Digital technologies in schools:
tensions between teaching performance, commercial interests and public policies[1]

Tecnologias digitais na escola:
tensionamentos entre atuação docente, interesses comerciais e políticas públicas

Tecnologías digitales en la escuela:
tensiones entre prácticas docentes, intereses comerciales y políticas públicas

Daniel Silva Pinheiro[2]
Universidade Federal do Sul da Bahia

Rafael Alberto González González[3]
Universidade Federal de Juiz de Fora

Abstract: This article starts from data produced in the context of a PhD thesis presented in 2022, it aims investigating the emerged tensions from teaching practices committed to students' educational demands versus the commercial interests of Big Tech. This asymmetrical relationship, reflected in the development of a real related public policies, is watched here from the perspective of high school teachers working in the autonomous region of Catalonia (Spain) and the state of Bahia (Brazil). The interviews conducted with these professionals were structured around a theoretical framework that understands education as a right and that the active and civic mobilization of school communities is fundamental for the development of public policies less susceptible to lobbying by transnational technology companies. Among the results obtained, we observe the implications of the current context of platformization of education on the work of teachers, with limitations on their autonomy and that of the school units, as well as problematic repercussions of public policies that disregard or downplay the fundamental role of education professionals in decision-making processes.
Keywords: Digital Technologies; Platformization of Education; Public Educational Policies; Teaching Performance.

Resumo: Este artigo parte dos dados produzidos no contexto de uma tese de doutorado defendida em 2022 para investigar os tensionamentos que emergem da atuação docente comprometida com as demandas formativas de estudantes frente aos interesses comerciais de grandes empresas de tecnologia. Esta relação, de caráter assimétrico e que está refletida na articulação de políticas públicas sobre o tema, aqui é observada sob a ótica de docentes do ensino médio atuantes na região autônoma da Catalunha (Espanha) e no estado da Bahia (Brasil). As entrevistas realizadas com estes

---

profissionais foram articuladas a uma base teórica que compreende a educação enquanto um direito e que a mobilização das comunidades escolares de maneira ativa e cidadã é fundamental para composição de políticas públicas menos suscetíveis ao *lobby* das empresas transnacionais de tecnologia. Entre os resultados obtidos são observados desdobramentos do corrente contexto de plataformização da educação sobre a atuação docente com limitações à sua autonomia e das unidades escolares, bem como repercussões problemáticas de políticas públicas que desconsideram ou secundarizam o papel fundamental dos profissionais da educação nos processos decisórios.

Palavras-chave*: Tecnologias Digitais; Plataformização da Educação; Políticas Públicas Educacionais; Atuação Docente.

Resumen: Este artículo considera los datos producidos en una tesis doctoral presentada en el año 2022 para investigar las tensiones que surgen de las prácticas docentes comprometidas con las demandas educativas de los estudiantes frente a las perspectivas comerciales de las grandes empresas de tecnología. Esta relación, que es asimetrica y también esta reflejada en la conformación de políticas públicas sobre el tema, es considerada aquí desde la ótica del profesorado de secundária en la región autónoma de Cataluña (España) y en Bahía (Brasil). Las entrevistas realizadas a estos profesionales se articularon dentro de un marco teórico que entiende la educación como un derecho y que la movilización activa y cívica de las comunidades escolares es fundamental para la formulación de políticas públicas menos susceptibles al cabildeo de las empresas tecnológicas transnacionales. Entre los resultados obtenidos, se observan los efectos del actual escenario de plataformización de la educación en la práctica docente, con limitaciones a su autonomía y a la de las unidades escolares, así como las repercusiones problemáticas de las políticas públicas que ignoran o minimizan el papel fundamental de los profesionales de la educación en los procesos de toma de decisiones.

Palabras clave: Tecnologías Digitales; Plataformización de la Educación; Políticas Públicas Educativas; Papel de la Docencia.

Introduction

The ongoing reconfigurations that Westernized societies have been undergoing draw attention for presenting developments in the realm of labor relations, cultural articulations, and the field of education, with an observable alignment between these movements and the capitalist economic model (Millanovic, 2019) that predominates in these contexts. Turning our gaze to the field of education, the approximations with this context are also notable since its principal representative, the school, as a social institution, faces major tensions: at times to reconstruct curricula in the face of emerging demands in the volatile world of work, at other times from the requirement that formative processes begin to strongly include competencies and skills idealized as useful for projected future sceneries of techno-digital predominance (Babich; Golovchin; Mironenko, 2021).

In a global context in which socio-technical processes of platformization (Srnicek, 2018) are intensifying and a small (but powerful) group of companies, the Big Tech (Morozov, 2018), have assumed a strategic role in shaping the technical, economic, social and political relations that characterize the most recent version of digital society, the educational universe has been deeply permeated by the relations of knowledge-power that drive the digital revolution, immersing the educational agenda in a web of multiple and complex connections that entangle primarily schools, techno-educational solutions, Big Tech and the hegemonic forces of global capitalism, this set of interactions proving to be a key element for understanding the social processes characteristic of the twenty-first century.

