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DROPOUT IN PROFESSIONAL AND TECHNOLOGICAL EDUCATION: A SYSTEMATIC REVIEW OF BRAZILIAN ACADEMIC PRODUCTION

EVASÃO NA EDUCAÇÃO PROFISSIONAL E TECNOLÓGICA: UMA VISÃO DA PRODUÇÃO ACADÊMICA

DESERCIÓN EN LA EDUCACIÓN PROFESIONAL Y TECNOLÓGICA: UNA VISIÓN DE LA PRODUCCIÓN ACADÉMICA

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ABSTRACT

This study aims to synthesize how student dropout in in-person upper secondary technical courses, offered concurrently with or subsequent to secondary education in Brazil, has been addressed in Brazilian scientific production between 2015 and 2025. To this end, a Systematic Literature Review was adopted as the methodological approach to understand and consolidate knowledge about the phenomenon. The study is classified as basic research, with exploratory objectives and a qualitative approach. Searches were conducted in the CAPES Journal Portal, SciELO Brasil, and Web of Science, resulting in 727 articles, of which fourteen met the inclusion criteria after duplicate removal and application of filters. The findings indicate that the term “dropout” and its classification criteria are understood heterogeneously, revealing a lack of consensus among researchers. The most recurrent reasons include financial difficulties, the need to balance study and work, pedagogical issues, and lack of identification with the course, among others. The strategies identified focus on student monitoring and support initiatives, strengthening student assistance policies, teacher training, mapping dropout factors, and improving institutional structural conditions. Analysis of the objects of study reveals a concentration of research conducted in Federal Institutes (92% of the articles), although these institutions account for less than 8% of national enrollments, highlighting important gaps in the representation of private and state institutions in the analyzed scientific production.

KEYWORDS: Technical vocational education. School dropout. Student persistence. Classroom-based courses.

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RESUMO
O presente estudo tem como objetivo sintetizar como a evasão escolar em cursos técnicos de nível médio presenciais, ofertados no Brasil nas formas concomitantes e subsequentes, tem sido abordada na produção científica brasileira, no período de 2015 a 2025. Para isso, utilizou-se a Revisão Sistemática da Literatura como procedimento metodológico, com o objetivo de compreender e consolidar o conhecimento sobre o fenômeno. A pesquisa caracteriza-se como básica, de objetivos exploratórios e abordagem qualitativa. As buscas foram realizadas no Portal de periódicos da CAPES, SciELO Brasil e *Web of Science*, que resultaram em 727 artigos, dos quais 14 atenderam aos critérios de inclusão, após remoção de duplicidades e aplicação de filtros. Os resultados indicam que o termo “evasão” e os meios de classificação são compreendidos de forma heterogênea, evidenciando ausência de consenso entre os pesquisadores. Entre os motivos mais recorrentes, destacam-se as dificuldades financeiras, a necessidade de conciliar estudo e trabalho, problemas pedagógicos e a falta de identificação com o curso, entre outros. As estratégias encontradas concentram-se em ações de acompanhamento e acolhimento de estudantes, o fortalecimento da assistência estudantil, a formação docente e mapeamento dos fatores de evasão e a melhoria nas condições estruturais das instituições. Ao analisar os objetos de estudo, observa-se uma concentração de pesquisas realizadas em Institutos Federais (92% dos artigos), embora esses institutos representem menos de 8% das matrículas nacionais, o que evidencia lacunas importantes na representação de instituições privadas e estaduais na produção científica analisada.

PALAVRAS-CHAVE: Habilitação profissional técnica. Abandono escolar. Permanência escolar. Cursos presenciais.

RESUMEN
Este estudio tiene como objetivo sintetizar cómo la deserción escolar en cursos técnicos de nivel medio presenciales, ofrecidos en las modalidades concomitante y subsecuente, ha sido abordada en la producción científica brasileña entre 2015 y 2025. Para ello, se empleó la Revisión Sistemática de la Literatura como procedimiento metodológico, con el propósito de comprender y consolidar el conocimiento sobre el fenómeno. La investigación se caracteriza como básica, con objetivos exploratorios y enfoque cualitativo. Las búsquedas se realizaron en el Portal de Periódicos CAPES, SciELO Brasil y Web of Science, identificándose 727 artículos, de los cuales 14 cumplieron los criterios de inclusión tras la eliminación de duplicidades y la aplicación de filtros. Los resultados evidencian que el término “deserción” y sus formas de clasificación son comprendidos de manera heterogénea, lo que revela la ausencia de consenso entre los investigadores. Entre los factores más recurrentes se destacan las dificultades financieras, la necesidad de compatibilizar estudio y trabajo, los problemas pedagógicos y la falta de identificación con el curso. Las estrategias identificadas se concentran en acciones de seguimiento y acompañamiento estudiantil, fortalecimiento de la asistencia estudiantil, formación docente, mapeo de factores asociados a la deserción y mejoras en las condiciones estructurales institucionales. Asimismo, se observa una concentración de investigaciones realizadas en Institutos Federales (92% de los artículos), pese a representar menos del 8% de las matrículas nacionales, lo que evidencia vacíos relevantes en la representación de instituciones privadas y estatales en la producción científica analizada.

