POLITICISING EDUCATIONAL TECHNOLOGY: reclaiming our digital sovereignty

POLITIZAR A TECNOLOGIA EDUCATIVA: recuperar a nossa soberania digital

POLITIZAR LA TECNOLOGÍA EDUCATIVA: recuperar nuestra soberanía digital

Enrique-Javier Díez-Gutiérrez[1] iD

Abstract

EdTech capitalism is defining new global education policies. Neoliberal dynamics are infiltrating education systems through the discourse of inevitable digitisation of teaching, promoted with greater impetus by large technology companies following lockdown and the forced adoption of distance learning during the COVID-19 pandemic in much of the world. The article analyses how BigTech companies are promoting a new form of digital governance in the field of education, where public-private collaboration is actually transforming into a relationship of subordination of the public sector to the private sector. It also questions whether this hybrid management model is fostering a growing process of Uberisation in education. Finally, it argues that the answer is not to reject digitalisation, but to democratise technological resources — 'socialise the cloud' — and transfer control of the means of digital production to the community, as an essential step towards true digital democracy in education.

Keywords: Digital sovereignty. Educational technology. EdTech. AI. Digital capitalism.

Resumen

El capitalismo EdTech está definiendo las nuevas políticas educativas globales. Las dinámicas neoliberales se están infiltrando en los sistemas educativos mediante el discurso de una inevitable digitalización de la enseñanza, promovido con mayor ímpetu por las grandes empresas tecnológicas tras el confinamiento y la adopción forzosa de la educación a distancia durante la pandemia de COVID-19 en gran parte del mundo. Se analiza cómo las BigTech están impulsando una nueva forma de gobernanza digital en el ámbito educativo, donde la colaboración público-privada se transforma, en realidad, en una relación de subordinación del sector público hacia el privado. Además, se cuestiona si este modelo de gestión híbrida está fomentando un proceso creciente de uberización en la educación. Finalmente, se plantea que la respuesta no consiste en rechazar la digitalización, sino en

---

[1] University Professor. Faculty of Education. University of León. Spain. Doctor of Education Sciences. Department of General Didactics, Specific Didactics and Education Theory. E-mail: enrique.diez@unileon.es

democratizar los recursos tecnológicos —"socializar la nube"— y transferir el control de los medios de producción digital a la comunidad, como paso esencial hacia una verdadera democracia digital en la educación.

Palavras-chave: Soberanía Digital. Tecnología Educativa. EdTech. IA. Capitalismo digital.

Resumo
O capitalismo EdTech está definindo as novas políticas educacionais globais. As dinâmicas neoliberais estão se infiltrando nos sistemas educacionais por meio do discurso de uma inevitável digitalização do ensino, promovido com maior ímpeto pelas grandes empresas de tecnologia após o confinamento e a adoção forçada do ensino a distância durante a pandemia da COVID-19 em grande parte do mundo. Analisa-se como as BigTech estão impulsionando uma nova forma de governança digital no âmbito educacional, onde a colaboração público-privada se transforma, na realidade, em uma relação de subordinação do setor público ao privado. Além disso, questiona-se se esse modelo de gestão híbrida está fomentando um processo crescente de uberização na educação. Por fim, argumenta-se que a resposta não consiste em rejeitar a digitalização, mas em democratizar os recursos tecnológicos — "socializar a nuvem" — e transferir o controle dos meios de produção digital para a comunidade, como um passo essencial para uma verdadeira democracia digital na educação.

Palavras-chave: Soberania digital. Tecnologia educacional. EdTech. IA. Capitalismo digital.

Introduction

In a context of techno-optimism fuelled by the media, technology corporations and even multilateral entities, technology, digitalisation and Artificial Intelligence (AI) have been expanding on a global scale (González-Mingot and Marin, 2025). They are present in activities and areas as diverse as online shopping, audiovisual materials for leisure, streaming platforms, countless smart goods and so-called disruptive technologies in virtually all education systems around the world (North, 2023).

All these technological and digital products, social networks and AI can be found in large metropolises and less populated areas, in high-income countries and impoverished societies, in both the Global North and South. The expansion of these products has been so widespread that it seems we are facing a process that cuts across all societies (Filk, 2025). It is a technology that is accessible regardless of ethnicity, gender, class or cultural capital, and its use seems to set aside any hierarchy or power relations in the capitalist world system. In this context, according to Google, we are facing an AI accessible to everyone.

Specifically, AI has been heralded as a tool that will generate many benefits,

such as improving efficiency in various processes, from business to education, improving consumer experiences of various services, and finding solutions to diseases (Roberts *et al.*, 2024). However, when we distance ourselves from commodity fetishism (Marx, 2014) and decide to take a step back from the sphere of circulation of this advertising bubble to take a closer look at the sphere of production, the picture looks very different (Filk, 2025).

Digital colonialism EdTech

The ongoing process of digitisation of society and education appears to be linked to the accelerated reproduction of a specific form of colonialism in the 21st century: data colonialism (Couldry and Mejias, 2019), which articulates and exacerbates the historical extractive tendency of traditional colonialism, but with novel computational methods of quantification. This trend is expanding over time.

Particularly in the case of the digitisation of education systems, largely derived from the window of opportunity offered by the global lockdown of the population due to the Covid-19 pandemic, the digital datafication of education has meant the expansion of extractivism and commercial management of education systems, from childhood to higher education, by the global operations of BigTech companies (Norris, 2023), in both Northern and Southern countries.

Their activity does not consist solely of providing educational software, but also of providing the infrastructure and digital technology that enables connection, i.e. digital communication itself. These companies, whose development has been promoted by their governments, also represent key elements in maintaining a global geopolitical order. Moreover, in the education systems of the global South, they have collaborated in the creation of new relationships of dependency and, thereby the consolidation of different categories of control.

In this way, the colonial phenomenon in the digital economy (Tello, 2023) manifests itself through the generalization of power structures over users, from whom they extract and appropriate data and information about their behaviour, while imposing rules and ideological visions through the design of the products they offer.

At the same time, they impose computational codes and algorithms, intellectual property terms, and concentrate knowledge and data in companies in the global North. In addition, both the raw materials for the development of the digital economy and the programming of key tools are obtained through cheap labour and the plundering of nature and resources in territories on the capitalist periphery.

In education, data colonialism has expanded as educational digitisation has become established and the presence of AI has spread and spread globally (Holmes and Tuomi, 2022). The adoption of digital technology produced in the Global North has led to different logics linked to the epistemicide of knowledge produced in the Global South (Milan et al., 2019), largely encouraged by the reproduction of a Eurocentric-universalist logic (which consists of thinking that educational practices generated in the West can operate everywhere), hiding, obscuring and disregarding relevant distinctions in epistemological conceptions and approaches from the Global South, which is subjected to the hegemonic vision and educational practices generated in the sphere of digital corporations from the Global North.

