

## PLATFORMIZATION IN THE EDUCATIONAL CONTEXT: IMPLICATIONS AND CHALLENGES FOR TEACHING WORK



**Raquel Pinheiro Matiola**

Universidade Federal de Santa Catarina (UFSC), Florianópolis, Santa Catarina, Brasil.  
[matiolaraquel@gmail.com](mailto:matiolaraquel@gmail.com)



**Rafael dos Santos**

Universidade Federal de Santa Catarina (UFSC), Florianópolis, Santa Catarina, Brasil.  
[rafael.santos.r@posgrad.ufsc.br](mailto:rafael.santos.r@posgrad.ufsc.br)



**Alaim Souza Neto**

Universidade Federal de Santa Catarina (UFSC), Florianópolis, Santa Catarina, Brasil.  
[alaimenergia@gmail.com](mailto:alaimenergia@gmail.com)

**Abstract:** The objective of this study is to critically analyze platformization in the educational context, its implications for labor, and its market-oriented bias. The methodology is based on a theoretical-conceptual and bibliographic study, using a literature review for data collection and analysis of the phenomenon under investigation. The results indicate that platformization intensifies and precarizes teaching work, representing a new form of exploitation in favor of capital.

**Keywords:** Education; Platformization; Teaching Work.

### A PLATAFORMIZAÇÃO NO CONTEXTO EDUCACIONAL: IMPLICAÇÕES E DESAFIOS

**Resumo:** O objetivo deste estudo é analisar, de forma crítica, a plataformação no contexto educacional e suas implicações ao trabalho, além do seu viés mercantilista. A metodologia adotada se baseia em um estudo teórico-conceitual e bibliográfico, utilizando a revisão de literatura para coleta de dados e análise do fenômeno estudado. Dos resultados, tem-se que a plataformação intensifica e precariza o trabalho docente, sendo uma nova forma de exploração em prol do capital.

**Palavras-chave:** Educação; Plataformização; Trabalho Docente.

## LA PLATAFORMIZACIÓN EN EL CONTEXTO EDUCATIVO: IMPLICACIONES Y DESAFÍOS PARA EL TRABAJO DOCENTE

**Resumen:** El objetivo de este estudio es analizar críticamente la plataformización en el contexto educativo y sus implicaciones para el trabajo, además de su sesgo mercantilista. La metodología adoptada se basa en un estudio teórico-conceptual y bibliográfico, utilizando la revisión de literatura para la recolección de datos y el análisis del fenómeno estudiado. Los resultados indican que la plataformización intensifica y precariza el trabajo docente, constituyendo una nueva forma de explotación en favor del capital.

**Palabras clave:** Educación; Plataformización; Trabajo Docente.

Received on: 02/05/2025

Accepted on: 09/08/2025

## 1 INTRODUCTION

The technological expansion, which has accelerated in recent decades, has caused economic and social transformations on the global stage, bringing impacts and modifications to labor relations. Among these, we can mention precariousness, overwork, the reduction or substitution of living labor by dead labor, and the loss of intellectual autonomy.

Industry 4.0 brings with it a new reality in work methods, such as teleworking through digital platforms and the use of applications. At first glance, these artifacts seem to facilitate laborious routines, but, contradictorily, they generate uninterrupted work that extends into all the time the worker has available, including leisure, since "[...] teleworking can be done totally or partially remotely, anywhere, as long as there is a computer or cell phone and an internet connection" (Previtali; Fagiani, 2020, p. 218).

The main consequence of Industry 4.0 for the world of work will be the expansion of dead labor, to recall Marx, with digital machinery—the ‘internet of things,’ artificial intelligence, 3D printing, big data, etc.—as the dominant and driving force of the entire production process, leading to the consequent reduction of living labor, made possible by the substitution of traditional and more manual activities with automated and robotic tools, under digital-informational command (Antunes, 2020, p. 14).

This scenario has rapidly entered the educational field and, although it is not a current reality, it has intensified in recent years with COVID-19, when schools were forced to change their in-person pedagogical practice—which was not possible due to social distancing—to a virtual one, using digital technologies, primarily relying on platforms as support.

Platformizing education necessarily means abandoning—whether due to an emergency like Covid-19 or because the Internet is now part of our lives—a world we have dealt with and experienced for centuries to enter an environment of new technopolitical determinations. If this process is accompanied by the entry of new service providers, who sustain themselves by exploiting advertising activities based on data surveillance, the challenges become even more intense (CGI.br, 2022, p. 8-9).

