

EdTech Financialization

Financeirização EdTech *Financiarización EdTech*

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Abstract: The article focuses on analyzing the financialization of EdTech industry in global education policy. The Brazilian context is used as a case study. Through statistical analyses, graphs, and discourse, a policy network of EdTech financialization is examined as part of digital governance policy networks of contemporary capitalism. Brazil is considered the laboratory of EdTech financialization. Digital platforms, investment funds, and venture capital proliferate, promoting financial investments in EdTech industry and speculative discourses of fictitious capital to imagine and design the future of education.

Keywords: Financialization; EdTech; Capitalism; Educational Policy.

Resumo: O artigo se concentra na análise da financeirização da indústria EdTech na política educacional global. O contexto brasileiro é utilizado como estudo de caso. Por meio de análises estatísticas, grafos e discursos, examina-se uma rede política de financeirização EdTech como parte das redes políticas de governança digital do capitalismo contemporâneo. O Brasil é considerado o laboratório da financeirização EdTech. Plataformas digitais, fundos de investimento e capital de risco proliferam, promovendo investimentos financeiros na indústria EdTech e discursos especulativos de capital fictício para imaginar e desenhar o futuro da educação.

Palavras-chave: Financeirização; EdTech; Capitalismo; Política Educacional.

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Resumen: *El artículo se focaliza en el análisis de la financiarización de la industria EdTech en la política educativa global. Se toma como caso de análisis el contexto brasileño. A través de análisis estadísticos, grafos y discursos, se examina una red política de financiarización EdTech como parte de las redes políticas de gobernanza digital del capitalismo contemporáneo. Brasil es el laboratorio de la financiarización EdTech. Proliferan las plataformas digitales, fondos de inversión y capitalismo de riesgo, que están promoviendo inversiones financieras de la industria EdTech y discursos especulativos de capital ficticio para imaginar y diseñar el futuro de la educación.*

Palabras clave: *Financiarización; EdTech; Capitalismo; Política Educativa.*

INTRODUCTION

In June 2018, HolonIQ published a report titled Education in 2030, which estimated the global educational technology (EdTech) market for the 2030 decade to be valued at USD 10 trillion. HolonIQ (2018) describes itself as an international intelligence platform with the mission of connecting the world through technology, skills, and capital to transform education. In addition to gathering and producing data and insights on the impact of the economy, the platform conducts projection calculations for investments and financial operations of specific actors to determine the future of education across regions, countries, and particular segments. Regarding financial projections focused on venture capital in the EdTech sector for the Latin America and Caribbean region, the platform indicates that while \$500 million in venture capital was invested in EdTech during the 2010s, it is expected that this investment will increase significantly during the 2020s, reaching USD 150 billion (HolonIQ, 2021).

Alongside HolonIQ, other global platforms such as Crunchbase and Traxcn are proliferating. These platforms are dedicated to demonstrating, through precise quantitative data, the financialization of the EdTech industry while also projecting future venture capital investments. The companies behind these platforms, focused on forecasting the financialization of EdTech, are emerging as politically significant actors on a global scale, shaping our understanding of the transformative processes of contemporary capitalism within global education policy.

In some cases, financial projections are not directed at broad segments like EdTech but instead focus on more specific niches. One such precise segment is the global financial industry of the Metaverse. The platform Statista reports that the more than \$44.1 billion invested in 2022 is expected to grow further at a compound annual growth rate of 46.14% between 2024 and 2030, culminating in an anticipated market volume of \$24.7 billion by 2030.

Although the financial industry of the Metaverse is subdivided into concrete segments such as education, advertising, digital media, augmented and virtual reality software, and others, investments directed toward the proliferation of the Metaverse

in education are central to venture capital investors. According to financial projections by Statista, the global Metaverse market in education is expected to reach a value of \$2.5 billion by 2024. Similarly, the international consultancy McKinsey & Company (2022) predicts that the Metaverse industry in education will have an impact ranging from \$180 billion to \$270 billion in the 2030s, specifically targeting virtual learning markets.

In other cases, financialization calculations are not directly aimed at broad segments like EdTech or more specific niches like the Metaverse in education. Financial projections and investments are increasingly focused on particular startups and companies that possess proprietary digital technologies or specialized digital products for education. A particular example is the investments and future projections directed toward “tech unicorns” in education – startups or tech companies valued at over \$1 billion during investment rounds in financial markets, often backed by venture capital firms.

