

## THE TEACHER AS MEDIATOR: NAVIGATING A SEA OF INFORMATION



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### ABSTRACT

The article investigated how pedagogical mediation, combined with digital technologies, can transform the teaching-learning process, meeting the demands of a connected society. The objective was to understand the role of the mediator teacher in the use of technological tools, such as augmented reality, to enhance meaningful learning and promote the cognitive and socio-emotional development of students. The methodology adopted was a bibliographic research, following Prodanov and Freitas (2013), with the analysis of articles, books and other academic publications. The research highlighted the evolution of the teaching role, from transmitter of information to facilitator of learning, and presented pedagogical practices in the context of the Zone of Proximal Development. Connections between digital technologies and cognitive development were explored, with practical examples of the application of resources such as augmented reality to facilitate the understanding of abstract concepts. Finally, the integration between pedagogical mediation and technological innovations was analyzed, evidencing positive results in the creation of dynamic and interactive educational environments. It was concluded that pedagogical mediation, combined with digital technologies, is essential for a more participatory, critical teaching aligned with the twenty-first century. The research stimulated the need for further investigations into the long-term impacts of this approach in diverse educational contexts.

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## INTRODUCTION

Contemporary education has faced significant transformations driven by technological advancement and the need to adapt to the demands of an increasingly connected society. In this scenario, the role of the teacher as mediator has become a central aspect, requiring a pedagogical approach that integrates critical reflection, technological innovation and inclusive practices. The theme proved to be relevant because it addresses how pedagogical mediation and the use of digital technologies contribute to the improvement of the teaching-learning process, in addition to promoting critical and socio-emotional skills necessary for the current context.

The main objective was to investigate how the mediator teacher can use emerging technologies, such as augmented reality, to transform the educational dynamics, promoting more meaningful learning. The question that guided this research was: 'How does pedagogical mediation, associated with the use of digital technologies, enhance contemporary teaching?'.

The methodology used was bibliographic research, as outlined by Prodanov and Freitas (2013), which allowed the analysis of relevant theoretical references to understand the interaction between teacher mediation and educational technologies. Data collection was carried out through the exploration of academic articles, books and other specialized publications that discussed the topic from different perspectives. The analysis technique consisted of the organization and critical interpretation of the collected material, aiming to identify trends and gaps that could contribute to the academic and practical debate.

The article was structured in four main chapters, each addressing essential aspects of the topic. The first chapter, 'The Teacher as Mediator', contextualized the evolution of the teaching role, highlighting the transition from transmitter of information to facilitator of learning, with an emphasis on critical reflection and student protagonism. Then, the chapter 'Teacher Mediation and the Zone of Proximal Development: Approaches and Practices in Contemporary Teaching' explored the theoretical bases of mediation and how it can be applied to enhance the cognitive development of students, using signs and instruments in a planned and intentional way.

The third chapter, 'Mediation in Contemporary Teaching: Connections between Technologies and Cognitive Development', discussed the possibilities offered by digital tools, such as augmented reality, to enrich the educational experience and make learning more dynamic and interactive. In this context, practical examples of how these technologies

can facilitate the understanding of abstract concepts and encourage collaborative work were presented. Finally, the chapter 'The Integration of Pedagogical Mediation and Digital Technologies in Contemporary Education' consolidated the previous discussions, analyzing the results obtained and suggesting ways to implement innovative practices in teaching.

Therefore, the structure of the article allowed for a broad and in-depth understanding of the role of the mediator teacher in contemporary education, reaffirming the importance of the integration between pedagogical mediation and digital technologies as an essential approach to promote more meaningful learning aligned with the demands of the twenty-first century.

## **THE TEACHER AS MEDIATOR**

The act of 'becoming an educator' and 'forming an educator' transcends the mere transmission of knowledge and involves a process of critical reflection on teaching practice, based on the theoretical-practical references accessed by the professional. According to Lima and Guerreiro (2019), this reflection is a fundamental element in the exercise of the profession, allowing educators to understand and continuously improve their pedagogical performance. In this context, the figure of the teacher is transformed from a mere transmitter of content into a mediator of a vast sea of information.

