

Evaluation of the quality of high school Technical Professional Education courses in distance learning: the state of art

A avaliação da qualidade da formação profissional na Educação Profissional Técnica de nível médio na modalidade de Educação a distância: o estado da arte

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Abstract

This article analyzes quality assessment in distance learning programs of High School Technical Professional Education (HSTPE), using the state of the art as its methodology. The research identified a lack of specific studies on HSTPE in the distance education modality, despite its significant growth in recent years. The absence of appropriate evaluation tools and systematic research limits the development of effective pedagogical practices and public policies. Existing studies highlight challenges such as the integration of theory and practice, continuous teacher training, and the development of suitable assessment methodologies. The article advocates for the creation of a specific evaluation framework for HSTPE distance learning and for strengthening academic research in this field.

Keywords: Distance professional formation; Educational assessment instruments; Educational equity.

Resumo

Este artigo analisa a avaliação da qualidade na Educação Profissional Técnica de Nível Médio (EPTNM) a distância, utilizando o estado da arte como metodologia. A pesquisa identificou escassez de estudos específicos sobre a EPTNM EaD, apesar de seu crescimento nos últimos anos. A ausência de instrumentos avaliativos próprios e de investigações sistemáticas limita o desenvolvimento de práticas pedagógicas e políticas públicas eficazes. Os estudos existentes destacam desafios como a articulação entre teoria e prática, a formação de docentes e a criação de metodologias avaliativas adequadas. O artigo defende a criação de um referencial próprio para a modalidade e o fortalecimento da pesquisa na área.

Palavras-chave: Formação profissional a distância; Instrumentos de avaliação educacional; Equidade educacional.

1 INTRODUCTION

In academic research, a state-of-the-art review is essential for mapping and critically examining the existing scientific literature on a specific topic, thereby providing a comprehensive overview of the field under investigation by identifying advances already achieved, ongoing challenges, gaps, and emerging debates. According to Severino (2007), this practice situates researchers within the context of the topic under study, enabling them to better understand its historical development and the nuances associated with the subject. Moreover, a state-of-the-art review helps justify the relevance of the research by highlighting areas that remain underexplored or insufficiently investigated.

According to Santos et al. (2018), a state-of-the-art review should be understood as a methodology that not only organizes and systematizes accumulated knowledge but also promotes critical reflection on the theoretical and methodological paths followed in existing research. This approach enables researchers to define the objectives and structure of their studies more clearly while highlighting their expected contribution to the advancement of the field. Therefore, incorporating this stage into academic research demonstrates methodological rigor and a commitment to generating relevant and well-grounded knowledge.

In this article, the state-of-the-art review was used as the central methodology to map and discuss the academic literature on quality assessment in distance Technical Vocational Education at the upper-secondary level (Educação Profissional Técnica de Nível Médio—EPTNM EaD). This methodological approach was selected to understand how the topic has been addressed in recent years, considering the expansion of distance education (EaD) and its growing relevance within the Brazilian educational context.

This study is justified by the need to gain a deeper understanding of the gaps in the scientific literature on distance EPTNM, particularly regarding the lack of assessment instruments specifically designed for this modality. The scarcity of systematic studies on the topic demonstrates the need to expand academic research in order to foster the development of more effective pedagogical practices and public policies tailored to the population served by this educational modality. Furthermore, by highlighting the concentration of research on other educational levels and modalities, this study underscores the relevance of strengthening investigations focused on distance technical education, thereby contributing to the consolidation of this field as a significant object of scholarly inquiry.

Throughout this article, the findings of the state-of-the-art review were integrated with theoretical discussions on educational assessment and its implications for distance EPTNM. The analysis highlights the need for a joint effort among researchers, educators, and policymakers to develop assessment guidelines and instruments tailored to the demands and specific characteristics of this educational modality. Accordingly, this study is expected to contribute to broadening the debate on quality assessment in distance EPTNM and to fostering reflections that may guide future research and interventions in the field, with a view to promoting development

that enhances not only the technical capacity of the Brazilian population but also cultural, social, and technological advancement.

2 DISTANCE TECHNICAL AND VOCATIONAL EDUCATION AT THE UPPER-SECONDARY LEVEL: ORIGINS AND REGULATORY FRAMEWORK

Distance education has its origins in correspondence-based instruction in the eighteenth century, with shorthand courses offered in England and the United States. In Brazil, the first distance education initiatives emerged in 1923 with the establishment of the Rádio Sociedade do Rio de Janeiro (Pfromm Neto, 2001). Over the following decades, technological advances—including the use of printed materials, the advent of television, and the development of the internet and Digital Information and Communication Technologies (DICTs)—consolidated distance education as a viable alternative for providing education in remote areas (Mill, 2018).