The platformization of education has rapidly gained ground worldwide. It is important to emphasize that, in a capitalist society, "[...] technology is not simply constituted by scientific progress, devoid of interest, detached from the context of the mode of production to which it belongs" (Souza; Valer, 2022, p. 334), and much less a miraculous panacea that will solve all the ills of

education (Gonzales, 2024). It is therefore established that "[...] technology is not neutral; it often performs a necessary and utilitarian function for the productive system" (Souza; Valer, 2022, p. 334-335).

Therefore, we cannot take a naive view of what various authors have called platformization. It is not a simple digitized transposition of the institutions that were historically built and matured until the 20th century. It is an accelerated reinvention of social relations that now occur on a new plane, with specific technical characteristics and populated by some old, but certainly new actors, often with disproportionate power in the dispute (CGI.br, 2022, p. 6).

Based on the foregoing, central questions arise, such as: what are the contradictions of the phenomenon of educational platformization and its impacts on teaching work and activity? This question guides the research as it highlights the contradictions present in this contemporary phenomenon of platformization and its impacts on teaching work.

The objective of this study is to critically analyze platformization in the educational context regarding its implications for work and its mercantilist bias in meeting the demands of capital. To this end, the study was divided into two chapters: the first will address platformization in education, and the second will deal with the impacts of platformization on teaching work.

## 2 METHODOLOGY

The adopted methodology is based on a theoretical-conceptual and bibliographic study, using a literature review for data collection and the analysis of the phenomenon of platformization in education. The literature review constituted the theoretical core of the study, and was conducted based on a critical-dialectical perspective, epistemologically grounded in Historical-Dialectical Materialism. According to Martins and Lavoura (2018, pp. 224-225):

Scientific investigations, which use dialectical and historical materialism as their methodological framework for analysis, have as their central premise the need to understand and explain the investigated objects and phenomena exactly as they truly are in practice. Given this, there is a crucial analytical assumption that must be made explicit: the epistemological dimension of scientific knowledge that allows humanity to systematize a set of postulates about how it is possible to know natural and social reality.

The sources were located in the academic databases Scielo and Scopus due to their scientific relevance and academic impact. The time frame for the investigation is from 2015 to 2024, owing to



the significant technological advancements and social changes impacting the educational field, such as the popularization of digital technologies, the advancement of neoliberal educational policies concerning the adoption of digital technologies, the context of the COVID-19 pandemic, and the window of opportunities that opened up for digital platforms during this period.

As search engines, specific descriptors were used to systematize the research, such as "platformization," "platformization in education," "mercantilization of education," "neoliberalism," and "teaching work." The terms were combined with Boolean operators "and" and "or" to broaden or refine the results, ensuring a well-grounded selection of relevant and up-to-date studies. Initially, 32 articles were identified. After reading the titles, abstracts, and keywords, the inclusion and exclusion criteria were applied.

The following filters were applied as inclusion criteria: articles published in journals; a time frame from 2015 to 2024; articles directly related to the object of this study; and authors who connect their studies with the category of labor. The exclusion criteria encompassed: a lack of direct relation to the object of study, addressing platformization generically; perspectives on platformization that are misaligned with the critical theoretical framework and do not problematize the commodification of education; and productions that approach technologies from an idealistic, superficial, and instrumental perspective. At the end of the refinement process, seven articles were selected to form the corpus of the analysis.

The analysis of theoretical data was conducted through a critical and systematic interpretation of the selected studies, as it is understood that, from a materialist perspective, "[...] theoretical knowledge is the knowledge of the object, the knowledge of its real movement reproduced in thought" (Martins; Lavoura, 2018, p. 226). Therefore, the aim was to identify the tensions, contradictions, and implications in the discourses on the platformization of education, especially concerning teaching work. The theoretical data analyzed refer to the conceptions, concepts, and analytical categories encountered. To systematize the data analysis, two categories were prioritized: Commodification of Education and Impacts and Challenges in Teaching Work, which served as the structural axes for this study.

During the analysis of the selected works, the authors and additional works mentioned in the references of the analyzed texts were identified. The new authors were incorporated into the set of analyzed references because they are directly related to the object of study. The systematization of



data analysis allowed for a critical discussion of the theoretical frameworks in relation to the object of study, offering a critical and substantiated interpretation of the phenomenon of platformization.

