BNCC-Computing and teachers' work:
the theoretical-methodological imposition of neoliberal policy[1]

BNCC Computação e trabalho docente:
a imposição teórico-metodológica da política neoliberal

BNCC Trabajo informático y docente:
la imposición teórico-metodológica da política neoliberal

Elma Mota dos Santos Gonçalves[2]
Universidade Federal de Goiás

Jhonny David Echalar[3]
Universidade Federal de Goiás

Abstract: This article examines how BNCC–Computing and the PNED–CNE policy chain reconfigure teachers' work by bringing together curriculum, connectivity, certification, and digital platforms. The analysis is grounded in the critique of value and social metabolism (Marx, 2013; Mészáros, 2008; 2010) and in curriculum theory as the production of identities, articulated with critiques of reforms and neoliberalism (Apple, 2001; Silva, 2011; Harvey, 2008). The method is a dialectical data analysis of texts issued at the federal level and by the state of Goiás (2017–2025), compared with evidence of implementation and work intensification (Echalar, 2021; Peixoto; Carvalho, 2014). The article argues that these documents function as steering apparatuses for both management and pedagogical-didactic work, standardizing goals, timelines, and "evidence" and shifting decision-making to virtual platforms, turning data into an equivalent of pedagogical value. The analysis also points to openings for recontextualization and to governance criteria that may subordinate technical means to the pedagogical project.

Keywords: BNCC-Computing; National Digital Education Policy; Teaching work; Digital Platforms; Educational Policy.

Resumo: Analisa-se como a BNCC-Computação e o encadeamento PNED–CNE reconfiguram o trabalho docente ao reunir currículo, conectividade, certificações e plataformas digitais. Parte-se da crítica do valor e do metabolismo social (Marx, 2013; Mészáros, 2008; 2010) e da teoria do currículo como produção de identidades, articuladas à crítica das reformas e do neoliberalismo (Apple, 2001; Silva, 2011; Harvey, 2008). O método é análise documental dialética de textos das esferas federal e do estado de Goiás (2017–2025), cotejada com evidências de implementação e intensificação do trabalho (Echalar, 2021; Peixoto; Carvalho, 2014). Argumenta-se que tais documentos funcionam como dispositivos de direção tanto da gestão quanto do trabalho pedagógico-didático que padronizam objetivos, tempos e "evidências" e deslocam decisões para as plataformas virtuais, convertendo dados em

---

[2] Graduação em Matemática. Mestranda do Programa de Pós-Graduação em Educação em Ciências e Matemática (PPGECM- UFG), Goiânia, Goiás, (GO) Brasil. E-mail: elmamota@discente.ufg.br; Lattes: http://lattes.cnpq.br/8261022764274317; ORCID: https://orcid.org/0009-0000-9972-7653.
[3] Doutorado em Educação. Docente da Faculdade de Educação da Universidade Federal de Goiás (FE-UFG), Goiânia, Goiás (GO), Brasil. E-mail: jhonnyechalar@ufg.br; Lattes: http://lattes.cnpq.br/5746522784363534; ORCID: https://orcid.org/0000-0002-4056-2804.

equivalente de valor pedagógico. Indicam-se frestas de recontextualização e critérios de governança para subordinar a técnica ao projeto pedagógico.

Palavras-chave: BNCC-computação; Política Nacional de Educação Digital; Trabalho docente; Plataformas Digitais; Política Educacional.

Resumen: Este artículo analiza cómo la BNCC-Computación y el marco PNED-CNE reconfiguran el trabajo docente al integrar currículo, conectividad, certificaciones y plataformas digitales. El artículo se basa en una crítica del valor y el metabolismo social (Marx, 2013; Mészáros, 2008; 2010) y la teoría del currículo como producción de identidad, articulada con una crítica de las reformas y el neoliberalismo (Apple, 2001; Silva, 2011; Harvey, 2008).. El método consiste en un análisis documental dialéctico de textos del ámbito federal y del estado de Goiás (2017-2025), comparado con la evidencia de implementación e intensificación del trabajo (Echalar, 2021; Peixoto; Carvalho, 2014). Se argumenta que dichos documentos funcionan como guías tanto para la gestión como para el trabajo pedagógico-didáctico, estandarizando objetivos, plazos y evidencia, y trasladando las decisiones a plataformas virtuales, convirtiendo los datos en un valor pedagógico equivalente. Se destacan las deficiencias en la recontextualización y los criterios de gobernanza para subordinar la tecnología al diseño pedagógico.

Palabras clave: BNCC-Computing; Política Nacional de Educación Digital; Trabajo docente; Plataformas Digitales; Política Educativa.

