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Digital teaching competencies in the distance-learning Educational Technology Undergraduate curriculum at UFMT: an analysis based on the Edutec/Cieb Guide

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Abstract: This article analyzes the digital teaching competencies present in the curriculum of the distance-learning Educational Technology Teacher Education Program at the Federal University of Mato Grosso (UFMT), based on the EduTec/CIEB Guide. This qualitative study combined documentary analysis of the Pedagogical Course Project (PPC) with a focus group conducted with graduates. The results reveal a higher prevalence of pedagogical and digital citizenship competencies. The study concludes that there is strong alignment among the curriculum, the assessment framework, and the graduates' lived experiences.

Keywords: Digital teaching competencies. Distance education. Educational technology.

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Competências digitais docentes no currículo de Licenciatura em Tecnologia Educacional modalidade a distância da UFMT: uma análise com base no Guia Edutec/Cieb

Resumo: Este artigo analisa as competências digitais docentes presentes no currículo da Licenciatura em Tecnologia Educacional, na modalidade a distância, da UFMT, com base no Guia EduTec/Cieb. A pesquisa qualitativa articulou análise documental do PPC e grupo focal com egressos. Os resultados evidenciam maior recorrência de competências pedagógicas e de cidadania digital. O estudo conclui que há aproximações entre currículo, referencial e experiências dos egressos.

Palavras-chave: Competências digitais docentes. Educação a Distância. Tecnologia Educacional.

Competencias digitales docentes en el currículo de la Licenciatura en Tecnología Educativa en la modalidad de educación a distancia de la UFMT: un análisis con base en la Guía Edutec/Cieb

Resumen: Este artículo analiza las competencias digitales docentes del currículo de la licenciatura en Tecnología Educativa, modalidad a distancia, de la Universidad Federal de Mato Grosso (UFMT), con base en la Guía EduTec/Cieb. El estudio cualitativo combinó el análisis del currículo y un grupo focal con egresados. Los resultados destacan las competencias pedagógicas y de ciudadanía digital. Se concluye que existen aproximaciones entre el currículo, la guía y las experiencias de los egresados.

Palabras clave: competencias digitales docentes; educación a distancia; tecnología educativa.

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1 INTRODUCTION

The use of technologies in education is not a recent phenomenon. Throughout history, different resources have been used to communicate, record information, organize experiences, and support teaching and learning processes. Kenski (2012), in discussing the relationship between technology and society, reminds us that technologies have accompanied human beings for many years, and can even be recognized in ancient forms of recording, such as cave paintings, which expressed modes of communication and the preservation of memory.

In this regard, thinking about Digital Technologies (DTs) in education goes beyond the use of projectors, computers, cell phones, or digital platforms in the classroom. These artifacts can compose daily school life in various ways, in the organization of activities, the delivery of content, the interaction between teachers and students, pedagogical mediation, or the monitoring of learning. Therefore, the discussion on DTs is not limited to access or technical mastery, but also involves the ways in which they are understood and connected to pedagogical practices.

In the current context, networks, digital platforms, and different information flows permeate school daily life and teacher preparation trajectories. This reality expands discussions about the role of digital artifacts in education, especially when considering that their use involves pedagogical choices, critical reading, ethical responsibility, and an understanding of the concrete conditions in which teachers and students are situated.

This discussion is also linked to the National Digital Education Policy (PNED), established by Law No. 14,533/2023, which proposes actions aimed at expanding access to digital resources, digital inclusion, school digital education, professional training, and research and development. In addressing basic and higher education, PNED reinforces that the presence of DTs in the educational field cannot be conceived solely as the provision of equipment or connectivity, but also as part of broader educational processes.

In Distance Education (DE), this debate takes on even more specific contours, given that pedagogical mediation occurs, to a large extent, through virtual environments, digital languages, instructional materials, online interactions, and different ways of monitoring students. Thus, DE not only uses DTs as support, but also organizes a significant portion of its practices around them.

