance learning.

26 questions were proposed corresponding to actions that, according to the authors, based on the theory studied and their experiences with DE teachers, favor affectivity and, therefore, enhance learning. The investigated teachers should position themselves according to a 5-point scale of frequency of use, in which score 1 corresponds to “never”, 2 to “rarely”, 3 to “sometimes”, 4 to “frequently” and 5 to “always”, so that higher scores represent greater use of actions.

The questions proposed in the questionnaire were subsequently grouped for statistical analysis by the authors in four dimensions, according to the nature of the teacher's action and its objective, namely:

1. **personalization** – actions of the teacher that aims to know the student's reality, personalizing their relationship, seeking to understand the social context in which it is inserted;
2. **integration and communication** – actions related to teacher-student integration, student-student and forms of communication and expression of feelings;
3. **monitoring and motivation** – actions that aim to encourage and motivate students in the teaching-learning process, as well as to highlight the constant presence of the teacher in this process;
4. **pedagogical choreography** – methodological actions for the construction of resource materials that will be part of the discipline's learning path.
5. The data obtained were analyzed using descriptive statistics, simple tables and the non-parametric Mann-Whitney test. The software used was SPSS (Statistical Package for Social Sciences) version 22.0.

3. Results and Discussion

Of the 85 teachers who participated in the study, 54.1% were female, 42.4% were over 50 years old, the majority (54.1%) had a Master's degree and the predominant area of activity was Human Sciences (45.9%).

Table 1: Description of the investigated sample

| Question | Answer | n. | % |
|----------|--------------------|----|------|
| Gender | Male | 39 | 45,9 |
| | Female | 46 | 54,1 |
| Age | Less then 40 years | 20 | 23,5 |
| | 40 – 50 years | 29 | 34,1 |
| | More than 50 years | 36 | 42,4 |

| | | | |
|------------------------------|---------------------------|----|------|
| Titration | Specialization | 14 | 16,5 |
| | Master's | 46 | 54,1 |
| | Doctorate degree | 25 | 29,4 |
| Predominant area of activity | Biological Sciences | 2 | 2,4 |
| | Health Sciences | 2 | 2,4 |
| | Exact Sciences | 13 | 15,3 |
| | Humanities | 39 | 45,9 |
| | Applied Social Sciences | 17 | 20,0 |
| | Engineering and Computing | 9 | 10,6 |
| | Languages and Arts | 3 | 3,5 |

Source: Authors.

Regarding the teaching profile, the qualifications of those surveyed (including specific in distance education - 70.6%) and experience in distance education stand out, considering that 54.1% have more than 9 years of experience in this modality. Emphasis on EaD experimentation in the profile of students (80%), which gives them a concrete way of how students learn, allowing them to rethink their pedagogical practices and, according to Longhi et al. (2019) announce, working the emotional dimension from the technological resources made available in the VLE. Tenório et al. (2015), in turn, corroborate the relevance of teaching empathy as a fact that generates complicity and affectivity. Table 2 summarizes the research findings.

Table 2: Description of the Distance Education teachers investigated in relation to the length of experience, the specific training for acting in the modality and the realization of the distance learning course

| Question | Answer | n. | % |
|--|--------------------|----|------|
| Time working in distance education? | Less than 5 years | 20 | 23,5 |
| | From 5 to 8 years | 19 | 22,4 |
| | From 9 to 12 years | 26 | 30,6 |
| | More than 12 years | 20 | 23,5 |
| Do you have any specific training to work in distance education? | No | 25 | 29,4 |
| | Yes | 60 | 70,6 |
| Have you ever taken a distance learning course as a student? | No | 17 | 20,0 |
| | Yes | 68 | 80,0 |

Source: Authors.

Table 3 presents the 26 questions segmented into four dimensions, as outlined in the methodology. The highest averages were observed in the dimensions of personalization and monitoring, in relation to naming the student in moments of interaction and either praising him for doing a good job or for contributing to the group debate, respectively. Such practices are consistent with Vygotskian thinking, providing students with freedom of questioning and space for autonomous or collaborative exploration of new horizons in the learning paths. However, more than personalization, the humanization of the teacher-student and student-student relationship must be emphasized; recognizing their needs, difficulties, desires and differentials, and adopting learning strategies appropriate to such profiles (combination of elements and more appropriate signs).

The lowest averages are found in the dimensions "integration and communication" and "monitoring and motivation", items of colloquial communication with the use of slang and use of motivational videos for students. From the above, it is interpreted the difficulty of the teacher to detach himself from the communicational formalism and to use the

media available in VLE (video, videochats, meeting, for example) as strategies to transform and improve student motivation, according to practical activities highlighted by Fiuza and Lemos (2017). As previously described, sometimes communication in distance education is hard, avatarized, robotic and distant, leaving disruption with the legacy of the face-to-face modality so that emotional bonds between teachers-students and students-students can be established that break physical and act as enhancers of cognitive development.