Introduction

The renewed push to integrate Computing[4] into the basic education curriculum, formally regulated in Brazil from 2017 onward, takes shape through an arrangement that brings together the National Common Curricular Base (BNCC), the National Digital Education Policy (PNED), the guidelines of the National Education Council (CNE), and the official documents of the different state-level Federative Units (UF). This combination around the construction of curricular frameworks and guidelines defines competencies, objects of knowledge, monitoring instruments and forms of documentation for teachers' pedagogical and didactic work. In this context, technology is forcefully introduced both as a curricular language and as a management apparatus. As a result, teachers' work is reconfigured through targets, deadlines, and data flows

---

[4] In this text, "Computing" appears with an initial capital letter in order to reproduce the category as formulated in federal and state normative acts (BNCC; PNED; CNE reports and resolutions). The term refers to the legal-administrative construct that frames the field within curricula and policies, without implying conceptual adherence on the part of the research. It serves as a marker of normative convention that allows the text to make explicit the critiques and disputes under analysis. Sources: Resolution CNE/CP No. 2, of December 22, 2017; Resolution CNE/CP No. 4, of December 17, 2018; Law No. 14,533, of January 11, 2023; and related state-level regulations.

that grow ever tighter and more closely monitored by the concatenation of different platforms. Through these instruments, the precarization of teachers' work is maintained and deepened, along with the disfiguration of its very core, when such routines are naturalized and solidified in everyday school life (Apple, 2001; Harvey, 2008).

In order to develop an understanding that comes closer to the concrete reality of this movement, this article takes as its analytical starting point the conception of labor as teleological mediation within social metabolism (Lukács, 2018; Marx, 2013; Mészáros, 2008). The school, as a social institution, organizes schedules, systematizes and mediates scientific knowledge, coordinates activities, and certifies learning, which is a requirement of liberal rationality for the organization and role of this institution. This organizational form is anything but neutral, since it expresses productive, economic, and political constraints that bear on pedagogical work, curriculum, assessment, and the use of teaching resources. From a neoliberal standpoint, one can observe that parameterized goals and objectives aligned with accountability reorder state management, and in this scenario teachers come to administer pedagogical "encounters" and spreadsheets of results.

In this context, the BNCC establishes a common competency framework that promotes standardization and measurement, while, in parallel, the PNED weaves together connectivity, fast-track training certifications, and digital platforms, and also structures a permanent monitoring cycle. In a similar and coordinated restructuring move, CNE/CEB Resolution No. 2/2025 sets out procedures and routines that can be verified through quantitative instruments for the pedagogical use of technologies, and basic education system programs move forward with the contracting and implementation of systems designed to materialize these instruments and processes (Brasil, 2017, 2022, 2023; Brasil, 2025). Taken together, this movement leads to the platformization of teachers' work, especially with regard to planning, record-keeping, and assessment.

A Marxist-oriented analysis makes it possible to grasp two movements. The first is the conversion of the curriculum into a performance contract, in which what is measurable tends to define pedagogical value (Apple, 2001; Marx, 2013). The second concerns the intensification of work through tasks of recording, feedback reports, and audits, often without corresponding material conditions (Echalar, 2021; Peixoto; Carvalho, 2014). The "pseudo-concrete" described by Kosík (1976) helps to read the seemingly self-evident surface of dashboards as an alienating totality that conceals the cuts and choices made by decision-makers regarding the intentionality of the managerial move toward platformization.

This article aims to develop a conjunctural analysis on the extent to which BNCC–Computing, in articulation with the PNED and the CNE guidelines, imposes a theoretical-methodological model of technological integration that deepens the determinations of the hegemonic system of production over teachers' work, and to identify the mediations that sustain such a direction. The objectives are to (i) map the normative chain linking curriculum, connectivity, certifications, and platforms; (ii) identify operational thematic units—standardization, measurement, accountability, and platformization; (iii) examine the effects on teachers' time, tasks, and recognition; and (iv) propose criteria for governance and recontextualization.

The analytical process begins with data analysis, grounded in the assumptions of a dialectical perspective, of official texts produced between 2017 and 2025, cross-referenced with empirical findings on implementation in public school systems. The reading draws on elements from the critique of political economy and curriculum theory, articulating totality, mediation, and teleology (Apple, 2001; Lukács, 2018; Marx, 2013; Silva, 2011). The empirical database includes studies on PROINFO[5] and research that has taken teacher education and the use of digital devices in the state of Goiás as its object, treated as singular cases that reveal a broader totality marked by asymmetries and overloads in teachers' work (Echalar, 2021; Peixoto; Carvalho, 2014).

The central argument of this study is that the BNCC–Computing documents and the CNE guidelines operate as instruments for hegemonically steering the National Digital Education Policy. By establishing curricular targets, connectivity requirements, and certifications, these normative instruments turn digital data into a key criterion of value and shift teachers' authorship onto scripts and checklists.

In this scenario, it is worth reaffirming that teaching practice, even under normative prescriptions, may produce recontextualizations, openness to dissent, and teleologically oriented decisions. It is from this relation between the power of teaching practice and the set of regulations on Computing and digital education that the guiding question of this essay emerges: to what extent, and through which mediations do BNCC–Computing, the PNED, the CNE guidelines, and related regulations articulate with the maintenance of the reproductive metabolism of the logic of neoliberal social relations of production in teachers' work?

---

[5] The *Programa Nacional de Tecnologia Educacional – PROINFO* (National Educational Technology Program - PROINFO) was an initiative of Brazil's Ministry of Education (MEC), created in 1997 to promote the use of information and communication technologies (ICTs) in public basic education schools across the country. Its objectives included the establishment of computer laboratories, the training of teachers, and the provision of digital educational content.