Thus, we establish as the main objective of this article to investigate the tensions that emerge from teaching activity committed to the formative demands of students in face of the commercial interests of large transnational technology companies, since it appears to us impossible to deny that the field of education is also a target of these political-economic agents which impact the design and implementation of public policies today.

It is important to signal that here we defend a broad and inclusive conception of what these policies are, understanding them to involve the decisions, actions, programs, projects and instruments used by governments and public agents for the implementation of services or for meeting the population in their respective spheres of action. This perspective draws on the propositions put forward by Raúl Velásquez Gavilanes (2009) and the investigation by Uriel Castellanos (2020), both of whom recall the fact that such policies may or may not include the participation and involvement of the citizens to whom they are addressed.

Returning to the context of public policy production, we are also interested in corroborating the observations made by Stephen Ball (2001) when he notes that a gradual disappearance is underway of the conception of public policies designed and effectively implemented by States in strategic areas such as education, in view of their replacement by policies for economic competitiveness which reflect what this author considers to be an abandonment or marginalisation of the social purposes of education. Not by chance, the important and already mentioned work of Morozov (2018), which introduces into the technopolitical debate the term Big Tech, is subtitled precisely as The Rise of Data and the Death of Politics. In the end, it is in this dimension of tension that some of the principal challenges of our time are instituted.

Given the relevance of the theme and being interested in observing it from the level of the school, alongside teachers in their itineraries of continuous training and

pedagogical practice associated with digital technologies (what here we summarise by the expression teaching activity) the objectives of this article are oriented by the methodology of data production derived from the research carried out for a doctoral thesis developed between the years 2017 and 2022. That investigation took place in the field with six teachers who were working at the secondary education level in schools in Brazil (Bahia) and Spain (Catalonia) during the years 2020 and 2021, amidst the Covid-19 pandemic, through in-person and online interviews, as well as the sharing of teaching materials by these professionals.

The arrangement mobilised for the investigation involved operation with three different types of devices for data production: semi-structured in-person interviews, semi-structured online interviews and analysis of teaching materials provided by the teachers, although this analysis is not part of the approach we undertake here. As for the interpretation of the data collected during the research and which we recover here, the assumptions of Textual Discursive Analysis with a base in the conceptions defended by Moraes and Galiazzi (2016) were used, with description and signification of the research findings carried out concomitantly via the hermeneutics of reconstruction of meanings, with emphasis on the perspective of the subjects involved in the research.

Interfaces between School Demands and Digital Platform Services

Students, teachers, other members of the school community, citizens in general — we are all lined up, in some way, on one (or several!) of the servers of one of the few Big Tech companies that today control the extraction and storage of internet user data. This new stage of the political and cultural experience of subjects, notably structured by the traversing of digital networks, also marks the process described by Pinheiro (2022) as *itinerância autoral docente* and involves actions of selection and curation of resources with didactic potential, mobilization of technical and pedagogical knowledge to work with these resources in learning experiences, creative and authorial operations, and even initiatives aimed at collaborative work and the sharing of teaching materials.

In this asymmetric and interconnected movement, teachers are urged to build various confrontations, for example, when they feel prevented or unable to carry out their creative and professional plans because of imposed legal usage restrictions on a given resource or because they lack access to digital devices that could support pedagogical work with students.

Given that they perform their work committedly and attentively, many of these professionals demonstrate awareness of the commercial disputes and interests that are at play when the topic is so-called "educational technology," understanding that their itinerant journey through resources/services that better respond to their needs and those of the students under their responsibility is, in different ways, intercepted by these disputes or subjected to power structures that operate at levels and instances that transcend their main work space: the school.

In the exercise of their citizenship, these teachers see themselves as part of the environment of struggles that is configured in contemporaneity, understanding that if they cannot build a direct confrontation to the large commercial structures and their lobbies, at least they must take responsibility for disseminating among students the awareness that there are alternatives, that this is not a scenario in which only the large market players operate. Among the dialogues woven with research participants emerged precisely meaning units about the profile of secondary school teachers in contemporaneity, which units were gathered under the category "committed teaching activity" since they accounted for how these professionals sought to circumvent the emerging dilemmas and the asymmetrical power relations in the realm of the promotion and incorporation of technologies in the school. It is in this sense that one of the teacher-collaborators[4] of the research articulates their testimony by stating that:

> […] it is evident that education is also a business. Of course I am not in favour of that, of the business, but there are companies that are and obviously, for example, Google offers us a very interesting platform, but with a clear objective which is that our students enter the Google platform and become captive. Should we make use of that? Yes. Should we be alert? Yes. Should we raise our students' awareness? Yes. For example, from the beginning we were against Windows and we are in favour of free programming, of Free Software, but it is not always possible. At this moment, for example, if there were a free alternative to Google's we would certainly use it, but there is none, and Google offers us an impressive amount of resources, that's the reality (Teacher ES-2).