It is within this field that digital teaching competencies (DTCs) are situated, understood as a set of knowledge, skills, and attitudes (KSA) related to the pedagogical use of DTs. In examining

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different national and international frameworks, Marroni, Miranda, and Carvalho (2022) present the Digital Competencies Matrix from the Center of Innovation for Brazilian Education (CIEB), organized in the areas of pedagogy, digital citizenship, and professional development. In the Brazilian context, the EduTec/CIEB Guide contributes to organizing this discussion by presenting competencies that allow for the analysis of practices, teacher preparation pathways, and curricular proposals related to the use of digital artifacts in education.

The expansion of Distance Education (DE) in Brazil was related, among other factors, to the creation and consolidation of the Open University of Brazil (UAB), which contributed to bringing higher education courses to different regions of the country. From this process, curricular proposals aimed at teacher preparation in dialogue with DTs gained greater visibility. This movement allows us to examine which competencies are planned, mobilized, and appropriated in courses designed, from their inception, in articulation with the digital.

In this context, the Undergraduate Degree Program in Educational Technology (TE in Portuguese; ET) is situared, teacher education, at the Federal University of Mato Grosso (UFMT). Created in 2018, the program presents itself as a unprecedented initiative in Brazil, focused on offering public education and organized around the relationship between education, curriculum, technological innovation, and teaching and learning processes.

According to the Federal University of Mato Grosso (2018), the Pedagogical Course Project (PPC) aims to prepare teachers to work in the planning, design, and development of educational projects that use media and DTs, considering their integration into the curriculum. The program's proposal, therefore, is not restricted to the technical use of DTs, but also involves the preservice teacher's participation in pedagogical planning actions, support for teachers in different areas, academic advising, production of materials, educational assessment, inclusion, accessibility, and support for school management in technology-related decisions.

Thus, the ET program constitutes a relevant case for analysis, as its very curricular organization focuses on the relationship between education and DTs. Among the specific objectives outlined in the PPC are actions such as planning projects that integrate curriculum and DTs, supporting teachers in the pedagogical use of these artifacts, developing academic orientation and tutoring, working with methodologies that favor the ethical use of technologies, collaborating with assessment processes, and producing digital pedagogical materials, such as websites, educational software, and learning objects.

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This article constitutes an excerpt from a master's research in which the digital teaching competencies addressed in the ET program were analyzed. To this end, an analysis of the PPC was carried out, articulated with the competencies of the EduTec/CIEB Guide and the perceptions of graduates, through data triangulation.

It is important to emphasize that the use of the EduTec/CIEB Guide in analyzing the PPC does not imply a critique of the document nor of the work of the teachers who participated in its elaboration. On the contrary, the PPC is taken as the institutional document of the program and serves as a basis for observing which aspects of the curricular proposal appear most prominently and how they relate to what graduates identify as important learning experiences in their trajectories.

In view of this, the objective of this article is to analyze how DTCs are addressed in the curricular proposal of the ET program and how they relate to the perceptions of graduates, based on the triangulation between the PPC, the competencies from the EduTec/CIEB Guide, and the data produced in the focus group. This relationship allows for observing approximations and possible divergences between what is outlined in the curriculum, the digital competency frameworks, and the experiences narrated by the research participants.

To this end, the study adopts a qualitative approach, taking the form of a case study, based on the integration of document analysis, an analytical framework, and data generated with graduates, which allows the phenomenon to be examined through different sources of evidence. Consequently, the article is organized into five sections. First, the theoretical framework is presented, addressing DTCs and the EduTec/CIEB Guide. Next, the methodology adopted in the research is described. In the fourth section, the results and discussions are presented, covering the analysis of the PPC based on the EduTec/CIEB Guide and the triangulation with the perceptions of the graduates. Finally, the study's final considerations are presented, followed by the references.

2 THEORETICAL FRAMEWORK

This section presents the theoretical framework supporting the study, focusing on digital teaching competencies and the EduTec/CIEB Guide. Initially, it discusses the concept of digital teaching competencies within the educational field, considering their relationship with pedagogical work and the use of Digital Technologies in education. Next, it presents the EduTec/CIEB Guide as the reference framework adopted for analyzing the PPC, highlighting its structure and its contribution

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to the analysis of competencies within the curriculum.