Table 3: Average and standard deviations of the variables of the frequency scale used (1 - never to 5 - always)

| Indicator | Average | SD |
|--|---------|-----|
| Customization | | |
| When responding to a question in a message or interaction forum, I use the student's name | 4,8 | 0,5 |
| I open an interaction forum in order to get to know my student better | 4,2 | 1,0 |
| I try to establish an interpersonal relationship with the student, motivating him to dedicate himself to my discipline | 4,1 | 1,0 |
| I am flexible regarding deadlines when I identify that the student faced difficulties and needs more time to complete the activities | 3,8 | 1,1 |
| I am interested in the life story of my students | 3,6 | 1,1 |
| I try to know the Branch of each of my students, in order to get to know their reality better | 3,5 | 1,1 |
| Integration and communication | | |
| I use formal language in my posts in the Virtual Learning Environment | 4,0 | 1,0 |
| In my subjects, I encourage students to present themselves at the Presentation Forum so that everyone in the Virtual Environment gets to know each other | 4,3 | 1,0 |

| | | |
|---|-----|-----|
| At the beginning of classes, I introduce myself informally to my students through a video made by me | 3,7 | 1,3 |
| I look for ways to demonstrate my feelings when communicating with my students (joy, sadness, disappointment, enthusiasm, motivation) | 3,3 | 1,3 |
| I record audio messages for my students | 2,9 | 1,3 |
| When communicating with students, I use slang and colloquial expressions | 2,2 | 1,2 |
| Monitoring and motivation | | |
| I usually give praise to students when they contribute to the debate, or even when they do a good job | 4,6 | 0,7 |
| I follow the learning process and provide feedback to students on the activities delivered | 4,4 | 0,8 |
| I use integration forums as a way to encourage student participation | 4,3 | 0,9 |
| I try to be present at VLE, even if there is no post from my students | 4,2 | 1,0 |
| I propose guiding questions in the Forums to motivate student participation | 4,0 | 1,1 |
| I make short videos on my computer or cell phone with motivational messages to students | 2,7 | 1,3 |
| Pedagogical choreography | | |
| I use multimedia resources (videos, links, hypertexts, websites etc.) in my subjects | 4,1 | 1,0 |
| At the beginning of the course, I present the skills and competences I intend to develop in the course | 4,1 | 1,1 |
| I use digital tools in my subjects | 4,1 | 0,9 |
| When I plan my subjects, I try to think of activities that promote interaction with a view to exchanges, collaborative and cooperative constructions among students | 4,0 | 1,1 |

| | | |
|--|-----|-----|
| I add other materials in my discipline during the semester when it is necessary to reinforce certain content | 3,9 | 1,1 |
| I try to illustrate my content with color schemes, pictures, clipart | 3,5 | 1,2 |
| I use drawings, emojis and images to illustrate my theoretical material | 3,3 | 1,3 |

Source: Authors.

Note: Standard deviation (SD).

For each of the dimensions, the average scores and their standard deviations were obtained considering the indicators belonging to them, with the highest averages representing the most frequent use of actions that develop affectivity in the disciplines offered in the distance modality. The general average of the affectivity score was also calculated, using the arithmetic average of all 26 indicators on the scale (Table 4).

Table 4: Average and standard deviations of the affectivity dimensions (1 - never to 5 - always)

| Dimension | Average | Standard deviation |
|----------------------------------|------------|--------------------|
| Customization | 4,0 | 0,6 |
| Monitoring and motivation | 3,9 | 0,7 |
| Pedagogical choreography | 3,8 | 0,8 |
| Integration and communication | 3,0 | 0,7 |
| Overall affectivity score | 3,7 | 0,6 |

Source: Authors.

It is noteworthy that the most frequently used actions refer to the “personalization” dimension, in which the teacher seeks to get to know his student better, his reality and to treat him individually. With less frequency of use, there is the dimension “integration and

communication”, characterized by different communication strategies that the teacher can use in his classes, such as videos, audios, as well as the type of language (formal or informal) and the expression of feelings in this communication.

Centering the analysis on the item “integration and communication”, essential, in the authors' point of view, for the formation of emotional bonds, and based on the teacher-student interaction, there is a utilitarian and formal communication, channeled for transmission / discussion of content to the detriment of building relationships. This finding differs from the authors studied, who defend integrative theories of the human being, correlating cognitive, emotional and historical-cultural dimensions in order to strengthen the emotional relationships between the peers that make up the educational process. Based on the review carried out and the results obtained, the authors can state that teacher-student and student-student connectivity is essential in distance education, in order to provide a learning concert.

Following the Piaget line, the teacher is a content mediator, and the student builds knowledge by his action on objects of knowledge and in subject-environment interaction; Based on this, we found that the students' reality must be taken into account, and communication must provide interaction between all the actors in the learning process. In the Wallonian perspective, affectivity and intelligence are associated, since, for the author, cognition is extremely important, but no more than affectivity or motor skills. The study allows us to affirm that affection, combined with technological tools, can enable a sense of belonging and contribute to the learner's motivation, a factor inherent in the entire educational process. The lack of affective bonds, in turn, can generate isolation, demotivation and culminate in evasion and / or academic failure.

In order to verify whether a specific training to work in distance education and the teacher's experience of being a student in this modality would be related to their degree of affectivity, the general scores of each dimension and the general score of “affectivity” were compared between the variables: “They have training to work in distance education” and “He did, as a student, some distance learning course” (Tables 5 and 6).