As the teacher further expands their reflection, they explain that, at the same time as they yield to the use of the Big Tech's services because, in their opinion, those provide a more robust response to the pedagogical demands they promote in that school, they and their colleagues do not

---

[4] In order to preserve the anonymity of participants, in the thesis all were identified by a label stating their role – "Teacher" – followed by their country of origin (Brazil = BR or Spain = ES) and a numerical indicator (1 to 5). This testimony, for example, was given by "Teacher ES-2".

relinquish the use of a free operating system, Linkat, on all computers provided to students. Moreover, the teacher considers that its use by those students does not become problematic compared to other proprietary operating systems. On the contrary, according to the teacher, over time and through teachers' incentives, problems with the user interface cease to be a hindrance to students. Linkat[5], the software referenced by the teacher, is an operating system based on Ubuntu, a GNU/Linux distribution, which was implemented by the Department of Education of Catalonia and offered to educational centers providing infrastructure with solutions for educational management, teaching and multimedia resources.

The importance of a public policy of this nature, in this case promoted by the Generalitat (the power instance that administers an autonomous region in the Spanish context) is notable, especially by considering as part of the solution an offer of functionalities that dialogue with the demands deriving from administrative tasks pertaining to the school reality. It is possible to consider, indeed, that precisely the first movement of schools toward the digital, in general, was viewed historically in the realm of the management of that type of tasks. As in much of other social niches, the understanding that digital technologies (above all computers and the internet) were tools able to enhance what was already done through analog machines, also reached schools that began to deploy those "new technologies" to organise student databases, formalise administrative processes and then, in a subsequent and more recent movement, make educational content available.

It is timely to highlight, however, that the infrastructure that underlies the provision of services of this nature to large publics, such as the set of schools in a network, large collectives of teachers, students and other administrative staff, ends up constituting an intricate apparatus that depends on significant supplies of electric power, specialised labour maintained with attractive employment opportunities and capital liquidity to fund the set of operations that this type of business incorporates. For governments, operating in isolation at the level of the state, the Generalitat or the municipal sphere, to compete effectively and viably in this market proves to be a true challenge that is often used as justification to yield to the commercial solutions of large corporations.

---

[5] Additional information about this operating system can be found at: http://linkat.xtec.cat/portal/index.php — accessed October 28, 2025.

In addition, as the teacher-researcher André Lemos (2021) points out, there are very objective intentions when Big Tech offer digital platforms. According to this author, the objective of these commercial platforms is to be, at the same time, an infrastructure deemed inevitable for all social sectors and a novel solution to a daily problem that can be solved by data flows. By articulating this context that mobilises a relationship of dependency, the author highlights that the platforms diversify products and operations from opportunities.

One can then note that content which reached students' hands through CD-ROMs or other types of physical media migrated in format and support and can now be found almost exclusively accessible in online environments which, despite bearing the school institution's branding in the headers and footers of web pages or apps, for the most part are not managed fully and autonomously by the local administration of the educational entities. This demand for online systems capable of organising students' academic life and facilitating the bureaucratic operations that are the responsibility of schools, has been met by numerous companies that either create systems, from their zero-stage, to suit client tastes at considerable cost, or customize platforms to operationalize the desired services.

There are also companies, especially startups, that offer consultancy for the installation and use of Big Tech systems, such as Google's services or its Google Workspace ecosystem, for example. According to the analysis undertaken by researcher Rafael Evangelista (2021) the role of these small companies, described by him as "satellite startups," is relevant in the current scenario of the expansion of surveillance capitalism since they are the ones responsible for translating the interests of multinational technology corporations into local language, with prominence for their action in the Global South, a market with particular specificities and challenges.

This reality was highlighted by participating teachers in the research who noted that the experience of proximity with technologies that was operationalised in their respective school units at the time of the testimonies occurred precisely through the lens of seeking solutions that responded to urgent administrative issues and only in a second moment did an expansion to include the provision of environments for direct interaction between teachers, students and educational resources take place. On that occasion, as they describe, such demand was met by contracting a company that customised the Moodle platform, developed as a free software, assigning its own visual identity and offering the typical resources of so-called Learning Management Systems (LMS) or learning-management systems.

> […] we began the project of creating the content ourselves, of offering parents the possibility that we create the content and, for that we looked for a platform. We manage the whole administrative matter of the school with Alexia[6], the grade matter, the whole administrative matter. So they offered us a platform that was the pedagogical part of Alexia (Teacher ES-4).

The reality of this school unit is quite characteristic, when considering the set of schools in which the other teachers who participated in the study were working. The autonomy to manage their resources, to discuss which alternatives available on the market best responded to the institution's needs, among other regulations and adaptations, stems from the cooperative management model of this school institution. Without this horizontalised management of processes, possibly we would see repeated the problems that are posed in educational realities that are highly hierarchical or where the definitions related to acquisition and operationalisation of technologies are distant from the school units, in instances higher than local administration, with little interlocution between them.