### 3 PLATFORMIZATION IN EDUCATION

Platformization is a phenomenon that affects all sectors of society, and education is no exception, as it is part of this context. We emphasize that the history of this phenomenon is not recent. According to Berrío-Zapata, Rodrigues, and Gomes (2019, p. 361), “[...] the history of platforms begins with the arrival of the internet in the 1990s. Information Systems (IS) ran on ONE networks and desktops, characterized by a closed and modularized architecture.”

The term 'Platformization' or 'platform society' describes the way in which human life, its economic and social interactions, are influenced by a global ecosystem of online digital platforms. These platforms operate with the support of AI algorithms that utilize vast datasets (Big Data) to shape experiences and interactions. (Evangelista, 2024, p. 27).

Platforms are now part of our daily lives and influence human relationships, as they “[...] have become intermediaries or mediators of sociocultural practices in contemporary life for millions of people connected to digital networks” (Rodrigues, 2020, p. 9). In a celebratory view, they bring the false sense of life facilitation without problematizing their contradictions. However, from a critical perspective, it becomes evident that “Industry 4.0 is, thus, another step in productive restructuring aimed at increasing corporate profitability and the exploitation of labor” (Previtali; Fagiani, 2020, p. 217).

Regarding education, platformization was already being implemented even before the COVID-19 pandemic. However, during the pandemic, a scenario emerged that represented a window of business opportunities and intensified this process (CGI, 2021). Nevertheless, given the impossibility of in-person classes, non-presential classes (online and offline) became a possibility for the continuity of pedagogical work, since “[...] the pandemic is thus configured as an opportunity for the acceleration of technological solutionism in education” (CGI.br, 2021, p. 23).

With the requirement that public schools develop pedagogical activities through digital platforms such as Google Classroom, Meet, Zoom, Padlet, Duolingo, WhatsApp, and others, the social chasm between classes was further exposed, bringing forth various challenges for schools, especially for teachers. The lack of teacher training for digital tools, digital exclusion, and the absence



of technological infrastructure—such as the lack of connectivity and computers or cell phones for studying at home—were some of the contradictions amidst the process of intensifying the use of platform-based technologies.

[...] schools had to rely on remote possibilities to provide content and online classes, given the impossibility of students, teachers, and other school staff working in person; consequently, old problems and challenges related to digital inclusion took on new dimensions (Evangelista, 2024, p. 65).

Given the expansion of the platformization phenomenon, we need to remain attentive and vigilant, moving from unreflective awareness to philosophical consciousness<sup>1</sup>, in order to understand what is obscured amidst the interests of Big Techs, large technology corporations, in public education. In a critical approach, Gonzales (2024, p. 343) states that:

A path to follow is to resume critical and radical reflection on technologies and educational goals, as well as to consider the kind of human beings one intends to shape and the relationship among politics, education, and society, countering the views that argue this reflection is a counterproductive act or that a mere 'paradigm shift' is sufficient for teachers.

The politicization of the technological discussion is necessary, and, above all, it must be understood within the educational context amidst economic, political, and social relations (Evangelista; Cruz, 2024), considering that “technology is a comprehensive way of acting upon the world, but it responds to the hegemonic interests involved in its production and in the market where it circulates” (Evangelista; Cruz, 2024, p. 15-16). Beyond their mere use, in a capitalist society, technologies serve capital and the large corporations that dominate the global landscape.

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<sup>1</sup>According to Saviani, 'Philosophical consciousness is reflection, but not just any reflection. It is radical reflection, which seeks to examine phenomena in depth. It is methodical, systematic reflection, which therefore proceeds by determined methods. And it is comprehensive, that is, it seeks to examine phenomena in their context, in their totality'" (Martins; Resende, 2021, p. 300).





The class struggle manifests itself in educational policies, where hegemonic business sectors dispute control over educational agendas. These forces conflict with the representations of the working class, which oppose the capital project, as evidenced by the neoliberal reforms that have advanced intensely in recent decades. These assumptions reinforce the idea that we cannot understand education and the role of the school outside this context of conflict (Sena, 2024, p. 216).

Large technology corporations have various interests in public education, the first of which is data collection, particularly because "these platforms operate with the support of AI algorithms that use vast datasets (Big Data) to shape experiences and interactions" (Evangelista, 2024, p. 27). Obtaining data through the use of platforms in the work relationship is linked to control and surveillance, but we cannot dissociate it from capitalization.

Algorithms are, on the one hand, crucial components of new mechanisms for managing and controlling work, but, on the other hand, they cannot be explained solely in terms of themselves, without considering the imbrication of financialization and datafication amid the totalization of an entrepreneurial neoliberal rationality (Grohmann, 2020, p. 96).