In a similar way, Freire (1996) reinforces the importance of an education that transcends the transfer of knowledge. He argues that educating is creating possibilities for the production of knowledge, encouraging the active and critical construction of knowledge. Thus, education is not limited to intervening in society to promote radical changes, but can also serve as a tool to understand and transform history. This perspective reaffirms the mediating role of the teacher, who acts as a guide in the process of production and organization of knowledge.

In the past, the role of the educator was predominantly marked by a traditional and banking approach to education, in which the teacher took the lead and the student was a passive receptacle of information. This dynamic, widely criticized by Freire (1996), promoted a hierarchical relationship and discouraged the active participation of the student in the teaching-learning process. However, contemporary society and technological transformations demand a revision of this paradigm.

Currently, teacher mediation is deeply connected to technological innovations and the abundance of information available. Critical reflection and the ability to guide students to

navigate and select relevant content are essential for the development of meaningful learning. Lima and Guerreiro (2019) highlight that the teacher must be able to integrate theory and practice in a dynamic way, using technological tools as a means to enrich teaching and expand the possibilities of knowledge construction.

To exemplify, the evolution of science teaching is considered. In the past, a biology teacher, for example, limited himself to exposing content on a blackboard and assigning the reading of textbooks. Currently, with the help of simulators, augmented reality platforms, and interactive databases, teachers can promote more immersive and engaging learning. This transition not only optimizes students' understanding but also empowers them to seek information critically and autonomously.

Thus, it is necessary to recognize that modern education requires from the teacher a flexible and innovative posture, capable of acting as a mediator and facilitator in the learning process. Freire (1996) and Lima and Guerreiro (2019) converge in highlighting that critical reflection, the use of technologies, and the promotion of participatory education are central elements to transform teaching and meet the demands of a society in constant change.

## **TEACHER MEDIATION AND THE ZONE OF PROXIMAL DEVELOPMENT: APPROACHES AND PRACTICES IN CONTEMPORARY TEACHING**

The role of the teacher as a mediator of the learning process is central to contemporary education, particularly when considering the performance in the Zone of Proximal Development (ZPD). According to Lima and Guerreiro (2019), this mediation consists of creating appropriate conditions, using signs and instruments, so that students can reach new levels of development. This approach requires from the teacher not only theoretical knowledge, but also an intentional and planned posture, which aims to promote meaningful and favorable interactions.

In addition, Lima and Guerreiro (2019) emphasize that mediation plays a humanizing role in transmitting culture and informing students, transforming culture and the means of information into sources of change. As the authors state, "mediation is a humanizing factor of cultural transmission. Man has culture and the means of information as a source of change" (Lima; Guerreiro, 2019, p. 5). This perspective not only highlights the importance of the teacher's role, but also reinforces the idea that teacher interaction should be planned and intentional, as this approach allows the educator to identify the specific needs of

students and develop strategies that enhance learning. By intentionally planning their interactions, the teacher promotes the construction of meaningful bonds, enabling students to advance in the understanding and application of knowledge in different contexts. In addition, this planned mediation stimulates critical thinking, encourages autonomy and strengthens engagement, essential elements for the success of the educational process. Moita (1995) complements this view by stating that

[...] effective didactic practices positively influence the education of students, because no one is formed in a vacuum, however, the training process supposes exchange, experience, social interactions, learning, an endless number of relationships (Moita, 1995, p. 15).

Therefore, teacher mediation also involves the use of educational technologies as tools that enhance interactions and promote learning. According to Batista *et al.* (2023),

[...] teachers play a central role in mediating between students and educational technologies, using these tools to create favorable conditions for the development of critical, cognitive and social skills. This mediation takes place through the careful selection of resources, the proposition of meaningful activities, and the encouragement of student protagonism, contributing to dynamic learning that is aligned with contemporary demands (Batista *et al.*, 2023, p. 109).