Although the autonomy resulting from this model of organisation is evident and representative, the relationship between the contracting party and the service-providing company is not always full, or progresses as expected, as pointed out by one of the teachers:

> For a time, Alexia did not work well. What happened is that the School Management did not allow, did not want […] and we spent a few years in the middle of a crisis thinking: "What do we do?" Then Alexia founded Xtend, which at first worked horribly. When we started, half of the things were not working, they offered us some things that later were not true and we stayed like that for two, three, four years. To the point that we reached a moment in which we said: "wow, we change company". […] Well, fortunately, Alexia resolved itself, Xtend resolved itself, you understand? And then, from that moment, it began to do the things it really had to offer, and now it is a very powerful platform to work with, really now it is functioning as I need and offering what I am asking them (Teacher ES-4).

Based on descriptors present in statements like this teacher's, which refer to the process of technology appropriation in the school in interface with the dispositions of the technical/technological services market that has been articulating in this context, we infer that the constitution of LMS-type environments represents an important demand in the present time, mainly because it responds to some of the expectations of two important agents in the schooling process: families and school institutions.

---

[6] Alexia is a suite/platform of educational services customized by the company Educaria: https://www.alexiaeducaria.com/entorno-unico/ – accessed October 28, 2025.

The need for continuous communication between these poles can be met, from platforms that interconnect teachers, students, parents and school management, including considering opportunities of synchronous and asynchronous interaction. During the pandemic period, although new challenges emerged, schools and educational systems that already had platforms of this nature took the lead because the school community was already familiar with the functionalities most required thereafter as a result of the necessary impositions of isolation/social distancing.

One of the teacher participants presents the stance taken at that moment by her and her colleagues who worked in public education, recalling:

> Everything began to shut down on Friday, didn't it? And on Monday we were already working, that is, we did not rest a day, we did not stay in standby because of what I told you before […]. The fact of having all the tools, of all the children having an internet connection, that facilitated our lives a lot. So, over the weekend, we created a [Google] site to be inserting challenges and other things so that they would not remain idle and we also created a classroom [Google]. Of course we had the luck of already working with those tools, so the children already knew them, the boys and girls already knew those tools, so everything was very easy. We communicated with students and families via email normally […]. (Teacher ES-1).

Statements such as this were recurrent among the teacher participants of the research, allowing the categorisation and discussion of the remarkable centrality of digital platforms in teacher routines and in the processes of mediating learning with students (a fact that was decisively amplified during the COVID-19 pandemic period). In addition to them, the use of social network communication resources also expanded, spaces in which secondary school students (in the Spanish case) already had greater traffic and more constant experience.

In contrast to this perspective, however, the fact draws attention that, for many teachers, as revealed by research carried out in the Spanish context by Castro-Rodríguez et al. (2017), these platforms that intend to be incorporated into school contexts as virtual learning environments continue to be seen in a precarious manner, under-utilising their potential, their main appropriation being while spaces of access and deposition/availability of educational content.

In the words of those same authors, "the conception of platform corresponds more to a vision of access to a repository of materials than to a communicational space" (p.57). A significant discrepancy then opens between what would be a "deposit space" as LMS are often appropriated and the communicational environments promoted by social networks focused on user interaction (even if mediated by

algorithm action), and which are convivial spaces in which typically students already are inserted and have skill for interaction.

If, on the one hand, virtual learning environments have the potential to fulfil the important role of organising information and contents in multiple and adequate forms, recording and historicising the accesses to each resource, besides enabling certain levels of interaction between users and other online environments, the commercial platforms maintained by Big Tech are often described as more user-friendly precisely because they are structured under the logic of social networks, offering possibilities of communication among the students themselves, with other young people and also with their teachers. This, to the disregard of whether the possible resources useful for students' learning are present there in a dispersed and non-linear way.

It is noteworthy further that, besides presenting themselves as "free," the services offered by these companies, through their digital communication platforms, foster exchanges among users, who can share their impressions as well as expand their contact networks using the language and codes current in these spaces ("likes," "follows," "unfollows" and "hashtags.").

Asymmetry of Interests in the Adoption of Technologies in Schools

Beyond the model in which the school itself seeks to contract services from local startups that represent the major players in the sector, we see other possible articulations outlined, the most prominent, in the case of public education, being those that involve formal agreements between school networks and educational systems and the business conglomerates that manage digital platforms.

These agreements include terms of use and/or privacy policies that use language not always accessible to school administrators or, more seriously, fail to adequately engage with important legislation intended to ensure users' rights. In the Brazilian case, the Lei Geral de Proteção de Dados (LGPD), and, in the European context, the General Data Protection Regulation (GDPR). Such a finding is expressed in a significant study, supported by the Open Education Initiative, conducted by researcher Stephane Lima (2020), undertaking a descriptive analysis of the terms of use of services offered by two giants in the sector (Google, with the "G Suite for Education" environment, and Microsoft, promoter of "Microsoft 365".