In the financial markets of EdTech, as in any other sector of financialization, the primary goal is the realization of future profits and, consequently, accumulating capital. This concept is commonly understood in financial market literature as Return on Investment (ROI). The basic formula for ROI is $ROI = [(Return\ on\ Investment - Investment) / Investment] \times 100$. Thus, the central strategies of investors involve calculating and preemptively approaching the ROI of the financial technology industry (Chiapello & Walter, 2016). This has led some critical studies to emphasize the processes of assetization (Birch & Muniesa, 2020), a key mechanism for transforming things into assets. These studies argue that in the technoscientific advancements of contemporary capitalism, investments have shifted toward dominating digital assets to secure future profits rather than solely targeting products, goods, and commodities for immediate revenue generation.

As demonstrated in the education sector, ROI in the EdTech industry is the primary focus of major corporations and venture capital funds, particularly in generating digital assets. This emphasis has been further accelerated by the technological advancements spurred by the global COVID-19 pandemic (Williamson; Komljenovic, 2023).

The above discussion highlights several representative cases that illustrate key aspects of how the EdTech financial industry operates to secure future economic profits while reshaping global education policy. This process can be distilled into a simple formula: calculate, invest, and secure future earnings while transforming the future of education. Broadly speaking, this expression encapsulates the financialization of EdTech as a critical element in the materialization of techno-educational markets

(Saura, Cancela & Parcerisa, 2023). These markets are integral to advancing digital privatization in education, driven by the expansionist and accumulative logic of contemporary capitalism.

However, these dynamics of EdTech financialization are not solely aimed at securing future economic profits. The calculations and projections driving financial logic in the broader EdTech sector, as well as in more specific segments such as the Metaverse in education or startups and corporations like tech unicorns, are accompanied by the imagination and projection of the future of education. To this end, financialization platforms, venture capital investors, investment funds, consulting firms, entrepreneurs, and the broader array of political actors involved in materializing financial investments in EdTech are crafting new speculative discourses about the configuration and design of future educational systems.

The Education in 2030 report (HolonIQ, 2018) integrates financial calculations with the ambition of “discovering what the world thinks about the future of education” to project, imagine, and “develop scenarios of possible futures for education and learning.” Regarding the study on the financialization of the EdTech industry in Latin America and the Caribbean, the platform states that its goal is “to provide policymakers, educational leaders, EdTech entrepreneurs, investors, and other stakeholders with information and inspiration to support EdTech initiatives and have a materially positive impact on the region’s educational outcomes” (HolonIQ, 2021).

Regarding the Metaverse in education, financial forecasts are intertwined with narratives that project disruptive visions for the future of education. Mark Zuckerberg, the leader of Meta – the most significant corporation driving venture capital investments and financialization for the Metaverse in education – stated in a video introducing the company’s name change from Facebook that, “In the Metaverse, learning won’t look anything like how we’ve learned before” (Meta, 2021). In the Meta for Education initiative, a dedicated section aimed at transforming the future of education, the company encourages investment by declaring that “learning is limitless in the Metaverse” and that “the Metaverse is breaking down barriers to education and increasing access to immersive learning experiences” (Meta, n.d.).

In alignment with this vision, Nick Clegg, former Deputy Prime Minister of the United Kingdom and now President of Global Affairs at Meta, argues that for the Metaverse to transform the future of education, “it is visionary educational administrators who creatively deploy these technologies in their schools and universities that will provide the best practices for others to adopt” (Meta, 2023). Similarly, venture capital funds such as McKinsey & Company (2019) encourage “public sector entities,” including those in education, to “reimagine public services

and infrastructure in the Metaverse” through “establishing priorities and a roadmap for the greater social good and executing them in collaboration with technology providers.”

From GoStudent, the largest European-born EdTech unicorn attracting financial markets, in a report titled *O fim da escola como você a conhece: A educação em 2050*, it is stated that the future of education will be based on the Metaverse. According to the report, “existing technological platforms for offering virtual education will become the norm across the entire educational spectrum by 2050, regardless of socioeconomic level” (GoStudent, n.d.). As is characteristic of EdTech unicorns, they link the necessity of financial investment in technologies to imagining the future of EdTech to democratize education. Specifically, GoStudent (n.d.) highlights the need to design the future of the Metaverse, asserting that immersive learning will democratize education.

All these narratives projecting the Metaverse industry in education are also disseminated through digital platforms such as EdSurge (n.d.), the most widely circulated publication dedicated to news, reports, and data aimed at attracting financial capital to the core EdTech markets essential for venture capital. The immersive universe of the Metaverse is a central focus of EdSurge in envisioning EdTech financialization and the digital transformation of the future of education.