The COVID-19 pandemic demonstrated the importance of flexible and adaptable pedagogical models that can decouple learning from physical presence. Although the transition to remote teaching occurred suddenly and under emergency conditions, the adaptation of teaching and learning processes to remote education demonstrated the feasibility of hybrid or fully distance-based models as complementary or alternative approaches to models centered on physical presence and face-to-face exchange of experiences.

Distance education can be understood as an educational model characterized by the physical separation of teachers and students throughout the teaching and learning process. This modality employs tools and technologies that enable communication and interaction among those involved without requiring their simultaneous presence in the same physical space. Currently, such interaction can occur synchronously, when teachers and students connect in real time, or asynchronously, allowing greater flexibility to meet individual students' needs. This modality promotes more inclusive access adapted to the demands of contemporary society, while requiring specific planning, pedagogical strategies, and infrastructure to ensure the quality of learning (Belloni, 2008).

The most significant regulatory milestone for distance education in Brazil was the enactment of the National Education Guidelines and Framework Law No. 9,394/1996 (Brasil, 1996), which recognized distance education as a legally established form of education at all levels. Decree No. 9,057/2017 (Brasil, 1997), which regulates Article 80 of Law No. 9,394/1996 (Brasil, 1996), defines distance education as:

“[...] the educational modality in which didactic-pedagogical mediation in teaching and learning processes occurs through the use of information and communication media and technologies [...] and educational activities are carried out by students and education professionals who are in different places and at different times.” (Brasil, 2017, p. 1).

According to this decree, different educational levels and modalities may make use of distance education, including Technical Vocational Education at the upper-secondary level (Educação Profissional Técnica de Nível Médio—EPTNM). This modality is part of Vocational and Technological Education (Educação Profissional e Tecnológica—EPT), which plays a fundamental role in preparing professionals to work across various sectors of the economy. Structured around the dimensions of work, science, culture, and technology, EPTNM seeks to meet the demands of economic and technological development in diverse contexts by promoting the training of a qualified workforce and addressing regional and national needs (MEC/CNE/CP, 2021).

The history of EPTNM is directly linked to processes of economic and social development, particularly in the Brazilian context, where productive transformations and public policies have shaped its trajectory. The pioneering initiatives in vocational education emerged during the Industrial Revolution, a period marked by the transition to capitalism and the consolidation of economic liberalism. The first technical schools emerged in Europe within this context, driven by the need to train workers to operate machinery, organize production processes, and promote economic modernization (Manfredi, 2016).

In Brazil, vocational education developed from an assistance-oriented perspective aimed at providing vocational training to children and young people living in vulnerable conditions (Manfredi, 2016). This initial approach sought to prevent idleness and facilitate their integration into society as productive citizens. With the beginning of the twentieth century and the advancement of industrialization in the country, vocational education adopted a more instrumental approach in response to the growing demand for skilled labor in productive sectors (Manfredi, 2016).

During the military regime that began in 1964, vocational education gained prominence as part of national economic development policies. Law No. 5,692/1971 (Brasil, 1971), which reformed primary and secondary education, made vocational education compulsory at the secondary level. This measure reflected the government's objective at the time of accelerating Brazil's industrialization and modernization by using education as a strategic tool for economic growth (Ramos, 2014).

The enactment of Law No. 9,394/1996 (Brasil, 1996), however, resulted in a reduction in the provision of EPTNM, particularly following the enactment of Decree No. 2,208/1997 (Brasil, 1997), which effectively relieved the state of the obligation to provide this type of education, transferring responsibility to the private sector. This situation changed with the rise of a new government in 2003 that was committed to expanding public education. In this context, Decree No. 5,154/2004 (Brasil, 2004) reinstated the possibility of integrating secondary education with vocational education, in addition to allowing concurrent and subsequent forms of provision.

Driven by the rapid growth of distance education in Brazil, EPTNM offered through this modality has also expanded. Data from the Nilo Peçanha Platform show that, in 2019, 67,447 students enrolled in 1,663 distance technical programs offered by 372 institutions. By 2023, there were 679,790 new students enrolled in 1,931 programs offered by 451 schools, representing an increase of nearly 1,000% in total enrollment over a five-year period (Plataforma Nilo Peçanha, 2024).