The relevant considerations that already highlighted the unsuitability of these documents regarding the effective and complete protection of data of students and

teachers using the services in educational/work contexts were updated via research produced by the Public Policies and Internet Laboratory (LAPIN), which, through the work of researchers Guilherme Chacon, Henrique Castro and Luiza Morales (2022), produced an analysis of these companies' services ("Google Workspace for Education" and "Microsoft 365 – Office 365 Educação)".

The paper reiterates the need to increase transparency around the operation and processing of user data in both products, reinforcing the dimension of opacity with which these companies operate. Another highlight concerns the fact that the servers on which the user data of the education-oriented services offered by Microsoft are stored are not necessarily located in Brazil, and that problematic prospects persist regarding the placement of ads in the Google products aimed at use in educational contexts.

Given this scenario, it is observed that schools, educators and students with their families appear to be on the opposite side of the technology companies with all their lobbying directed at governments and institutional powers. Such an asymmetric relationship contributes to tensing these "partnerships" between companies and schools and/or educational systems to such a degree that resistance movements mobilized by school communities are remarkable, such as the one that emerged in Catalonia (ES) involving families and civil society entities[7]. Between 2018-2019, groups of families in public schools in Catalonia mobilised against the massive presence of Google services as the only alternative for digital use and experimentation in the school.

On that occasion, those families obtained the support of the activist network Xnet[8] to build a consistent proposal capable of offering technical products[9] similar to those developed in Silicon Valley, in terms of usability (with the difference of being auditable and offering greater security for users, children and adolescents, for the most part). That partnership resulted in an interlocution with the Catalan government, which decided to fund a pilot project with five schools experimenting with the new services.

When a public policy sees itself under tension and must re-frame itself given the dissatisfaction of collectives that would be impacted by it, we understand that the

---

[7] This movement of families was featured in the Spanish news, for example here: https://elpais.com/espana/catalunya/2020-12-10/escuelas-que-buscan-alternativas-a-google.html — accessed 28 Oct 2025.

[8] Additional information about the network Xnet can be found at: https://xnet-x.net/es/quienes-somos/ — accessed 28 Oct 2025.

[9] Additional information on the full alternative proposal to G-Suite can be found at: https://xnet-x.net/es/no-autorizar-google-suite-escuelas/ — accessed 28 Oct 2025.

importance of citizen participation is heightened, yet it is perceptible that in contexts in which asymmetrical power relations predominate such participation does not emerge naturally and needs to be encouraged by forceful actions of social institutions, among them the school.

It was precisely in this sense that the different actors involved in the research project *Conexão Escola Mundo: espaços inovadores para formação cidadã*, carried out between 2018-2022 and funded by CNPq Call No. 22/2016 - Research and Innovation in Human, Social and Applied Social Sciences, acted. The initiative integrated a collective of professors and students from public universities in Bahia and Santa Catarina, and school communities in the cities of Salvador and Florianópolis, around actions promoting digital citizenship and critical and creative appropriation of digital technologies.

The evidence produced within the project, in its different fronts, sought to provide support for public policies that aimed to bring cyberculture and education closer to consider emerging issues in school communities as fundamental and not only view them as the implementers — allowing then that the formulation of public policies needs to be based on a hacker, collaborative model of work, which mobilises agents in different spheres and spaces of political practice, something that enriches learning processes and proves to be a potentiality that cannot be wasted (Pretto, Lapa, Espínola, 2021).

As the researchers also highlight, even recognizing that there were successes in the articulations with the two school communities that integrated the project, whether regarding the use of free solutions alternatives to those offered by the large companies, or in the composition of more horizontal formation processes, which respected the times and demands of teachers and students, the need is recognised that actions of this nature may be taken at scale, planned in order to constitute experiments with real conditions promoting other paths for the composition of public policies.

Still in this context, it is worth noting that the promotion of these projects or initiatives aimed at the experimentation of viable and scalable alternatives does not necessarily require an ideological-partisan label more aligned to the left or to the right, but could be conceived, as is occurring with the presence and articulation of the supranational companies themselves which, in the Brazilian case, have managed to promote business negotiations with governors of different political spectra[10].

---

[10] This assertion is exemplified by the partnerships established between Google and the Government of Bahia (a state governed by left-leaning administrations for more than fifteen years) and, simultaneously, the

Once again we revisit the logics and the intricacies of these commercial agreements that Big Tech seek to establish, which we now do from the perspective of one of the teacher collaborators of the Brazilian research. As with other testimonies, we can observe a tension concerning the role of the school, which finds itself subject to decisions made in the central bodies of the education system without participation of the local community. This category is analysed here, then, at the interface with another related to the organization of teaching work which finds itself urged to reconfigure without necessarily having a pedagogical justification for it (as would be expected).