The text is organized into four analytical sections. The first one addresses teachers' work and neoliberalism as a hegemonic driving force, situating school work within the social metabolism of capital and competitive rationality. The second one examines guiding documents of the neoliberal policy for integrating technology into teachers' work, mapping BNCC–Computing, the PNED, the CNE, and state regulations as a normative-technical chain. The third part offers considerations on BNCC–Computing and teachers' work, discussing the theoretical-methodological imposition and its mediations over teachers' time, tasks, and recognition.

Teachers' work and neoliberalism as a hegemonic driving force

Teachers' work can be understood within the social metabolism of capital as part of a mechanism that shapes subjects and regulates time and tasks according to a given productivist imperative. At the same time, school organizes the passage of abstract time, distributes tasks, and certifies learning, and this structure is permeated by purposes and intentionalities that stem from economic and political determinations, as well as from class disputes and conflicts (Marx, 2013; Mészáros, 2008). The teacher's position is located at this intersection between the needs of social groups and the interests that emerge within the management of the state apparatus.

Within a neoliberal horizon, the state reshapes its mediations around contracts, metrics, and accountability, adopting a results-based management mode that penetrates school routines through external assessments and continuous reporting, fully integrated into the capitalist social metabolism. When one looks specifically at the curriculum, it comes to be structured around competencies and evidentiary instruments, while school systems establish ranking and comparison indicators for systems, schools, and individuals (Apple, 2001; Harvey, 2008). As a result of this process, teachers end up mediating between pedagogical-didactic work and spreadsheets fed by data from different platforms, so that the lesson no longer ends with the pedagogical act; it continues in records and uploads, now carried out on digital platforms that allow real-time monitoring.

In this sense, when it is guided by this rationality, education and the structures and relations of production form part of the same metabolic mechanism of the social reproduction of the logic of capital. Dialectically, from the standpoint of the ontological dimension of labor, teachers' work is not an appendage in this scenario but a singular activity within a totality in historical movement that bears a twofold character: the reproduction of the dominant ideology and the condition for counter-hegemonic action through revolutionary praxis. The former

because it contributes to the formation of labor power and behaviors functional to capital, and the latter because all practice involves teleology, choice, and cooperation (Lukács, 2018; Marx, 2013). This possibility does not emerge from a voluntaristic act; it arises from social organization, systematic study, and bonds with the community, and the hegemonic school form participates in shaping dispositions toward waged labor, clocked time, and the acceptance of hierarchies (Mészáros, 2008).

Moreover, the "pseudo-concrete" (Kosik, 1976) shows up when charts and dashboards are taken as a concrete reality, as if they represented the whole phenomenon of the quality and outcomes of teachers' work in what is phenomenologically labeled the "digital society." In practice, these graphic elements conceal market-driven choices and interests, through mediations that involve policy, funding, the educational publishing industry, and everyday school life.

In this sense, every decision about curriculum, assessment, and technology needs to answer to two questions: What relation does this decision establish with the logic of surplus value and abstract time? What relation does it establish with the construction of free social time, cooperation, and conscious control over the reproductive metabolism? If the answer leans toward the former, we have reproduction. If it leans toward the latter, we have a tentative crossing. It is in this fold that teachers' work finds meaning and project (Mészáros, 2008).

Thus, analyzing neoliberalism as a "hegemonic engine" makes it possible to understand the direction that currently drives schools and teachers' work, since it redefines their aims through contracts, metrics, and competition, while at the same time turning means into criteria of pedagogical value. As a consequence, when standardized results begin to guide everyday decisions, the school form adjusts to abstract time and the logic of productivity (Apple, 2001; Harvey, 2008). Hegemony is consolidated at the moment when this theoretical-methodological framework comes to seem natural and necessary, even though it generates tensions in teaching practice, and it is at this point that the two questions formulated above gain strength: whom do these decisions serve, and what kind of social time do they construct?

The effects of this rationality fall directly on teachers' time and recognition, as their routines become marked by surveillance of delegated tasks and performance control across different dimensions. When educational management prioritizes targets and results, it turns teachers' work into an activity governed by indicators. In this regard, Kawamoto (2023, p. 104) notes that "the administrative duties of teachers, coordinators, and principals have increased. This shift sidelines the effectiveness of pedagogical responsibilities," revealing that the focus on results turns planning into mere technical execution and undermines the formative dimension of teaching.

Guiding documents of the neoliberal policy for integrating technology into teachers' work

The central documents that structure this agenda in Brazil are the BNCC (2017); Law No. 14,533/2023, which establishes the National Digital Education Policy (PNED) and lays out its areas of action; CNE/CEB Resolution No. 2/2025, which sets guidelines for the use of digital devices in school settings and for the curricular integration of digital and media education; Computing in Basic Education: From Principles to Practice (BNCC–Computing) (2022); the Curricular Document for Goiás (DC-GO) (SEDUC GOIÁS, 2020); and the Digital Education Policy in Schools – Digital Citizenship of Goiás, implemented by Law No. 21,790/2023 (Goiás, 2023). Taken together, these documents form a normative chain that integrates curriculum, connectivity and platforms, certifications, and data-based governance, turning different technological apparatuses into a structuring axis of teachers' work.

As a national curricular policy, the BNCC prescribes competencies and skills and links them to teacher education, materials development, and assessment. By homogenizing the curriculum–teachers' work nexus into a single grammar of measurement, it creates the conditions for a performative and comparative regime. As Zajac and Cássio (2023, p. 12) state, "the individual has been literally placed at the center of official curriculum policy," which reveals a shift from a collective educational project to one that is individualizing and managerial in nature, driven by indicators and results.