2.1 Digital teaching competencies

According to Zabala and Arnau (2020), the term competency initially had a strong connection with the business realm, being associated with the idea of a person capable of performing tasks efficiently. Upon being incorporated into the educational field, this concept took on a different meaning, related to the need to overcome the limitations of traditional teaching, especially that centered on memorization, content repetition, and the difficulty of applying knowledge in concrete situations. In this way, thinking about competencies in education means considering not only what the student knows, but also how this knowledge can be mobilized when facing problems, contexts, and real practices.

In this same perspective, Behar (2013) analyzes competencies from a curricular organization standpoint, distinguishing traditional curriculum from competency-oriented curriculum. In the traditional model, the curriculum tends to be structured around content, often without establishing clear relationships with the student's lived context and social function. By contrast, in a competency-based curriculum, a shift occurs from the centrality of the teacher and teaching to the student and learning, seeking to understand how knowledge can be mobilized, articulated, and utilized in practical situations.

Based on this understanding, anchored in the concept of competency in education, Silva, Machado, and Behar (2022) state that DTCs are understood as an articulated set of knowledge, skills, and attitudes (KSA) related to the pedagogical use of Digital Technologies. This perspective broadens the scope beyond technical mastery, as it involves planning, mediation, selection of digital artifacts, critical reading, ethical responsibility, and the capacity to adapt to the concrete conditions of the educational context.

2.2 EduTec/CIEB Guide

The EduTec/CIEB Guide is a framework aimed at understanding and developing DTCs. As Araripe and Lins (2020) explain, it is a free online resource that supports diagnostic processes related to the use of educational technologies by public school teachers, while also contributing to self-

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development pathways and peer learning.

The Guide is part of a set of initiatives developed by the Center of Innovation for Brazilian Education (CIEB), an organization created to support the integration of DTs into Brazilian public education. This framework became consolidated during the implementation of the National Common Base for Initial Teacher Education (BNC-Formação), approved in 2019, a period in which CIEB participated in proposing competencies related to the pedagogical use of technologies.

The Guide organizes DTCs into three broad areas: pedagogical, digital citizenship, and professional development. These areas unfold into twelve competencies: pedagogical practice, assessment, personalization, curation and creation, responsible use, safe use, critical use, inclusion, communication, sharing, self-development, and self-assessment. This set makes it possible to analyze how the use of DTs links to planning, teaching mediation, participation in digital contexts, and the ongoing professional development of teachers.

In this study, the EduTec/CIEB Guide is used as a benchmark for reading the PPC, allowing us to observe how these competencies appear in the prescribed curriculum and how they relate to the graduates' perceptions. Its use does not carry an evaluative character, as the intent is not to judge the PPC, but rather to understand convergences, recurrences, emphases, and less evident aspects within the curricular proposal.

Its choice also dialogues with the investigated context. According to Matos (2024), the EduTec/CIEB Guide was deployed in Mato Grosso in initiatives aimed at developing digital competencies among state public school educators between 2022 and 2023, with the involvement of institutional partners. This presence in the local scenario reinforces the relevance of using it as an analytical reference, especially considering that a portion of the graduates may work in educational contexts informed by this same framework.

Building on this understanding, the EduTec/CIEB Guide is used in this article as a benchmark for analyzing the PPC, allowing us to observe how DTCs appear in the prescribed curriculum and how they relate to the graduates' perceptions. Accordingly, the following section presents the methodological pathway adopted, highlighting the case study and document analysis through data triangulation.

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3 METHODOLOGY

The study is grounded in a qualitative approach and is organized as a case study, focusing on the analysis of the PPC of the ET program considering the competencies from the EduTec/CIEB Guide. The objective is to understand how DTCs appear in the prescribed curriculum, considering patterns of presence, distribution, and concentration throughout the course of study.

