# HIGHER EDUCATION IN BRAZIL: DIDACTIC AND PEDAGOGICAL CHALLENGES OF UNIVERSITY TEACHING

## O ENSINO SUPERIOR NO BRASIL: DESAFIOS DIDÁTICOS E PEDAGÓGICOS DA DOCÊNCIA UNIVERSITÁRIA

## LA EDUCACIÓN SUPERIOR EN BRASIL: DESAFÍOS DIDÁCTICOS Y PEDAGÓGICOS DE LA DOCENCIA UNIVERSITARIA

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**ABSTRACT**
Contemporaneously, Brazilian higher education has faced multiple challenges involving political, didactic, and methodological dimensions. Democratization has expanded access, but inequalities, the precarization of the teaching career, and pressures of marketization still persist. The aim of this research is to analyze how these challenges impact university teaching practice, discussing limits and possibilities for consolidating a critical and innovative university pedagogy. The methodology adopted was qualitative and bibliographic, grounded in classical and contemporary authors of university pedagogy as well as official documents of public policies for higher education. As results, the study showed that university teaching has been reconfigured in the context of institutional expansion, inclusion policies, the need for pedagogical innovation, and the growing use of digital technologies and artificial intelligence. It was found that gaps remain in the pedagogical training of professors, which still lacks institutionalization. At the same time, methodological experiences and proposals capable of enhancing more critical, dialogical, and socially committed practices were identified. It is concluded that strengthening university pedagogy depends on faculty appreciation, investment in institutional conditions, and the critical integration of digital technologies. The research indicates that, despite the difficulties, there are concrete possibilities for transformation that may consolidate a more inclusive, innovative, and socially grounded university.

**Keywords:** Higher Education. University Teaching. Methodology. Didactics. Technologies.

**RESUMO**
Contemporaneamente o ensino superior brasileiro tem enfrentado múltiplos desafios que envolvem dimensões políticas, didáticas e metodológicas. A democratização ampliou o acesso, mas ainda convive com desigualdades, precarização da carreira docente e pressões de mercantilização do ensino. O objetivo desta pesquisa é analisar de que forma esses desafios impactam a prática docente universitária, discutindo limites e possibilidades para a consolidação de uma pedagogia universitária crítica e inovadora. A metodologia utilizada foi qualitativa e bibliográfica, fundamentada em autores clássicos e contemporâneos da pedagogia universitária e em documentos oficiais de políticas públicas para o ensino

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superior. Como resultados, a pesquisa evidenciou que a docência universitária tem se reconfigurado diante da expansão institucional, das políticas de inclusão, da necessidade de inovação pedagógica e do uso crescente das tecnologias digitais e da inteligência artificial. Constatou-se que persistem lacunas na formação pedagógica dos docentes, que ainda carece de institucionalização. Ao mesmo tempo, identificaram-se experiências e propostas metodológicas capazes de potencializar práticas mais críticas, dialógicas e socialmente comprometidas. Conclui-se que o fortalecimento da pedagogia universitária depende da valorização docente, do investimento em condições institucionais e da integração crítica das tecnologias digitais. A pesquisa aponta que, apesar das dificuldades, existem possibilidades concretas de transformação que podem consolidar uma universidade mais inclusiva, inovadora e socialmente referenciada.

**Palavras-chave:** Ensino Superior. Docência Universitária. Metodologia. Didática. Tecnologias.

## RESUMEN
Contemporáneamente, la educación superior brasileña ha enfrentado múltiples desafíos que abarcan dimensiones políticas, didácticas y metodológicas. La democratización amplió el acceso, pero aún convive con desigualdades, precarización de la carrera docente y presiones de mercantilización de la enseñanza. El objetivo de esta investigación es analizar de qué manera estos desafíos impactan en la práctica docente universitaria, discutiendo límites y posibilidades para la consolidación de una pedagogía universitaria crítica e innovadora. La metodología utilizada fue cualitativa y bibliográfica, fundamentada en autores clásicos y contemporáneos de la pedagogía universitaria, así como en documentos oficiales de políticas públicas para la educación superior. Como resultados, la investigación evidenció que la docencia universitaria se ha reconfigurado frente a la expansión institucional, las políticas de inclusión, la necesidad de innovación pedagógica y el uso creciente de tecnologías digitales e inteligencia artificial. Se constató que persisten lagunas en la formación pedagógica de los docentes, la cual aún carece de institucionalización. Al mismo tiempo, se identificaron experiencias y propuestas metodológicas capaces de potenciar prácticas más críticas, dialógicas y socialmente comprometidas. Se concluye que el fortalecimiento de la pedagogía universitaria depende de la valorización docente, de la inversión en condiciones institucionales y de la integración crítica de las tecnologías digitales. La investigación señala que, a pesar de las dificultades, existen posibilidades concretas de transformación que pueden consolidar una universidad más inclusiva, innovadora y socialmente referenciada.