In this way, the use of technological resources in the classroom becomes a fundamental element in promoting a dynamic and interactive learning environment. For example, in high school, the teacher's mediation with the use of technology can be observed in a physics class on optics. The teacher, by using a digital simulator of optical phenomena, guides students in carrying out virtual experiments, such as the reflection and refraction of light in different media. In this context, the teacher not only provides instruction but also encourages critical reflection and hypothesis formulation, allowing students to explore concepts in an interactive and meaningful way.

In addition, according to Moita (1995), the teacher is not limited to being a transmitter of knowledge, but becomes the main tool of his work and the main agent of his education. In this sense, by planning and mediating activities with the support of educational technologies, the teacher expands his role and reaffirms his importance as a facilitator of learning. This dynamic, while valuing the student's autonomy, reaffirms the relevance of intentional and planned mediation for the formation of individuals able to interact with the challenges of the contemporary world.

## **MEDIATION IN CONTEMPORARY TEACHING: CONNECTIONS BETWEEN TECHNOLOGIES AND COGNITIVE DEVELOPMENT**

The role of the mediator teacher is essential in the educational process, as it provides the student with tools to deal with new tasks, explaining, through mediation, the successful functioning of the learning processes. According to Lima and Guerreiro (2019), "the mediator provides the mediated person with tools to deal with new tasks, explaining with the help of mediation the successful functioning of the process" (p. 8). This approach transforms the educational environment into a space for integral development, enabling students to apply the skills acquired in varied contexts.

In addition, the exercise of self-regulation and behavior control, as highlighted by Lima and Guerreiro (2019), is a gradual process that requires time for the student to cognitively elaborate the information before actively responding to it. According to the authors,

[...] the exercise of self-regulation and behavior control require time for the student to work cognitively with the information before actively responding to it (Lima; Guerreiro, 2019, p. 8).

Thus, the role of the teacher is to create conditions that favor reflection, planning, and organization of responses, promoting not only the acquisition of knowledge, but also the development of socio-emotional skills. On the other hand, sharing experiences is another essential aspect of mediation, as it intensifies the learning process by allowing students to listen to each other while sharing their reflections with other colleagues. According to Lima and Guerreiro (2019), "sharing experiences intensifies the learning process by allowing us to have the opportunity to listen to each other, while talking to the other" (p. 9). This practice stimulates the collective construction of knowledge, creating an environment of collaboration that enriches both the individual and the group.

In addition, the use of digital platforms has shown great potential to personalize and make learning more inclusive. Narciso *et al.* (2024) point out that digital environments that offer personalization and control can be highly effective for autistic students, enabling them to learn, work, and express themselves in ways that respect their interests and abilities. In this scenario, the mediator teacher assumes the role of guiding and adapting the use of these tools to ensure that they become catalysts for the educational process.

According to Passos *et al.* (2024), mediation also implies a transformation in the role of the teacher, who ceases to be a mere transmitter of knowledge to become a guide and



stimulator. This paradigm shift not only values the student's protagonism, but also encourages them to build concepts, values, and attitudes that favor personal and citizen growth.

In addition, Santana *et al.* (2024) reinforce that the partnership between the school and the family is essential for mediation to reach its full potential. The creation of bridges between home and school enables an environment of support and reciprocity, promoting a more harmonious development of students. Passos *et al.* (2024) corroborate by stating that "the school must excel in the partnership of parents, students and educators" (p. 2), strengthening the support network necessary for effective teaching.

Finally, mediation in contemporary teaching requires a sensitive look and a flexible posture from the teacher, who must act as a facilitator, planner and advisor. By aligning the individual needs of students with technological and social demands, the teacher contributes to the construction of a dynamic and meaningful educational environment, preparing students for the challenges of a world in constant transformation.