PALABRAS CLAVE: Cualificación profesional técnica. Abandono escolar. Permanencia escolar. Cursos presenciales.

INTRODUCTION

Even prior to the establishment of the first formal institutions of vocational education and the enactment of regulations governing the field, preparation for work was already present among diverse social groups as an integral dimension of social life. Among Indigenous peoples, such

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formation was intertwined with leisure, culture, community life, and family and religious education, occurring inseparably from broader processes of socialization. As highlighted by Cordão and Moraes (2017), learning developed in connection with the physical and psychological development of children and youth, without a clear division between educating, socializing, and preparing for work. Similarly, African traditions organized the transmission of trades through ancestry and orality, while European traditions institutionalized apprenticeship relations within craft guilds, demonstrating that vocational preparation precedes formal schooling and constitutes a historically constructed social necessity.

At the beginning of the twentieth century, this form of preparation gained institutional prominence in Brazil. In 1906, during the administration of Afonso Pena, the Practical School of Apprentices at the Engenho de Dentro Railway Workshops was established to provide vocational qualification for students progressing from lower secondary education to railway training. This initiative contributed to the enactment of Law No. 7,566/1909, under Nilo Peçanha, which created nineteen Schools of Apprentices and Craftsmen (Cordão; Moraes, 2017). During this period, Professional and Technological Education (EPT) responded to the growing demand generated by industrialization and, unlike its earlier community-embedded dynamics, became primarily directed toward socially vulnerable youth. From this milestone onward, EPT progressively consolidated itself as a national public policy.

Over the past century, Professional and Technological Education (EPT) has expanded its reach and relevance, with more than 2.5 million enrollments recorded in 2024, according to the Censo da Educação Básica (Brazilian Basic Education Census), and a portfolio of 218 program titles listed in the Catálogo Nacional de Cursos Técnicos (CNCT). It is thus configured as a strategic educational policy aimed at social inclusion in alignment with the country's socioeconomic demands. Nevertheless, despite this expansion, student dropout remains a persistent challenge, undermining the right to education, students' academic success, and the effectiveness of public policies.

The factors associated with dropout constitute a complex phenomenon related to social, economic, and pedagogical dimensions, among others. The existing literature is largely composed of case studies; in some, the object of analysis is a single institution, while in others the focus is further restricted to a specific course. This scenario reveals the difficulty of establishing a national overview capable of informing large-scale preventive policies. In addition, there is a scarcity of systematized data, and few systematic reviews synthesizing trends, patterns, and gaps in the scientific production on dropout in Professional and Technological Education (EPT) are identified in bibliometric searches. Sampaio and Mancini (2007) emphasize that a systematic review is a method designed to synthesize evidence regarding the procedures adopted in studies on a given topic. Through this method, it is possible to integrate data and findings from multiple investigations,

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enabling the comparison and weighting of results, the identification of robust evidence, and the guidance of future research based on the gaps and trends identified.

In light of this context, this systematic review sets out to examine the following question: how has recent Brazilian scientific literature described, analyzed, and interpreted student dropout in in-person upper-secondary technical courses offered in the concomitant and subsequent modalities? Accordingly, the study aims to synthesize the academic community's understanding of the investigation of this phenomenon. This problematization underpins the objectives presented in the following section.

In Professional and Technological Education (EPT), upper secondary technical courses are organized into different forms of provision: subsequent, intended for graduates of upper secondary education; concomitant, aimed at students who attend upper secondary education simultaneously without curricular integration; mixed, composed of students from both concomitant and subsequent modalities; articulated, offered through partnerships between distinct institutions; and integrated, characterized by unified curricula and a single enrollment.

In this context, the objective of this review is to synthesize how student dropout in face-to-face upper secondary technical courses, offered in the concomitant and subsequent modalities in Brazil, has been addressed in Brazilian scientific production between 2015 and 2025, encompassing concepts, causes, impacts, and coping strategies. Specifically, it aims to:

- Map Brazilian scientific production on student dropout in upper secondary technical courses.
- Identify patterns, concepts, factors, trends, and gaps related to student dropout and the strategies proposed to address it.

THEORETICAL FRAMEWORK

Understanding the phenomenon of school dropout requires the articulation of different frameworks, ranging from the historical, political, and labor-market contexts to the contemporary dynamics of technical course provision, student profiles, and educational policies.

Professional and Technological Education (EPT) has historical roots that precede the formal institutions that currently structure it. In traditional societies, the acquisition of vocational knowledge emerged from community interaction, oral transmission, practical experience, and socially shared practices, without a rigid separation between work, education, and everyday life. The consolidation of EPT as a state policy, initiated with the establishment of the Escolas de Aprendizes e Artífices (Schools of Apprentices and Artisans) in 1909, introduced a new configuration characterized by the institutionalization of curricula, regulations, and school organizational models, as well as the targeting of specific populations. At different moments, this process was marked by assistentialist approaches directed at socially vulnerable youth. In this regard, Ferreira and Valer (2022) argue that admission criteria at the time were directly associated with income-based selection.