In education, platformization has been characterized by a growing transfer of public responsibilities and resources to private actors, reinforcing market logic in a field that should prioritize the collective interest. This dynamic is often normalized under the discourse of technological innovation, which ultimately obscures fundamental debates about digital sovereignty and the role of the State in guaranteeing equitable access to education. Lopes, Santo Filho, and Iora (2023, p. 283) warn about the strengthening, legitimization, and prominence of private initiative in education, given that "[...] there is a risk that, in the absence of an in-depth debate about the production of public digital platforms, the solution found will be to leverage public resources for private initiative."

Platformization also brings other implications for public education, essentially because "[...] the technocratization of education opens space for an uncritical, content-focused education with increasingly less interference from the teacher" (Evangelista; Cruz, 2024, p. 16). The change in the form of hiring (Uberization<sup>2</sup>) and the precariousness of the teaching profession are also consequences of the platformization phenomenon. Furthermore, "[...] digital education is concerned with the constant surveillance of students and teachers through the mining and processing of mass data" (Evangelista, 2024, p. 41).

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<sup>2</sup> "Uberization is a process in which labor relations are increasingly individualized and invisibilized, thus assuming the appearance of 'service provision' and obliterating the relations of wage labor and labor exploitation" (Antunes, 2020, p. 11).



From a critical-dialectical perspective, we must be attentive to the apparent new form of work that Industry 4.0 seeks to incorporate into the educational field, characterized as surveillance capitalism (Zuboff, 2021) or platform capitalism (Van Dijck; Poell; Waal, 2018). It is necessary to transcend both the technophobic and technocratic views, seeking to understand the use of these artifacts in all their dimensions.

Thus, we, as teachers, have viewed the relationship between technology and education from a perspective that has become a self-inflicted trap. If we consider technologies to be the redeemers of educational problems, we must then resolve these problems through their use; if we take them as the origin of a limiting education, we must reject them at all costs. Either way, we have considered technologies in isolation from the multiple dimensions that constitute them (Peixoto, 2023, p.14).

Given the scenario of the platformization of education, education workers must confront the situation of precariousness, exploitation, and expropriation that is present and deepening with the advance of capitalism. There are many challenges in confronting Industry 4.0, considering the attack on education and working conditions.

Teachers in basic education assume the important and difficult task of resisting the ideological imperatives of capital, which are founded on a non-critical conception of science and an authoritarian perspective of education, aiming to promote a conformist subjectivity. It happens that no matter how great and profound the destructive process of the capitalist order may be, there is no control without resistance (Previtali; Fagiani, 2020, p. 235).

As an alternative to mitigate the fragmentation of the working class in the face of the platformization phenomenon, Grohmann (2020) proposes: a) regulation of work on digital platforms; b) collective organization of workers; c) construction of other logics for organizing work. For Antunes (2020, p. 22), "[...] the new morphology also enables the flourishing of a new morphology of social struggles, self-organization, and new forms of representation."

Beyond critique, but also attentive to the pedagogical issue, "[...] it is necessary to consider the use of technologies in educational work in a way that does not reduce the teacher's role to a mere organizer of the learning environment, nor human development to a simple accumulation of competencies and skills" (Gonzales, 2024, p. 343). The confrontation of this perverse educational project will be achieved by overcoming unreflective consciousness and through struggles, resistance, and collectivity, in favor of public education of socially referenced quality.



#### 4 PLATFORMIZATION IN TEACHING WORK

Platformization is reaching schools within a context of technological explosion that, in its entirety, is generating rapid transformations across society. This phenomenon has been essentially driven by the adoption of digital technologies in the teaching-learning process, systematically leading to a heightened prominence of digital platforms in schools, often replacing the teacher. This requires critical reflection within the scope of initial teacher training and continuing education, as it is a scenario with profound implications and challenges, given that platformization in schools aligns with market logics that prioritize efficiency, standardization, and control over the educational process (CGI.br, 2022). Seki (2024, p. 338) argues that platforms "[...] allow school management to have real-time control over the pace of content delivery per class for their teachers and students, standardization of assessments, data on students' behavioral interactions with digitized materials, etc." The platformization of education, by introducing digital technologies as protagonists in the teaching process, places the teaching profession at the center of discussions due to the complexity and contradictions that are emerging in this process.