**Palabras clave:** Educación Superior. Docencia Universitaria. Metodología. Didáctica. Tecnologías.

## 1 INTRODUCTION

Brazilian higher education has historically been marked by late education, accelerated expansion, and tensions between democratization and quality. In the twenty-first century, this scenario becomes even more complex in the face of the demands for social inclusion, the pressures for internationalization, the need for pedagogical innovation, and the growing incorporation of digital technologies and artificial intelligence (AI) in the educational process. The contemporary university is called upon to reconcile multiple functions: to train professionals, to produce science, to contribute to social development and to sustain the critical and civic education of students.

These challenges are expressed in different dimensions. On the historical and political level, the expansion of access and affirmative policies stand out, which, although fundamental, did not eliminate inequalities in permanence and quality. On the didactic and methodological level, university teaching faces the need to consolidate its own pedagogy, which goes beyond the mere transmission of content and reproductive logic. On the technological level, possibilities and risks arise associated with the digitalization of teaching and the application of AI, which require critical, ethical and innovative skills from teachers for pedagogical mediation.

The research adopts a qualitative, bibliographic and documentary approach, based on the analysis of reference works and institutional documents. The material was examined in the light of the content analysis proposed by Bardin (2016), which allowed the identification of categories and recurrences linked to historical, political, didactic, methodological and technological challenges. In this way, the methodology articulates theoretical and documentary review with critical reflections on teaching practice in higher education.

The relevance of the study is expressed in two dimensions. On the scientific level, the article contributes to the deepening of studies on university pedagogy, integrating dimensions that are often analyzed in isolation. On the social level, it responds to the need to critically reflect on the social function of the university, on the conditions of teaching work and on the quality of the training of the thousands of students who enter the Brazilian higher education system each year.

The article is organized into three sections, in addition to this introduction and final considerations. The first discusses the foundations and challenges of higher education in contemporary Brazil, articulating the historical-political, didactic-methodological and technological dimensions. The second analyzes the contributions of the philosophy of

education and the psychology of education to the practice of university teaching, based on classical and contemporary authors. The third examines the methodological challenges of teaching in dialogue with digital technologies and artificial intelligence, also bringing a subsection dedicated to public policies for teacher training in the federal government in the period from 2023 to 2025.

## 2 FOUNDATIONS AND CHALLENGES OF HIGHER EDUCATION IN CONTEMPORARY BRAZIL

Brazilian higher education bears marks of a unique historical trajectory. Unlike neighboring countries in Latin America, which since the colonial period already had universities, in Brazil the university model was only consolidated in the twentieth century, as a result of a late and fragmented education. This heritage, added to the elitist character of its first institutions, meant that higher education developed unevenly and with little attention to broader social demands. Over the last few decades, especially since the Federal Constitution of 1988, there has been a movement towards the democratization of access, accompanied by policies to expand vacancies and the internalization of public universities. This process, however, did not eliminate the tensions between inclusion and quality, between massification and commitment to critical education.

On the political level, experiences such as the Support Program for Restructuring and Expansion Plans of Federal Universities (REUNI), implemented in 2007, and the policies of racial and social quotas are concrete examples of measures that have increased enrollment in higher education. The research by Santos, Guzmán, and Bianchini (2023), when analyzing the regional bonus policy at the Federal University of Maranhão, shows that such initiatives not only ensured greater diversity of student profiles, but also pressured institutions to rethink pedagogical practices and permanence mechanisms. However, the democratization of access has not yet been accompanied by an equally solid process of valuing university teaching and investing in adequate teaching conditions. Chauí (2003) warns that the Brazilian university, under managerial and market pressures, runs the risk of losing its critical function, becoming a mere provider of educational services. Morosini (2014) reinforces this point by stating that internationalization and institutional expansion will only make sense if they are accompanied by pedagogical quality and social commitment.

This historical-political framework refers directly to the role of the university professor. The expansion of the number of students and the cultural and social diversity within the

classrooms require more flexible methodologies, attentive to the heterogeneous trajectories and the conditions of permanence of students. In this sense, the teaching practice cannot be limited to the expository transmission of content, but must be configured as a mediating, dialogical and inclusive action. The challenge of university education, therefore, shifts from a teacher-centered model to one oriented to meaningful student learning.

The didactic-methodological dimension of higher education, in this context, gains centrality. For a long time, university teaching was seen as a natural extension of the academic career, without the requirement of specific pedagogical preparation. Almeida (2012) observes that even today many institutions prioritize research as a criterion of prestige and functional progression, relegating teaching to the background. This devaluation contributes to the precariousness of the teaching activity, often reduced to a mere fulfillment of a workload. Almeida and Pimenta (2014), in turn, defend the consolidation of university pedagogy as a field of reflection, responsible for discussing theories, methods and practices specific to higher education. For the authors, valuing teaching means recognizing teaching as a legitimate space for the production of knowledge.