In the recent context of education policies that take technology as a central axis of implementation, the National Digital Education Policy (PNED) stands out, organized around four pillars: digital inclusion, digital education in schools, training, and research and development. This policy establishes a continuous circuit of targets and certifications geared toward connectivity and the creation of training pathways and digital repositories. As Zajac and Cássio (2023, p. 3) note, "the BNCC has become the country's major education policy, with the stated intentions of correcting distortions and boosting the quality of education, as well as guaranteeing students' right to learn," which reveals the centrality of a managerial curricular paradigm that also guides the PNED, consolidating dependence on digital platforms as both a benchmark of pedagogical value and a criterion of institutional effectiveness.

This legal framework shifts the focus from pedagogical reflection to technical compliance, and certification becomes the actual criterion of qualification, even though teachers' working conditions remain precarious and unequal. Moreover, pedagogical assessment comes to include the completion of prescribed training pathways, measures of

access to digital resources (clicks and screen time), and the uploading of bureaucratic-administrative information. The result is an integration between education policy and data-industry policy, and teachers' work becomes tied to deadlines and records defined outside the classroom. The PNED thus consolidates the BNCC–digital platforms–management audits circuit within school systems, in an arrangement that reinforces and stabilizes the equivalence between data and education quality.

In addition, CNE/CEB Resolution No. 2/2025 builds a bridge between curriculum and technology by defining procedures for use, storage of devices, training, and monitoring (CNE, 2025). It also turns pedagogical practices into objects of verification through clear protocols, while expanding the scope of pedagogical auditing and stabilizing data collection routines. Responsibility is distributed across schools and school systems, and the platform becomes the instance that validates teachers' work.

Meanwhile, at the state level, the Curricular Document for Goiás territorializes the BNCC (Goiás, 2020), distributing skills by grade level and subject área, guiding planning and assessment. This translation enables contracts, professional development programs, and materials aligned with the standard, and the policy is operationalized through calendars and reports.

The State Law No. 21,790/2023 from Goiás establishes a policy on technologies and digital citizenship (Goiás, 2023), integrating curriculum, digital ethics and online safety, with targets and adherence commitments tied to the safe use of technology and to digital citizenship. In addition, it sets out responsibilities and deadlines for school systems and individual schools, and underpins procurement and training processes that cement the centrality of digital platforms. This policy orientation takes shape in clauses and workflow prescriptions, and the result is the stabilization of the platform as a mandatory medium.

The history of PROINFO in Goiás highlights the mediations and limits of this program with regard to the introduction of devices and connectivity into school environments. Computer labs and internet connectivity, for instance, were introduced unevenly, contributing in an asymmetric way to the variation in focus and depth of continuing education initiatives (Echalar, 2021). Moreover, in practice, the uses of these resources were reconfigured according to local circumstances and conditions, and work intensification emerged without any reduction of the tasks that existed prior to the informatization of school spaces and times. Research on the program has brought to light contradictions between its stated objectives and the material constraints on its implementation.

These texts reveal a vertical chain in which the curriculum sets targets, the law organizes connectivity and certifications, the guideline regulates procedures, the technical

document details sequences, and state regulations territorialize and formalize contracts. This chain produces a data pipeline that feeds comparison and ranking. In this process, the equivalence between data and pedagogical value is consolidated (Apple, 2001), and teachers' daily routines come to follow the logic sequenced and managed by school systems.

This equivalence is sustained by an appearance that conceals and breaks apart the whole, in which dashboards seem to mirror and represent the actual movement of activities inherent to school education. As Kosík (1976) points out, however, what presents itself as an immediate totality is only an appearance that fragments and distorts reality. For the author, everyday thought tends to take the phenomenon as if it were the very essence of things, confusing lived concrete reality with concrete reality as thought. Thus, dashboards display slices of the real, partial and decontextualized representations in which politics hides behind the technical form of charts and items.

Moreover, the selection of knowledge reflects disputes that are not settled solely through indicators, but through the way the very status of educational knowledge is defined. As Saviani (2017, p. 5) states, "education policies are formulated at the intersection of two practical sciences, politics and pedagogy," which implies recognizing that the production and circulation of school content result from this dialectical articulation between theory and practice. In this sense, education policy cannot be reduced to measurable targets, since it involves theoretical choices and pedagogical values that determine what is recognized as valid knowledge.

In this context, external assessment finds a favorable environment, in which items, scales, and reports circulate quickly and guide pedagogical planning, even reorganizing the school calendar around testing windows. In this process, the value attributed to the school comes to be communicated primarily through aggregate indicators, which also become reference points for the recognition of teachers (Apple, 2001), so that the form of the exam tends to shape the very form of the lesson. As a consequence, teachers' work intensifies and fragments, since reports, uploads, and rubrics start to occupy a large share of out-of-class time (Peixoto; Carvalho, 2014), while pedagogical meetings are structured by imposed curves and targets. Pedagogical relationships thus compete with the demands of feeding the system, and the platform's pace ends up redefining the pace of the lesson itself, expanding administrative mediation and broadening the scope of teachers' tasks.