One of the challenges that has emerged, characterized as the focus of this study, is teaching work involving digital technologies, which has caused contradictions precisely because, at the same time that large technology companies offer superficial and instrumental training merely for handling devices, they also end up "[...] creating a growing dependence of the educational sector on the services offered by large digital platforms" (CGI.br, 2022, p. 15). Contradictorily, teaching work is reconfigured within a logic that tends to dehumanize human development, subordinating pedagogical practice to the dynamics of digital platforms (Lima Filho, 2010). The process of relativizing teaching work inevitably makes learning vulnerable to the interests of digital platforms and large corporations, which see education as a highly profitable and lucrative environment.

The discourse of innovation, instrumentalized by digital platforms, which was adopted to portray technologies as tools that enhance teaching work under market conditions, essentially promotes a masking of the reproduction of exclusions and precariousness. According to Sena (2024), "[...] digital technologies are not tools like the hammer, the sickle, the knife; they are cultural contents, or rather, social mediations that can only be understood in relation to other mediations" (Sena, 2024, p. 201).

The reductionist and uncritical view of technologies as mere technical instruments ignores



their insertion into a broad context, permeated by cultural, social, political, and economic elements, in which power structures, inequalities, and values are reproduced and consolidated (Peixoto, 2023). By neglecting digital technologies inserted within these contexts, educational policies and practices perpetuate a hegemonic model that disregards the human condition and the needs of individuals in education.

Based on Peixoto (2023), we see that the supposed technological neutrality, often propagated in the discourse of innovation surrounding technology, reinforces relations of domination that materialize in platformization through models of control and commodification of education. For Lima Filho (2010), it is essential to overcome the conceptual reductionism of technology, recognizing it as an element intertwined with power relations that can effectively compromise teaching work and learning. Based on an understanding of technology as a historical and social construct, Sena (2024, p. 191) contextualizes:

We start from the understanding of technologies as cultural production, reflecting the social characteristics of each era. From a materialist ontological perspective, man became a social subject through labor, when he needed to produce his conditions of existence and, to do so, created means that altered nature and himself, with the product of these alterations being culture itself.

Platformization in education operates within capitalist and neoliberal logics, extending to the commercialization and privatization of education, with corporate involvement, aiming for profit and treating education merely as a commodity in the form of a product or service. In this context, platformization in education is geared toward corporate interests, redefining educational processes according to algorithmic and market dynamics, prioritizing metrics, large-scale assessments, data, and quantitative results over learning (CGI.br, 2022)..

The advancement of digital platforms in education is not limited to the reconfiguration of pedagogical processes; it also represents a strategy of surveillance and control that transcends the operational sphere, inserting itself into the cognitive dimension of individuals. According to Sena (2024, p. 206), “[...] the new phase of structuring work and the crisis of capital, with an emphasis on the advancement of technologies, is not limited to the physical control of workers, but also of their minds.” In the educational field, control is explicitly operationalized by digital platforms through the massive collection of data and the imposition of standardization, which influence what should be taught and how it should be evaluated, and, above all, what should be prioritized in schools (Sena,



2024).

The platformization of work has profound implications for workers' subjectivity. One of the main implications relates to precariousness and insecurity. The lack of job guarantees, benefits, and income uncertainty contributes to a feeling of insecurity and instability (Silva; Argüelles, 2024, p. 5).

The platformization of teaching work, by incorporating work models mediated by digital platforms, exacerbates the precariousness and insecurity experienced by workers (Silva; Argüelles, 2024). This process reflects a broader strategy of capital, which is to reinvent itself by diversifying the forms of control and exploitation of human productive forces (Sena, 2024). This dynamic not only weakens employment relationships and working conditions but also transforms the subjectivity and autonomy of teachers, who begin to face intensified demands for productivity under the logic of the commodification of education.

Sena (2024, p. 191) states that, "[...] in this context, capital has sought to reinvent itself, adopting strategies of control over human productive forces and diversifying the forms of exploitation and expropriation inherent to it." In this sense, some questions become pertinent for a critical reflection on the pedagogical limitations and the growing devaluation of the intellectual dimensions of teaching work:

For this reason, teaching work emerges as a nodal point for understanding the current educational technology industry: in what sense can the autonomy, critical thinking, and intellectual dimensions of teaching work be pressured by the standardization, data production, measurement, and control of digital systems in schools? What conceptions of teaching work do these platforms articulate in their modes of operation? Could we speak of the subsumption of teaching work to digital platforms? (Seki, 2024, p. 340).