In her reflection, this teacher reveals some of the details of agreements made within the administration of the state education network, which affect the local reality in the school where she worked:

> [...] some years ago, one year, two, the state government made the partnership with Google and created an email with a large database, with many megabytes, and created a course linked to promotion and salary increase, so, in order to have a salary progression you had to take the course. It's so that you get trained in Google Classroom, anyway, these Google tools. So I don't know if from now on it stays like that, sort of implied that if you took the course, you already know this. That, if you are approved sometime there [in the course], you'll have to work with Google's tools here [...]. (Teacher Br-1).

Among other impacts arising from this type of partnership for teaching practice, attention is drawn to the tying of career progression to teachers' participation in training courses for use of these corporations' products (in this case Google) in educational experiences with students. It is, at a minimum, astonishing this type of offer in the realm of public education and even the association between training for use/experimentation of private services/resources/platforms and career advancement.

In this context, we must question whether, if teachers undertake a course based on the use/experimentation of free technologies, they are guaranteed the same rights. Even more, we could ask whether such courses are offered by the network itself in the same way or if conditions for the didactic transfer, together with students, are minimally provided?

Regarding this last question, it is worth mentioning the fact that the partnership recovered in the teacher's statement also included the provision of so-called Chromebooks; then, complementarily, we can ask what other physical resources

---

agreement of the same company with the State of Santa Catarina — for more than one term led by far-right politicians. Articles published by the state education secretariats themselves attest to this reality: https://www.ba.gov.br/mulheres/noticia/2024-03/5424/em-parceria-com-o-google-governo.

were at the disposal of teachers trained in courses linked to free technologies? Unfortunately, we have no knowledge of public policies in the Brazilian state of Bahia, where that school was located, that are concretely established or of partnerships/projects linked, for example, to the acquisition and provision of Arduino-kits or structuring networks and servers, that support free software capable of providing users functionality related to text and spreadsheet editing, slide production, etc., there being a discrepancy in the posture of the public agent, something that is not compatible with its legal duty of promoting equality and equivalence of opportunities.

Another aspect, which marks the institution of these agreements between public management and private companies such as the Big Tech, is the emphasis on the fact that they are monetarily advantageous for the State, because they do not burden an already strained public budget, once they derive from the supply of "free" services. We observe, for example, that at the time of the announcement of the partnership signed between the Bahia state government and Google, frequent reference was made to the gratuity of the services to be provided by the US company in the various publications that informed society about the state management procedure.

If, in the propaganda sense, this reference to gratuity may even mobilise the attention and interest of lay taxpayers, from a practical and realistic viewpoint it finds no support, since if the government does not disburse any financial amount for the actual acquisition of the products or for the access of the school community to these platforms, there is no doubt that other economic assets are being delivered to justify the offer of the service by the company and even its operational continuity. As expressed emphatically by Nelson Pretto:

> Having ahead of the SEC [Secretariat of Education] one of the pioneer militants of the free software movement, former deputy and licensed senator Walter Pinheiro, the government going public to declare that the cost of the project is zero is total naiveté, not to say something else. Who does not know that when we use these systems so-called free, we are, in fact, remunerating these companies precisely with the most valuable currency in the contemporary world: our information. ALL, in uppercase even, all the information about our lives will be at the disposal of a single company that lives precisely from the information it stores and operates! That each subject does that individually is of their intimate forum and of their free will. However, that a government begins to adopt this initiative as a public policy, "obliging" an entire school community to deposit there their data and their productions, is absolutely lamentable. (Pretto, 2017, p. 94).

This understanding is reinforced by data produced and disclosed by Brazilian and South-American researchers/scientists gathered in the *Observatório Educação*

Vigiada[11], an initiative dedicated to mapping the advance of platformization of public education, especially in basic and university education. Based on the investigations carried out, which take as a base, for example, the reading and meticulous analysis of the terms/documents that guide agreements signed between public entities and Big Tech, the researchers who integrate the initiative assess that:

> […] beyond the data mining and collection, there are other ways for the companies in question to 'monetize' the free. The continuous use of tools and platforms fosters a cycle of familiarity and a legacy of content that leads users to seek the same platforms and tools in other spheres of action, thus generating loyalty since the earliest age. (Amiel; Haar; Vieira; Soares, 2020, n.p.).

Thus, to the extent that Teacher BR-1, for example, having participated in those training courses for use of the Google suite, finds herself urged by the Secretariat of Education, the school's pedagogical coordination, or by the objective conditions related to an insurgent scenario (such as that of the COVID-19 pandemic) to incorporate these resources into her pedagogical routines with students or, even before that, when preparing teaching materials, she would also be contributing to the training of these companies' algorithms at the same time as she fosters the students' familiarity with the creative-production environment (icons, aesthetic composition, navigability, etc., provided by them). This movement, widespread and repeated over time, may result in a subsequent loyalty of these users, potential clients of those companies, for other products of their ecosystem.