This leads to the impossibility of digital educational agency in the Global South, as well as in the South of the Global North. This implies conceiving educational communities and teachers as objects of application of a supposed intervention-modernisation process dictated by external private agencies of global capitalism, and not as autonomous agents with the capacity to construct their own knowledge, which is situated, contextualised and non-commodifiable (Milan and Treré, 2019).

Data colonialism in the West is led by the most powerful Big Tech companies in the Western world (GAFAM), which are historically linked to the geopolitical interests of the United States. This became evident in 2020, when Eric Schmidt, former CEO of Google and later chairman of the board of Google and its parent company Alphabet, called for greater support from the U.S. government for Silicon Valley in order not to lose competitiveness to China (Schmidt, 2020).

Data colonialism is not a metaphorical approach to the phenomenon, but rather a reality that is intertwined with the global deployment of digital capitalism, which finds in data extraction, the exploitation of digital labor, and the plundering of nature (both in mineral resources and in energy and water to sustain its large

infrastructures) its mechanisms of development and corporate expansion.

The advent of an AI controlled by Big Tech represents a moment of deepening and reinforcement of the influence of Global North actors in peripheral educational systems. Control over AI's digital infrastructure establishes a barrier to entry and a system of control over the proclaimed technological modernization of education, which generates a condition of competitive advantage, decision-making capacity, and influence over educational policies and over the future of educational policymaking for certain states, but above all for certain corporations and societies of the Global North, which significantly impact the ways in which educational systems are designed and governed in the Global South.

The introduction of this capitalist AI from the Global North into digital structures of educational organization in the Global South implies its integration into a sociotechnical construction that entails assuming an established order and a hierarchy previously developed by those who control and design it, in its production, development, and implementation.

Digital capitalism EdTech

Large technology companies not only impose a neocolonial logic, but for years have sought to displace state control over public education in order to infiltrate it. During the 2008 crisis, they took advantage of budget cuts and austerity policies to promote MOOCs (massive open online courses) as a magic solution to the problems generated by lack of funding (Liu and Barranquero, 2025), under a technological solutionism approach (Baldissera and Amaral, 2020; Castañeda *et al.*, 2020). Later, with the 2020 crisis, they used confinement and virtual teaching to strengthen the ties between education and profit, normalizing the privatization of digital education and infiltrating global educational policies to expand their influence.

The idea that the mere introduction of technology into classrooms revolutionizes educatión has been widely promoted, as in the cases of Uruguay and Spain, where initiatives such as one computer per child were implemented. These campaigns, backed by giants such as Intel, Microsoft, banks, and telecommunications

companies, promised to transform teaching with grandiloquent headlines: A laptop for every student will change education, One PC per child: the plan that will revolutionize everything. Later came interactive whiteboards and tablets, although none of these tools has achieved the revolutionary impact that was announced (Marín-Díaz et al., 2018).

What they have achieved is the expansion of the education business, dominating the digital infrastructures of schools and universities: servers, cloud platforms, and applications exclusive to their ecosystems. They control everything from software to hardware, and many institutions have outsourced critical services (such as email or storage) to their systems. Thus, students become familiar from an early age with environments designed in Silicon Valley, acquiring the skills demanded by the digital market and becoming future consumers of their products (Cancela, 2020).

In educational centers with advanced resources—high-speed connectivity, personal devices, and access to platforms such as Google Classroom—the teaching–learning dynamic already depends on the digital. However, this deepens the socioeconomic gap, which is not limited to who has technology, but also to who possesses the skills, motivation, and family environment necessary to navigate the ocean of digital information. Inequality is exacerbated when families' cultural capital determines who can truly take advantage of these tools (Feito, 2020).

Google's digital tools and other platforms have a limited impact in schools where families lack basic economic resources (Liu and Barranquero, 2025). In these contexts, prioritizing the acquisition of smartphones or internet access becomes secondary to more urgent needs, such as ensuring adequate nutrition or having support teachers for students with difficulties (Calderón, 2019).

What was promoted as the great educational innovation of the 21st century has become a lucrative business for technology corporations. The rise of the EdTech market, which encompasses millions of students, generates exorbitant profits. Beyond educational platforms, costs multiply: operating systems, per-student software licenses, antivirus programs (dispensable in free software but mandatory in proprietary systems), and annual updates. Each of these elements represents a constant flow of income for multinational companies in the sector.

This panorama makes it necessary to question whether the supposed educational innovation responds to pedagogical needs or to corporate interests. As Adell (2009) points out, large technology companies not only influence public policies on digital education, but have also managed to make many teachers internalize their discourse. Evidence of this can be seen in professionals who display on their social networks certifications granted by these companies, unconsciously acting as promoters or ambassadors of their brands.

Research has consistently shown that digital tools, without adequate pedagogical grounding, teacher training, and appropriate structural conditions, do not by themselves generate significant impacts on educational improvement (España, 2025; Vega *et al.*, 2025). Educational technology does not in itself guarantee the development of social competencies and ethical values. Learning through screens hinders socialization, emotional growth, and the integral formation of personality. Moreover, the digital industry does not seek to broaden educational horizons, but rather to reinforce consumption patterns through the homogenization of interests and behaviors (Sampedro, 2018; Williamson, 2025).

Every digital tool incorporates an ideological load (Rivera, 2019; Watters, 2020). The adoption of commercial educational platforms implies subjecting school communities to structures designed by technology corporations from their ideological conception and political principles. As Williamson (2019) notes, artificial intelligence systems export preconceived cultural and pedagogical models, imposing visions that are alien to local contexts.

Moreover, digitalization increases the burden of unpaid labor for both teachers and students, extending the educational workday beyond the physical space of the classroom. This model transfers infrastructure costs (equipment, connectivity) to educational staff, replicating dynamics typical of the gig economy (Estévez, 2020). Under an appearance of flexibility, systems of constant surveillance are implemented that erode the richness of face-to-face interactions (Agamben, 2020).

Big Tech companies have scaled their influence through campaigns that promise to revolutionize teaching through automation and cost reduction (Ostrowicz, 2019). Yet their real objective is to turn classrooms into sources of data extraction,

using AI to build loyalty among future consumers (Cancela, 2017; Regan and Jesse, 2019). As Lafuente (2020) warns, these systems seek not only to predict behaviors, but to actively shape them.