In this sense, Veiga (2011; 2021) proposes the construction of a didactic of higher education, highlighting that teaching practice must be based on careful planning, formative evaluation, and the selection of methodologies that favor student autonomy. Instead of conceiving the classroom as a space of simple transmission, it is necessary to understand it as an environment for the collective construction of knowledge, in which learning takes place through problematization, dialogue and integration between teaching, research and extension. This paradigm shift also implies recognizing that university teaching demands its own competencies, including the ability to mobilize active methodologies, to plan formative experiences and to evaluate in a continuous and procedural way.

The university pedagogical practice, in this scenario, cannot do without the use of Digital Technologies. Kenski (2012) states that technological resources are not mere auxiliary instruments, but elements that transform the forms of communication, reorganize times and spaces and reconfigure the very logic of the teaching-learning process. Moran (2015) reinforces this argument by arguing that active methodologies, when associated with digital resources, stimulate greater student protagonism, foster meaningful learning and enable work with real and contextualized situations.

In recent years, this debate has been intensified by the emergence of artificial intelligence, especially generative AI tools, which pose new dilemmas for the university.

Selwyn (2022) draws attention to the risk of AI reinforcing uncritical automation practices, reducing education to mechanical and standardized processes. For the author, the central question is not to decide whether technologies should be used, but how they can be integrated with clear pedagogical objectives and solid ethical principles. At the same time, the potential of AI to support activities of personalization of teaching, analysis of learning data, and expansion of pedagogical resources opens up new possibilities for teaching practice. The challenge lies in balancing innovation and criticality, taking advantage of technological potential without abdicating the irreplaceable role of the teacher as mediator, advisor and critical trainer.

It is at this point that the three dimensions discussed converge — historical, methodological and technological. Contemporary Brazilian higher education needs professors capable of understanding the historical and political constraints of the university, of designing innovative and inclusive pedagogical practices, and of dealing critically with digital technologies and AI. The practical methodology of the university professor, therefore, must articulate intentional planning, active methodologies, procedural evaluation and critical integration of technology. This set of competencies can contribute to overcoming the tensions between democratization and quality, between massification and critical education, which mark the Brazilian university in the twenty-first century.

Thus, the foundations and challenges of higher education in contemporary Brazil point to the need for university teaching that is, at the same time, scientific, pedagogical and technological. More than specialists in specific areas, university professors are called upon to constitute themselves as education professionals, capable of forming autonomous, critical and creative subjects. University pedagogy, in this context, consolidates itself as a scientific field and as a fundamental social practice to face the demands and contradictions of Brazilian higher education.

## 3 CONTRIBUTIONS OF THE PHILOSOPHY OF EDUCATION AND THE PSYCHOLOGY OF EDUCATION TO THE PRACTICE OF UNIVERSITY TEACHING

University teaching, when thought of beyond technicality, requires foundations that guide purposes, criteria and ways of pedagogical action. In this horizon, the philosophy of education questions **why** and **for what to** teach, while the psychology of education illuminates **how** subjects learn and develop. The articulation of these fields allows the university professor to define principles of action, select coherent methodologies and

evaluate processes with a formative sense, especially in a scenario of democratization of access and technological reconfigurations.

## 3.1 CONTRIBUTIONS OF THE PHILOSOPHY OF EDUCATION

From the beginning of Christian thought, **Augustine (389)** conceives the act of teaching as inner mediation: the external teacher provokes, but it is the **"inner master"** who illuminates learning. Transposed to higher education, this perspective shifts the teacher from the place of "giver of truths" to that of **ethical and intellectual mediator**, who raises questions and helps the student to elaborate meanings proper to knowledge. In practical terms, it means planning classes that stimulate **listening**, **concentration** and **reflection** (moments of guided study, productive silence, personal syntheses), recognizing that learning is also built on interiority.

**John Dewey (1916)** redefines education as an investigative experience and **democratic life.** In addition to "teaching content", training in higher education involves **organizing experiences** that connect theory, practice and real problems. This results in a didactic design that privileges **authentic questions, projects, case studies** and **guided research**, with cycles of action-reflection-action. The teacher becomes **a designer of experiences** and curator of situations that activate thought, collaboration and prudential judgment.

**Paulo Freire (1968)** radicalizes the dialogical principle: "no one educates anyone, no one educates himself, men educate themselves in communion" (1968, p. 47). The university pedagogical relationship is not **banking**, but problematizing; it incorporates the student's prior knowledge and historical condition. The methodological consequence is clear: **generative questions**, critical reading of the world, collective production of knowledge and evaluation as **a practice of freedom** (reasoned self-evaluations, formative feedback and shared rubrics).

The interlocution with difference, dear to mass and plural teaching, is the theme of **Silvio Gallo (2000),** for whom a **pedagogy of difference** shifts the class from a homogeneous pattern to an ecology of voices, rhythms and repertoires. In didactic terms, it presupposes **flexible training itineraries**, multiple ways of evidencing learning (portfolios, projects, prototypes, multimodal trials) and **learning contracts** that negotiate challenging and achievable goals.

In terms of the creation of the new, **Gilles Deleuze (1968)** proposes to think of learning as an **encounter with problems** and the **production of difference**, not as mere repetition.