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Over the decades, Professional and Technological Education (EPT) has expanded significantly. In 2025, this process was strengthened by the establishment of the National Policy for Professional and Technological Education (PNEPT), created by the Ministry of Education (MEC), which sets guidelines for education oriented toward the world of work while promoting comprehensive and civic formation. The PNEPT is integrated into the National System for the Evaluation of Professional and Technological Education (SINAEPT), which is responsible for guiding and monitoring the quality of educational provision across institutions and their programs (Brazil, 2025a). According to the policy itself:

> […] the PNEPT aims to promote the population's comprehensive and civic education and articulates a set of guidelines, strategies, and actions designed to foster expansion, democratization, quality enhancement of provision, equity in access and retention, and respect for the diversity of learners and educational contexts, in dialogue with the world of work (Brazil, 2025a, our translatio).

Among its objectives is the intention to integrate different education systems, strengthening the connection between education, social inclusion, socio-productive integration, and sustainable and economic development. In this context, the PNEPT acknowledges that social contexts produce educational inequalities, privileging certain groups while disadvantaging others; for this reason, it incorporates, among its guiding principles, equity in access, retention, and academic success, dimensions that are deeply affected by school dropout.

Whereas the Brazilian educational framework recognizes the importance of student retention, gaps persist in the formulation of structured and articulated policies specifically aimed at addressing dropout across different education systems. Within the Federal Network of Professional, Scientific and Technological Education, the National Student Assistance Program stands out as an institutional strategy to reduce retention and dropout, expand conditions for permanence, promote social inclusion, and mitigate socioeconomic inequalities through student support and public funding (Brazil, 2024).

SCHOOL DROPOUT IN PROFESSIONAL EDUCATION

School dropout is widely recognized as a complex phenomenon resulting from the dynamic interaction of multiple social, institutional, economic, and pedagogical factors, and is therefore characterized as multifaceted (Silva; Castione, 2024; Bezerra; Carvalho, 2024; Alonso; Figueiredo, 2022). This complexity is also reflected in the difficulty of addressing the phenomenon, particularly in light of the lack of systematized data within Professional and Technological Education and the need for actions that are both broad and specific (Alonso; Figueiredo, 2022).

Within the context of Professional and Technological Education, another relevant aspect concerns the so-called "intermediate exits," through which students, after completing specific curricular components, may obtain technical professional qualification certificates aimed at more

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immediate entry or reentry into the labor market. In such situations, the interruption of the educational trajectory is not always characterized as dropout, since it is considered that part of the educational objectives has been achieved. However, this interpretation tends to relativize the institutional and public investments directed toward students' integral education. As argued by Oliveira *et al.,* (2011), the incorporation of these certifications may fragment the concept of integral education and create tensions within the pedagogical proposal of EPT programs and institutions.

This complexity acquires specific characteristics within Professional and Technological Education, as technical programs require the articulation between general education and vocational training at different stages of life. Such programs demand from students a level of maturity for vocational decision-making, the ability to reconcile study and work, and the capacity to cope with socioeconomic adversities historically associated with the populations served. Bezerra and Carvalho (2024, p. 4, our translation) further emphasize that:

> [...] the reasons for school dropout among students in technical courses are diverse, including the inability to balance work and study, family-related issues, difficulties in accessing the school, among others. However, in the capitalist society in which we live, one of the main causes of dropout is work.

Dropout does not stem from a single factor that can be addressed solely by an institution or through public policies; in each situation, multiple factors may interact, thereby increasing the likelihood of school abandonment.

Silva and Castione (2024) identify that the concept of dropout is not uniform and that different terms, such as school exclusion, course abandonment, or withdrawal, are used with varying meanings across studies. This conceptual heterogeneity, which complicates comparability among studies and generates distinct diagnoses depending on the definitions adopted, hinders the development of national indicators to guide public policy. It thus underscores the need for critical systematization and rigorous synthesis, justifying the relevance of a systematic review as conducted in this study.

At the international level, dropout has been extensively analyzed through the contributions of Vincent Tinto in Higher Education and Russell W. Rumberger in Basic Education, whose studies have become theoretical benchmarks for understanding the phenomenon. Tinto argues that dropout occurs when students exhibit low levels of academic and social integration, resulting from weakened interactions with peers, faculty, and the institution itself, indicating that student retention is directly associated with the degree of institutional attachment (Bento Junior *et al.,* 2025). Rumberger conceptualizes school dropout based on a student performance model, according to which retention or dropout is influenced by two sets of factors: individual factors, related to the students' personal characteristics, and institutional factors, linked to the family, school, and community structures that shape their educational trajectory (Sales, 2014).