Silicon Valley's educational project combines strategies of gamification, personalization, and the progressive replacement of teachers by algorithms (McDowell, 2017). Adaptive learning applications classify students through big data in order to offer standardized content (Jarke and Breiter, 2019), while technologies such as blockchain introduce market logics into educational processes (Reig, 2018).

This model turns educational institutions into data factories, where student information is commodified and becomes an object of financial speculation (Fueyo et al., 2018; Sriprakash, 2025). The capitalism of educational platforms (Saura, 2020) promotes a dystopian future in which AI replaces pedagogical labor and students are trained as future digital workers.

The fundamental problem lies, at its core, in the commodification of knowledge. As Diez-Gutiérrez and Fajardo (2020) demonstrate, online education benefits most those who already possess prior advantages, leaving the most vulnerable behind. Technology should serve pedagogy, not subordinate it to corporate interests or false promises of innovation.

Digital libertarianism EdTech

The current dominant educational technology, and particularly the different AI tools used in education, are articulated with the capitalism of our time. It is clear that the pace of advancement of digital technology and AI depends to a large extent on the interests of capital valorization, particularly large capital, articulated in a small set of technology companies with the capacity to create a permanent process of monopolization of digital knowledge. These companies also display a political vocation that can be found in Zuckerberg's statement that in many ways Facebook is more like a government than a traditional company (Klein, 2018).

The integration of artificial intelligence into educational processes is far from being an aseptic or impartial phenomenon, since technology itself is never neutral. The very concept of Artificial Intelligence, as it has been configured from the

dominant paradigms of Silicon Valley, shows how its development responds to a specific ideological matrix: the neoliberal-libertarian doctrine that various authors have referred to as the Silicon Doctrine (Caro-Morente, 2023; Jiménez, 2020).

This doctrine, forged in the ecosystem of the arms industry and speculative venture capital funds, promotes an apparently contradictory model: on the one hand, it demands absolute freedom for technology corporations, while on the other, it normalizes the subordination of users transformed into algorithmic commodities. Its discourse combines a fierce rejection of state regulation with a superficial rhetoric of inclusion, in which the recognition of minorities (ethnic, sexual, or cultural) serves as a smokescreen to conceal its agenda of radical privatization. Under this paradigm, essential services such as education, health, or public goods must be transferred to private hands, subjected to the natural laws of the market. The individual is reduced to a mere consumer, solely responsible for his or her success or failure within a technological meritocracy that monetizes even the most intimate aspirations.

As critical analyses have shown (Jiménez, 2020; Caro-Morente, 2023), this doctrine rests on three fundamental pillars:

1. A predatory productive system, in which users are simultaneously unpaid workers and sources of exploitable data.

2. A corporate governance of the digital, which rejects any legal framework based on human rights for considering it an obstacle to innovation. Instead, it argues that companies themselves should set the rules of the game.

3. A precarized labor market, in which extreme flexibility is glorified, collective bargaining is weakened, and the protections of the welfare state are systematically dismantled.

In essence, the Silicon Doctrine is nothing more than the adaptation of neoliberalism to the digital age: a neocolonial project that repeats old formulas of power concentration, now disguised as disruptive. This ideology not only shapes the technologies we use, but also determines their application in classrooms, where their use is naturalized without questioning their political implications.

In the face of this panorama, it is naïve to continue approaching educational technology as if it were an innocuous instrument, devoid of history, economic

interests, or structural constraints. Contemporary AI is the offspring of a digital capitalism that has turned the massive extraction of data into the fuel of its business model. This process not only privatizes socially generated knowledge, but also uses it to feed systems that, far from being neutral, are actively designing the future according to the interests of a handful of corporations.

However, the narrative persists that AI is an inevitable advance, a kind of manifest destiny that must colonize all educational dimensions (from teaching to assessment or management). This narrative, promoted by the very companies that monopolize the sector, conceals a paradox: while it is sold as the great pedagogical revolution of the 21st century, it actually consolidates a status quo in which power remains in the hands of those who control the algorithms, the data, and, with them, the decisions that affect millions of people.

It is therefore urgent to adopt a critical approach that dismantles these myths and rethinks the place of technology in education from radically different principles: social justice, digital sovereignty, and the real democratization of knowledge.

The dominant narrative promoted by the capitalist technological conglomerate itself, and particularly by AI, consists of presenting this technology as something magical. When exposing the uses of generative AI to teachers, at mass events or in online broadcasts, they allude to the supposed magic that the technology offers in terms of grading assignments, personalizing learning, or generating educational content (texts, images, videos, etc.). In a strict sense, what they do not show is that this magic actually consists of alienated labor crystallized in the machine, as well as expropriated knowledge.

This narrative is shared by the global technology industry, which has proven useful in constructing a fetishized vision of technology (Saura, 2020). Fetishism, in essence, is formed from a partial, immediate view of technology. Technology is understood as essentially the phenomenon, the object that we have before our eyes: the computer, the educational tablet, the digital whiteboard, or the interface of an educational platform or AI tool. This partial approach does not seek to know, explore, or analyze what lies behind—or intrinsically within—these technological commodities.

The social relations through which it was produced, its historical conditions of creation and development, the human labor hidden in its design, production,

DÍEZ-GUTIÉRREZ, Enrique-Javier.

circulation, realization, and functioning. Commodity fetishism is the epistemological substrate of the anthropomorphization of artificial intelligence. And in order to stop humanizing a machine, it is necessary to humanize those who have produced it.

This fetishization, moreover, does not take into account the process through which it is constructed, the material and environmental conditions of its expansion, or the extraction, appropriation, and assembly of чуж knowledge through which the machine learning that enables AI is deployed. What is presented as magic is in reality nothing more than objectified, hidden, and exploited labor and knowledge, which has enabled the development of technological productive forces and digital relations of production and reproduction of knowledge and social know-how (Marx, 2014), which gradually also impact education.

The collection of information and the subsequent extraction of educational data from students (learning achievements, capacities, specific learning needs, attendance, behaviors, reactions, etc.), from teachers (efficiency, attendance, knowledge), and from families (time devoted to students), etc., allows the acquisition of a large amount of data useful for improving educational companies, their products, and their profits, as well as for monetizing them and selling them to other insurance, healthcare, advertising, or banking companies that will use them to secure their business prospects.

Ultimately, the incorporation of AI as a specific form of digital technology in schools entails a series of implications, since it fixes, expropriates, and commodifies knowledge, while at the same time reproducing a social order in which greater digitalization means less privacy, more exploitation of digital labor, and a higher degree of information extraction across different spheres of our lives (Saura, 2020). This is done without recognition of the hidden labor of educational communities, and even less with remuneration for their unconscious and invisibilized digital labor.