The choice of a qualitative approach stems from the interest in interpreting how these competencies are presented in the curricular document, without the intention of measuring frequencies or producing statistical generalizations. Along these lines, Yin (2015) highlights that a case study enables an in-depth analysis of a contemporary phenomenon within its real-world context, especially when the boundaries between phenomenon and context are not clearly defined.

The study is characterized as a holistic single-case design, with the undergraduate program in ET at UFMT, offered in the distance learning modality, serving as the unit of analysis. According to the PPC, the program is affiliated with the UAB system, with an initial intake of 180 vacancies distributed across support centers in the state of Mato Grosso, organized on a semester basis with a total workload of 3,320 hours to be completed in a minimum of eight and a maximum of ten semesters. The program's proposal combines activities carried out in the Virtual Learning Environment with face-to-face sessions at the support centers, particularly for monitoring, assessments, and practical activities.

Regarding student trajectories, institutional data indicate that out of the total enrolled students from the 2018 cohort, 65 completed the program, highlighting a scenario shaped by diverse educational paths and retention conditions. In this study, special consideration is given to the curricular proposal as outlined in the PPC, which was subsequently linked to the graduates' perceptions for data triangulation purposes.

The choice of this case is supported by an interconnected set of elements. First, it is a public undergraduate teacher education program whose identity is directly linked to the field of ET, which remains uncommon on the national scene. Second, as it is offered through distance education, the program makes it possible to analyze how a curriculum conceived in this format organizes competencies related to DTs across different educational contexts. Third, its implementation takes place during a period marked by the expanded use of these technologies in education, highlighting tensions between what the curriculum proposes and the concrete conditions for implementation.

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Finally, the case enables an examination of the relationship between the prescribed curriculum, the digital competency framework, and the graduates' perceptions, forming a suitable context for in-depth investigation.

Document analysis was based on the PPC, supplemented by institutional documents selected for their relevance to the investigated object. The procedure consisted of reading the curricular components, considering objectives, syllabi, content, and didactic-pedagogical strategies, seeking to identify how DTCs appear in the curriculum, especially in the areas of pedagogy, digital citizenship, and professional development, as well as which competencies prove to be more recurring or less evident throughout the course of study.

In this process, the EduTec/CIEB Guide was used as a benchmark to guide the analysis of the PPC, particularly in identifying DTCs such as pedagogical practice, assessment, personalization, curation and creation, responsible use, safe use, critical use, inclusion, self-development, self-assessment, sharing, and communication. Its use carried no evaluative character, given that the goal was not to pass judgment on the document or the program's proposal, but rather to understand alignments, emphases, and possible gaps based on a recognized framework in the field.

The data generated with graduates do not constitute the central axis of this article, being mobilized in the triangulation stage alongside the document analysis. Triangulation involved linking the findings from the document analysis with the meanings assigned by the graduates, making it possible to identify convergences, divergences, and aspects not explicitly captured in the prescribed curriculum.

Data collection with graduates took place in two stages. The first stage was conducted through an online questionnaire created on Google Forms and administered between November 30 and December 13, 2025. The instrument comprised 22 questions, including both objective and open-ended items, aimed at characterizing the participants' profile and gathering initial perceptions regarding learnings, applications, and difficulties related to DTCs. In total, 16 graduates provided consent. Of this group, 11 answered the questionnaire and agreed to participate in the subsequent stage, four participated solely in the questionnaire, and one chose not to proceed with the study.

Of the 11 graduates who agreed to participate in the subsequent stage, ten attended and actively participated in the online focus group conducted on December 13, 2025. The remaining participants did not attend the meeting or provide a reason for their absence and were therefore not included in the focus group. This strategy was employed because it allows for the collective discussion of

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experiences, enabling participants to share lived situations, comment on common perceptions, and highlight differences regarding teacher education and the use of DTCs in their practices.

The session was guided by an outline with three key guiding questions related to the experience in the program, the challenges and advances in applying the knowledge gained, and the digital competencies that participants consider necessary to continue developing. Upon obtaining consent, the session was recorded, transcribed, and reviewed. To maintain confidentiality, participants were identified by codes such as P1, P2, and so on.