In the same vein, the professional development envisioned in these normative documents tends to be limited to technical compliance, since the proposed training tracks certify only operational and conformity-related competencies. As Kawamoto (2023, p. 63) notes, "the BNCC will serve as the benchmark for undergraduate teacher education programs,

with changes imposed on universities and other training spaces," which highlights the shift in teacher education away from a space of critical reflection toward a logic of curricular standardization and technical instrumentalization. As a result, qualification comes to be evaluated by the fulfillment of protocols and certifications rather than by the collective construction of knowledge.

Moreover, material inequalities put pressure on the implementation of the policy, since connectivity, maintenance, and technical support vary significantly across school systems and individual schools (Echalar, 2021). The same regulation can, therefore, produce different effects, because the platform, far from leveling conditions, tends to reproduce and widen preexisting disparities. In this scenario, it becomes essential that education policy address the concrete costs and logistics of implementation. Otherwise, the technological circuit will only reinforce existing asymmetries.

Although digital rights are guaranteed in the normative texts, their effectiveness depends on each local school system's capacity to establish transparent forms of governance, with clear and auditable rules for data access, storage, and deletion. As Kawamoto (2023, p. 83) observes, "there are spreadsheets and data-monitoring systems, as if these would figure the learning process reality," indicating that the discourse of technological modernization often masks the replacement of democratic management with technical mechanisms of control and surveillance. From this perspective, when school councils cease to function as deliberative bodies and the issue of transparency remains confined to formal statements, the neoliberal orientation that turns data collection into an apparatus for controlling, standardizing, and hierarchizing pedagogical practices is reinforced.

The dialectical reading, in turn, restores teleology and decision-making to the center of the analysis, starting from the recognition that every practice involves purposes, means, and evaluation (Lukács, 2018). Although normative documents guide teachers' work, they do not exhaust pedagogical action, since curricular recontextualizations can shift uses and priorities and, in articulation with projects developed alongside the community, reorganize time and ways of work. In this way, contradiction ceases to be an external or abstract data and becomes a matter of everyday choice, shaped by the concrete mediations of school practice (Mészáros, 2008).

That said, public criteria may limit the documentary fetish by reversing the logic that sustains it: instead of subordinating pedagogical aims to product specifications, those aims must first guide any technical definition. In addition, audits of usage and of effect should take place in an open and transparent manner, so that pedagogical choices are not concealed by the technical form of the instruments. For this to happen, costs and contractual clauses must be

disclosed in an accessible way, and indicators must serve primarily for internal diagnosis rather than for ranking schools or teachers (Saviani, 2017). Ultimately, the parameter to be preserved is the political-pedagogical project, not the statistical dashboard.

Within this horizon, a research agenda can support decision-making by mapping normative chains and associated contracts, identifying data flows and decision points, estimating the impact of data recording on classroom time, comparing metrics with actual learning processes, and documenting teachers' tactics of recontextualization (Saviani, 2017). The political criterion, however, remains the essential filter, since every prescription must be confronted with two questions: does it reinforce the logic of surplus value and abstract time (Marx, 2013)? Or does it create conditions for free social time and conscious cooperation (Mészáros, 2008)? The answers guide whether policies are accepted, rejected, or locally rewritten, as conflict materializes both in everyday microdecisions and in institutional arrangements. It is within this space of struggle that school can shift meanings through organization and critical study.

Thus, the BNCC, PNED, CNE/CEB Resolution No. 2/2025, Computing in Basic Education, the Curricular Document for Goiás, and Goiás State Law No. 21,790/2023 function as guiding frameworks because they couple curriculum, connectivity, certifications, and practice auditing. This coupling stabilizes technological integration in the form of targets, metrics, and contractual logic. Hegemony consolidates when such apparatuses come to regulate time and task; critique, in turn, reconstructs mediations and proposes governance. It therefore falls to teachers' work to reorder priorities through recontextualization, since crossing toward another rationality requires collective organization and public criteria (Mészáros, 2008).

Considerations on BNCC–Computing and teachers' work

BNCC–Computing does not mark the beginning of the digital agenda in basic education; rather, it deepens this process by framing it both as a curricular language and as a management apparatus. In this sense, the BNCC formalizes the ideas of "computational thinking," "digital world" and "digital culture" as dimensions articulated with the general competencies and specific subject components, turning them into reference points for objectives and skills across all stages of schooling (Brasil, 2018). At the federal level, the PNED (Law No. 14,533/2023) structures national policy around four pillars—Digital Inclusion, Digital Education in Schools, Training, and Research & Development—and defines

the articulation among curriculum, connectivity, repositories, and certifications, with corresponding targets and external evaluation processes (Brasil, 2023).

CNE/CEB Resolution No. 2/2025 integrates this architecture into the daily operations of school systems by requiring that national guidelines inform internal decision-making, curricular review processes, and monitoring mechanisms directly linked to the BNCC (CNE, 2025). In the same movement, the document *Complemento à BNCC – Computação* (Supplement to the BNCC – Computing) (BRASIL, 2022) operationalizes this arrangement by organizing charts of competencies, knowledge objects, and sample activities by grade and school year, in a format already compatible with tracking and reporting platforms, thereby reinforcing the logic of standardization and measurement.