The expansion of Big Tech in educational systems around the world has enabled a network for extracting large quantities of datifiable information aimed at: commodifying, generating knowledge, predicting behaviors, improving products, expanding market share, and increasing in situ corporate influence (Díez-Gutiérrez, 2021; Díez-Gutiérrez & Jarquín-Ramírez, 2025). In fact, a private corporation such as

Google can come to possess even more information about students and educational communities than regional or national ministries of education. This, in turn, implies that public education systems gradually become more dependent on the data generated by these companies' platforms, by renouncing the creation of public digital systems and delegating them to the private sector.

Although most digital services are initially presented as free, they actually imply the integration of school communities into the price-less market of digital capitalism. As companies incorporate mechanisms to reward the proper use of their digital commodities, an extractive model in education is consolidated, because any action carried out by students, teachers, administrators, or families is mediated by digital technology, whose main driving force is the extraction of information. An infinite machine of extraction and datafication of human experiences, and a technical framework for the expropriation of socially produced knowledge in the educational sphere. With the added drawback that this does not necessarily mean access to technology that improves learning or the educational experience in general, but rather opens the door to many questions about its effectiveness, as well as concerns regarding privacy, educational privatization, and various undesirable effects in education.

Not to mention that this dynamic is also transforming teachers' work, which not only may become replaceable, but also promotes technocratic AI systems in the education sector that transform teaching into a quasi-policing or control task, responsible for both monitoring and quantifying and scoring student outcomes, generating a mindset of suspicion and mistrust toward students' work, almost assuming guilt of copying and plagiarism unless proven otherwise (McDowell, 2017).

Final considerations: Reclaiming our digital sovereignty

In this way, the hegemonic discourse of digital capitalism places us at a historical crossroads. Beneath the rhetoric of innovation and technological progress lies a project of domination that seeks to colonize the last collective spaces that resisted total commodification: the commons and public services. These constitute the last frontier to be conquered in a world where virtually everything has been

turned into a commodity under the neoliberal dogma.

The decisive battle today is being fought over control of our data, that intangible heritage that should be considered an essential public good, but which has been seized by technology giants. These corporations have emerged as the new feudal lords of the digital economy (Wallerstein, 2005), exercising quasi-sovereign power over virtual space (Morozov, 2018). Through the algorithmic exploitation of the millions of data points they extract daily, they have managed to concentrate an unprecedented level of influence over governments and societies (García, 2020; Kovacova *et al.*, 2019).

This process represents the latest metamorphosis of capitalism, which has found in the digital era the perfect way to monetize even the most intimate aspects of human existence. Our gestures, preferences, and social relationships are translated into raw data that, once processed, become marketable products (Zuboff, 2019). What we are witnessing is nothing more than the continuation of the extractivist logic that has characterized the capitalist system since its origins, only now the gold to be exploited is human behavioral patterns.

A new regime of digital governance is thus taking shape, where supposed public–private partnerships actually conceal relationships of structural dependence. What began as collaboration ends up as subordination: states abdicate their digital sovereignty while corporations advance their project of turning the commons into sources of private profit.

The education sector does not escape this dynamic. Educational technology companies (EdTech) are redesigning teaching–learning processes according to the logic of consumption, even proposing scenarios in which the figure of the professional teacher becomes dispensable (Koening, 2020). This model not only precarizes educational labor, but also turns the right to education into just another product subject to market laws.

In the face of this panorama, it becomes evident that the dispute over the meaning of technology in education is, ultimately, a struggle over the model of society we want to build. The alternative necessarily involves reclaiming education as a public good, data as collective heritage, and technology as a tool at the service of

the general interest, not private accumulation.

As we see, the expansion of AI in the education sector entails new forms of control, colonialism, and deepening of asymmetric relations between the Global South and the Global North. The algorithmic processing of the massive volumes of information that technology companies extract from users—and later commercialize—grants them an unprecedented capacity for influence in history (García, 2020; Kovacova *et al.*, 2019), and the globalization of the Silicon Valley educational start-up, which opens the door to logics of epistemic injustice and different forms of neocolonialism in education, is shaping the future of educational policies worldwide.

This phenomenon represents a qualitative shift in power relations, in which private actors accumulate a degree of knowledge and prediction over entire populations that far exceeds the traditional capacities of nation-states.

This power is based on three fundamental pillars:

1. The capacity for omnipresent surveillance, where every digital interaction leaves traces that are captured, stored, and analysed.
2. The monopoly of predictive intelligence, by being able to anticipate social behaviors through the analysis of massive patterns.
3. The creation of alternative realities, through the manipulation of information flows and the extreme personalization of content.

What is peculiar about this new form of power is its apparently dematerialized character: it does not require visible armies or traditional territorial occupations, but rather operates through digital infrastructures that normalize constant surveillance under the guise of personalized services. Technology corporations have thus managed to establish what we might call data colonialism, where the extraction of value is no longer limited to natural resources but extends to digitalized human experience itself.

This situation poses a fundamental paradox of our era: while democratic states are constrained by institutional checks and balances in power relations, digital corporations operate in a deregulated global space where they accumulate power that challenges traditional frameworks of political sovereignty. The result is a radical asymmetry in which those who control algorithms and large data sets end up

conditioning the decisions of those who theoretically hold political power.

However, it is necessary to recognize digital technology and AI as a space of dispute rather than as an element that must be rejected. For this reason, it is important to seek the construction of alternative forms of democratic, decolonial, and just technological governance.

This implies, first of all, the possibility that historically marginalized voices be heard in the design, implementation, and development of technology. Nevertheless, this may entail a risk of participation-washing (Birhane et al., 2020) if it is not accompanied by the possibility and the need to build the conditions for communities—upon whom the production or use of AI falls—to have decision-making power (Omotubora and Basu, 2024) over strategic aspects of that technology. Thirdly, it is also essential to make possible the production of culturally and geographically situated technology that responds to the human needs of those communities, grounded in a democratic conception of life and oriented toward the common good. This would allow for technological development founded on social justice, rather than guided solely by the geopolitical and geoeconomic interests of major powers and their multinational corporations.

But the dispute also concerns the process of conceiving, researching, and designing AI technology itself. Because control over AI is also expressed at the level of regional technological research, Ayana *et al.* (2024) propose the establishment of AI research centers in the Global South, the promotion of technology transfer through open science, and a review of property rights in AI. It is also important to create institutional programs that enable greater understanding of the algorithmic black box that constitutes this technology in the educational field, and that foster greater teaching and learning with and about AI aligned with principles of social justice and human rights (Holmes, 2023).