These data were examined through Bardin's (2016) content analysis, serving as support to relate what the PPC explicitly outlines with the perceptions of the subjects who experienced the training. The research was approved by the Research Ethics Committee under CAAE No. 86793125.4.0000.5690 and Opinion No. 7.900.942, issued on October 13, 2025, in compliance with CNS Resolutions No. 466/2012 and No. 510/2016.

4 RESULTS AND DISCUSSION

This section brings together the results and discussion of the study, organized in two parts: the analysis of the PPC based on the EduTec/CIEB Guide and the triangulation with the graduates' perceptions.

4.1 Analysis of the PPC considering the EduTec/CIEB Guide

The analysis of the PPC of the ET program was carried out based on the competencies from the EduTec/CIEB Guide, which organizes DTCs into three areas—pedagogy, digital citizenship, and professional development—unfolded into twelve competencies: pedagogical practice, assessment, personalization, curation and creation, responsible use, safe use, critical use, inclusion, self-development, self-assessment, sharing, and communication. To reach the results presented in this section, each curricular component was analyzed based on its objectives, syllabi, content, and didactic-pedagogical strategies described in the PPC.

The analysis was conducted comparatively, seeking to identify consistent evidence of alignment between the descriptions in the document and the competencies outlined in the Guide. This procedure was not based on the mere presence of keywords, but rather on the pedagogical meaning

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expressed within the text. For example, components that explicitly address activity planning with technologies, pedagogical mediation, or the organization of learning experiences were associated with pedagogical practice; those involving material production, content development, or the use of digital resources were linked to curation and creation; while references to ethics, critical thinking, safety, and accessibility were associated with the competencies of responsible use, critical use, safe use, and inclusion.

Based on this reading, it was possible to identify that the PPC incorporates DTCs throughout the entire program, albeit unevenly in terms of both presence and distribution. Certain competencies appear recurrently across different components, while others are concentrated at specific points along the course of study.

In the initial semesters, courses such as Learning Processes in Distance Education, Digital Technologies in Education, and DTs and Cognitive Processes feature a broad set of competencies, with particular emphasis on pedagogical practice, assessment, personalization, curation and creation, alongside critical use, responsible use, and safe use. This set indicates that the program begins by combining the pedagogical use of technologies with discussions regarding their consciousness, safety, and critical use.

Also, during this phase, courses such as Reading and Text Production and History of Education and Technologies expand this approach by incorporating competencies related to communication, critical use, and self-development, showing that the digital dimension is not restricted to specific subjects, but also permeates different areas of the curriculum. In subsequent semesters, a higher incidence of pedagogy-related competencies is observed in courses such as Education Mediated by DICTs; School Curriculum and Technologies; Didactics and Pedagogical Practices with Technologies; and Virtual Learning Environments. In these courses, there is a predominance of pedagogical practice, curation and creation, and personalization, indicating a shift toward connecting technological knowledge with its application in lesson planning and the organization of teaching activities.

In the intermediate and final semesters, courses such as Planning and Production of Instructional Material I and II, Multimedia Production, Editing and Publishing Educational Videos, and Multimedia Systems for Education reinforce the presence of curation and creation, highlighting an emphasis on the production of digital materials and teacher authorship. This set of components indicates that the program values not only the use of technologies but also the capacity to create

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educational resources.

One of the most evident aspects of the analysis is the concentration of multiple competencies in components such as the Integrative Seminars and Supervised Internships. In these components, the simultaneous presence of competencies from all three areas is observed, including pedagogical practice, assessment, personalization, curation and creation, responsible use, safe use, critical use, inclusion, self-development, self-assessment, sharing, and communication. This indicates that these components function as spaces for linking different learning outcomes, bringing theory and practice closer together.

At the same time, this concentration reveals that certain competencies appear more intensely in the final stages of the program. This is particularly evident with competencies in the Professional Development area, such as self-development and self-assessment, which tend to feature less frequently in regular coursework and show a stronger presence in integrative components.

