

THE MEDIATION PROCESS IN EDUCATIONAL PRACTICES: A FUNDAMENTAL CONCEPT FOR TEACHER TRAINING IN DIGITAL CULTURE



Achilles Alves de Oliveira

State University of Tocantins (UNITINS), Palmas, Tocantins, Brazil

achilles.ao@unitins.br



Yara Fonseca de Oliveira e Silva

State University of Goiás (UEG), Anápolis, Goiás, Brazil

yarafonsecas09@gmail.com

Abstract: This essay discusses the concept of mediation as a central element in teacher training and its critical application to coherent and oriented pedagogical work based on an epistemological foundation. Based on Vygotskian theory, the essay emphasizes the relevance of mediation in educational practices and current teacher training. The essay advocates for training that promotes emancipatory practices alongside digital culture, particularly through pedagogical mediation.

Keywords: Cyberculture; Pedagogical Mediation; Teacher Training.

O PROCESSO DE MEDIAÇÃO NAS PRÁTICAS EDUCATIVAS: UM CONCEITO FUNDAMENTAL À FORMAÇÃO DOCENTE NA CULTURA DIGITAL

Resumo: Discute-se o conceito de mediação como elemento central na formação docente, com sua apropriação crítica para um trabalho pedagógico orientado e coerente a partir de sua fundamentação epistemológica. Com base na teoria Vygotskyana, este ensaio destaca sua relevância nas práticas educativas e na formação docente atual. Defende-se uma formação que promova práticas emancipatórias em interface com a cultura digital, especialmente a partir da mediação pedagógica.

Palavras-chave: Ciberultura; Mediação Pedagógica; Formação de Professores.



EL PROCESO DE MEDIACIÓN EM LAS PRÁCTICAS EDUCATIVAS: UN CONCEPTO FUNDAMENTAL PARA LA FORMACIÓN DE PROFESORES EN LA CULTURA DIGITAL

Resumen: Se discute el concepto de mediación como elemento central en la formación docente, con su apropiación crítica para un trabajo pedagógico orientado y coherente a partir de su fundamentación epistemológica. Basándose en la teoría Vygotskiana, este ensayo destaca su relevancia en las prácticas educativas y en la formación docente actual. Se defiende una formación que promueva prácticas emancipadoras en interfaz con la cultura digital, especialmente a partir de la mediación pedagógica.

Palabras clave: Cibercultura; Mediación Pedagógica; Formación de Profesores.

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1 INTRODUCTION

Even before addressing the topic of mediation, we often encounter its adjectives in various fields, such as pedagogical, technological, and artistic mediation, among others (Peixoto; Santos, 2018). However, when it comes to teacher training, particularly at the undergraduate level, a better understanding of this concept is still needed so that reflections like those of Oliveira and Silva (2022) can be applied to pedagogical and technological mediation within digital culture.

As the authors argue, these processes cannot be consolidated through the mere adoption of specific tools, practices, support, or technology. Therefore, careful planning and a mediation process guided by pedagogical intentions aligned with specific projects and perspectives on human development are required. Furthermore, we understand that critically, reflectively, and purposefully considering the use and adoption of digital information and communication technologies (DICTs) requires first reflecting on what mediation actually is.

In this sense, the purpose of this text is to discuss the concept of mediation as a fundamental aspect of teacher training in the context of digital culture. Derived from a master's dissertation developed within the Interdisciplinary Graduate Program in Education, Language, and Technologies at the State University of Goiás (PPG-IELT-UEG) (Oliveira, 2020), a qualitative research approach based on a narrative literature review (Jesson; Matheson; Lacey, 2011) grounded in Historical-Cultural Psychology (Vygotsky, 1984) was developed. A theoretical essay is developed based on the works of classical and contemporary authors, including Brito (2015), Coutinho and Moreira (1992), Nunes and Silveira (2009, 2015), Oliveira (1995), Peixoto (2016), Peixoto and Santos (2018), Rego (2012), and Vygotsky (1984). The essay aims to discuss the theme in the context of its interconnections with digital culture, the growing presence of mobile technologies and networks, and the current transformation processes addressed by Kenski (2018), Mill, Oliveira and Falcão (2018), Oliveira and Silva (2022), and Santaella (2021).