What seems clear is that any equitable governance scheme requires the inclusion of more voices as actors with decision-making capacity. This concern has already been addressed by various authors. According to Ayana et al. (2024), AI must prioritize equity, and this can be achieved by providing the Global South with the capacity and authority to lead the creation of solutions to different problems in

this field that also affect the South. This would imply a change in power and authority relations within the global AI field, since it is currently Global North countries that lead efforts to regulate AI, set its trajectory of evolution, and consolidate a global governance of AI (Omotubora and Basu, 2024), which generates a concentration of decision-making powers regarding what to do with this technology and how to do it. In other words, changing the current situation requires developing a decolonial approach to AI governance. This must begin by recognizing the neocolonial repercussions of AI, as well as existing access disparities (Ayana et al., 2024).

The fundamental challenge of our time is not limited to containing the excesses of surveillance capitalism or to passively opposing the commodification of education. As various authors point out (Cancela, 2020; Morozov, 2018; Williamson and Hogan, 2020), merely defensive responses are insufficient. The authentic educational revolution requires building pedagogical alternatives based on three fundamental principles:

1. Reclaiming the collective: In the face of the individualist paradigm that dominates corporate educational platforms, we need to recover the social dimension of learning.

2. Situated rootedness: Overcoming the abstract universalism of standardized technological solutions through educational practices anchored in specific contexts.

Re-commoning knowledge: Restoring the community bonds that the digital-mercantile model seeks to erode.

This emancipatory education must teach how to unveil the fictions of digital neoliberalism, showing how:

- The sum of individual selfishness never builds collective well-being.

- Personal merit is a myth that conceals structures of privilege.

Technology is never neutral, but embodies concrete values and interests.

The challenge is not technological, but political-pedagogical: to create spaces where we learn that:

- Cooperation surpasses competition.

- Community knowledge is worth more than extracted data.

DÍEZ-GUTIÉRREZ, Enrique-Javier.

- Technological sovereignty is as important as food sovereignty.

In contrast to the individualized and isolated model of digitalized education offered by technology corporations, which reduces learning to interactions with screens, we must oppose a pedagogy of the commons that:

✓ Connects with the real problems of communities.

✓ Reclaims educational spaces as places of encounter and deliberation.

✓ Teaches how to use technology critically and autonomously.

True educational innovation is not found in digital platforms, but in rebuilding the communal meaning of education, demonstrating day by day that another world is possible when we learn together, from below and with critical awareness (Meirieu, 2020).

A Luddite education, in the original sense of the term, that allows us to question the hegemony of digital capitalism in EdTech and the corporate control of teaching processes and student learning; while proposing alternative public, diverse, plural (decolonial), and fair forms of technology, with active community participation and effective regulation of technological infrastructures, as well as ethical and transparent regulation of technological development, in order to ensure a more equitable future (Aparici-Marino *et al.*, 2024).

Beyond traditional technical and technological training, focused on digital skills—which essentially amount to learning how to use technology, AI, social networks, programming languages, or all types of software—teachers need spaces for discussion and debate in both their initial and ongoing training to understand the whys and wherefores of technology, digitalization, and AI (Almeida, 2020). They need to understand why this knowledge is fundamental to the subjective, social, material, economic, and cultural constitution of contemporary society, and which interests, ideologies, and policies its design, development, and implementation respond to, in order to be able to critique the cultural imperialism and ideological neoliberalism that sustain capitalism.

A radical Critical Digital Pedagogy, committed to a clearly anti-capitalist, decolonial, democratic, rebellious, and deeply critical approach to the cultural imperialism and libertarian ideological neoliberalism that underlie the current

techno-digital colonization. We must move toward an Educational Technological Democracy grounded in a Digital Commons through the construction of post-capitalist alternatives.

We must therefore question the foundations of the current techno-digital paradigm, which is characterized by a fundamental contradiction: while digital infrastructures have become essential for the exercise of fundamental rights, control over them remains in the hands of technological oligopolies that operate according to the logic of private accumulation (Sierra-Caballero, 2021). This paradox raises the urgent need to develop alternative models that, from a perspective of radical democracy, allow for the socialization of the means of digital production and the reconfiguration of power relations within the technological ecosystem.

Criticism of platform capitalism and contemporary techno-feudalism (Varoufakis, 2024) must transcend the level of denunciation and materialize in concrete proposals for the social reorganization of technology. As various authors point out (Klein, 2020; Mason, 2016; Morozov, 2018; Sierra-Caballero, 2021), this implies moving toward what could be called democratic digital socialism, where:

1. Critical infrastructure (connectivity networks, data centers, essential platforms) becomes democratically managed common property.
2. Knowledge and cultural creations circulate under open licensing models that prioritize the general interest.

Algorithms and AI systems are developed transparently and subject to citizen control.

In this context, the field of education takes on strategic relevance as a space for building counter-hegemony. Schools must be transformed into laboratories of technological sovereignty, where:

• The political architecture of dominant technologies is critically questioned.

• Concrete alternatives (free software, mesh networks, open repositories) are experimented with.

• Non-Western epistemologies are recovered as an antidote to digital colonialism.

• The socialization of technological knowledge (from source code to hardware designs) thus emerges as a necessary condition for any emancipatory educational

project. The digital commons economy demonstrates that other models of production are possible, based on peer-to-peer collaboration rather than value extraction.

• However, this transition requires overcoming false dilemmas: it is not simply a matter of better regulating tech giants, but of radically questioning their right to exist as private monopolies that control essential goods. Historical experience shows that essential services (water, electricity, health) ultimately require public management when they reach a certain degree of social importance. The internet and its associated infrastructures have clearly reached that status and should be declared a non-profit public good (Filk, 2025; Klein, 2020).

• The challenge, therefore, is twofold: to decommodify the digital while building pedagogical alternatives that prepare new generations to exercise full technological citizenship. This implies training not only in the critical use of existing technologies, but also in the ability to imagine, design, and govern technologies in radically different ways. Education for the commons must, at the same time, be education for the technological commons.

• Technological colonialism in education is not only a problem of access, but also of power: who decides how the tools used are designed, which ones are prioritized, and what future is built with them. An emancipatory education must include critical reflection on technology and seek alternatives that prioritize cognitive and digital justice (Filk, 2025).

References

ADELL-SEGURA, Jordi. Políticas TIC en educación: ¿un viaje a ninguna parte? **Aula de Innovación Educativa,** Barcelona, n. 185, p. 46–51, 2009. Disponível em: https://www.grao.com/es/producto/politicas-tic-en-educacion. Acesso em: 18 ago. 2025.