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These perspectives highlight the complexity of school dropout; however, these models were developed from specific educational contexts, primarily within Higher Education and regular Basic Education. In the case of Professional and Technological Education (EPT), the institutional configuration ranges from technical courses integrated into basic education to higher technological training programs. This educational diversity increases the analytical complexity of the phenomenon and underscores the need to understand it beyond homogeneous definitions, taking into account the identity, organizational, and pedagogical specificities inherent to EPT.

Within this context, the discussion on school dropout in Professional and Technological Education (EPT) requires shifting the focus from individual student responsibility to an analysis of the structural conditions that support student retention, highlighting the role of public policies in mitigating educational inequalities and addressing the educational and identity-related specificities of the different modalities of EPT.

METHODOLOGY

The present study is grounded in the need to deepen research on school dropout in EPT and is designed to identify what the scientific literature has consolidated in recent years regarding this theme. To achieve this purpose, a systematic literature review was adopted, a method structured through bibliographic research and guided by previously defined criteria and procedures, which enables the collection, evaluation, and synthesis of the available knowledge on a given phenomenon.

In this context, since the study is dedicated to understanding and consolidating existing knowledge on school dropout in EPT, its nature is classified as basic research. According to Gerhardt and Silveira (2009), basic research contributes to the advancement of science by generating knowledge about a phenomenon without an immediate practical purpose. Thus, although the results of this review may eventually support educational management actions, its central objective lies in the theoretical advancement of the topic.

Regarding its objectives, the study is characterized as exploratory, as it aims to provide greater familiarity with the phenomenon, making it more explicit and enabling the construction of broader understandings, as indicated by Gerhardt and Silveira (2009). The focus of this investigation is to comprehend how the academic community has discussed dropout in EPT, prioritizing interpretations, meanings, and conceptions rather than numerical measurements; therefore, its approach is considered qualitative. As highlighted by Gerhardt and Silveira (2009), qualitative research is not guided by statistical representativeness but by an in-depth understanding of social, cultural, or institutional phenomena.

Based on this purpose, the guiding objectives of the review were defined. To support the entire systematic review process, the Parsif.al application was used, a platform that enables the

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collaborative conduct of the stages that compose this type of study. Its functionalities go beyond document organization, contributing to the development of the project in a consistent and rigorous manner, ensuring the transparency required in systematic reviews and enabling the replicability of the process (Mauricio; Mill, 2025).

According to Sampaio and Mancini (2007), three stages should be considered prior to the initiation of a systematic review: defining the objective of the review,

In addition, the research question was formulated prior to the initiation of the searches using the PICOC framework, in order to enhance the identification of relevant results. According to Santos, Pimenta, and Nobre (2007), although access to scientific information has expanded through electronic portals in recent years, the use of this strategy contributes to the construction of a precise and effective research question capable of locating the best available scientific evidence. The composition of this instrument is presented in Figure 1.

Figure 1. Composition of the PICOC

Acronym	Correspondence	Definition
P	Population or Problem.	Population, group of individuals, or the sample to be studied; may include characteristics such as age, gender, health condition, etc.
I	Intervention.	Treatment, procedure, or exposure being evaluated.
C	Control or Comparison.	Alternative to the primary intervention used for comparison; may be a different treatment or no intervention.
O	Outcomes.	Outcomes or results measured to evaluate the effectiveness of the intervention.
C	Context.	The environment or circumstances in which the intervention is applied; may include aspects such as setting, situation, or specific conditions.

Source: Adapted from Maurício and Mill (2025) and Santos, Pimenta and Nobre (2007).

Although the framework was originally developed to structure reviews in the medical field, it has been incorporated into diverse areas due to its capacity to guide research questions in a precise and logical manner. Accordingly, the PICOC framework was adopted, considering, in the context of this study, that the population corresponds to students who dropped out of in-person upper secondary technical programs offered between 2015 and 2025; the intervention refers to factors associated with school dropout; the outcomes involve the identification of factors, impacts, prevention strategies, and conceptions of the phenomenon; and the context encompasses concomitant and subsequent technical programs in Brazilian institutions within EPT. The comparison element was not included, given the structural differences between in-person and distance education

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programs, as well as between technical and higher education programs, which would render the use of this component inappropriate for the design of the study.

Based on this PICOC definition, the guiding research question was established: How has recent Brazilian scientific literature described, analyzed, and interpreted the dropout of students in in-person upper secondary technical programs offered in the subsequent and concomitant modalities? From the main question, subquestions were defined, which the present study seeks to answer: Q1. How do the studies define, conceptualize, and delimit the phenomenon of dropout in in-person upper secondary technical programs? Q2. What classification is used to understand the factors that result in dropout in in-person technical programs? Q3. What reasons, strategies, or recommendations are discussed in the studies to address dropout in in-person EPT? Q4. What are the objects of the studies?