This text is subdivided to encompass the concept of mediation, its relationship with educational practices based on Vygotskian theory, and considerations on mediation in digital culture. We present a critical systematization of the concept and its interconnections in the current context, expanding the debate to include emerging issues such as the widespread presence of digital information and communication technologies (DICTs), generational differences, and existing inequalities.



2 MEDIATION: INITIAL CONSIDERATIONS ABOUT THE CONCEPT

The concept of mediation stems from distinct understandings that can encompass intermediation processes for conciliation, the relationship between subjects, instruments, and signs, and facilitating and guiding teaching, learning, and knowledge construction processes, among others, as Carvalho, Silva and Mill (2018) present. Above all, the authors argue that mediation is based on a constant search for change, rupture, developmental processes, and separation from the current stage in which an individual finds themselves. In this sense, we understand mediation as an action that, especially in education, must be guided by direction and pedagogical intentionality to achieve the objectives of the formative process aimed at a specific societal project.

According to Carvalho, Silva and Mill (2018), the concept of mediation developed through various theoretical and epistemological influences, including the work of thinkers such as Hegel, Marx, and Vygotsky. Peixoto and Santos (2018) and Oliveira and Silva (2022) recall that, for Hegel, mediation is a dialectical process that establishes relationships between the immediate and the mediate. This process guides constant conflicts that facilitate new interrelations and reflections based on the changes generated by opposing movements. This dynamic allows us to transcend the established and achieve new things. From a Hegelian perspective, mediation is a reflective process in which individuals interact with reality to overcome their current condition (Carvalho; Silva; Mill, 2018).

In the Marxist view, the understanding of the subject is brought in its socially and historically situated aspect, with mediation as a process and not just a product (Peixoto; Santos, 2018). In this sense, this concept is linked to the relationship between man and the real, concrete and material world, understanding that

[...] human mediations manifest in response to the challenges of producing and reproducing the material conditions of existence and in reciprocal relationships with others. These mediations are established through artifacts and technologies (Carvalho; Silva; Mill, 2018, p. 434, translated by us).

Finally, without exhausting this discussion, Lev Vygotsky's perspective presents a closer dialogue between this concept and the field of education. This perspective is also based on a historical-dialectical materialist approach. Mediation, stemming from the principle of human labor, is a central piece in which humans act upon nature through a "relationship mediated by the instruments of work





and society, modifying it and, at the same time, being modified by it" (Brito, 2015, p. 30, translated by us).

Thus, technical instruments and sign systems are understood as products of human work and construction within a historical context that play a primary role in mediating relationships between individuals and between individuals and their surroundings (Rego, 2012). Therefore, there is a dialectical relationship in which humans modify nature while being influenced and transformed by it. Therefore,

[...] through the mediation of material instruments or tools and through the mediation of signs, man acts in the physical and social world, knowing it, modifying it, interacting, learning, communicating his experiences to others and building his own consciousness (Coutinho; Moreira, 1992, p. 143, translated by us).

In this study, we adopt a perspective permeated by the dialectical logic and constructs of Lev Vygotsky (1896-1934), which he refined and developed collaboratively with Alexander Luria (1902-1977) and Alexei Leontiev (1903-1979). Based on Karl Marx's historical-dialectical materialism, Vygotsky, Luria, and Leontiev start from the understanding that "the human being is a concrete reality, and its essence is constructed in social relations" (Nunes; Silveira, 2009, p. 97, translated by us). These relations allow us to further discuss this concept within the field of education.

3 MEDIATION IN EDUCATIONAL PRACTICES

According to Peixoto and Santos (2018), dialectical logic contrasts with formal, or classical, logic. In formal logic, learning an object of knowledge can occur immediately or directly. This object has a concrete character, and its characteristics are determined by fixed, predetermined laws. The authors describe this logic of thought as something that allows "access to immediate reality, that which is apparent and can be measured, classified, and categorized" (Peixoto; Santos, 2018, p. 425, translated by us).