AGAMBEN, Giorgio. El modo online que terminará por sepultar a la Universidad. **CCTT**, 25 maio 2020. Disponível em: https://cctt.cl/2020/05/25/el-modo-online-que-terminara-por-sepultar-a-la-universidad/. Acesso em: 18 ago. 2025.

ALMEIDA, João Gabriel. Círculos de Reflexión y lógica P2P: Una alternativa didáctica a la Colonización del MOOC. **El Ágora USB**, Medellín, v. 20, n. 2, p. 236-245, jul.-dez. 2020. Disponível em:

https://revistas.usb.edu.co/index.php/Agora/article/view/5141. Acesso em: 18 dez. 2025.

APARICI-MARINO, Roberto; ÁLVAREZ-RUFS, Manuel; GÓMEZ-MONDINO, Pilar. Colonización tecnológica, automatización de la colonización y eco-educomunicación. Chasqui: **Revista Latinoamericana de Comunicación**, Quito, n. 157, p. 19-34, 2024. Disponível em: https://dialnet.unirioja.es/servlet/articulo?codigo=10195916. Acesso em: 17 dez. 2025.

AYANA, Getu et al. Decolonizing global AI governance: assessment of the state of decolonized AI governance in Sub-Saharan Africa. **Royal Society Open Science**, v. 11, n. 8, p. 231994, 2024. Disponível em: https://royalsocietypublishing.org/doi/10.1098/rsos.231994. Acesso em: 17 dez. 2025.

BALDISSERA-CARVALHO, Eliane; AMARAL, Alberto José do. Pandemia, vigilância e os perigos do solucionismo tecnológico. *In*: **COVID-19:** ambiente e tecnologia. Itajaí: Editora da Univali, 2020. p. 94-109.

BIRHANE, Abeba. Algorithmic Colonization of Africa. **SCRIPTed: A Journal of Law, Technology & Society**, v. 17, n. 2, p. 389-409, ago. 2020. Disponível em: https://script-ed.org/article/algorithmic-colonization-of-africa/. Acesso em: 17 dez. 2025.

CALDERÓN-GÓMEZ, Daniel. Una aproximación a la evolución de la brecha digital entre la población joven en España (2006-2015). **Revista Española de Sociología**, v. 28, n. 1, p. 27-44, 2019. Disponível em: https://recyt.fecyt.es/index.php/res/article/view/66428. Acesso em: 17 dez. 2025.

CANCELA, Ekaitz. **La educación que diseña Silicon Valley y que transformará el futuro.** El Salto, 13 out. 2017. Disponível em: https://www.elsaltodiario.com/educacion/educacion-disena-silicon-valley-google-facebook. Acesso em: 18 ago. 2025.

CANCELA, Ekaitz. La agenda común de Bill Gates y Mark Zuckerberg. **La Marea**, n. 77, p. 20-23, ago. 2020. Disponível em: https://www.lamarea.com/2020/08/06/la-agenda-comun-de-bill-gates-y-mark-zuckerberg/. Acesso em: 17 dez. 2025.

CARO-MORENTE, Jaime. The Silicon (Valley) Doctrine. Las ideologías de las Big-Tech. **El Viejo Topo**, nº 422, mar. 2023. Disponível em: https://www.elviejotopo.com/articulo/the-silicon-valley-doctrine-las-ideologias-de-las-big-tech/. Acesso em: 17 dez. 2025.

CASTAÑEDA, Linda; SALINAS, Jesús; ADELL, Jordi. Hacia una visión contemporánea de la Tecnología Educativa. **Digital Education Review**, n. 37, p. 240-268, jun. 2020. Disponível em: https://revistes.ub.edu/index.php/der/article/view/30136.

Acesso em: 17 dez. 2025.

COULDRY, Nick; MEJIAS, Ulises Ali. Data colonialism: Rethinking big data's relation to the contemporary subject. **Television & New Media**, v. 20, n. 4, p. 336-349, 2019. Disponível em: https://journals.sagepub.com/doi/10.1177/1527476418796632. Acesso em: 17 dez. 2025.

DÍEZ-GUTIÉRREZ, Enrique Javier. Hybrid digital governance and EdTech capitalism. **Foro de Educación**, v. 19, n. 2, p. 1–20, 2021 https://doi.org/10.14516/fde.860 Acesso em: 19 dez. 2025.

DÍEZ-GUTIÉRREZ, Enrique Javier; GAJARDO ESPINOZA, Katherine. Educar y evaluar en tiempos de Coronavirus: la situación en España. **Multidisciplinary Journal of Educational Research**, v. 10, n. 2, p. 102-134, 2020. Disponível em: https://hipatiapress.com/hpjournals/index.php/remie/article/view/5604. Acesso em: 17 dez. 2025.

DÍEZ-GUTIÉRREZ, Enrique Javier; JARQUÍN-RAMÍREZ, Mauro Rafael. Capitalismo digital y universidades: una reflexión sobre los riesgos educativos del uso de tecnología orientada a la ganancia. **Sintaxis**, n. 14, p. 49–68, 2025 https://doi.org/10.36105/stx.2025n14.04. Acesso em: 19 dez. 2025.

ESPAÑA GALLARDO, Olivia. De la innovación a la acción: la tecnología educativa como motor del desempeño docente. **Revista Ciencia Multidisciplinaria** CUNORI, v. 9, n. 1, p. 1-25, 2025. Disponível em: https://revistacunori.com/index.php/cunori/article/view/314. Acesso em: 17 dez. 2025.

ESTÉVEZ, Ariadna. El zoomismo y el disciplinamiento para la inmovilidad productiva. **Nexos**, Cidade do México, 6 abr. 2020. Disponível em: https://medioambiente.nexos.com.mx/el-zoomismo-y-el-disciplinamiento-para-la-inmovilidad-productiva/. Acesso em: 18 ago. 2025.

FEITO ALONSO, Rafael. Este es el fin de la escuela tal y como la conocemos. Unas reflexiones en tiempo de confinamiento. **Revista de Sociología de la Educación-RASE**, v. 13, n. 2, p. 156-163, 2020. Disponível em: https://ojs.uv.es/index.php/RASE/article/view/17130. Acesso em: 17 dez. 2025.