For university teaching, this implies replacing mechanical exercises with **open**, ambiguous problems with multiple defensible solutions; valuing **processes** (trajectories, attempts, revisions) as much as final **products**; and promoting **criteria of originality** and argumentative consistency in evaluations.

Michel Foucault's (1975) **institutional critique** shows how devices of power and discipline constitute **normalized subjects**. The warning is direct: the university can reproduce practices of surveillance and docilization (rigid standards of attendance, only punitive evaluation, bureaucratic control), suffocating intellectual autonomy. The pedagogical response involves **transparency of criteria, student participation** in the construction of standards, **formative assessment** (which accompanies and transforms) and **less prescriptive curricula**, with spaces for choice and authorship.

In an acute way, **Marilena Chauí (2003)** denounces the **commodification** of the university under the logic of productivity and the customer. Teaching, in this context, tends to be precarious and instrumentalized. Defending the **public function** of the university puts teaching back at the center: institutional time for planning, **pedagogical training** as a policy and recognition of **teaching as a production of knowledge.**

In philosophical synthesis: - the teacher is an **ethical mediator** (Augustine, 389); - organizes **democratic experiences** (DEWEY, 1916); - acts as a **dialogical** and politically situated subject (FREIRE, 1968); - composes **ecologies of difference** (GALLO, 2000); - cultivates **creative problems** (DELEUZE, 1968); - resists normalizing devices (FOUCAULT, 1975); and - affirms the **public** dimension of teaching (CHAUÍ, 2003). Each thesis is translated into **concrete didactic decisions**: from the type of task to the headings, from the pedagogical contract to the form of participation.

## 3.2 CONTRIBUTIONS OF EDUCATIONAL PSYCHOLOGY

On the side of processes, **Jean Piaget (1945; 1975)** shows that knowledge is constructed by **assimilation** and **accommodation**. In didactic terms, this requires **challenging situations** that produce cognitive imbalances, followed by time for reorganization: **graded problems**, sequences with **progression of complexity, scaffolding,** temporary supports, and **guided reviews**. Evaluation follows the development of thought structures, not just the final hit.

**Lev Vygotsky (1934)** introduces the **Zone of Proximal Development** and sociocultural mediation. Learning, at the university, is participating in **communities of**

**practice**: seminars with rotating papers, **peer tutoring**, *feedback* between groups, guided writing workshops, **collaborative reading** protocols. The teacher acts as a **cultural mediator**, offering instruments (concepts, models, languages) and *scaffolding* that is progressively withdrawn, giving autonomy to the student.

From a **humanistic perspective, Carl Rogers (1969)** argues that learning is both **cognitive** and **affective**: personal meaning, **empathy,** and authenticity of the teacher favor engagement and self-regulation. Practical implications: **climate of trust**, feedback that recognizes efforts and processes, **negotiated goals**, spaces for **authorship** and student **voice**. In different classes, the student-centered approach enhances belonging and persistence.

Sigmund **Freud's** psychoanalysis **(1905; 1930)** introduces the dimension of the **unconscious**, of **desires** and **resistances**. In higher education, this guides the teacher to read **pedagogical symptoms** (silences, procrastination, copies) as signs to be interpreted, and not just to punish. Coherent teaching procedures include **clear contracts**, **stable routines**, class start/end **rituals** , **procedural tasks** (portfolios, learning diaries), as well as listening and referral channels when necessary. Recognizing affections and conflicts does not "psychologize" the class, but humanizes mediation and favors **high standards with high support**.

Highlighting the psychological contributions presented: - **design of progression** and productive imbalance (PIAGET, 1945; 1975); - **social mediation** and collaboration (VYGOTSKY, 1934); - **relational climate** and personal meaning (ROGERS, 1969); - **attention to resistances** and non-conscious processes (FREUD, 1905; 1930). Such ideas converge to **active methodologies with support, formative assessment** and **management of the room** as a space of safety and demand.

Integrated practical developments (philosophy + psychology): a) **Planning by understanding**: formulating **observable objectives** that express capacities to **analyze, argue, create** (DELEUZE, 1968; FREIRE, 1968); align tasks and rubrics to these goals; predict **supports** and **revisions** (PIAGET, 1975; VYGOTSKY, 1934). b) **Authentic problems and difference**: proposing **open situations** with imperfect data, assuming **multiple plausible answers**; ensuring **flexible itineraries** and different ways of evidencing learning (GALLO, 2000; DEWEY, 1916). c) **Evaluation as a process**: combining **diagnostic** (mapping repertoires), **formative** (*feedbacks* and resubmissions) and **summative** (synthesis), with **agreed transparent criteria** (FOUCAULT, 1975; CHAUÍ, 2003). Evaluate

**product and path** (drafts, versions, meta-reflections). d) **Relational environment**: institute **clear pedagogical contracts**, opening rituals (guide questions) and closing (paper minutes, *exit tickets*), **empathetic listening** and references for support (ROGERS, 1969; FREUD, 1930). e) **Critical use of technologies**: selecting tools **at the service** of objectives (and not the other way around), with **transparency** and a policy of **integrity**; preferring **non-automatable tasks** and **co-authorship** with process registration (FREIRE, 1968; FOUCAULT, 1975; SELWYN, 2022).