From a dialectical perspective, the authors argue that it transcends the limits of knowledge and immediate information, enabling one to penetrate and immerse oneself to understand the object in its entirety. Thus, dialectical logic encourages us to "go beyond," understanding the multiple interrelationships between the object and various forms of knowledge, especially its socio-historical context. Peixoto and Santos (2018) question whether this relationship with knowledge could be



immediate and whether knowledge itself would be immediately available for learning and understanding by the individual. They also question whether some intermediation between the individual and the object of knowledge is necessary to achieve learning. Educational practices that consider the space and relationships between a subject and the object of knowledge are advocated. This leads us to reflect on learning processes and the appropriation of the object. Based on a dialectical vision, mediation makes it impossible for man to relate immediately with nature, culture, and with himself, since it is understood as a process and not a product, and that

[...] it involves contradiction as an explanatory engine and moves away from fixed, stabilized dualism. This concept of mediation focuses less on the elements that comprise social relations and more on the articulation of these elements within a single entity, such as pedagogical work. In this case, the object of mediation is not knowledge or the student, but rather the relationships between the subjects and objects of knowledge (Peixoto, 2016, p. 373, translated by us).

In other words, it is important to recognize that mediation exists in pedagogical relationships, where knowledge is considered a human product determined by a specific context. Knowledge is the result of complex relationships between individuals and nature, as well as between individuals themselves. These relationships are conditioned and shaped by the political, economic, social, and cultural issues of each historical moment (Peixoto; Santos, 2018). For knowledge to be accessed, it must undergo a process of objectification. This is the way in which the subject understands and constructs the object of knowledge. From this perspective, knowing implies a mediated process in which a person actively interacts with previously developed knowledge. Through this interaction, the individual not only learns about the object but also reframes it and transforms themselves. The historical-cultural perspective helps us understand the implications of this process for teaching and pedagogical practice. It also offers a theoretical basis for understanding mediation. The historical-cultural approach contributes to discussions of development and learning processes and raises reflections that impact pedagogical practice and teaching performance.

3.1 Lev Vygotsky's Contributions on Mediation

Based on their discussions, Vygotsky and his successors understand education as a process of cultural mediation. According to Brito (2015), this process enables qualitative changes in individuals' subjective constitution and their relationships with knowledge, reality, and others. This perspective



assumes that human beings are constituted through their relationships with others and with culture. In this process, two qualitatively distinct aspects weigh in: elementary and higher psychological functions (Nunes; Silveira, 2009).

According to Vygotsky (1984) and Nunes and Silveira (2009), elementary psychological functions have biological origins and exist from the beginning of child development. These functions encompass aspects such as immediate memory, involuntary attention, and natural perception. Higher psychological functions, on the other hand, originate from a specific sociocultural context and encompass language, conceptual thought processes, creative imagination, and voluntary memory, among others.

Nunes and Silveira (2009) corroborate that, throughout development, individuals gradually acquire cultural meanings and signs that mediate their relationship with the environment. This results in the acquisition of knowledge and progress in development. As human development progresses, activities mediated by instruments and signs grow in predominance compared to those derived from genetic and maturational capital. Thus, we understand that psychological processes develop and facilitate the construction of higher mental processes, representing socio-historical and cultural transformations (Coutinho; Moreira, 1992).

That way,

through activity in processes of interaction with the social environment, psychological functions are transformed, evolving, with a gradual mastery of cultural meanings and an advancement in the modes of reasoning carried out by the subject, that is, higher psychological functions are constituted (Nunes; Silveira, 2015, p. 50, translated by us).

Vygotsky (1984) posits that all human activity is mediated by technical instruments and sign systems that are both constituted sociohistorically. According to the author, this combination enables the development of higher psychological functions. For Rego (2012), this development is also based on mediation and individuals' relationships with the world. Therefore, according to Nunes and Silveira (2009), human development in Historical-Cultural Psychology cannot occur without the presence of others, social exchange, environmental stimuli, and diverse learning situations.

According to Nunes and Silveira (2009), the starting point is an understanding of the Russian word *obuchenie*, which Vygotsky defined as the "teaching-learning process," encompassing what is learned and who teaches. The authors highlight variations in the translation of the author's works, presenting the term sometimes as "teaching" and sometimes as "learning." However, according to



Vygotsky, it is impossible to conceive of "learning" (the act of learning) without the interaction with others involved in teaching situations. Thus, we reinforce the idea that teaching and learning are inseparable. In this article, as in other writings by these authors, the term "teaching" refers to the entire teaching-learning process.

Regarding concept learning, the Vygotskian perspective categorizes them as either spontaneous or scientific. According to Coutinho and Moreira (1992) and Nunes and Silveira (2009), spontaneous concepts are acquired by children through their daily experiences, while scientific concepts are learned through structured teaching based on logic, coherence, and increasing degrees of generalization. Thus, there is an interdependence between these two types of concepts.