FILK, Christian. Ideologiekritik im Zeitalter der algorithmischen Governance: Über die transformative Kraft einer kritisch-reflexiven Medienpädagogik in einer plattformisierten Gesellschaft. **Medienimpulse: Beiträge zur Medienpädagogik**, v. 63, n. 2, p. 1-55, 2025. Disponível em: https://journals.univie.ac.at/index.php/mp/article/view/9469. Acesso em: 18 dez. 2025.

FUEYO GUTIÉRREZ, Aquilina; RODRÍGUEZ HOYOS, Carlos; HOECHSMANN, Michael. Construyendo ciudadanía global en tiempos de neoliberalismo: confluencias entre la

educación mediática y la alfabetización digital. **Revista Interuniversitaria de Formación del Profesorado**, vol. 32, n. 1 (91), p. 57-68, 2018. Disponível em: https://www.redalyc.org/journal/274/27454937005/html/. Acesso em: 18 dez. 2025.

GARCÍA-CANCLINI, Néstor. **Ciudadanos reemplazados por algoritmos**. Berlín: Calas, 2020.

GONZALEZ-MINGOT, Sara; MARÍN, Victoria I. Ecosistemas de tecnología educativa en educación: perspectivas de los educadores catalanes sobre los actores digitales. **International Studies in Sociology of Education**, 2025. Disponível em: https://repositori.udl.cat/handle/10459.1/468026. Acesso em: 18 dez. 2025.

HOLMES, Wayne. The unintended consequences of Artificial Intelligence and Education. Brussels: **Education International**, 18 out. 2023. Disponível em: https://www.ei-ie.org/en/item/28115:the-unintended-consequences-of-artificial-intelligence-and-education. Acesso em: 18 dez. 2025.

HOLMES, Wayne; TUOMI, Ilkka. State of the art and practice in AI in education. **European Journal of Education**, v. 57, n. 4, p. 542-570, 2022. Disponível em: https://onlinelibrary.wiley.com/doi/10.1111/ejed.12533. Acesso em: 18 dez. 2025.

JARKE, Juliane; BREITER, Andreas. The datafication of education. **Learning, Media and Technology**, v. 44, n. 1, p. 1-6, 2019. Disponível em: https://doi.org/10.1080/17439884.2019.1573833. Acesso em: 18 dez. 2025.

JIMENEZ, Aitor. The silicon doctrine. tripleC: Communication, Capitalism & Critique. **Open Access Journal for a Global Sustainable Information Society**, v. 18, n. 1, p. 322-336, 2020. Disponível em: https://www.triple-c.at/index.php/tripleC/article/view/1147. Acesso em: 18 dez. 2025.

KLEIN, Ezra. Mark Zuckerberg on Facebook's hardest year, and what comes next. **Vox**, 2 abr. 2018. Disponível em: https://www.vox.com/2018/4/2/17185052/mark-zuckerberg-facebook-interview-fake-news-bots-cambridge. Acesso em: 18 ago. 2025.

KLEIN, Noami. **On Fire: The Burning Case for a Green New Deal**. New York: Penguin. 2020.

KOENIG, Rebecca. The Post-Pandemic Outlook for Edtech. **EdSurge**, 11 jun. 2020. Disponível em: https://www.edsurge.com/news/2020-06-11-the-post-pandemic-outlook-for-edtech. Acesso em: 18 ago. 2025.

KOVACOVA, Maria; KLIESTÍK, Tomas; PERA, Aurel; GRECU, Iulia; GRECU, Gheorghe. Big data governance of automated algorithmic decision-making processes. **Review of Contemporary Philosophy**, v. 18, p. 126-132, 2019. Disponível em:

https://addletonacademicpublishers.com/contents-rcp/1408-volume-18-2019/3588-big-data-governance-of-automated-algorithmic-decision-making-processes. Acesso em: 18 dez. 2025.

LAFUENTE, Antonio. Cuerpo común y soberanía tecnológica. **CTXT**, 29 jun. 2020. Disponível em: https://ctxt.es/es/20200601/Firmas/32582/cuerpo-tecnologia-datos-control-coronavirus-futuro-antonio-lafuente.htm. Acesso em: 18 ago. 2025.

LIU, Jingshan; BARRANQUERO, Alejandro. A decade of myths about educational technology in the Spanish media: the case of MOOCs. **Educational Media International**, v. 62, n. 2, p. 126-142, 2025. Disponível em: https://www.tandfonline.com/doi/full/10.1080/09523987.2025.2490907. Acesso em: 18 dez. 2025.

MARÍN-DÍAZ, Verónica; BURGOS-MELLADO, Soledad; LÓPEZ-PÉREZ, Magdalena. Formación de docentes para la inclusión digital desde el plan escuela 2.0: estudio de un caso. **International Journal of Educational Research and Innovation (IJERI)**, n. 10, p. 274-298, 2018. Disponível em: https://www.upo.es/revistas/index.php/IJERI/article/view/2851/2295. Acesso em: 18 dez. 2025.

MARX, Karl. **El fetichismo de la mercancía y su secreto**. Logroño: Pepitas de calabaza, 2014.

MASON, Paul. **Postcapitalismo:** hacia un nuevo futuro. Barcelona: Paidós, 2016.

MCDOWELL, Alison. **What Silicon Valley Has Planned for Public Education**. Seattle: [vídeo online], 25 mar. 2017. Disponível em: https://www.youtube.com/watch?v=IvqBJYmpQrY. Acesso em: 18 ago. 2025.

MEIRIEU, Philippe. ¡Dejemos de idolatrar lo digital!. **Viento Sur**, 13 mai. 2020. Disponível em: https://vientosur.info/philippe-meirieu-dejemos-de-idolatrar-lo-digital/. Acesso em: 18 ago. 2025.

MILAN, Stefania; TRERÉ, Emiliano. Big Data from the South(s): Beyond Data Universalism. **Television & New Media,** v. 20, n. 4, p. 319-335, 2019. Disponível em: https://journals.sagepub.com/doi/10.1177/1527476419837739. Acesso em: 18 dez. 2025.

MOROZOV, Evgeny. **Capitalismo Big Tech:** ¿Welfare o neofeudalismo digital? Madrid: Enclave, 2018.

NORRIS, Trevor. Educational futures after COVID-19: BigTech and pandemic profiteering versus education for democracy. **Policy Futures in Education**, v. 21, n. 1, p. 34-57, 2022. Disponível em:

https://journals.sagepub.com/doi/10.1177/14782103221080265. Acesso em: 18 dez. 2025.

NORTH, Michael. Generative AI has disrupted education. Here's how it can be used for good. **UNESCO – World Economic Forum**, 2023. Disponível em: https://www.weforum.org/stories/2023/09/generative-ai-education-unesco/. Acesso em: 18 dez. 2025.