As a search strategy, the databases CAPES Journal Portal, SciELO Brazil, and Web of Science were used, with the combination of the descriptors “Educação Profissional e Tecnológica,” “EPT,” “Educação Profissional,” “Habilitação Profissional,” “Técnico em,” “Escolar,” “Escola,” “Instituição Educacional,” “Instituição de Ensino,” “Unidade Educacional,” “Unidade Escolar,” “Evasão,” “Abandono de curso,” “Abandono escolar,” “Evasão de curso,” “Evasão escolar,” and “abandono,” combined through Boolean operators, resulting in: (“Educação Profissional e Tecnológica” OR “EPT” OR “Educação Profissional” OR “Habilitação Profissional” OR “Técnico em”) AND (“Escolar” OR “Escola” OR “Instituição Educacional” OR “Instituição de Ensino” OR “Unidade Educacional” OR “Unidade Escolar”) AND (“Evasão” OR “Abandono de curso” OR “Abandono escolar” OR “Evasão de curso” OR “Evasão escolar” OR “abandono”). The descriptors were maintained in Portuguese to ensure fidelity to the original search strategy and to preserve the transparency and replicability of the review. The search period comprised the years 2015 to 2025, with a filter for peer-reviewed articles in Portuguese, conducted on October 11, 2025.

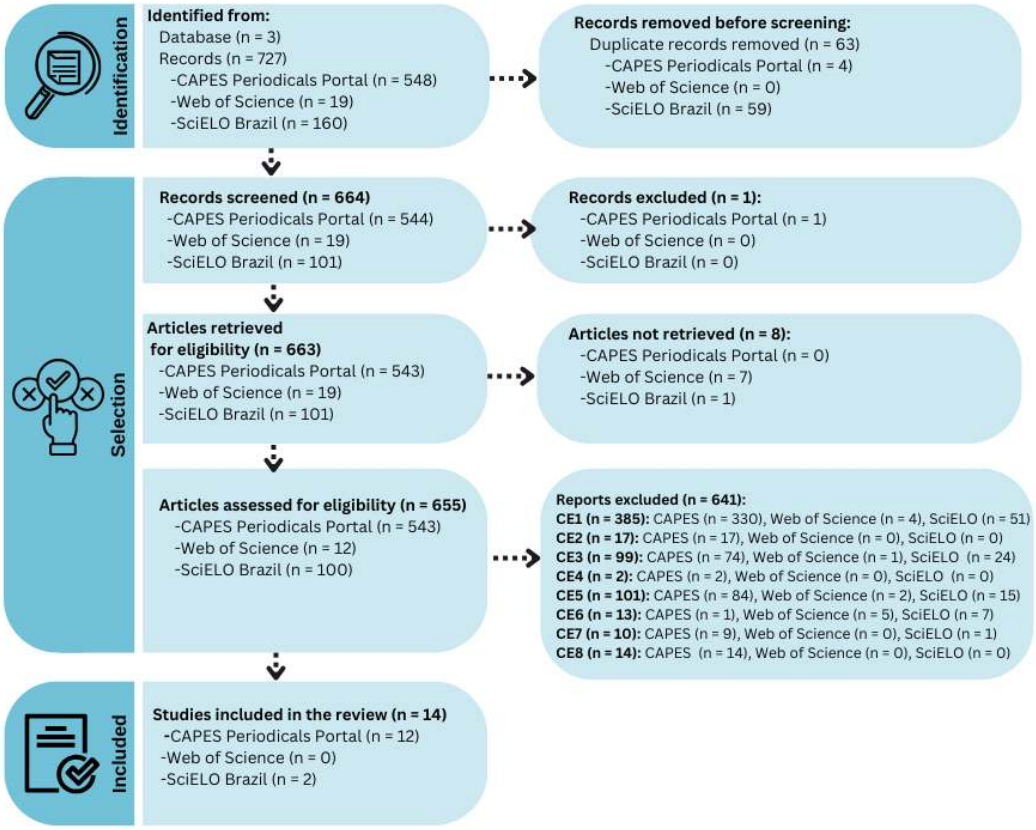
The searches yielded a total of 727 articles. Subsequently, eligibility and exclusion criteria were established. Initially, a first filter was applied to remove duplicate articles. In a second filtering stage, publications that were not scientific articles were excluded, including one book review. As a third filter, scientific articles that were inaccessible or could not be located were removed.

As a fourth filter, eligibility (C) and exclusion (CE) criteria were established, which involved reading the research title, abstract, and, when necessary, the methodology. The eligibility criteria were defined as C1. Publications within the scope of the study, addressing dropout in in-person upper secondary technical programs, both subsequent and concomitant; and C2. Applied research, with the educational institution as the locus of study. The exclusion criteria were: CE1. Publications outside the scope of the study; CE2. Technical education integrated into secondary education; CE3. Higher education; CE4. FIC courses; CE5. Basic education, including early childhood, elementary, secondary, and youth and adult education; CE6. Locus in other countries; CE7. Distance learning

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format; and CE8. Studies without empirical research on a school or institution. To support this method, which aims for standardization and transparency, the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guideline was used, as illustrated in the diagram in Figure 2.