These are just a few among numerous examples of narratives accompanying financial investments in EdTech that aim to project and envision the future of education, which can be analyzed through the lens of sociotechnical imaginaries. According to Jasanoff’s perspective (2015, p. 5), sociotechnical imaginaries are understood as “collectively held, institutionally stabilized, and publicly performed visions of desirable futures, animated by shared understandings of attainable forms of social life and social order through, and in support of, advances in science and technology.” This is a broad analytical category relevant to understanding the technoscientific advancements of contemporary capitalism concerning the digital transformation of society (Guay & Birch, 2022; Mager & Katzenbach, 2021) and the digital transformation of education within critical studies in global education policy (Dussel & Williams, 2023; Matthews, 2021; Rahm, 2021; Saura, Cancela, & Adell, 2022).

The text is divided as follows: first, we contextualize the research, focusing on the present moment and the trajectory of financialization in Brazil. Next, we address the methodological approach, leading to what we refer to as the political networks of EdTech financialization in Brazil, identifying the actors and investment rounds occurring there. Then, we present a section on sociotechnical imaginaries in education in Brazil, followed by the conclusions.

RESEARCH CONTEXT

Everything happening around financial calculations and investments, as well as the creation of new sociotechnical imaginaries that are shaping and envisioning the future of education, are very precise ways in which the processes of capital accumulation advance through EdTech financialization. They are concrete expressions of the very development of capitalism, which Marx anticipated in *Capital*, through central categories for analyzing contemporary capitalism: *fictitious capital*, *interest-bearing capital*, *the trinitarian formula*, and *commodity fetishism* (Marx, 2017). In summary, what is occurring now is part of what Marx (2017, p. 892) expressed.

[...] interest-bearing capital, land-rent, labor-wages – this economic trinity that connects the components of value and wealth in general with their sources – is the consummation of the mystification of the capitalist mode of production, the reification of social relations, the immediate amalgamation of the material relations of production with their historical-social determination [...].

These initial categories of Marxist theory were some of the key axes for analyzing, in the early 20th century, what gave rise to the foundation of studies on financial capital, mainly through the works of Hilferding (1985) and Lenin (1961), to examine how financial capital explains the tendency toward capital-profit accumulation through the dynamics of profits, interest, and rents. Due to the idiosyncrasies of capitalism in Brazil, studies on financialization in the Brazilian context (Carcanholo; Nakatani, 1999) have been central in understanding global trends toward the financialization of capital over the past three decades (Chesnais, 2016; Mader; Mertens; Van der Zwan, 2020).

Due to the particularities of the Brazilian educational system, theoretical and analytical foundations of Marxist theory have been crucial for the development of critically relevant international literature that focuses on the study of the financialization of education (e.g., Adrião and Domiciano, 2018; Chaves and Amaral, 2016; Leher, 2021; Oliveira, 2009; Siqueira, 2004). Studies on the financialization of education in Brazil began two decades ago, because of the expansion of international conglomerates in higher education, supported by state-driven economic and fiscal incentives based on educational supply.

Two of the central governmental policies enabling the financialization of education have been the University for All Program (*Programa Universidade para Todos*, ProUni), implemented through Law 11,096 (Brazil, 2005), and the Student Financing Fund (*Fundo de Financiamento Estudantil*, FIES), established through Law 10,260 (Brazil, 2001). These policies are recognized as sources of funding for the private sector. Regarding the ProUni policy, central government incentives focus on

transferring economic resources to investment funds and corporate conglomerates through scholarship systems, directing funds from the government to financial markets (Chaves; Amaral, 2016; Leher; Costa, 2023).

In analyzing the financialization process of higher education between 1990 and 2018, Seki (2021) highlights that the role of the for-profit private sector, through banks and investment funds, gained prominence in the late 1990s and expanded significantly after the 2008 capitalist crisis, which drove an influx of international financial investments into peripheral regions. This phenomenon is part of a broader explanation rooted in the thesis that “the higher education system must become more diversified and flexible, aiming for expansion while containing public expenditure.” (Chaves, 2010, p. 482).

For the development of financial capital in Brazilian education policy, both in higher education and basic education, processes involving stock market expansion, investment funds, and corporate groups have become central to controlling Brazilian education policy. This trend has led recent research to focus on specific case studies, demonstrating both the accumulation of profits and the control of policies by the corporate groups driving the most significant financialization expansions in Brazil, such as Anima Holding, *Babema Educação*, *Cogna Educação*, *Cruzeiro do Sul Educacional*, and *Ser Educacional* (Araujo, 2023; Guimarães *et al.*, 2023; Kato, Cordeiro e Costa, 2023; Leher e Costa, 2023; Quibao Neto e Adrião, 2023).