Another point identified relates to the weaker visibility within the PPC text of competencies tied to the institutional organization of technology use, such as defining rules, device management, and monitoring digital practices. These dimensions appear less explicitly in courses such as Foundations of Computer Systems and Introduction to Algorithms, indicating potential gaps in how these competencies are detailed within the prescribed curriculum.

Overall, the analysis highlights that the PPC places greater emphasis on the areas of pedagogy and digital citizenship, with a consistent presence of competencies related to the pedagogical use of technologies, material production, and critical reflection. At the same time, it reveals an uneven distribution of competencies throughout the program, marked by higher integration in the final components and less continuous presence of certain dimensions, particularly those related to professional development.

4.2 Triangulation between the PPC, the EduTec/CIEB Guide, and Graduates' Perceptions

Triangulation was carried out by linking the analysis of the PPC with the data produced with the graduates, examined through Bardin's (2016) content analysis. The categories derived from the focus group guided the reading of the statements, making it possible to relate what is outlined in the curriculum to what graduates recognize in their own experiences.

This process involved establishing relationships among:

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- the EduTec/CIEB Guide competencies identified in the PPC;
- the most recurrent competencies at the intersection between the PPC and the graduates' statements;
- the meanings assigned by the graduates to their experiences;
- the conditions under which these competencies are mobilized in practice.

This articulation made it possible to identify convergences, divergences, and less evident aspects between the PPC and the graduates' perceptions, synthesized in Box 1.

Box 1 – Synthesis of the triangulation of DTCs among the PPC, the EduTec/CIEB Guide, and graduates' perceptions

Competências do Guia EduTec/Cieb	Evidências no PPC	Evidências nas falas dos egressos	Síntese interpretativa
Prática pedagógica; curadoria e criação; personalização	Presença recorrente em disciplinas como Didáticas; Ambientes Virtuais de Aprendizagem; Produção de Material Didático	Uso de plataformas, organização de aulas digitais e criação de atividades interativas (“dar aulas on-line pros alunos” – P9)	Há alinhamento entre o que o currículo apresenta e o que é realizado quando existem condições de aplicação
Uso crítico; uso responsável; uso seguro	Presença desde os semestres iniciais em diferentes componentes curriculares	Mudança de postura, aumento de confiança e abertura ao uso do digital (“quebra de paradigmas” – P6)	O curso contribui para modificar a relação dos egressos com as tecnologias
Prática pedagógica; avaliação; curadoria e criação	Organização das competências ao longo do curso, com maior integração em estágios e seminários	Uso intensificado em contextos como ensino remoto e demandas específicas da escola	A mobilização das competências depende de situações concretas de uso
Uso responsável; uso seguro; uso crítico	PPC prevê o uso das TD, mas não detalha condições institucionais	Dificuldades com infraestrutura, acesso e bloqueios (“não tem um computador funcionando” – P9)	A aplicação das competências depende de fatores externos ao curso

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Autodesenvolvimento; autoavaliação	Presença mais concentrada nos momentos finais do curso	Busca por atualização contínua e interesse por novas tecnologias (“estou fazendo cursos de IA” – P8)	O desenvolvimento das competências continua após a formação inicial

Source: adapted by the authors (2026).

The synthesis presented in Box 1 demonstrates that triangulation is not limited to confirming results, but rather provides an understanding of what is outlined in the PPC relate to professional practice under varying conditions. Among the convergences, the presence of competencies in the pedagogical area stands out. In the PPC, these competencies appear in courses such as Didactics and Pedagogical Practices with Technologies; Virtual Learning Environments; and Instructional Material Design and Production. In the graduates' statements, these competencies manifest in lesson planning, the use of digital platforms, and the creation of interactive activities, indicating alignment between curriculum and practice when conditions permit application.

Convergences also emerge regarding changes in how teachers relate to technology. Graduates report increased confidence, a broader repertoire, and a greater openness to using digital tools. These elements show that the program contributes directly to how teachers position themselves when dealing with technology.