Within school systems, this normative machinery takes shape in local provisions. In Goiás, for example, Law No. 21,790/2023 mandates the compulsory participation of schools and the formalization of agreements with public and private entities, linking teacher training, technical support, and usage filters to everyday implementation (Goiás, 2023). As a result, the immediate impact on teachers' work appears in the reconfiguration of planning, evidence, and assessment, which come to be defined by usage policies and procedures incorporated into school bylaws and Political-Pedagogical Projects (PPP) (CNE, 2025).

The National Digital Education Policy (PNED), in its Digital Education in Schools pillar, defines explicit objectives for introducing digital education across all levels and modalities of teaching, encompassing dimensions such as computational thinking, programming, and robotics. By detailing and standardizing the very terms "computational thinking," "digital world," and "digital culture," the document creates an official vocabulary that provides a foundation for school systems to reorganize teachers' working time, content, and tools according to usage targets and digital competency.

Complementing this arrangement, CNE/CEB Resolution No. 2/2025 incorporates these guidelines into the everyday functioning of educational systems by establishing operational norms for the use of digital devices and requiring that they be observed in the organization of school and curricular routines. In doing so, the resolution underpins internal decision-making, curricular review processes, and monitoring and evaluation mechanisms, consolidating the three central pillars — digital culture, digital world, and computational thinking — as structuring principles of school practice.

In the same movement, the BNCC establishes the semantics that link technology to the curriculum by defining "computational thinking," "digital world," and "digital culture" as dimensions articulated with the general competencies and the skills of each subject area and educational stage. By defining "digital culture" as mediated participation and critical use, and

by connecting these competencies to the "world of labor" and to school organization, the document constructs a normative grammar that drives the standardization of objectives, timelines, and instruments (Brasil, 2018).

The "Complemento à BNCC – Computação" (*Supplement to the BNCC – Computing*) translates the BNCC's grammar into grade-by-grade charts listing knowledge objects and sample activities. This technical translation supports scripts, rubrics, and integration with tracking platforms, and in this process, lesson planning comes to follow shared parameters while assessment adopts standardized forms of evidence (Brasil, 2017, 2018, 2022, 2023; CNE, 2025).

From a critical standpoint, neoliberal rationality reorganizes teachers' work along three main axes: through 1) normativity, it is observed that laws and guidelines define the pillars, competencies, and obligations of planning and monitoring; through 2) technical translation, it can be noticed that documents and platforms convert prescriptions into tasks and indicators; and 3) management, it can be spotted that accountability transforms results into criteria of merit and mechanisms for the correction of practices, without addressing underlying inequalities.

This dynamic is not the product of chance; it is the outcome of an institutional engineering that connects laws, resolutions, curriculum, and systems, within which the PNED provides for connectivity, repositories, and data policy. In this arrangement, the 2025 Resolution establishes decision-making and curriculum review processes, and the BNCC sets the language of competencies and skills, so that the combined effect of these elements bears on the temporalities, content, and very ways in which teaching is documented. As Harvey (2008, p. 3) explains, "the role of the state is to create and preserve an institutional framework appropriate to such practices," which means that neoliberal rationality materializes itself in the normative organization that articulates policies, contracts, and legal instruments shaping the very functioning of public education.

In this way, the school we have today is the outcome of a project that shifts education away from a social right and a process of holistic human formation toward a political-administrative arrangement governed by results-based management, whose central measures are targets, usage, and competencies. This reorganization redefines the public meaning of teachers' work, which comes to be governed by deadlines, protocols, and continuous reporting, as teachers are compelled to convert the historical and immaterial process of teaching into interoperable digital data.

Adding another cog to the global managerial engine, at the federative level the current Digital Education Policy implemented in the state of Goiás can be seen as a concrete

expression of this movement. Beyond what has already been discussed, this policy enables the formalization of public–private partnership (PPP) agreements, both for teacher education and for technical support. This process continues what Echalar (2021) identifies and documents regarding the introduction of technologies into the Goiás state school system, namely the ongoing use of technology-integration policies as an instrument for maintaining and deepening corporate logic.

In the same vein, Kawamoto (2023, p. 98) argues that "business leaders and economists decide what they want for public schools, since they implement a model of schooling with educational platforms and government proposals that do not engage in dialogue with students' guardians", which makes it clear that the incorporation of digital technologies in the state school system expresses a corporate rationality that subordinates education to market imperatives.

Critique does not entail rejecting technique or technology; it entails a struggle over the meaning of their use and over pedagogical control of educational means and resources. This is because they are invested with social purposes, and the problem arises when technique itself becomes the criterion of value and the command center of practice. For this reason, connectivity and devices set out in laws and resolutions must be subordinated to formative aims defined in the political-pedagogical project (Saviani, 2017). In this sense, we understand that school work intensifies the separation between conception and execution. This occurs because curricula designed outside the school, training delivered through partnerships, and materials aligned with the BNCC shift decisions about means and sequencing, while teachers are called upon to carry out tasks and produce evidence, so that pedagogical authorship gives way to data governance.