This growth reflects the positive impact of the flexibility provided by distance education, enabling workers, parents, and other groups with time constraints to reconcile their personal demands with the pursuit of professional qualifications. In addition, the use of DICTs in distance education enhances the development of digital skills, which are essential for the contemporary labor market, while also contributing to educational inclusion in regions that are difficult to access.

Despite these advances, the rapid expansion of EPTNM through distance education presents significant challenges. These include the need to ensure pedagogical quality, promote the integration of theory and practice, and assess the impact of DICTs on technical training. These issues underscore the importance of carefully monitoring the policies and practices adopted within this modality to ensure that its expansion does not compromise students' comprehensive education.

3 QUALITY ASSESSMENT IN DISTANCE EPTNM: ADVANCES AND GAPS

Educational quality in Brazil encompasses a broad range of factors that extend beyond learning outcomes, including access, retention, and students' holistic development. Widely debated in public policy, this concept seeks to balance educational excellence with the promotion of social justice. Cury (2014) emphasizes that quality is intrinsically linked to ensuring equity by promoting equal opportunities for all citizens, regardless of their socioeconomic or regional circumstances, with the aim of building a more just society. This approach requires not only consideration of academic outcomes but also attention to factors that directly affect student performance and retention, including social and structural conditions.

Although the results of large-scale assessments, such as the National High School Examination (Exame Nacional do Ensino Médio—ENEM) and the Basic Education Assessment System (Sistema de Avaliação da Educação Básica—SAEB), constitute important indicators, they do not fully capture students' educational experiences or learning contexts. Saviani (2009) argues that educational quality should be grounded in holistic development, including the cultivation of critical thinking, ethical awareness, and citizenship. Freitas et al. (2017), in turn, emphasize that factors such as school infrastructure, continuing teacher education, and effective inclusion are crucial for ensuring meaningful educational processes and fostering critical and engaged citizens. These aspects are particularly important for reducing educational and regional inequalities, which remain significant challenges in Brazil.

In this context, educational inclusion emerges as a fundamental pillar, encompassing policies aimed at students with disabilities, special educational needs, or those experiencing social vulnerability. According to Mantoan (2003), a high-quality school fosters interaction among students, contextualizes academic subjects as means of understanding the world, and engages families and communities in the school project. This integration not only enriches learning processes but also strengthens students' connection with the school, thereby increasing retention and completion rates.

External assessments have emerged as significant tools for monitoring the quality of the educational system. Tests such as the Literacy Assessment Program (Programa de Avaliação da Alfabetização—PROALFA) and the Public Basic Education Network Assessment Program (Programa de Avaliação da Rede Pública de Educação Básica—PROEB), implemented in the state of Minas Gerais, assess essential competencies during the early years of education. Such data are valuable to educational administrators because they enable the development of more targeted policies and strategies addressing specific deficiencies identified within the system. At the national level, the National High School Examination (Exame Nacional do Ensino Médio—ENEM) is an important assessment instrument that contributes to democratizing access to higher education. However, it has been criticized for prioritizing technical and instrumental training over a critical and citizenship-oriented approach, highlighting the need to balance large-scale assessments with pedagogical practices that foster critical thinking and creativity (Trigueiro, 2020).

Beyond numerical results, Cunha and Müller (2018) advocate integrating qualitative and formative assessments that consider students' holistic development. Thus, although instruments such as the Basic Education Assessment System (Sistema de Avaliação da Educação Básica—SAEB) are fundamental for monitoring educational progress, they need to be complemented by approaches that provide a deeper understanding of the challenges faced by educational institutions and contribute to more effective pedagogical interventions. This includes strengthening both initial and continuing teacher education, as teachers play a central role in translating assessment data into relevant pedagogical practices.

In the context of distance education, assessment acquires specific characteristics due to the absence of face-to-face interaction between students and teachers. Moran (2015) emphasizes that assessment should be integrated into a technology-mediated system that fosters student autonomy and agency. Virtual Learning Environments (VLEs) are central to this process, enabling diverse assessment practices, such as discussion forums, simulators, and interactive quizzes (Belloni, 2012). In addition, Mill and Veloso (2018) identify continuous feedback as an indispensable tool for ensuring formative and motivational assessment. This approach has become even more relevant in the context of current demands for flexibility and personalization in teaching and learning processes.