In other words, without teaching, spontaneous concepts do not develop into structured, specific concepts. Similarly, without the support of spontaneous concepts, scientific concepts would lack authentic meaning since their acquisition would be mechanical (Nunes; Silveira, 2009). Therefore, in education and mediation, the teacher plays a fundamental role by promoting constant conflicts between systematized knowledge and the learner's daily life. This establishes an important relationship that provokes the student's desire to learn, providing the necessary conditions and cognitive mediations (Peixoto, 2016).

The conflict or confrontation between spontaneous and scientific concepts is essential to the learning process. This is because scientific concepts are constituted based on a relationship that is (inter) mediated by other concepts, given that

[...] both spontaneous and scientific concepts are mutually articulated: the spontaneous ones favoring the scientific ones in a confrontation with concrete reality and the scientific ones leading the spontaneous ones to increasing degrees of hierarchy and generalization, thus changing their psychological structure (Coutinho; Moreira, 1992, p. 154, translated by us).

Thus, as scientific concepts develop, Coutinho and Moreira (1992) defend the existence and continuity of the development of higher functions of memory, abstraction, ordering, and generalization, among others, with concepts being dependent on such functions for their own constitution. Based on this, the school setting, within the context of formal education, is conceived as an environment conducive to learning and development, an essential space for the development of more advanced psychological functions. To this end, we return to some basic concepts for thinking about mediation processes.



3.2 Zone of Proximal Development: Between the Real and the Potential in the Mediation Process

When considering mediation processes, we start from the understanding that learning must be linked to the level of development of the individual or learner (Vygotsky, 1984). In this sense, to understand the zone of proximal development (ZPD), we return to the understanding of two distinct levels: that of actual development and that of potential development.

First, the level of actual development relates to capacities and skills that have been consolidated, learned, or acquired. In other words, it refers to completed cycles and mature functions, that is, the final products of development (Nunes; Silveira, 2009; Rego, 2012; Vygotsky, 1984). These relate to actions that children or young people perform independently and autonomously. On the other hand, potential development refers to imminent development that requires assistance or mediation from another person, whether an adult or a more experienced child (Rego, 2012).

Between the level of actual and potential development, the concept of ZPD arises, as a path to be traveled or the distance between them. According to Vygotsky (1984, p. 97, translated by us), it is the

[...] distance between the level of actual development, which is usually determined through independent problem-solving, and the level of potential development, determined through problem-solving under the guidance of an adult or in collaboration with more capable peers.

The ZPD conception implies an understanding of development from a particular perspective. It highlights the extreme relevance of embryonic processes in the individual, who exists in a psychological domain of constant transformation (Oliveira, 1995). According to Vygotsky (1984, p. 97, translated by us), the ZPD defines those functions "that are in the process of maturation, functions that will mature, but that are present in an embryonic state," referring to them as "buds" or "flowers" of development.

Vygotsky (1984) postulates that a subject's actual level of development refers to cognitive development from a retrospective perspective, marking "complete" mental functions that have resulted from evolutionary processes. Conversely, the ZPD characterizes mental development from a prospective perspective, presenting possibilities at an imminent stage. Thus, understanding the ZPD and human developmental processes improves teachers' performance in pedagogical practice. In pedagogical terms, it is in this emerging proximal space that mental functions in the process of construction are accessed through educational interventions (Coutinho; Moreira, 1992).





According to Nunes and Silveira (2009), the Vygotskian vision posits that teaching and pedagogical action should focus on teaching based on working with skills, abilities, and knowledge that can be implemented through the mediation of others and not on those that students already master independently. Thus,

Using this method, we can account for cycles and maturation processes that have been completed as well as those that are forming or just beginning to mature and develop. Thus, the zone of proximal development allows us to predict the child's immediate future and their state of dynamic development. It provides access to both what has already been achieved through development and what is in the process of maturation (Vygotsky, 1984, p. 97-98).

Therefore, in agreement with Coutinho and Moreira (1992), good pedagogical practice anticipates development by acting within the ZPD. According to Vygotsky (1984, p. 101, translated by us), this “enables us to propose a new formula, that 'good learning' is only that which anticipates development”. Thus, the mediation process aims to facilitate qualitative changes through interaction with others, allowing for the learning and development of that which is susceptible to such mediations.