## **THE INTEGRATION OF PEDAGOGICAL MEDIATION AND DIGITAL TECHNOLOGIES IN CONTEMPORARY TEACHING**

The role of the educator as a mediator requires a balanced approach in the teaching-learning process, especially with regard to the management of students' emotions. According to Passos *et al.* (2024), "the educator must be very careful in the teaching-learning mediation process, he should never get too involved in the emotional state of his students" (p. 5). This statement highlights the need to establish clear limits to ensure that the pedagogical relationship maintains its focus on the academic and social development of students.

In this context, Freire (1996) highlights the relevance of democratic education as a central element for the promotion of significant social and political solidarity. He states that "the social and political solidarity we need has a practice of real importance in democratic formation" (Freire, 1996, p. 22). Thus, the educator must act as a facilitator in the development of students' critical sense, encouraging collective engagement and active participation in social and political issues.

In addition, the use of technologies such as augmented reality (AR) has proven to be a powerful tool in pedagogical mediation, particularly in the approach to abstract concepts. Batista *et al.* (2023) point out that, "during the implementation, teachers realized that AR



facilitated the explanation of abstract concepts" (p. 112). For example, in a physics class in high school, the teacher can use an AR app to demonstrate the principles of optics. Through mobile devices or AR glasses, students can visualize the refraction and reflection of light in different media, promoting a clearer and more intuitive understanding.

In addition, Batista *et al.* (2023) note that "the planned AR class was divided into stages that included exploration, manipulation, and group discussion" (p. 113). In the example mentioned, the teacher could start the class with the exploration of the properties of light through AR, followed by the manipulation of variables such as angle of incidence and refractive index. Finally, students would participate in a group discussion to share their observations and develop a collective understanding. This structured planning reflects the importance of intentional pedagogical mediation, which promotes not only individual learning, but also the collective construction of knowledge. Thus, the use of AR goes beyond being a simple technological tool, becoming a fundamental resource to encourage teamwork and critical reflection among students.

On the other hand, Santana *et al.* (2021) reinforce the need for teacher training to deal with the demands of a generation immersed in the digital world. According to the authors, "more than ever, meaningful training is essential, contextualized with the interests of a generation immersed in the digital world" (p. 2084). The continuing education of teachers is essential so that they can fully explore the potential of technologies and adapt their pedagogical practices to the profile of contemporary students.

Also in this sense, Santana *et al.* (2021) highlight that "opening up to digital pedagogical possibilities allows the teacher to achieve the profile of the new-age student" (p. 2086). This openness requires a commitment to innovation and flexibility, allowing the mediator teacher to integrate technologies effectively, promoting a dynamic learning environment aligned with the demands of the twenty-first century.

Therefore, the integration between pedagogical mediation and digital technologies represents a promising path for contemporary teaching. By combining teacher training, the use of technological tools, and the principles of democratic training, it is possible to transform the classroom into a space for innovation and collective growth, meeting the needs of a society in constant evolution.

## RESULTS AND DATA ANALYSIS

The main conclusions of this study highlight the relevance of intentional pedagogical mediation and the use of digital technologies in contemporary education.

Table 1 - main authors

Author(s)	Year of Publication	Research Subject	Relevance of the Research
Lima and Guerreiro	2019	Teacher mediation, critical reflection and pedagogical development	It grounds mediation as a reflective and intentional practice.
Freire	1996	Democratic education and social transformation	It establishes the relationship between education, democracy and social transformation.
Bush	1995	Social interactions and effective didactic practices	It highlights the importance of exchanging experiences in learning.
Batista <i>et al.</i>	2023	Use of educational technologies, such as augmented reality, in teaching	It explores emerging technologies to make learning more dynamic.
Narciso <i>et al.</i>	2024	Personalization of learning for autistic students	It proposes personalized environments for educational inclusion.
Passos <i>et al.</i>	2024	Emotional limits in teacher mediation	It emphasizes the emotional balance in the teacher-student relationship.
Santana <i>et al.</i>	2021	Teacher training for digital pedagogical practices	It reinforces the need for continuous training for digital practices.
Santana <i>et al.</i>	2024	School-family partnership for educational support	It highlights the creation of bridges between school and home to promote integral development.