The diversity of student profiles in distance education requires inclusive and adaptable assessment methods. Andrade (2018) proposes strategies such as portfolios and self-assessment to capture different dimensions of learning, whereas Rosa et al. (2019) emphasize the importance of technologies that ensure assessment authenticity, such as facial recognition and digital signatures. Despite these advances, it is essential that assessment be understood as a continuous process that values dialogue and ongoing reflection (Faganello, Reis, and Magalhães, 2024). This enables students to develop not only technical competencies but also socioemotional skills, such as resilience and collaboration.

In EPTNM, quality assessment plays a central role in ensuring that programs are aligned with the country's social, economic, and technological needs. Ramos (2014) argues that such assessment should consider both students' academic performance and their integration into the labor market. However, there is no single

assessment model that is appropriate for all EPTNM distance education contexts. The specific characteristics of each context, including regional demands and students' socioeconomic profiles, must be considered to ensure that assessment processes address the objectives of holistic education while meeting labor market requirements.

The incorporation of DICTs has expanded access and diversified pedagogical practices, although it also poses challenges related to teacher training and the adaptation of assessment processes (Mill and Ramos, 2019). These technologies enable more dynamic and interactive forms of assessment, such as interdisciplinary projects and simulations, which promote the practical application of knowledge. Nevertheless, assessment instruments should go beyond quantitative indicators by incorporating strategies capable of capturing differentiated learning characteristics and fostering the development of critical and collaborative competencies (Silva et al., 2020).

According to Allain, Gruber, and Wollinger (2020), another relevant aspect is the need for indicators that reflect the contemporary demands of the world of work. Indicators such as the Basic Education Development Index (Índice de Desenvolvimento da Educação Básica—IDEB) and the guidelines of the National Catalog of Technical Courses (Catálogo Nacional de Cursos Técnicos—CNCT) provide a basis for standardization but must be continuously revised to keep pace with changes in the labor market and evolving economic demands. Assessment should be flexible and capable of adapting to these transformations, ensuring that distance EPTNM remains relevant and effective.

Thus, assessment in distance EPTNM should be understood as a dynamic, adaptable, and continuous process that extends beyond the measurement of outcomes. It should be aligned with both students' specific needs and labor market demands, promoting educational inclusion, social mobility, and the development of competent professionals prepared to address contemporary challenges. This perspective reinforces the importance of assessment approaches that integrate quality, equity, and innovation, consolidating distance EPTNM as a strategic modality for the country's development.

4 STATE OF THE ART

To map the national academic literature on the assessment of the quality of vocational training provided through distance Technical Vocational Education at the upper-secondary level (EPTNM EaD), a detailed search was conducted in the Brazilian Digital Library of Theses and Dissertations (Biblioteca Digital Brasileira de Teses e Dissertações—BDTD), which centralizes academic works defended at Brazilian higher education and research institutions. This platform was selected because of its broad coverage and the practicality afforded by its filters and advanced search tools, which enable more targeted retrieval of studies related to the topic under investigation.

Initially, the search filters were configured to identify master's theses and doctoral dissertations defended between 2015 and 2024, based on abstracts containing the following keywords: "assessment," "quality," "training," "vocational,"

“technical,” and “distance.” This initial search yielded 85 results. To refine the dataset, the “CNPq knowledge area” filter was applied, restricting the results to the field of Education. This step reduced the number of studies to 25. Subsequently, the category “assessment of the teaching and learning process” was selected, resulting in a single study that addressed learning assessment in distance education but focused exclusively on initial teacher education programs.

Given the limited number of results, a new round of searches was conducted using a reduced set of keywords: “assessment,” “quality,” “technical,” and “distance.” This initial search yielded 385 results. Applying “Education” as the knowledge area reduced the number to 34 studies. After selecting “Vocational Education” under the subject filters, only one result remained, which was not directly related to the research topic. When the “Distance Education” category was applied, a total of 19 results was obtained, among which only one study addressed the topic under investigation: Silva’s (2020) master’s dissertation, entitled *Graduates of Distance Technical Vocational Education at the Upper-Secondary Level: An Exploratory Study of the Educational Proposal and Professional Integration*.

Silva’s (2020) study was conducted through the administration of questionnaires and semi-structured interviews with graduates of three distance technical programs offered by the Diamantina Campus of the Federal Institute of Northern Minas Gerais, within the framework of the Open Technical School Network of Brazil (Rede Escola Técnica Aberta do Brasil—Rede e-Tec). The findings indicated that, from the graduates’ perspective, the quality of the education received directly influenced their professional integration. However, a low rate of employment in their specific field of training was identified, along with a significant demand for a greater number of practical classes within the programs. Despite these limitations, the graduates acknowledged the importance of the programs in their professional and personal trajectories, generally evaluating the experience positively.