This understanding is corroborated by the conclusion reached by Pretto, Amiel, Bonilla and Lapa (2021), in their analysis of the current platformization of Brazilian education, with emphasis on the pandemic period:

> Given that the adoption of the systems [of the Big Tech] occurred, in large part, without consultation and discussion with the academic and school communities, loyalty becomes a form of coercion: how can a staff member, teacher or student opt not to use an institutional system? If one of the objectives of Surveillance Capitalism is to change and shape behaviours (Zuboff, 2018), the accumulation of longitudinal data over a childhood or a life are instruments to achieve those objectives. (PRETTO et al., 2021, p. 236).

The interfaces between the testimonies produced in the research in an interpretative key based on the literature discussed thus far allow us to infer that, ultimately, Teacher BR-1, as well as her colleagues, who find themselves subject to the results of agreements of this nature, indirectly work for the Big Tech, being their

---

[11] Detailed information about the initiative can be found here: https://educacaovigiada.org.br/pt/sobre.html. Accessed August 28, 2025.

representatives among the future/possible clients, the students. This would be another expression of "surplus value 2.0", a phenomenon described by Evangelista (2007) when suggesting that the large portals and platforms that spread with the appearance of so-called web 2.0 began to implement a logic in which a significant set of users work for generating profit for the owners of these enterprises, which results in a labour regime that is not always clear for the more vulnerable part. This would be a derivation that, as proposed by Dantas (2014, p. 88), "alters the value formerly attached to labour, to the field of language which is understood as commodity in this context". It is worth noting that even with the current monetization of channels and profiles with greater audience and/or engagement on digital social networks, a significant imbalance persists in the perception of gains between the maintainers of those online environments and the content producers who operate directly with the afore-mentioned commodity: language.

Considerations

As we have discussed here, there is a relevant role being played by large technology corporations in the articulation of public policies that guide, fund and/or marshal digital resources for education. Whether in the central regions of capitalism, where nations such as Spain are located, or in its periphery, where a country such as Brazil might be positioned, there are concretely commercial interests aimed especially at the expansion of these companies' markets either through the fidelization of users or through operation with data provided and/or captured via their own technical solutions.

In this sense, what we have examined reveals at least three tensions for committed teaching practice that demand attention: the limited autonomy of school-unit managers in the face of ongoing commercial disputes, making predominant the need for articulations involving families and other social and political agents to circumvent the voracity of the Big Tech business model; the demand for funding of actions with digital technology in educational settings, which today crosses political and commercial negotiations that disregard or subordinate the fundamental role of education professionals in decision-making processes; the availability of digital resources that truly engage with the everyday pedagogical/didactic and administrative life of school units, for example LMS aligned with the communicational reality in which teachers and students are daily immersed. These tensions highlight the need for articulated action among families, education professionals and social agents in building alternatives and mobilizing political actors.

Although the unfolding of these tensions can be observed in different contexts, it is necessary to note the limitations incorporated into the analysis presented here, which does not intend to be universal or even definitively restrictive; rather, it stems from the concrete reality of data production, in a scenario involving five teachers in three school units (two in Spain and one in Brazil), to discuss the problematic that relates commercial interests and professional teaching activity at the school level.

The reflections produced by these teachers in interface with the literature contribute to the thematic debate precisely because they are representative inasmuch as they account for how this movement is disparate in terms of the reach of voices, given that the repercussion of the concrete demands that are part of teaching practice, in many cases, does not exceed the internal management spaces of the school and, on the other hand, the lobby of large technology companies with all their capital power lies very close to the policy-making articulation spaces.

It is then noted that, even though actions of resistance and promotion of alternatives that more adequately respond to the demands of teachers and school communities are highlighted, the balance of forces alongside public agents remains unequal and shows no sign of abating. The responsibility remains, then, for researchers interested in the topic and even for the subjects involved with its unfoldings (teachers, students and parents, primarily) to denounce and refuse this state of affairs. We understand that, although these stances fulfil their role, the need persists for citizen involvement to be expanded for mobilizing collectives of struggle and experimentation of alternatives to these hegemonic models today.

Among the possible actions derived from the discussion proposed here, we highlight the fundamental role played by research actions operated by public institutions as well as mobilizations led by organized civil society (their continuation, strengthening and expansion are recommended). We also envisage the necessity that organized social collectives seek channels of dialogue with legislators in different levels, from the municipality to broader instances, so that they support their activity in this field with consistent analyses produced jointly with school communities. Finally, it must be emphasized that we envisage a horizon that does not ignore or disparage the existence of large corporations; on the contrary, it understands that their role cannot be merely to engulf public policies or act to suppress a broader and more diverse ecosystem of solutions.

References

AMIEL, T.; HAAR, Ewout ter; VIEIRA, Miguel Said; SOARES, Tiago C. Lavits_Covid19_#20: Educação aberta, plataformas e capitalismo de vigilância: a pandemia como encruzilhada, 2020. Disponível em: https://lavits.org/lavits_covid19_20-educacao-aberta-plataformas-e-capitalismo-de-vigilancia-a-pandemia-como-encruzilhada/. Acesso em: 25 AGO 2024.