According to Vygotsky (1984), there are dynamic and complex relationships between development and learning processes. He rejects the possibility of linearity in how the individual develops and incorporates historical and cultural dimensions into his theory. He also expands the notion of development beyond social interactions as the origin of all higher psychological functions (John-Steiner; Souberman, 1984; Nunes; Silveira, 2015).

Due to the importance Vygotsky attributes to the historical dimension of psychological functions and social interaction, as well as their role in constructing the human being, Oliveira (1995) argues that learning becomes central to Vygotsky's conception of humankind. For the author, although human development is defined in part by the maturation processes of the organism, belonging to the human species, "it is learning that enables the awakening of internal development processes that, if it were not for the individual's contact with a given cultural environment, would not occur" (Oliveira, 1995, p. 11, translated by us).

In this logic, Vygotsky presents the crucial point of learning through its possibility of creating the ZPD.

[...] learning awakens various internal developmental processes, which are able to operate only when the child interacts with people in his environment and when in cooperation with his peers. Once internalized, these processes become part of the child's independent developmental acquisitions (Vygotsky, 1984, p. 101, translated by us).



Thus, the school environment facilitates spaces for constructing and reflecting on cultural and historical meanings through mediation. This fosters pedagogical actions that create conditions for achieving genuine development (Nunes; Silveira, 2009). In this context, teaching is essential to facilitating this process and consolidating new learning. It is also important to situate mediation within a socio-historical context, such as digital culture.

4 PEDAGOGICAL MEDIATION AND DIGITAL CULTURE

To make learning effective, it is necessary to develop pedagogical practices that allow for and facilitate the active participation of students and teachers (Nunes; Silveira, 2015). To achieve this objective, a practice focused on forming new connections and elaborations of the subject matter is conceived. This practice is based on possibilities that promote individual development and encompasses processes of "analysis, synthesis, abstraction, and intelligent generalization" (Coutinho & Moreira, 1992, p. 159, translated by us). Thus,

[...] the creation of symbolic spaces that enable advances in psychological development must be thought of based on the teacher-student, student-student relationship (with more advanced knowledge) and not simply a group of people (Nunes; Silveira, 2009, p. 106, translated by us).

It is in this sense that Oliveira (1995, p. 12, translated by us) argues that the Vygotskian foundation points to the understanding of pedagogical processes as "intentional, deliberate, aimed at the construction of psychological beings who are members of a specific culture, whose profile, therefore, is marked by culturally defined parameters." In other words, actions are based on pedagogical intentionality and the teacher's educational practices. The author understands that experiences mediated by other subjects are fundamental to advancing the mastery of a culturally developed and shared system. In education, one teaching task is to mediate this process by provoking formative experiences that focus on imminent and incomplete development. In other words, amidst mediation, the teacher's actions focus on the "sprouts" postulated in Vygotsky's analogy. Acting and intervening in ZPDs is part of the teacher's fundamental role of "making the cultural heritage formulated by humans accessible to students and challenging their learning processes through teaching" (Rego, 2012, p. 81, translated by us).

Historical-cultural theory views the student as an active social being within a cultural context





and acknowledges that students enter the educational environment with prior knowledge that should be recognized and incorporated into the learning process (Coutinho; Moreira, 1992; Nunes; Silveira, 2009). In this context, it is essential to consider students' knowledge and representations as the starting point of pedagogical practice. In Historical-Critical Pedagogy, this can characterize initial social practice (Saviani, 2008). Theorists such as Coutinho and Moreira (1992) and Nunes and Silveira (2009) also emphasize the importance of the ZPD in constructing concepts and progressing development. They highlight the essential role of teacher mediation in the teaching process. The relationship between every day and scientific concepts is evident, as is the function of content as a pedagogical tool. More than passing on information or offering explanations and guidance, it is crucial to foster practices that stimulate curiosity, promote the exchange of knowledge among students, encourage problem-solving, observation, and other forms of active knowledge construction (Rego, 2012).

Peixoto (2016) emphasizes the intricacy of the student-teacher relationship, which stems from the clash between intuitive, everyday notions and systematized, scientific principles. This conflict presents a constant challenge in teaching, whether in basic or higher education. In this sense, Sforini (2012) emphasizes that teachers must master the content and strategies that enable students to understand and access this knowledge during the learning process.