Given the limited number of results identified in the BDTD, the search was expanded to include the “Sumários de Revistas Brasileiras” repository, selected because of its broad coverage in indexing national academic journals, thereby enabling a broader and more detailed search. The purpose of this expansion was to identify scientific publications addressing the fields of Distance Education and Vocational Education using the previously defined keywords.

The journals identified in this search were as follows:

- **Boletim Técnico do SENAC:** published by the Communications Office of the National Department of the National Commercial Learning Service (Serviço Nacional de Aprendizagem Comercial—SENAC);
- **Educação Profissional e Tecnológica em Revista:** affiliated with the Graduate Program in Vocational and Technological Education, offered through a networked program;
- **Em Rede – Revista de Educação a Distância:** published by the Association of Networked Universities (Associação Universidades em Rede—UniRede) in partnership with researchers and national and international universities;

- **Revista Brasileira da Educação Profissional e Tecnológica:** affiliated with the Graduate Program in Vocational Education at the Federal Institute of Rio Grande do Norte;
- **Revista Científica em Educação a Distância:** published by the Center for Science and Higher Distance Education of the State of Rio de Janeiro;
- **TICs e EaD em Foco:** published by the Center for Educational Technologies at the State University of Maranhão.

Following the selection of the journals, targeted searches were conducted in each publication using the keywords “assessment,” “quality,” “training,” “vocational,” “technical,” and “distance.” The time frame covered the period from 2017 to 2021, considering that *Educação Profissional e Tecnológica em Revista* began publishing in 2017. Based on these criteria, the following results were obtained:

Table 1: Number of publications identified in the first round of searches

Journal	Number
Boletim Técnico do SENAC	0
Educação Profissional e Tecnológica em Revista	0
EmRede - Revista de Educação a Distância	0
Revista Brasileira da Educação Profissional e Tecnológica	1
Revista Científica em Educação a Distância	0
TICs e EaD em foco	0

Source: prepared by the authors (2025).

A review of the abstract of the article identified in the *Revista Brasileira de Educação Profissional e Tecnológica* showed that it was not related to the assessment of the quality of technical training delivered through distance education, as its focus was on mapping scientific research concerning teacher education within the context of Vocational Education.

Given the scarcity of specific results, it was necessary to broaden the search, which was conducted in two distinct stages. In the first stage, the following keywords were used: “assessment,” “quality,” “training,” and “technical.” In the second stage, the keywords used were “assessment,” “quality,” “training,” and “distance education.” This procedure aimed to diversify the range of potential results, considering the multiple approaches possible within the field of educational assessment. These search strategies yielded the following results:

Table 2: Number of Publications Identified in the Second Round of Searches

Journal	Stage 1	Stage 2
Boletim Técnico do SENAC	1	0
Educação Profissional e Tecnológica em Revista	0	0
EmRede - Revista de Educação a Distância	0	2
Revista Brasileira da Educação Profissional e Tecnológica	2	1
Revista Científica em Educação a Distância	1	5
TICs e EaD em foco	0	1

Source: prepared by the authors (2025).

The results demonstrate a significant difference in the volume of studies addressing distance education compared with EPTNM, a discrepancy that may be attributed to the broader scope of the former, which encompasses different educational levels and modalities, whereas EPTNM, due to its specific nature, tends to receive less academic attention. In addition, the perceived academic relevance of EPTNM may be lower than that of other more extensively discussed fields.

An analysis of the abstracts of the articles identified revealed that only three studies showed some degree of correspondence with the topic of this study, all of which were published in the *Revista Científica em Educação a Distância*. However, although these studies addressed quality assessment in distance education programs, they focused on other types of training, such as undergraduate programs, continuing education programs, and specific extension initiatives, without directly addressing technical education at the upper-secondary level.

Therefore, a third search was conducted using the keywords “quality,” “training,” “vocational,” and “technical.” This stage aimed to explore more deeply the potential connections between educational quality assessment and distance technical education by broadening the scope of the investigation to identify studies that, even indirectly, could contribute to understanding this relationship. The results of this new search are presented in the table below:

Table 3: Number of Publications Identified in the Third Round of Searches

Journal	Number
Boletim Técnico do SENAC	3
Educação Profissional e Tecnológica em Revista	4
EmRede - Revista de Educação a Distância	0

Revista Brasileira da Educação Profissional e Tecnológica	7
Revista Científica em Educação a Distância	0
TICs e EaD em foco	1

Source: prepared by the authors (2025).