Figure 2. PRISMA Diagram of the article selection steps



Source: Elaborated by the authors (2026).

RESULTS AND DISCUSSION

The search for scientific articles addressing dropout in technical secondary education courses, in the subsequent, concurrent, and mixed modalities, resulted in the identification of 14 studies (Figure 3) that met the established inclusion criteria. During the search process, a significant number of studies focusing on higher education were observed; these were excluded as they fell outside the scope of the present study. Additionally, 15 other publications addressed dropout predominantly from a conceptual perspective, without empirical field research in schools or educational institutions, and were therefore also excluded.

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Regarding the temporal distribution of the included publications, the highest concentration occurred in 2023, with five articles. No publications were identified for the years 2015, 2018, 2022, and 2025, whereas the years 2016, 2019, and 2024 each accounted for one publication. The years 2017, 2020, and 2021 each had two publications.

Figure 3. List of articles that met the inclusion criteria

Article	Article Title	Authors	Year
1	A evasão escolar nos cursos técnicos subsequentes do Instituto Federal do Pará campus Altamira	Larici Keli Rocha Moreira, Maria de Fátima Matos de Souza, Regina Celi Alvarenga de Moura Castro	2021
2	A influência do capital cultural e da violência simbólica na evasão	Lee Elvis Siqueira de Oliveira, Gildo Volpato	2017
3	Abandono e Permanência Escolar: analisando olhares de trabalhadores da educação do IFSC	Alexsandra Joelma Dal Pizzol Coelho Zanin, Nilson Marcos Dias Garcia	2023
4	Combate à evasão escolar por meio da gestão de processos: um estudo de caso no IFPI Parnaíba	Aluydio Bessa Amaral, Vitor de Sousa Mendes, Higor Rafael Menezes Paiva de Araújo, Paulo Henrique do Nascimento Sousa, Victor de Souza Pereira, Lucas Pereira Araujo, Wilo Santos	2020
5	Dados educacionais com foco na evasão escolar: diagnóstico e desafios para o IFNMG – campus Avançado Porteirinha	Wilney Fernando Silva, Lidinei Santos Costa, Dieny Eduarda Santos dos Anjos	2021
6	Diagnóstico da evasão em cursos de educação profissional por intermédio do Projeto Político Pedagógico	Rodolfo Gabriel Deganut, Tatiane da Silva	2019
7	Educação Profissional e evasão escolar em contexto: motivos e reflexões	Natália Gomes da Silva Figueiredo, Denise Medeiros Ribeiro Salles	2017
8	Evasão escolar na educação profissional técnica de nível médio no curso técnico em enfermagem	Ângela Valéria de Amorim, José Alex Alves dos Santos, Danielle Mota Bastos, Joana D'arc Lyra Batista, Pauline Cavalcanti, Patrícia Maria de Oliveira Andrade Araújo, Rosa Maria Oliveira Teixeira de Vasconcelos	2023
9	Evasão na Educação Profissional e Tecnológica	Jair Jonko Araújo, Zaira Peres Corrêa	2023
10	Indígenas: Quais cursos fazem? Qual o comportamento de evasão? – análise do período 2018-2020 na Rede Federal de Educação Profissional, Científica e Tecnológica (RFEPCT)	Alexandre Moura Giarola, Vássia Carvalho Soares, Wenceslau Gonçalves Neto	2023
11	Mensuração e monitoramento da eficácia: reflexões e aplicação na discussão sobre evasão nos cursos técnicos do campus Taguatinga do Instituto Federal de Brasília – IFB	Daniel Soares De Souza, André Nunes	2023
12	Permanência e abandono escolar na Educação Profissional	Alexsandra Joelma Dal Pizzol Coelho Zanin, Nilson Marcos Dias García	2020
13	Permanência e evasão escolar: um estudo de caso em uma instituição de ensino profissional	Juarina Ana da Silveira Souza	2016
14	Práticas pedagógicas e evasão discente: uma análise no curso técnico	Everton Barbosa Nunes, Antônio Marcos da Costa Silvano	2024

Source: Elaborated by the authors (2026).

Based on the reading of the articles, the guiding questions of the present systematic review were addressed. In this context, Q1 asked: How do the studies define, conceptualize, and delimit the phenomenon of dropout in face-to-face technical secondary education courses? Among the

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responses, eight approaches to understanding the concept of school dropout were identified, as presented in Figure 4.