For Masetto (2013, p. 142), learning is directly linked to that of the apprentice who,

[...] involving themselves, their peers, and the teacher, they seek and acquire information, give meaning to knowledge, produce reflections and insights, research, dialogue, debate, develop personal and professional skills, ethical and political attitudes, change behaviors, transfer learning, integrate theoretical concepts with practical realities, relate and contextualize experiences, give meaning to the different practices of daily life, develop critical thinking, the ability to consider and look at facts and phenomena from different angles, compare positions and theories, and solve problems. In short, the learner grows and develops (translated by us).

In this sense, Masetto (2013) argues that pedagogical mediation involves actions such as discussing doubts and problems with students and presenting guiding questions and guidance to help them advance independently in the process. The author also emphasizes the importance of streamlining teaching through problem situations, reflections, and challenges while fostering connections between prior knowledge and acquired concepts. This approach develops students' critical thinking skills regarding the information obtained. Furthermore, Masetto emphasizes the



importance of students critically appropriating current technologies and avoiding passive acceptance of the interests behind them. In other words, educators must encourage exchanges between learned content and life and social contexts, raising ethical, social, professional, and potentially conflicting questions and problematizations.

However, as Oliveira and Silva (2022) point out, favorable conditions are necessary for mediation processes to be effective. This is because the precariousness of educational contexts and teaching work often prevents teachers from acting amid the specificities and material tensions of the modern world.

According to Moran (2018), it is evident that the teaching role is more complex and extensive today. Teachers are expected to design experiences that foster learning, producing personalized and collective routes and itineraries. They must guide and mentor projects, research, reflections, and questions - actions that add to the existing challenges and specificities of everyday school life. Thus, rethinking the role of teachers is a difficult challenge. This requires understanding that pedagogical mediation is based on the selection of teaching techniques and pedagogical strategies to optimize and promote learning, encompassing different dimensions (Masetto, 2013). The teacher becomes a mediator and a bridge between the student, the historically accumulated knowledge, and the appropriation of human cultural production.

Therefore, as Alonso *et al.* (2014) suggest, it is necessary to discuss the nuances of teaching and learning in digital culture. The authors understand that, in this context, it is through this questioning and analytical perspective that the relationships between learning, teaching, and the constant intersections of ICTs in the most diverse forms of mediation can be redefined. According to the authors, mediation presupposes reconfiguring collaborative learning processes, fostering networked learning, and shifting from conventional, hierarchical relationships to moments and experiences that favor intellectual, moral, and affective exchanges and sharing among those involved in pedagogical practice.

In this sense, Alonso *et al.* (2014) also highlight trends that have emerged in the present and from the recent past. They share the understanding that learning does not depend on the transmission of knowledge but rather on interconnections and interrelationships based on horizontality, which can favor collaborative and collective processes. The authors argue that the boundaries of teaching and learning change in such relationships and interactions. Furthermore, they agree with Kenski (2018) that ICTs have repercussions on interactions and relationships. Thus, Alonso *et al.* (2014) argue that



formal, traditional teaching spaces are beginning to coexist with environments of collective, informal knowledge construction. These environments include social networks, which allow for the adoption of authorship and co-authorship roles.

This scenario requires mediation that engages with the specificities of the present moment, aiming to understand digital culture itself (Han, 2022; Kenski, 2018; Santaella, 2021), as well as the elements, hybridisms, and mediational processes that enhance distinct methodologies in this reality (Nonato; Sales; Sarly, 2019; Oliveira; Silva, 2024; Veloso; Mill, 2024). Therefore, training is necessary that considers specific digital teaching competencies (Sales; Moreira, 2022) and integrates political, technological, pedagogical, and content knowledge into teaching practice (Veloso; Pareschi; Oliveira, 2024). This training would partially encompass current specificities and tensions (Oliveira; Contreras-Espinosa, 2025; Santo; Santos, 2021). This makes it possible to mediate the pedagogical process more critically and coherently in contemporary times. It overcomes simplistic conceptions of hybrid education as merely combining in-person and distance modalities (Maieski; Casagrande; Alonso, 2024). It also helps us understand the relevance of specific conceptual and methodological contributions to conceiving and conducting synchronous and asynchronous moments, relationships, interactions, and mediations (Mill; Oliveira; Ferreira, 2022; Oliveira; Mill; Ferreira, 2023). In other words, it encompasses all the complexity involved in mediation processes in teaching practice.