A review of the abstracts of the articles identified revealed that only one was closely related to the topic of this study. This was the article by Villasanti and Nascimento (2024), published in *Educação Profissional e Tecnológica em Revista*, entitled “The Quality of Technical Vocational Education in Brazil Since LDB 9.394/96: A Systematic Review of the Last 10 Years.”

The study adopts a qualitative approach based on bibliographic and documentary research, analyzing legislation, public policies, and institutional documents related to Vocational and Technological Education (EPT). Villasanti and Nascimento (2024) emphasize assessment as an indispensable tool for improving pedagogical practices and achieving better educational outcomes. The article highlights that assessment processes are essential for identifying gaps in training, guiding improvements, and ensuring that educational objectives are aligned with both labor market demands and students’ needs. Although distance education is not its primary focus, the study addresses assessment dimensions that include the effectiveness of teaching methodologies, the relevance of curricular content, and the appropriateness of pedagogical practices to students’ profiles.

An analysis of the available academic literature revealed a scarcity of studies specifically addressing the assessment of the quality of technical education at the upper-secondary level delivered through distance education in Brazil. This scenario contrasts with the exponential growth of distance education in recent years, particularly within Vocational Education. The modality has played a unique role in democratizing access to education by reaching students in remote regions and expanding opportunities for technical training. However, the lack of systematic studies investigating assessment criteria and their impacts on distance EPTNM underscores the need to expand academic discussions on the topic.

This gap reflects not only the limited exploration of the subject but also the urgent need to develop a theoretical foundation to support the formulation of public policies and pedagogical practices better suited to this modality. Furthermore, an analysis of the available studies indicates that, although some research touches upon the topic, such studies generally focus on other educational levels or training modalities, further highlighting the specificity and relevance of the object of study addressed herein.

Expanding research on quality assessment in distance EPTNM is essential for gaining a broader understanding of the challenges and potential of this modality. Rather than serving merely as a diagnostic mechanism, assessment should be conceived as a strategic tool for ensuring that technical training delivered through distance education can meet labor market demands as well as the expectations of

society and students. This perspective is essential to ensuring that the expansion of distance EPTNM occurs sustainably, promoting high standards of quality and equity within the Brazilian educational system.

5 FINAL CONSIDERATIONS

The analysis presented in this article reaffirms the relevance of distance education as a viable modality for expanding access to EPTNM in Brazil. The significant expansion of distance education in recent years reflects its capacity to meet the demand for technical training, particularly in a context marked by regional and economic inequalities. However, the study revealed that challenges related to the quality of training, the integration of theory and practice, and the assessment of educational outcomes remain critical issues to be addressed.

The discussions presented in the first two sections demonstrated that, although regulatory guidelines and institutional initiatives aimed at promoting quality in distance EPTNM exist, there is still no consolidated assessment model that addresses the specific characteristics of this modality. The absence of a unified framework that encompasses the particularities of distance technical education may hinder the implementation of pedagogical and assessment practices capable of ensuring high standards of quality and equity.

The state-of-the-art review revealed a scarcity of studies specifically addressing quality assessment in distance EPTNM. Analysis of the studies identified showed that, although some publications touch upon the topic, most focus on other educational levels or training modalities, leaving significant gaps in the investigation of the specific characteristics of distance EPTNM. This lack of systematic and comprehensive research on the topic underscores the need for a coordinated academic effort to explore this issue in greater depth.

When the findings of the state-of-the-art review are considered alongside the aspects discussed throughout the article, the urgent need to develop an assessment instrument specifically designed for distance EPTNM becomes evident. Such an instrument should take into account educational contexts, labor market demands, and the characteristics of students who choose this educational modality. In addition, this framework must be flexible and adaptable to ongoing technological and social transformations to ensure that the expansion of distance EPTNM occurs sustainably and remains aligned with educational and professional objectives.

Finally, the importance of fostering academic research on this topic should be emphasized by promoting discussions and investigations that can inform the formulation of public policies and pedagogical practices tailored to this modality. Assessment should be understood not merely as a diagnostic mechanism but as a strategic tool for ensuring holistic education and the development of competencies aligned with contemporary demands. Thus, the findings of this study are expected to contribute to broadening discussions on distance EPTNM and to inspire future research aimed at deepening the understanding of this educational modality in Brazil.

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