Table 5: Comparison of the dimensions of affection for “Has training to work in distance education”

| Dimension | Has training to work in distance education | | n. | Average | SD | p |
|-------------------------------|--|----|-----|---------|-------------|---|
| | Yes | No | | | | |
| Customization | Yes | 60 | 4,1 | 0,6 | 0,108 NS | |
| | No | 25 | 3,8 | 0,7 | | |
| Integration and communication | Yes | 60 | 3,1 | 0,6 | 0,260 NS | |
| | No | 25 | 2,8 | 0,8 | | |
| Monitoring and motivation | Yes | 60 | 3,9 | 0,6 | 0,442 NS | |
| | No | 25 | 3,8 | 0,8 | | |
| Pedagogical choreography | Yes | 60 | 3,9 | 0,8 | 0,406 NS | |
| | No | 25 | 3,7 | 0,9 | | |
| Overall affectivity score | Yes | 60 | 3,8 | 0,5 | 0,222 NS | |
| | No | 25 | 3,5 | 0,7 | | |

Source: Authors.

Note: Standard deviation (SD); nonsignificant (NS).

Em relação à formação do professor, não foram observadas, por meio do teste não paramétrico de Mann-Whitney, diferenças significativas para os escores entre os que possuem ou não a formação específica do professor para atuar na EaD.

Table 6: Comparação das dimensões de afetividade por “Já fez algum curso na modalidade EaD”

| Dimension | Taken as a student, some distance learning course | | n. | Average | SD | p |
|-------------------------------|---|----|-----|---------|-------------|---|
| | Yes | No | | | | |
| Customization | Yes | 68 | 4,1 | 0,6 | 0,048* | |
| | No | 17 | 3,7 | 0,7 | | |
| Integration and communication | Yes | 68 | 3,0 | 0,7 | 0,663 NS | |
| | No | 17 | 3,0 | 0,8 | | |
| Monitoring and motivation | Yes | 68 | 4,0 | 0,7 | 0,009** | |
| | No | 17 | 3,6 | 0,5 | | |
| Pedagogical choreography | Yes | 68 | 3,9 | 0,8 | 0,075 NS | |
| | No | 17 | 3,6 | 0,8 | | |
| Overall affectivity score | Yes | 68 | 3,7 | 0,6 | 0,046* | |
| | No | 17 | 3,4 | 0,5 | | |

Source: Authors.

Note: nonsignificant (NS); * significant $p \leq 0,05$; ** significant $p \leq 0,01$; standard deviation (SD).

When comparing the scores obtained between teachers who had or did not have an experience, as a student, in distance education courses, significant differences were found through the Mann-Whitney non-parametric test for the dimensions “personalization” and “monitoring and motivation” and for the “general affectivity score”. For these comparisons, it was observed that they are more often used by teachers who have already taken a course in distance learning, that is, affectivity is more present in virtual classrooms where the teacher has already been in the role of distance learning student. This fact corroborates Piaget's theory that the subject-environment interaction (in this case, previous experiences in distance education) and subject-object of

knowledge (distance education experience as students) potentiates the teaching pedagogical learning, expanding its theoretical perspectives. Acting in partnership with the student, he guides him towards autonomous dialogue, working on projects and learning through research, converting the student into a problem maker, and the teacher into a work team coordinator.

From the study conducted, it appears that distance education has a long way to go by scholars and theorists with regard to methodologies, forms of learning and relationships between teachers and students. Affection is one of the topics that deserve attention, since this is one of the pillars for the student's intellectual development. In this context, being present in the virtual environment, planning integrative and collaborative activities, bringing students closer together through dialogue and interaction, making them feel part of the educational process and assuming the role of protagonists are actions that, we understand, reinforce emotional bonds.

Final considerations

The present study sought to identify the use of methodological actions and procedures carried out by distance education teachers with a view to creating emotional bonds with their students, observing how teachers conducted their subjects with the purpose of fostering a mediating relationship that values the dimensions of fundamental human rights.

The study showed that communication between teacher-student is the dimension that most needs attention, since teachers still face barriers due to technological and personal skills for communication through audio and video. However, listening to the teacher and viewing his messages through a video are important actions to approach and be present in the virtual classrooms, in addition to being ways to mitigate the effects of the “physical distance” between teachers and students.

Another important result refers to the teacher who already had the experience of being an EaD student, in which the study can observe that this fact favored greater affection in the development of his classes,

a result that could be explained by the empathy to be more present in these cases, as well as in a different view of this teacher, since being in the role of student could provide opportunities for experiences that made him improve his teaching practice.

The researchers understand that it is up to the teacher to rethink his role in this new context, to undress from the conventional methodologies used in his face-to-face classes and to assume the position of mediator in the learning process, tracing new pedagogical architectures with a view to creating sociocognitive, affective bonds and emotional, because, just like this, it will make possible the meaningful learning of its students.

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Corresponding Author

Simone Soares Echeveste
E-mail: simone.echeveste@ulbra.br

Simone Loureiro Brum Imperatore
E-mail: simone@imperatore.com.br