Thus, the philosophy of education offers **ends** and **principles** (ethical formation, dialogue, difference, creation, resistance to normalization and defense of the public), while the psychology of education provides **means** and **processes** (active construction, social mediation, relational climate, attention to the unconscious). The meeting of these fields sustains a **demanding and hospitable university teaching**, which combines **intellectual rigor** and **care, autonomy** and **support, freedom** and **responsibility**. It is from this arrangement that practices capable of responding consistently to the contemporary challenges of Brazilian higher education emerge.

## 4 METHODOLOGICAL CHALLENGES OF THE TEACHER IN HIGHER EDUCATION IN DIALOGUE WITH DIGITAL TECHNOLOGIES AND ARTIFICIAL INTELLIGENCE

The contemporary university professor works in a field tensioned by massification of access, student heterogeneity and accelerated digitalization of academic work. This scenario increases the demand for consistent methodological choices and for a clear definition of what is meant by formative quality. The guiding question remains: - how to sustain a practice that preserves the public and critical function of the university, simultaneously facing inequalities of origin, precariousness of teaching work and the ubiquitous presence of digital technologies and artificial intelligence?

Almeida (2012) observes that the pedagogical training of university professors is still fragile and little institutionalized. In practice, this results in curricula planned from content rather than learning, assessments centered on memorization, and a peripheral or instrumental use of technologies. The methodological response requires institutional policy and continuous professional development, but also classroom decisions that reorient the focus of teaching towards learning, with planning by explicit formative objectives, alignment between objectives, activities and assessment, and study times that combine conceptual deepening and contextualized application.

Almeida and Pimenta (2014) defend university pedagogy as a field that gives academic status to teaching. From the methodological point of view, this implies treating teaching as a production of knowledge and not as a mere transmission. In concrete terms: to explain the formative problem of each subject; select content as a means to solve problems and not as an end in itself; and make evaluation a process of learning investigation, with *feedback* that guides improvements.

Veiga (2011; 2021) proposes the construction of a specific didactic for higher education. This presupposes a course architecture that distributes the work in short cycles of study, investigation and synthesis; that uses active methodologies with gradual levels of complexity; and that adopts continuous formative evaluation. In different classes, it is decisive to foresee different paths to evidence learning: written and oral case studies, group projects with defined and rotating roles, prototypes, analytical essays, and research diaries. The diversity of end products expands authorship opportunities and reduces the reliance on high-stakes evidence as the sole criterion.

The presence of digital technologies reorganizes times, spaces and mediations. Kenski (2012) highlights that it is not just about tools, but about new forms of communication and circulation of information. This requires teacher curatorship and the design of activities that make technology a means to expand reading, writing, and argumentation, and not a shortcut. Moran (2015) shows that active methodologies mediated by digital resources strengthen student protagonism when the student faces real situations, with incomplete data, diverse sources and the need to justify decisions. The use of virtual environments, forums evaluated by criteria of argumentative quality and writing workshops with successive versions reintroduces elaboration time and allows *for more accurate* feedback.

With AI, Selwyn (2022) warns of the risk of uncritical automation. The answer is not to prohibit, but to make explicit pedagogical purposes and ethical limits. On the methodological level, this involves: designing tasks that require conceptual reconstruction, use of field-specific references and process traces; request commented intermediate versions; ask for meta-reflections on the decisions made; and incorporate critical analysis of AI outputs, requiring students to identify biases, gaps, and errors and propose reasoned reviews. When AI is used as support, the student must declare the tool, the purpose, and the impacted excerpt, and answer for the validity and originality of the work.

Student heterogeneity, intensified by inclusion policies, reinforces the need for teaching plans that combine academic demand and support. Santos, Guzmán, and Bianchini

(2023) show that the diversity of trajectories challenges methodological uniformity. Faculty mediation can include initial diagnoses, differentiated study paths, peer tutoring, and transparent evaluation criteria, agreed upon and communicated in advance. Transparency reduces asymmetries and favors students to plan effort and time.

A coherent methodological architecture can be synthesized in four chained movements. First, formulation of learning objectives that describe observable capacities to analyze, argue, solve problems and create. Second, organization of content into authentic problems and cases, with activities that require searching and evaluating sources, comparing models, and decision-making. Third, procedural evaluation with intermediate milestones and careful feedback, allowing reviews and new attempts. Fourth, public syntheses of learning, such as seminars, technical reports, digital posters or commented portfolios, which make visible the trajectory of knowledge construction.

Academic integrity and equity need to be addressed in a pedagogical way. Clear criteria on authorship, citation, and permitted use of digital and AI tools, accompanied by tasks that value process, reduce difficulties and create shortcuts. At the same time, inclusive practices must provide for accessibility of materials, multiple formats of participation, monitoring, and service hours, without giving up rigor. The requirement becomes effective when it is accompanied by support and understandable criteria.