From the standpoint of the state, the National Digital Education Policy (PNED) and CNE/CEB Resolution No. 2/2025 combine normative coercion with inducement. While the former sets obligations and parameters, the latter makes funding and technical support conditional, allowing digital policy to permeate school bylaws, Political-Pedagogical Projects (PPPs), and assessment procedures. To operationalize this orientation, the "Complemento à BNCC – Computação" (*Supplement to the BNCC – Computing*) plays a manualizing role, organizing knowledge objects by grade level and school year and facilitating their coupling with digital platforms. This document enables management to translate lessons into auditable sequences and pedagogical experience into monitorable tasks, creating the risk of an inversion between means and ends (Brasil, 2023; CNE, 2025; Silva, 2011).

An evident tension thus emerges, since the promise of critical participation set out in the BNCC stands in direct contrast to the usage controls established in the Resolution, which

mandates monitoring policies and guidance directed at families. It is therefore crucial that this contradiction between discourse and the materialization of policy be confronted within school planning and evaluation, so that technology does not become a rule of conduct and na apparatus of surveillance, but rather a genuine mediation for learning.

In the current conjuncture, teachers' work becomes the main vector of implementation, since targets and platforms operate as remote command instruments over the pedagogical process. Moreover, the struggle over working conditions and over the formative meaning of schooling requires recentering the political-pedagogical project as the key decision-making arena and reopening space for the selection of content, the organization of instructional time, and formative assessment under the control of the school community. At the level of research, this agenda unfolds along three interconnected fronts. It is necessary to analyze platform contracts and data flows, to study working time and its impacts on teachers' health, and to investigate how BNCC/PNED are translated into practice in school systems such as that of Goiás, so that critique may operate both at the level of decision-making and in the classroom itself (Echalar, 2021; Peixoto; Carvalho, 2014).

In light of the critique to the capitalism and managerial forms, neoliberalism in education operates as a guiding force that aligns the state, corporations, and curriculum. Its aim is to regulate behavior and manage the preparation of the labor force. In this context, resistance movements must confront this institutional engineering by contesting what is taught, how it is taught, and by what means it is taught (Harvey, 2008; Mészáros, 2008).

Therefore, this struggle requires reconstituting teachers' authorship and autonomy, expanding collective deliberation in line with a democratic approach to school governance, and redirecting the integration of digital technology on the basis of educational purposes defined by the school community itself. At the level of policy and work, this means subordinating connectivity and platforms to the pedagogical project and recognizing planning time, school collectives, and non-standardized assessment as key instruments for analyzing the quality of public education.

Conclusions

In light of the foregoing, the analysis has shown that the insertion of computing and platforms into everyday school life stems from a normative chain that converts curricular targets into performance contracts. For example, the BNCC, the PNED, and the CNE guidelines, territorialized by state regulations, stabilize patterns of measurement and

accountability. As a consequence, data comes to function as an equivalent of pedagogical value, while teachers' work is reconfigured around records, uploads, and recurring audits.

The technical fetish, expressed in the dashboards' appearance of totality, sustains the naturalization of political choices as if they were neutral imperatives. This appearance conceals inequalities in infrastructure, asymmetries in support, and variations in working conditions. In this regard, the critique of the "pseudo-concrete" invites us to place processes and mediations back at the center of analysis, replacing the immediacy of indicators with the reconstruction of the formative trajectory (Kosik, 1976).

From the standpoint of teachers' work, there is a clear intensification: out-of-class working time has been extended, administrative tasks have accumulated, and planning has been made to converge around testing windows. The separation between conception and execution tends to deepen when the curriculum is parameterized by learning tracks and checklists. In this dynamic, pedagogical authorship cedes ground to data governance, with consequences for teachers' recognition and health (Peixoto; Carvalho, 2014; Echalar, 2021).

Besides, the categories of the critique of political economy and the ontology of labor provide a critical yardstick for curricular and technological decisions: on one side, their relation to surplus value and abstract time; on the other, the creation of free social time and conscious cooperation. This yardstick makes it possible to distinguish between reproduction and a tentative crossing within everyday school routines, without resorting either to voluntarism or technicism (Lukács, 2018; Marx, 2013; Mészáros, 2008).

Meanwhile, at the school level, curricular recontextualization and collective deliberation restore teachers' authorship. Agreements with the community regarding assessment, timing, and the use of digital resources open space for inquiry, student authorship, and the documentation of learning processes rather than mere outcomes. This way, technology can serve cooperation when it is accompanied by protected time for study and planning, stable support, and professional development conceived as action research.

Therefore, the theoretical-methodological imposition identified is not the destination. It is a hegemonic direction sustained by norms, contracts, and metrics, open to contestation through public criteria and the organization of work. On the other hand, reconstructing mediations makes it possible to place the pedagogical project back at the center of decision-making. In this fold between reproduction and crossing, teachers' work finds meaning and horizon.

References

APPLE, Michael Whitman. *Educação e poder*. Tradução de João Menelau Paraskeva. Porto: Porto Editora, 2001. 243 p. Título original: *Education and Power*.

BRASIL. *Base Nacional Comum Curricular*. Brasília: MEC, 2017. Disponível em: https://basenacionalcomum.mec.gov.br/images/BNCC_EI_EF_110518_versaofinal_site.pdf . Acesso em: 15 out. 2025.

BRASIL. Conselho Nacional de Educação. Câmara de Educação Básica. *Resolução CNE/CEB nº 2, de 21 de março de 2025*. Diretrizes operacionais sobre o uso de dispositivos digitais e integração curricular de educação digital e midiática. Diário Oficial da União: seção 1, Brasília, DF, 24 mar. 2025. Disponível em: https://www.gov.br/mec/pt-br/cne/2025/marco/rceb002_25.pdf Acesso em: 15 out. 2025.