Figure 4. Definition of the Concept of Dropout

Group	Concept / Terminology Used	Article(s)
G1. Recurrent Concept	Dropout is presented as the definitive interruption of studies, without the student's intention to return—whether from a course, an institution, or the school environment—prior to program completion; that is, it may occur through the non-renewal of enrollment.	1, 4, 7, 9 e 11
G2. INEP Concept Dropout and abandonment are distinct constructs.	Dropout is defined as a student's departure without returning to the education system. Abandonment refers to a student who interrupts their studies but returns in the following year. Other terms, such as compulsory cancellation and canceled status, are mentioned but not defined.	13
G3. Own Definition Dropout and abandonment considered as synonymous.	The concepts of school dropout and abandonment are used as synonyms, referring to students who start a course but do not complete it.	5
G4. Own Definition Withdrawn students and dropouts are considered distinct.	The term "dropout" refers to students who attended the course and then discontinued their studies, whereas "withdrawal" refers to students who enrolled but never attended the course.	6
G5. Classification-Based Concept It is classified by course, institution, and system.	The definition of dropout is presented as the interruption of studies, either temporary or permanent, and is directly linked to the course, institution, or education system.	14
G6. Own Definition Abandonment carries a social connotation.	School abandonment encompasses a two-way dynamic in which the student may either leave voluntarily or be left behind by the school.	3
G7. Abandonment with Possibility of Return (without using the term "dropout")	School abandonment: interruption during the academic year, with the possibility of returning the following year (Abramovay & Castro, 2003).	8
G8. No Definition of Dropout Provided	Articles that use the term but do not provide an explicit definition.	2, 10 e 12

Source: Elaborated by the authors (2026).

The multiplicity of terms employed, such as dropout, abandonment, withdrawal, cancellation, and disengagement, and the heterogeneous way in which they are used across different studies reveal the need to clarify the various ways of understanding the phenomenon, since this approach influences both the methods employed and the interpretation of the results.

It is observed that five studies define dropout as the definitive and unplanned interruption of the educational trajectory, characterized by the student leaving before completing the course, without

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returning to continue their studies. This interpretation reflects a segment of what Dore and Lüscher (2011, p. 775, our translation) present in their research:

> School dropout has been associated with a range of situations, including student retention and repetition, withdrawal from an institution, leaving the education system, failure to complete a given level of education, and temporary school abandonment followed by a return. It also refers to individuals who never enrolled in a certain level of education, particularly in compulsory education, as well as students who have completed a given level but exhibit dropout-like behavior.

This conception, present in different studies, is associated both with broad student academic failure, including those who never enrolled in any modality, thereby revealing a social problem. Alongside social issues, the studies associate dropout with the waste of financial resources by institutions and the government, highlighting an understanding of dropout as a structurally negative phenomenon. Also emphasized is the influence of definitions that frame dropout as the definitive exit from a course, an institution, or the education system before the completion of the educational cycle.

Despite these convergences, conceptual divergences are significant. While some authors treat the terms dropout and abandonment as synonyms, others establish clear distinctions between them, particularly based on INEP definitions. According to this federal agency, “the technical concept of abandonment is different from dropout. Abandonment means that the student leaves school in a given year but returns the following year. Dropout means that the student leaves school and does not return to the system” (Brasil, 2025b).

It should be noted that, contrary to this definition adopted by the agency, the Secretariat of Professional and Technological Education, also under the Ministry of Education, operationalizing the National Information System of Professional and Technological Education (SISTEC), uses the term dropout to record students with unjustified absences exceeding 25% of the total course hours, for whom there is no possibility of returning to the course. The term withdrawal, on the other hand, is applied to students who formally cancel their enrollment (Brasil, 2018). Other studies differentiate between withdrawals, understood as students who enroll but never attend the course, and dropouts, who begin academic activities and subsequently interrupt them. Some works further expand the analysis by distinguishing between dropout from the course, the institution, and the education system, highlighting the complexity of the phenomenon when observed across different analytical scales.

Furthermore, some studies employ terms such as compulsory withdrawal, canceled, and dismissal without providing clear definitions, while three other analyzed studies do not even offer an explicit definition of dropout, using the term tacitly or assuming its meaning is self-evident. This absence of definition demonstrates that, even in research aiming to understand or measure the phenomenon, conceptual fragility still prevails.

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Subsequently, the classification of dropout factors was analyzed to address the second guiding question (Q2): What classification is used to understand the factors leading to dropout in on-site technical courses?

The analysis reveals a tendency to adopt explanatory models that organize school dropout into broad categories, generally aligned with the individual and contextual dimensions of the phenomenon. Classifications often rely on two or three spheres—such as factors internal and external to the institution, individual and institutional factors, or student, course, and sociocultural factors. The Internal/External and Individual/Contextual models are the most frequently applied, appearing in articles citing authors such as Rumberger (1995), Sousa *et al.,* (2011), Benetti (2008), Neri (2009), and Feitosa and Oliveira (2020). Explanations predominantly consider, on the one hand, student-specific characteristics (motivation, academic history, personal difficulties, working conditions, substance use, among others) and, on the other, factors related to the school environment, the course, institutional management, infrastructure, and broader social conditions. The recurrence of this model suggests a relatively consolidated understanding in the literature that dropout results from the interaction between student characteristics and structural factors that go beyond individual will.