Finally, the management of the teacher's working time is a critical variable. Planning, formative evaluation and monitoring processes takes hours. The institution that values teaching guarantees a workload for planning, continuing education and teamwork. Without this, methodological innovation tends to be episodic and invisible, as Almeida (2012) and Almeida and Pimenta (2014) warn. In summary, the methodological quality results from the intertwining of pedagogical design, lucid technological curatorship and working conditions.

## 4.1 PUBLIC POLICIES FOR TEACHER TRAINING IN HIGHER EDUCATION IN THE CONTEXT OF THE FEDERAL GOVERNMENT (2023–2025)

The methodological analysis of university teaching gains density when connected to public policy measures that focus on financing, physical expansion, student assistance, curriculum regulation, and the incorporation of digital technologies and artificial intelligence. Between 2023 and 2025, fronts that reconfigure working conditions, curriculum design, and classroom practices stand out: budget recompositions and expansion of the federal network; readjustments of scholarships and induction to research and graduate studies;

institutionalization of student assistance; consultations and public hearings of the National Council of Education (CNE) that update course guidelines; and the opening of a public agenda for AI in education. These measures do not replace pedagogical planning, but create or restrict the possibilities of its daily realization.

In the area of physical expansion and infrastructure, the announcement of 100 new campuses of the Federal Institutes, in March 2024, with an investment of 3.9 billion reais via the New PAC and the expectation of 140 thousand new vacancies, directly impacts the demand for teachers, the territorial distribution of offers, and methodologies in interiorization contexts. For teaching practice, internalization tends to increase the heterogeneity of student trajectories and requires competency-based planning, active methodologies, and formative assessment in environments with infrastructure being implemented. Official data confirm the scale of the measure and its federative capillarity.

In the same package, the federal government announced, in June 2024, investments of 5.5 billion reais for federal universities in the New PAC, providing for the installation of ten new campuses (with 60 million reais per campus) and a block of resources for university hospitals. The expansion of the network of teaching hospitals and university campuses has immediate curricular effects on health, engineering and professional areas, by multiplying practice scenarios, internships, integrative projects and teaching articulated with research and extension. The Chief of Staff explained the composition of resources and the regional distribution, reinforced by press coverage of the creation of eight new university hospitals. For the professor, this translates into greater demand for supervision of practices, evaluation in context and theory-practice integration.

In current financing, there were relevant budget recompositions: in 2023, 1.7 billion reais were supplemented for universities and federal institutes; in 2024, 747.3 million; and, in 2025, a new additional recomposition was announced. These reinforcements partially correct accumulated gaps and contribute to the cost, maintenance, and support of academic activities, which directly affects the ability of laboratories to operate, libraries to update collections, campuses to maintain connectivity, and courses to sustain practical experiences. Documents and official communiqués from MEC and Secom consolidate the amounts and their purpose of recomposing the LOA and inflation correction.

The training of teaching staff was also impacted by the readjustment of Capes and CNPq scholarships, announced in February 2023 after a decade without correction: master's degrees from 1,500 to 2,100 reais, doctorates from 2,200 to 3,100 reais, and postdoctoral

degrees from 4,100 to 5,200 reais. The ordinances and official communications record the new values. Although research-oriented, these scholarships integrate the formative ecology of undergraduate studies through monitoring, teaching internships and research groups, strengthening the pedagogical environment in universities.

In the field of student permanence, the institutionalization of the National Student Assistance Program in law (Law 14.914/2024) is a legal framework that gives normative stability to actions of housing, food, transportation, health, digital inclusion, and pedagogical support. Legislative formalization reduces the risk of discontinuity by infralegal act and provides a basis for multi-year planning. Reports and audit by the TCU on the policy indicate, however, historical budget insufficiencies and the need to improve criteria and monitoring, showing that pedagogical effectiveness depends on the binomial academic requirement and material support. The MEC portal details the objectives and scope of the program.

From a regulatory point of view, 2023 and 2024 were years of consultations and public hearings at the CNE on guidelines for initial teacher training and guidelines for undergraduate courses, especially in the areas of health, fashion, and others. This movement revisits competencies, internships, theory-practice integration and evaluation, with a direct impact on the didactic design of the courses and on teaching practice. The official pages bring together public notices and reference texts, and academic entities have registered public hearings, such as the revision of the medical guidelines. For the teacher, these changes require curriculum replanning, items consistent with competencies and expansion of learning scenarios.

The agenda of digital technologies and artificial intelligence began to take public shape at MEC with the holding of seminars and spaces for debate on educational use and ethical principles of AI. Although some of the initiatives focus on basic education, they point to guidelines that tend to have repercussions on higher education: responsible integration of tools, alignment with pedagogical objectives, teacher training and review of evaluation practices. For university teaching, this translates into the need for clear institutional policies on the use of AI, transparency in the declaration of tools, and the design of tasks that privilege conceptual reconstruction, critical analysis of sources, process traces, and public defense of works.