From a critical-dialectical perspective, these questions highlight that the transformations in the contemporary world of work reflect economic and technological restructuring and the intensification of variables that precariousize workers' conditions. This precariousness goes beyond the loss of rights or the deregulation of labor laws, as it manifests more profoundly in the social and subjective dimensions, promoting a scenario of social instability (Sena, 2024). Essentially, the flexibilization of labor standards is revealed as an instrument of dehumanization and the strengthening of society's structural inequalities.

In reality, "[...] there is a worsening of labor relations, including due to the social invisibility and fragility of workers' organizations in the face of mutations and flexibilizations of laws that



distance themselves from human rights and strengthen market principles" (Sena, 2024, p. 193). Contradictorily, the intensification of technological consumption and the precariousness of working conditions, driven by capitalist influence, accentuate social disparities and weaken social relations, revealing a paradox between material progress and the deterioration of living conditions.

Understanding contradictions as constituent elements of social reality, we perceive that the dizzying expansion of digital technologies, the popularization of the internet, and, above all, of communication media, bring conveniences to daily life while simultaneously complicating social relations (Sena, 2024, p. 196).

In the educational landscape, the complexity of digital platforms in teaching work does not occur neutrally, as it reproduces and intensifies social contradictions by reconfiguring practices and discourses under the logic of capital and technology itself. By understanding education as a field where conflicting interests reveal profound disputes over the direction of society, such as the pursuit of democratizing access to knowledge and the commodification of learning. Sena (2024, p. 217) suggests that "[...] education, as a social practice, reflects the contradictions inherent to society, which implies recognizing that within educational practices, the various conflicting social interests shape the social totality, highlighting its contradictions and what is at stake."

Saviani and Galvão (2021, p. 42) warn in this direction when they state that "[...] minimizing the educator's function in pedagogical practice is to disqualify the profession and the professionalism of the teaching category, since anyone, and under any precarious conditions, could presume to carry out school educational work." In a context where digital platforms assume functions organically attributed to the teacher, such as content organization and learning monitoring, teaching work is strained between the market logic and the need to preserve pedagogical intentionality.

Finally, a critical understanding of the impacts and challenges of platformization on teaching requires questioning to what extent these changes effectively serve to strengthen the professionalization process of teaching or, conversely, contribute to transforming education into a product constantly subordinated to market demands, thereby relativizing the intellectualization of teaching.



## 5 FINAL CONSIDERATIONS

This study aimed to analyze the contradictions of the platformization phenomenon in its totality from a critical-dialectical perspective, focusing on the precariousness and control of teaching work and activity. Based on a theoretical-conceptual approach grounded in historical-dialectical materialism, tensions and contradictions inherent to the commodification of education and the challenges arising from the neoliberal logic in the educational field were identified.

Throughout this article, it has become evident that the phenomenon of platformization has expanded in recent years. Particularly within the educational field, this process—which was already well underway—was further intensified by the COVID-19 pandemic. However, it is essential to understand what lies hidden behind the emergence of Industry 4.0 and its consequences for teaching work. Ultimately, whose interests do platformized digital artifacts serve?

Within the scope of teaching work, it is concluded that platformization in education intensifies the precarization of labor, restricting teachers' autonomy, while relying on discourses of technological innovation to legitimize practices that degrade the conditions of teaching work. Furthermore, the growing dependence on private digital platforms reinforces the subordination of education to corporate interests, weakening the autonomy of the processes that shape teaching work.

In this scenario, it is possible to understand that platformization is one of the new forms of exploitation and precariousness of labor in favor of capital that also affects education workers, precisely because "we are witnessing a process of de-salaried employment, concomitant with the emergence of new forms of labor subordination and exploitation" (Previtali; Fagiani, 2020, p. 235).

In this context, confrontation by education professionals is necessary. For Antunes (2020), these precarious forms of work must be fought by both resistance movements in the workplace and by unions. Basic Education teachers assume the important and difficult task of resisting the ideology of capitalism, which is founded on a non-critical conception of science and an authoritarian bias in education (Previtali; Fagiani, 2020). Beyond confrontation and resistance, some possibilities mitigate the fragmentation of teaching work and are necessary in this process, such as the regulation of platform use, strengthening critical teacher training in technology, free and open platforms, and educational policies that respect pedagogical diversity and school autonomy.

Critical awareness among educators regarding the safer and more humanizing use of platforms





is essential to combat the overload and expropriation of teaching workers' rights. Coupled with collective organization, based on a new dialectical training, this contributes to addressing the challenges posed by the advancement of Industry 4.0 toward other forms of social interaction.

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