It is also observed that some classifications are based exclusively on the work of specific authors, such as Rui Canário (2004), who discusses internal and external forms of exclusion in relation to schooling. In these cases, although the internal/external axis is preserved, it assumes a more conceptual rather than operational character, attributing to the school and the broader social context the role of determinants of exclusionary processes that may ultimately lead to dropout. Despite the predominance of these two- or three-part classifications, it is important to note that three articles do not present any categorization model for dropout. In these cases, factors are mentioned but not systematically organized.

Regarding the third guiding question (Q3): What reasons and strategies or recommendations are discussed in the studies to address dropout in on-site Professional and Technological Education (EPT)?

It is observed that the reasons reported in the analyzed studies are predominantly associated with four main dimensions: socioeconomic conditions, difficulties in balancing study and work, pedagogical and methodological aspects, and processes of choice and identification with the course. Among these, financial and sociocultural factors are the most recurrent, appearing in 9 of the 14 articles, followed by the difficulty in reconciling work and study, mentioned in 8 studies.

The data also suggest that dropout commonly results from a combination of individual, institutional, and structural factors, and rarely from a single cause. This diversity reinforces the multifactorial nature of the phenomenon.

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The recommendations provided by the authors converge on four main areas: continuous teacher training, student monitoring and support, student assistance programs, and systematic mapping of dropout factors. It is noted that the recommendations align with the identified causes, reflecting both pedagogical challenges and issues related to material and emotional student retention. There are also specific indications for pedagogical flexibilization, the use of active methodologies, the creation of multidisciplinary teams, and improvements in academic infrastructure.

This set of measures demonstrates that addressing dropout requires intersectoral, pedagogical, and socio-assistance actions, coordinated among teachers, administrators, technical staff, and families. The suggestions proposed by the studies point not only to interventions within institutions but also to broader public policies, including the expansion of student assistance programs and the systematic monitoring of educational trajectories.

To answer the fourth research question, the educational institutions serving as the loci of the studies were identified in order to respond to Q4: What are the units of analysis of the studies?

An analysis of the units of study in the fourteen selected articles reveals a strong concentration of research within Federal Institutes (IFs), both as exclusive loci and as predominant contexts. Of the fourteen studies, thirteen were conducted entirely within at least one campus of a Federal Institute, located in the states of Santa Catarina, Piauí, Rio de Janeiro, Pernambuco, Rio Grande do Sul, Federal District, Pará, Rio Grande do Norte, and Ceará. It is noteworthy that one study analyzed the entire Indigenous student population across all IFs.

Furthermore, there is a predominance of studies that work with small samples, often restricted to a single course, a single campus, or very short timeframes. In many cases, the studies analyze isolated classes within a range of 70 to 1,000 enrollments, with an average of 150 students being most common.

This scenario contrasts with the actual scale of Professional and Technological Education (EPT) in Brazil. According to the Basic Education Census, published by INEP, between 2014 and 2024 Brazil recorded a total of 13.7 million enrollments in subsequent and concurrent technical courses, of which 63.4% of students were enrolled in private institutions, highlighting the significant weight of this segment in the provision of professional education.

CONSIDERATIONS

This systematic review aimed to synthesize how school dropout in full-time, in-person secondary-level technical courses, offered in subsequent and concurrent formats in Brazil, has been addressed in Brazilian academic production, identifying associated concepts, factors, and research gaps, in order to answer the question: how has recent Brazilian scientific literature described, analyzed, and interpreted student dropout in in-person secondary-level technical courses offered in subsequent and concurrent formats?

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The results reveal significant conceptual heterogeneity in the literature on Professional and Technological Education (EPT), marked by the use of distinct terms and classifications to designate dropout. Such heterogeneity compromises the comparability between studies and hinders the consolidation of indicators that could support public policies for student retention, highlighting the need for theoretical clarification of adopted concepts and greater analytical standardization in the field.

Classifying factors solely based on the distinction between individual and institutional dimensions may reinforce interpretations that place the responsibility for retention on the student. The results indicate the need for analytical approaches that consider institutional co-responsibility and the role of educational policies in guaranteeing the right to persistence.

A strong concentration of studies in Federal Institutes and localized investigations was also observed, contrasting with the national scope of Brazilian EPT, where the majority of enrollments are in state, private, and Sistema S networks. This contrast underscores a key finding of this review: Brazilian literature on dropout in in-person technical courses is limited, localized, and fragmented, with scarce research that engages with the actual scale of EPT in the country, encompassing the diverse courses in the National Catalog of Technical Courses (CNCT).

Among initiatives aimed at promoting student retention, some studies highlight successful strategies such as pedagogical monitoring, tutoring, and curricular integration. However, these actions remain sporadic and poorly systematized, reinforcing the need for articulated institutional policies implemented on a systemic scale.

In summary, the objectives of the systematic review were achieved, demonstrating that dropout in Professional and Technological Education constitutes a phenomenon strongly conditioned by conceptual, institutional, and structural aspects that remain insufficiently integrated in the national scientific literature. The results point to the need for greater conceptual standardization, an expansion of the empirical scope of investigations, and the strengthening of public policies aimed at student retention, taking into account the formative and identity-specific characteristics of the different EPT modalities.

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