These fronts make up a mixed picture of advances and tensions. The expansion of campuses and hospitals expands opportunities for situated practices, integrative projects and articulation between teaching, research and extension, but requires teaching teams prepared

to operate curricula by competencies, supervise internships and evaluate processes in contexts of interiorization. Budget recompositions relieve pressures and allow the resumption of laboratory and librarianship routines, but their sustainability depends on fiscal predictability and multi-year planning. The transformation of the PNAES into law stabilizes the policy, but the TCU's findings reinforce the historical insufficiency of resources and the need for consistent criteria and monitoring, without which equality of academic opportunity is compromised. The CNE consultations reorient training and demand in-service teacher development. The AI agenda pushes for methodological reconfigurations with academic integrity, avoiding both decontextualized prohibition and uncritical adherence.

From the point of view of teaching practice, some implications are immediate. First, internalization and expansion require intentional didactic planning with active methodologies, differentiated learning paths, peer tutoring, and formative assessment, given the increase in student heterogeneity. Second, the budget recomposition and the readjustments of scholarships must be converted into concrete teaching conditions: operating laboratories, updated libraries, adequate connectivity and institutional workload for planning and *feedback*. Third, the institutionalization of PNAES needs to be integrated with the pedagogical project of the course and academic management, articulating student assistance with strategies for permanence and success. Fourth, the updating of the guidelines by the CNE requires alignment of objectives, contents, internships and evaluation with the competencies of graduates, with transparent rubrics and real practice scenarios. Fifth, AI demands explicit institutional policies and continuous teacher training to design non-automatable tasks, demand transparency in the use of tools, and value authorship, originality, and process.

In summary, between 2023 and 2025 there is a movement to reactivate investments and update regulations that can create more favorable conditions for university teaching, as long as it is accompanied by structuring programs for teacher development, strengthening student assistance, and clear guidelines for digital technologies and AI. The task of institutions is to transform these inputs into effective curricular improvements, with competency-based planning, procedural evaluation, and learning ecologies that favor student authorship, academic integrity, and public commitment of Brazilian higher education.


## 5  FINAL CONSIDERATIONS

The present study started from the guiding question: - what are the main historical, political, didactic, methodological and technological challenges of higher education in Brazil

in the twenty-first century and how do they impact university education and teaching practice? The analysis of theoretical, documental and conceptual sources allowed us to understand that these dimensions cannot be treated in isolation, as they are articulated in a web of conditioning factors that shape the daily life of university teaching.

By revisiting the historical path, it was evident that higher education in Brazil has always been tensioned between the elitist character of its origin and the attempts at democratization, especially intensified in recent decades with the policies of expansion, interiorization and inclusion. However, as demonstrated, expanded access did not guarantee, by itself, student permanence, pedagogical quality or the appreciation of teaching. The central problem identified – the precariousness of the teaching career in a scenario of massification and commodification – remains one of the greatest obstacles to the consolidation of a public and socially referenced university project.

From the didactic and methodological point of view, the research confirmed the diagnosis that there are still significant gaps in the institutionalization of the pedagogical training of university professors. Remnants of a conception that reduces teaching to the mere transmission of contents, subordinated to research as a criterion of prestige, persist. However, the authors analyzed point out ways to overcome this scenario: university pedagogy must be affirmed as a scientific and practical field of its own, capable of offering foundations and methodologies that sustain a critical, creative and socially committed teaching. In this horizon, the valorization of intentional planning, active methodologies, procedural evaluation and dialogical mediation emerges as a structuring axis of teaching practice.

On the technological level, the reflections showed that the integration of digital resources and artificial intelligence cannot be uncritical or instrumental. As Kenski (2012), Moran (2015) and Selwyn (2022) argue, it is a matter of pedagogical design: it is necessary to select technologies at the service of learning, articulating them with clear objectives, ethical criteria and training requirements. When used responsibly, digital technologies expand opportunities for authorship, collaboration, and innovation; When applied uncritically, they reinforce processes of automation and pedagogical impoverishment. The role of the teacher, therefore, is irreplaceable as a reflective mediator, curator of information, and trainer of critical subjects in the face of digital culture and AI devices.

The objectives of the research were achieved by: - contextualizing the Brazilian higher education in its historical, political and social dimensions. - discussing the philosophical and

psychological foundations of university pedagogy, evidencing its relevance to teacher training. - examining the methodological challenges of pedagogical practice in dialogue with digital technologies and artificial intelligence. - analyzing the most recent public policies and their implications for the teaching work. – And by proposing methodological and pedagogical guidelines that articulate social inclusion, teacher appreciation and technological innovation.

Thus, it can be said that the investigation not only diagnosed limits and contradictions, but also pointed out real possibilities for transformation. The research contributes to the strengthening of university pedagogy by showing that teaching practice needs to be understood as a production of knowledge, and not as a mere technical application. It is a field that articulates science, ethics and public commitment, capable of sustaining the social function of the university in a country still marked by deep inequalities.