BRASIL. *Parecer CNE/CEB nº 2/2022, aprovado em 17 de fevereiro de 2022 – Normas sobre Computação na Educação Básica – Complemento à Base Nacional Comum Curricular (BNCC)*. Brasília: MEC/CIEB, 2022. Disponível em: https://portal.mec.gov.br/index.php?option=com_docman&view=download&alias=235511-pceb002-22&category_slug=fevereiro-2022-pdf&Itemid=30192 Acesso em: 15 out. 2025.

BRASIL. Presidência da República. *Lei nº 14.533, de 11 de janeiro de 2023*. Institui a Política Nacional de Educação Digital (PNED). Diário Oficial da União: seção 1, Brasília, DF, 11 jan. 2023. Disponível em: https://www.planalto.gov.br/ccivil_03/_ato2023-2026/2023/lei/l14533.htm Acesso em: 15 out. 2025.

ECHALAR, Jhonny David. *Políticas de inserção de tecnologias digitais como instrumento de reforma na rede estadual de ensino de Goiás (2007–2017)*. 2021. Tese (Doutorado em Educação) – Universidade Federal de Goiás, Goiânia, 2021.

GOIÁS (Estado). *Lei nº 21.790, de 2 de fevereiro de 2023*. Institui a Política de Educação Digital nas Escolas – Cidadania Digital. Goiânia: Assembleia Legislativa do Estado de Goiás, 2023. Disponível em: https://legisla.casacivil.go.gov.br/api/v2/pesquisa/legislacoes/106720/pdf Acesso em: 15 out. 2025.

GOIÁS. *Documento Curricular para Goiás* – Etapa Ensino Fundamental. Goiânia: SEDUC-GO, 2020. Disponível em: https://goias.gov.br/educacao/wp-content/uploads/sites/40/2020/08/80d3d5d8ac56f920562e29f5ef9785df-2cf.pdf Acesso em: 15 out. 2025.

HARVEY, David. *O neoliberalismo: história e implicações*. Tradução de Adail Sobral e Maria Stela Gonçalves. São Paulo: Edições Loyola, 2008. 256 p. Título original: *A brief history of neoliberalism*.

KAWAMOTO, Roberta dos Santos Piedras. *A gestão da rede pública de ensino no Estado de Goiás, frente às políticas neoliberais entre 2011 a 2021*. 2023. 115 f. Tese (Doutorado em Educação) – Escola de Formação de Professores e Humanidades, Pontifícia Universidade Católica de Goiás, Goiânia, 2023. Disponível em: https://tede2.pucgoias.edu.br/handle/tede/4972. Acesso em: 15 out. 2025.

KOSÍK, Karel. *Dialética do concreto*. Tradução de Célia Neves e Alderico Toríbio. 2. ed. Rio de Janeiro: Paz e Terra, 1976. 230 p. (Rumos da cultura moderna, v. 26). Título original: *Dialektika Konkrétniho*.

LUKÁCS, György. *Para uma ontologia do ser social.* Tradução de Sergio Lessa; revisão de Mariana Andrade. 1. ed. Maceió: Coletivo Veredas, 2018. 1457 p. (Obras de Georg Lukács, v. 14). Edição bilíngue. ISBN 978-85-92836-31-3.

MARX, Karl. *O capital:* crítica da economia política. Livro I – O processo de produção do capital. Tradução de Rubens Enderle. Apresentação de Jacob Gorender; advertência de Louis Althusser; considerações sobre o método de José Arthur Giannotti. São Paulo: Boitempo, 2013. 894 p. (Marx-Engels, Obras escolhidas).

MÉSZÁROS, István. *A educação para além do capital.* Tradução de Isa Tavares. 2. ed. São Paulo: Boitempo, 2008.

PEIXOTO, Joana; DE CARVALHO, Rose Mary Almas. Formação para o uso de tecnologias: denúncias, demandas e esquecimentos nos depoimentos de professores da rede pública. *Revista Educativa-Revista de Educação*, v. 17, n. 2, p. 577-603, 2014. Disponível em: https://seer.pucgoias.edu.br/index.php/educativa/article/view/3961 Acesso em: 15 out. 2025.

SAVIANI, Dermeval. Epistemologias da política educacional: algumas precisões conceituais. *Revista de Estudos Teóricos y Epistemológicos en Política Educativa*, v. 2, p. 1-5, 2017. Disponível em: https://revistas.uepg.br/index.php/retepe/article/view/10477 Acesso em 15 Out. 2025.

SILVA, Tomaz Tadeu da. *Documentos de identidade:* uma introdução às teorias do currículo. 3. ed. Belo Horizonte: Autêntica, 2011. 156 p. (Coleção Estudos Culturais em Educação).

ZAJAC, Danilo Rodrigues; CÁSSIO, Fernando. A aprendificação da pedagogia das competências na BNCC. *Educação & Sociedade*, v. 44, p. e270962, 2023. Disponível em: https://www.scielo.br/j/es/a/MJFV5YdC3q8xdNWxnkdLd9d/ Acesso em: 15 out. 2025.