In this context, different generations coexist within digital culture and social life. Kenski (2018), for example, describes a time when older individuals were accustomed to a more linear approach to learning, when information was less readily available and digital media were rare, if not nonexistent. Mill, Oliveira and Falcão (2018) term another group the "digital generation." This group refers to those born and raised amid the intense technological transformations of recent decades. From this perspective, Kenski (2018) adds that the articulation between digital culture and educational culture can open up possibilities for new paths in formal education, encompassing the needs of the digital generation while also seeking to respond to the characteristics, tensions, and challenges of contemporary society from a critical and emancipatory perspective—a society that, according to the author, is deeply immersed, in all its aspects, in interactions with the digital universe and its various layers.

However, a critical stance is essential because mere involvement with digital culture does not automatically enable individuals to explore, interact with, and use virtually connected environments reflectively and consciously. On the contrary, it is important to recognize that digital culture takes



different forms depending on aspects such as gender, class, race, and territory. Therefore, we advocate the need for training to think about mediation, taking into account the various digital cultures, in a sense that

[...] the plural occurs both because of its cultural diversity—in the most varied aspects—and because it refers to more than one possible culture, with the digital manifesting itself in different ways even within the same context. This reveals, for example, issues related to social, material, educational, and cultural inequality, among many others. Even though they are intertwined by the digital—or a digital that intertwines with different cultures—they manifest themselves from varied realities, challenges, and possibilities (Oliveira; Contreras-Espinosa, 2025, p. 3-4, translated by us).

Furthermore, the near omnipresence of smartphones and other digital devices that are constantly connected to the internet does not shield individuals from the constant tensions involving a lack of critical digital literacy, training in digital citizenship, and an understanding of the means, processes, and mediations in virtuality, among other contemporary factors.

In this sense, reappropriating the concept of mediation in initial teacher training requires an understanding of this reality, especially with a focus on breaking through the immediacy and superficiality of digital culture. This allows for a critical training framework that engages with the context of ICTs and connectivity while discussing training processes and focusing on civic and emancipatory development. This framework strengthens the understanding of mediation in teacher training and future practice by addressing the nuances of the concept. From there, we can move forward and utilize the other adjectives for mediation mentioned above.

While not exhausting the possibilities of the listed provocations, it is important to highlight the limitations imposed by the bibliographical and essayistic scope of this text. In this sense, this essay aims to facilitate a discussion that substantiates practical and empirical experiences within the scope of teaching practice, particularly in the post-pandemic context, engaging with a reality of possibilities and tensions that become widespread as ICTs become more accessible.

5 FINAL CONSIDERATIONS

From a historical-cultural perspective, pedagogical mediation cannot be reduced to a set of instructional strategies or neutral techniques. Rather, it must be understood as an intentional, situated practice focused on the comprehensive development of individuals. In this process, the teacher's role



goes beyond transmitting information; they become a mediator of accumulated cultural knowledge, capable of provoking, guiding, and collaborating in meaningful and transformative learning. This role requires the ability to identify students' zones of proximal development (ZPDs) and foster pedagogical relationships that respect their prior knowledge, interests, and ways of being in the world.

In the context of digital culture, this role becomes more complex. The constant presence of digital technologies in the lives of students and teachers requires training that goes beyond technical and operational mastery of devices. It's important to understand that students of the so-called "digital generation" may be familiar with using devices and platforms, but this doesn't imply they have a critical understanding of the media and discourses that circulate in these environments. In this sense, teacher training needs to encompass the analysis of digital mediation, the impacts of misinformation, and inequalities in access to and use of technologies.

Thus, this text provides a valuable opportunity to expand the discussion on the challenges and opportunities of teacher training dedicated to critical and humanizing mediation in the digital cultural landscape. Considering the intersections of class, race, territory, and gender in the use of ICTs is a fundamental step to ensuring that pedagogical mediation expands horizons of meaning and builds emancipatory practices in education rather than reinforcing exclusions.

Finally, it is reaffirmed that, when consciously and critically integrated with digital culture, pedagogical mediation can promote teacher training that values the complexity of the educational process, its participants, and its contexts. Rather than taking a technocratic or naive view of technology, we must recognize the potential of digital and information communication technologies (DICTs) as tools for mediating learning. However, they must be used with a pedagogical intentionality committed to social justice, equity, and the development of active, critical, and creative individuals.

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