BABICH, Lyubov; GOLOVCHIN, Maksim y MIRONENKO, Elena. Smart competencies as a toll for the development of the information culture and society. Economic ans social changes: Facts, trends, forecast, 2021. Disponible en: https://bit.ly/42iQ0pF. Acceso: 20 de septiembre, 2023.

BALL, J. S. Diretrizes Políticas Globais e Relações Políticas Locais em Educação. Currículo sem Fronteiras, v.1, n.2, pp.99-116, Jul/Dez 2001 Acessado em 30 jul 2024. https://gestaoeducacaoespecial.ufes.br/sites/gestaoeducacaoespecial.ufes.br/files/field/anexo/ball.pdf.

CASTELLANOS, Aguirre, Uriel José. (Des)contextos de la cultura libre como política educativa en uma universidad de Venezuela. Universidade Federal da Bahia, Faculdade de Educação, 2020. 265 f.

CASTRO-RODRÍGUEZ, M. M.; CALVO, A. D. C.; RIVERO, V. M. H. Análisis de plataformas educativas digitales comerciales españolas destinadas a Educación Primaria / Analysis of Spanish commercial digital educational platforms for Primary Education. Revista Latinoamericana de Tecnología Educativa - RELATEC, v. 16, n. 2, p. 49–62, 17 dez. 2017.

CHACON, G., CASTRO, H., MORALES, L. Análise: Termos De Uso e Políticas De Privacidade do Google Workspace for Education e Microsoft 365 (Office 365 Educação). Laboratório de Políticas Públicas e Internet - LAPIN, Brasilia, 2022. Disponível em: https://zenodo.org/records/7718863. Acesso: 25 AGO 2024.

Conexão Escola-Mundo: espaços inovadores para formação cidadã. Projeto Aprovado no CNPq edital apoio à pesquisa e à inovação em Ciências Humanas, Sociais e Sociais Aplicadas CHSSA 2016, da linha Educação Básica: ensino e formação docente - no. 440065/2017-8

DANTAS, M. D.-U. F. DO R. DE J. –. MAIS-VALIA 2.0: PRODUÇÃO E APROPRIAÇÃO DE VALOR NAS REDES DO CAPITAL. Revista Eletrônica Internacional de Economia Política da Informação, da Comunicação e da Cultura, v. 16, n. 2, p. 85–108, 15 maio 2014.

EVANGELISTA, R. Plataformas educacionais e o capitalismo de vigilância no Sul Global. In: Educação e tecnologias digitais [livro eletrônico]: desafios e estratégias para a continuidade da aprendizagem em tempos de COVID-19. 1. ed. São Paulo: Núcleo de Informação e Coordenação do Ponto BR,2021. p.19–32.

EVANGELISTA, R. Mais valia 2.0. Dicas-L, 14 jul. 2007. Disponível em: http://www.dicas-l.com.br/zonadecombate/zonadecombate_20070714.php. Acesso em: 25 AGO 2022

GAVILANES, Raúl Velásquez. Hacia una nueva definición del concepto "política pública". Desafíos v. 20, p. 149–187, 2009.

LEMOS, A. A Tecnologia é um Vírus: Pandemia e cultura digital. 1. ed. Porto Alegre: Editora Sulina, 2021. v. 1

LIMA, Stephane. Educação, Dados e Plataformas – análise descritiva dos termos de uso dos serviços educacionais Google e Microsoft. São Paulo: Iniciativa Educação Aberta, 2020.

MILANOVIC, Branko. The future of the system that rules the world. London: Harvard University press, 2019.

MORAES, Roque; GALIAZZI, Maria do Carmo, Análise Textual Discursiva, 3. ed. Ijuí: Editora Unijuí, 2016.

MOROZOV, Evgeny. Big Tech. A ascensão dos dados e a morte da política. São Paulo: Ubu, Editora, 2018.

PINHEIRO, Daniel Silva. Itinerância autoral docente para criação de materiais didáticos: tensionamentos e potencialidades em tempos de cibercultura. Universidade Federal da Bahia. Faculdade de Educação, 2022. 265 f

PRETTO, N. D. L., BRANDÃO, L. A., BAZZO, E. M. Conexão Escola-Mundo: espaços inovadores para a formação cidadã. 2021, Perspectiva, 39(3), 1–14.

PRETTO, N. D. L.; AMIEL, T.; BONILLA, M. H.; LAPA, A. Plataformização da educação em tempos de pandemia. In: Educação e tecnologias digitais [livro eletrônico]: desafios e estratégias para a continuidade da aprendizagem em tempos de COVID-19. 1. ed. [s.l.] Núcleo de Informação e Coordenação do Ponto BR, 2021. p. 221–250.

PRETTO, N. Educações, Culturas e Hackers: escritos e reflexões. Salvador: EDUFBA, 2017.

SRNICEK, Nick. Capitalismo de plataformas. Buenos Aires: Caja Negra editora, 2018.