In addition, the analysis of recent policies (2023–2025) allowed us to identify that, although there have been advances in terms of expansion, budget recomposition, and regulations, the structural challenge of valuing teaching work remains. University teaching continues to demand adequate institutional conditions – time for planning, continuing education, pedagogical support, professional stability, without which any methodological innovation tends to be episodic and fragmented. This is a central point: without investment in careers and concrete working conditions, the university runs the risk of compromising its mission of training qualified professionals and critical citizens.

The research also reinforces that university teaching cannot be thought of only in technical terms, but as a social and political practice. The teacher is called to assume a critical stance in the face of the pressures of commodification and instrumentalization of teaching, defending the public and emancipatory character of the university. In this sense, it is essential that institutions assume teaching as a priority and not just as a bureaucratic obligation.

However, the challenges of Brazilian higher education, whether historical, political, didactic, methodological or technological, are great, but not insurmountable. On the contrary, they constitute opportunities to reinvent teaching practice and to consolidate a university pedagogy capable of dialoguing with student diversity, with the demands of contemporary society and with the potential of digital technologies.

It is necessary to register an optimistic perspective. Despite the difficulties, university professors from the federal, state and private networks have demonstrated resilience, creativity and social commitment. Recent experience shows that, even in the face of precariousness and accelerated transformations, teachers continue to seek didactic,

methodological and technological alternatives that favor meaningful learning and critical training of students. This movement signals that, with the support of consistent public policies, adequate institutional conditions and an academic culture that values teaching, research and extension, university teaching can consolidate itself as a transforming force.

Thus, the present-future time of higher education in Brazil depends, to a large extent, on the collective capacity to articulate scientific rigor, pedagogical innovation and ethical-social commitment. The challenge is real and the possibility of moving towards a more inclusive, critical and emancipatory university can also be. The university professor, in any network, remains the central subject of this transformation, a mediator who, at the same time as facing historical, cultural, social and structural obstacles, also inaugurates new possibilities of teaching, learning and forming citizens for a democratic and solidary society.

## DECLARATION OF CONFLICT OF INTEREST

The authors declare that they have no financial, commercial, professional, academic or personal conflicts of interest that could have influenced the research and preparation of this article.

## REFERENCES

Agostinho, Santo. (1991). De Magistro (Trad. portuguesa: O mestre). Paulus. (Original de 389).

Almeida, M. I. de. (2012). Formação do professor do ensino superior: Desafios e políticas institucionais. Cortez.

Almeida, M. I. de, & Pimenta, S. G. (2014). Pedagogia universitária: Valorizando o ensino e a docência na universidade. Revista Portuguesa de Educação, 27(2), 7–31. https://www.redalyc.org/articulo.oa?id=37437158001

Bardin, L. (2016). Análise de conteúdo. Edições 70.

Chauí, M. (2003). A universidade pública sob nova perspectiva. Revista Brasileira de Educação, (24), 5–15.

Deleuze, G. (2006). Diferença e repetição. Graal. (Original de 1968).

Dewey, J. (1959). Democracia e educação. Nacional. (Original de 1916).

Foucault, M. (1987). Vigiar e punir: Nascimento da prisão. Vozes. (Original de 1975).

Freire, P. (1968). Pedagogia do oprimido. Paz e Terra.

Freire, P. (1996). Pedagogia da autonomia: Saberes necessários à prática educativa. Paz e Terra.

Freud, S. (1996). Três ensaios sobre a teoria da sexualidade. Imago. (Original de 1905).

Freud, S. (1997). O mal-estar na civilização. Imago. (Original de 1930).

Gallo, S. (2000). Pedagogia da diferença: Alteridade, ética e educação. Autores Associados.

Kenski, V. M. (2012). Educação e tecnologias: O novo ritmo da informação. Papirus.

Moran, J. M. (2015). Metodologias ativas para uma educação inovadora. Penso.

Morosini, M. C. (2014). Internacionalização da educação superior: Entre a qualidade e a mercantilização. Educação, 37(1), 5–22.

Piaget, J. (1976). A equilibração das estruturas cognitivas: Problema central do desenvolvimento. Zahar. (Original de 1975).

Piaget, J. (1978). A formação do símbolo na criança. Zahar. (Original de 1945).

Rogers, C. (1978). Liberdade para aprender. Interlivros. (Original de 1969).

Santos, E. dos R., Guzmán, P. R. S., & Bianchini, A. R. (2023). Ações afirmativas na educação superior: A política de bonificação regional na Universidade Federal do Maranhão. Revista Exitus, 13(1). https://portaldeperiodicos.ufopa.edu.br/index.php/revistaexitus/article/view/2420

Selwyn, N. (2022). Education and technology: Key issues and debates (3rd ed.). Bloomsbury Academic.

Veiga, I. P. A. (2011). A docência na educação superior e as didáticas especiais: Campos em construção. Educação, 36(3), 455–464.

Veiga, I. P. A., & Fernandes, R. C. de A. (2021). Por uma didática da educação superior. Autores Associados.

Vygotsky, L. (1991). A formação social da mente. Martins Fontes. (Original de 1934).