On the other hand, the triangulation reveals significant divergences. Although the PPC presents competencies related to the pedagogical use of technologies, graduates report concrete difficulties in applying them, particularly concerning infrastructure, access, and institutional limitations. These aspects show that the inclusion of competencies in the curriculum does not automatically guarantee their implementation in practice.

Another divergence relates to the distribution of competencies throughout the program. While the PPC concentrates multiple competencies in components such as Integrative Seminars and Internships, graduates indicate that the mobilization of these competencies occurs primarily in practical situations, when there is a concrete need for their use.

Regarding gaps, competencies related to professional development appear less evenly distributed in the PPC and are mentioned by graduates mainly as individual initiatives, particularly concerning the search for professional development and keeping pace with new technologies. Furthermore, issues related to the institutional organization of technology use emerge in the

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statements as recurrent challenges, yet they are not detailed explicitly in the PPC, indicating that this dimension largely depends on contexts external to the program.

The combined reading of the data makes it possible to understand that the influence of the program manifests both in expanding the repertoire and in organizing teaching practice, but it is also conditioned by factors that extend beyond the curriculum. In this way, triangulation contributes to understanding not only what the PPC presents, but also how these competencies are recognized, mobilized, and, in some cases, constrained in practice.

5 CONSIDERATIONS

This study analyzed the PPC of the ET program considering the competencies from the EduTec/CIEB Guide, aiming to understand how DTCs are incorporated into the curriculum and recognized by graduates in their professional experiences. The analysis demonstrated that the PPC incorporates digital competencies throughout the program, with a stronger presence in pedagogical and digital citizenship competencies, particularly those related to pedagogical practice, curation and creation, personalization, and the critical use of technologies.

When observing the organization of these competencies, it was found that their distribution is uneven throughout the program. There is a higher incidence in courses focused on planning and the pedagogical use of technologies; in integrative components, such as seminars and internships, various competencies appear in an articulated manner. In contrast, competencies related to professional development, such as self-development and self-assessment, show a less continuous presence, concentrating in specific moments of the program.

The triangulation of data with graduates' perceptions broadened the understanding of these findings. Convergences were identified between what the PPC presents and what graduates report, particularly regarding the pedagogical use of technologies, the organization of digital activities, and the conduct of classes mediated by DTs. The statements indicate that the program contributed to expanding the participants' repertoire and supporting the incorporation of technologies into their teaching practices.

Important limitations were also highlighted. Graduates point to difficulties related to school infrastructure, access to equipment, platform blocking, and institutional conditions in schools, indicating that the presence of competencies in the curriculum does not guarantee their

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implementation in daily school routine. These results show that the mobilization of DTCs depends on conditions that extend beyond the scope of the program.

Another relevant aspect concerns how these competencies become consolidated. The analysis indicates that their mobilization occurs more intensely in situations requiring application, such as internships, integrative seminars, and specific practice contexts, like remote teaching. This suggests that the articulation among different competencies tends to strengthen during moments of practice, while also indicating that it could be more evenly distributed throughout the program.

Furthermore, the graduates' statements highlight the continuity of professional development beyond initial teacher education, emphasizing the search for professional updating and an interest in emerging topics. This movement indicates that DTCs continue to develop throughout the professional trajectory, reinforcing the importance of addressing this dimension more explicitly within the curriculum.

Thus, the results indicate that the PPC of the ET program is aligned with DTCs, while also highlighting aspects that could be further developed—particularly regarding the distribution of these competencies throughout the course and the explicit inclusion of dimensions related to professional development and the organization of technology use within school contexts.

Finally, it should be noted that this analysis does not aim to evaluate or judge the PPC, but rather to understand how it organizes DTCs and how these competencies are recognized in practice. In this sense, the study contributes to the debate on teacher education with Digital Technologies by illustrating connections between curriculum, professional practice, and contexts of practice, while pointing towards paths for future discussions and research in the field.

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