OMOTUBORA, Adedeji; BASU, Subhajit. Decoding and reimagining AI governance beyond colonial shadows. *In*: **Handbook on Public Policy and Artificial Intelligence**. Cheltenham: Edward Elgar Publishing, 2024. p. 220-234.

OSTROWICZ, Iván. Lo que se esconde detrás de la EdTech y la LearnTech. **Telos: Cuadernos de comunicación e innovación** (suplemento TELOS enlightED), 110, p. 30-35, 17 abr. 2019. Disponível em: https://telos.fundaciontelefonica.com/telos-110-enlighted-analisis-lo-que-se-esconde-detras-de-la-edtech-y-la-learntech/. Acesso em: 18 ago. 2025.

REGAN, Priscilla M.; JESSE, Jolene. Ethical challenges of edtech, big data and personalized learning: twenty-first century student sorting and tracking. **Ethics and Information Technology**, v. 21, n. 3, p. 167-179, 2019. Disponível em: https://journals.sagepub.com/doi/10.1177/14782103221080265. Acesso em: 18 dez. 2025.

REGAN, Priscilla M.; JESSE, Jolene. Ethical challenges of edtech, big data and personalized learning: twenty-first century student sorting and tracking. **Ethics and Information Technology**, v. 21, n. 3, p. 167-179, 2019. Disponível em: https://journals.sagepub.com/doi/10.1177/14782103221080265. Acesso em: 18 dez. 2025.

REIG HERNÁNDEZ, Dolors. Blockchain y educación, ¿de qué estamos hablando? **Cuadernos de Pedagogía**, n. 488, p. 126-127, 2018. Disponível em: https://dialnet.unirioja.es/servlet/articulo?codigo=6470286. Acesso em: 18 dez. 2025.

RIVERA, Javier de. Guía para entender y combatir el capitalismo digital. **Papeles de relaciones ecosociales y cambio global**, n. 144, p. 55-72, 2019. Disponível em: https://www.fuhem.es/papeles/papeles-numero-144/. Acesso em: 16 dez. 2025.

ROBERTS, Huw; HINE, Emmie; TADDEO, Mariarosaria; FLORIDI, Luciano. Global AI governance: barriers and pathways forward. **International Affairs**, v. 100, n. 3, p. 1275-1286, 2024. Disponível em: https://academic.oup.com/ia/article/100/3/1275/7641064. Acesso em: 16 dez. 2025.

SAMPEDRO, Víctor. Quimeras y mito digital. **Público**, 18 maio 2018. Disponível em: https://www.publico.es/opinion/hemeroteca/quimeras-mito-digital.html. Acesso em: 18 ago. 2025.

SAURA, Geo. Filantrocapitalismo digital en educación: Covid-19, UNESCO, Google, Facebook y Microsoft. **Teknokultura: Revista de Cultura Digital y Movimientos Sociales**, v. 17, n. 2, p. 159-168, 2020. Disponível em: https://revistas.ucm.es/index.php/TEKN/article/view/69547. Acesso em: 18 dez. 2025.

SCHMIDT, Eric. Eric Schmidt: I Used to Run Google. Silicon Valley Could Lose to China. **The New York Times**, 27 fev. 2020. Disponível em: https://www.nytimes.com/2020/02/27/opinion/eric-schmidt-ai-china.html. Acesso em: 18 ago. 2025.

SRIPRAKASH, Arathi; WILLIAMSON, Ben; FACER, Keri; PYKETT, Jessica; VALLADARES CELIS, Carolina. Sociodigital futures of education: reparations, sovereignty, care, and democratisation. **Oxford Review of Education**, vol. 51, n. 4, p. 561-578, 2025. Disponível em: https://www.tandfonline.com/doi/full/10.1080/03054985.2024.2348459. Acesso em: 18 dez. 2025.

SIERRA-CABALLERO, Francisco Samuel. Comunicología y descolonización: Una lectura histórica para nuevas mediaciones en la era digital. **Tram[p]as de la Comunicación y la Cultura**, n. 86, e053, 2021. Disponível em: https://portal.amelica.org/ameli/journal/518/5182257008/. Acesso em: 18 dez. 2025.

TELLO, Andrés. Sobre el colonialismo digital: Datos, algoritmos y colonialidad tecnológica del poder en el sur global. **InMediaciones de la Comunicación**, v. 18, n. 2, p. 89-110, 2023. Disponível em: https://revistas.ort.edu.uy/inmediaciones-de-la-comunicacion/article/view/3523. Acesso em: 18 dez. 2025.

VEGA, Francisco R. *et al*. Integración de tecnología educativa en el aula: Oportunidades y desafíos. **Imaginario Social**, v. 8, n. 2, p. 3-?, 2025. Disponível em: https://dialnet.unirioja.es/servlet/articulo?codigo=10073046. Acesso em: 18 dez. 2025.

VAROUFAKIS, Yanis. **Tecnofeudalismo:** El sigiloso sucesor del capitalismo. Barcelona: Deusto, 2024.

WALLERSTEIN, Immanuel. **Análisis de sistemas-mundo.** Una introducción. México: Siglo XXI, 2005.

WATTERS, Audrey. School Work and Surveillance. **Hack Education**, 30 abr. 2020. Disponível em: https://hackeducation.com/2020/04/30/surveillance. Acesso em: 18 ago. 2025.

WILLIAMSON, Ben; HOGAN, Anna. La comercialización y la privatización en y de la educación en el contexto de la COVID-19. **Internacional de la Educación**

América Latina, 2020. Disponível em: https://ei-ie-al.org/recurso/la-comercializacion-y-la-privatizacion-en-y-de-la-educacion-en-el-contexto-de-la-covid-19. Acesso em: 18 ago. 2025.

WILLIAMSON, Ben. **Big data en educación**. Madrid: Morata, 2017.

WILLIAMSON, Ben. Digital policy sociology: Software and science in data-intensive precision education, Critical Studies in Education, p. 1-17. 2019. https://doi.org/10.1080/17508487.2019.1691030 Acesso em: 19 dez. 2025.

WILLIAMSON, Ben J. Re-infrastructuring higher education. **Dialogues on Digital Society**, v. 1, n. 1, p. 41-46, 2025. Disponível em: https://journals.sagepub.com/doi/10.1177/29768640241251666. Acesso em: 18 dez. 2025.

ZUBOFF, Shoshana. **The Age of Surveillance Capitalism:** The Fight for a Human Future at the New Frontier of Power. London: Profile Books, 2019.

DÍEZ-GUTIÉRREZ, Enrique-Javier.