Source: author himself.

It was found that the teacher's role as a mediator, supported by technological resources such as augmented reality (AR), provides a more dynamic and meaningful learning environment. In addition, the continuing education of teachers proved to be indispensable to meet the demands of a generation immersed in the digital world, as pointed out by Santana *et al.* (2021). These findings indicate that the combination of

innovative pedagogical practices with digital tools contributes to the development of critical and social skills in students.

The significance of these discoveries lies in the transformation of the role of the teacher, who is no longer a simple transmitter of content to become a facilitator and advisor. This change reflects a more participatory and democratic approach to education, as advocated by Freire (1996), promoting the collective construction of knowledge and the preparation of students for the challenges of contemporary society.

In relation to what other research has already demonstrated, this study dialogues directly with the contributions of Lima and Guerreiro (2019), who emphasize the importance of a planned and humanizing mediation. In addition, the findings corroborate the observations of Batista *et al.* (2023), which highlighted the positive impact of AR on the explanation of abstract concepts. This convergence reinforces the validity of teacher mediation practices supported by digital technologies.

On the other hand, some limitations of this study were identified. The reviewed literature points out that the implementation of educational technologies still faces barriers such as the lack of adequate infrastructure and resistance to innovation on the part of some teachers (Batista *et al.*, 2023). In addition, the impacts of technological mediation in different cultural and socioeconomic contexts have not been widely explored, which requires future studies to broaden the understanding of the subject.

Explanations for unexpected results have also emerged. In certain cases, teachers reported difficulties in fully integrating AR into their pedagogical practices due to the technical complexity of the resources or the lack of adequate training (Santana *et al.*, 2021). This finding highlights the need for significant and contextualized teacher training, as emphasized by the same authors.

Finally, based on the findings and limitations, it is suggested that more research be carried out to deepen the relationship between pedagogical mediation and digital technologies in different areas of knowledge. Longitudinal studies could also investigate the long-term effects of these practices on students' academic performance and socio-emotional development. In addition, the analysis of the impact of emerging technologies in hybrid or remote teaching contexts represents a promising field for future research. These reflections contribute to the construction of a more inclusive, innovative educational scenario aligned with the demands of the twenty-first century.

## CONCLUSION

This article sought to analyze the role of the mediator teacher in the contemporary educational context, emphasizing the integration between pedagogical mediation and digital technologies as transformative tools in the teaching-learning process. The proposed objectives were largely met, by highlighting how planned and intentional mediation contributes to the construction of a dynamic and meaningful learning environment. It was evidenced that mediation goes beyond the simple transmission of knowledge, incorporating critical reflections, socio-emotional development and cognitive skills necessary to face the challenges of a society in constant transformation. In addition, the study demonstrated that the use of technologies such as augmented reality enables an innovative approach, promoting the understanding of complex concepts and encouraging student protagonism, collaborative work, and critical reflection.

The analysis also highlighted the importance of continuous and contextualized teacher training, essential for teachers to be able to fully take advantage of the potential offered by technological tools. Despite the inherent limitations, such as infrastructure barriers and resistance to innovation, the study reaffirms the relevance of the theme for contemporary education. Thus, it is hoped that this work will inspire new investigations aimed at deepening the relationship between pedagogical mediation and educational technologies, with an emphasis on diverse cultural contexts, long-term impacts, and possible gaps in the practical implementation of these approaches. It is encouraged that more research be carried out to broaden the understanding of the role of the mediator teacher, strengthening education as an inclusive, democratic process adapted to the demands of the twenty-first century.

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