The expansion of such corporate conglomerates drives companies to invest in hiring investment consulting services, as exemplified by Ser Educacional’s partnership with Hopper, to amplify their presence in the capital market (Kato; Cordeiro; Costa, 2023). These financialization processes also foster speculative accumulation, as seen in the case of Arco Educação, one of the few startup companies classified as a technological unicorn. This highlights the relationship between educational capital and digital technologies, with Arco operating in the Brazilian market by selling educational systems focused on basic education. This startup produces and commercializes private education systems, digital tools, textbooks, and other resources targeted at the “Brazilian domestic market” (Seki, 2023, p. 3). Like most corporations and startups, Arco Educação recognizes the financial capital accumulation potential in developing new techno-educational markets. Furthermore, the latest merger and acquisition processes have elevated Arco to a proper educational oligopoly, marked by capital concentration and expansion.

In Brazil’s specific context of dependent capitalism, historical circumstances have positioned state governments as central actors in the proliferation of capital accumulation through the financialization of education. This phenomenon has, in part, led Leher (2021, p. 11) to elucidate specific historical trends in financialization within the Brazilian context, stating that the actions of “[...] corporations and the

State facilitate this shift of education, constitutionally designated as a duty of the State, towards the sphere of expanded capital reproduction.” To examine the financialization of education within the dialectical relationship between the State and financial capital, it is crucial for studies in educational policy to focus on “investigating investment funds, shareholder composition, business portfolios, acquisition movements, and stock market behavior” (Leher, 2021, p. 12).

Under these premises for understanding the relationship between financial capital, the State, and educational policy, it becomes possible to identify some of the primary motivations for introducing the study of financialization into the field of educational policy research. Brazil stands as an ideal context, representing a global exemplar of experimentation with the financialization of contemporary capitalism in education.

This brief contextualization of key analyses on the financialization of education in Brazil establishes the country as a laboratory for global experimentation with educational financialization. As such, Brazil has attracted the focus of intelligent platforms for projecting financial markets, venture capitalists, tech unicorns, large technology corporations, digital media, philanthropic capitalist foundations, and global impact investment funds. These actors concentrate on devising financial calculations for EdTech operations and shaping the sociotechnical imaginaries of the future of education within the Brazilian educational system.

Nonetheless, research on the financialization of the EdTech industry in the Brazilian context remains limited, which is a key motivation for this article. In light of this, this study aims to examine specific dynamics of EdTech financialization within the framework of Brazilian educational policy, seeking to explain the advancements of contemporary capitalism in and through education.

METHODOLOGY

For the development of the research, various procedures, analytical techniques, and software tools are employed, grounded in the principles of network ethnography (Howard, 2002) and adapted to the latest advancements in digital governance networks in education (Saura, Cancela, & Adell, 2022). The study is structured into several methodological phases:

Phase I: This phase focuses on capturing economic data related to investments in EdTech in Brazil. A statistical-descriptive analysis is conducted based on data gathered from two platforms: CrunchBase and Tracxn. As of May 2024, data from these platforms indicate the existence of 999 EdTech companies in Brazil. To delimit the scope of the study, the analysis is concentrated on the ten most significant EdTech companies within the Brazilian context. Using data from CrunchBase and Tracxn,

a longitudinal analysis is conducted to identify the principal corporate groups and individual actors financing these ten companies, the total amount of resources raised, and the investment rounds undertaken.

From this point, some theoretical concepts of political governance networks are used to capture the relationships and visible aspects of actors who are catalyzed to take action that would traditionally fall under the operational capacity of governments. Using these data, a network (graph) is constructed to systematize the identified relationships, which helps analyze educational policies. The software Gephi is employed to design the network. This tool analyzes the power relationships, focusing on the degree of modularity, which indicates the centrality of specific actors within the network. In Figure 1, the nodes represent the actors, and the edges (arrows) represent the investments. The size of the edges is proportional to the frequency with which an investor has contributed financial resources to an EdTech. The ForceAtlas2 algorithm (Jacomy et al., 2014) separates the financing groups. The network was constructed using data collected from both platforms on May 2, 2024, based on the rankings available up to that period. Since data is processed with investment networks (and, consequently, capitalism), changes may occur over time, and market analyses will evolve.

Phase III: Based on the key platforms, corporations, and investors within the EdTech financialization political network in Brazil, this phase analyzes the discourses promoted by these political actors to link financial calculations with the speculative promotion of the future of the EdTech industry in Brazil. To achieve this, the research employs theoretical and analytical frameworks from Critical Discourse Analysis (Fairclough; Wodak, 1997) to demonstrate the dialectical relationship between power and economics in the financialization of the EdTech industry. This approach enables a deeper understanding of how these actors frame and influence public and private perceptions of the EdTech sector, shaping narratives that reflect broader economic agendas with a focus on speculative practices in the context of the education market.

POLITICAL NETWORKS OF EDTECH FINANCIALIZATION IN BRAZIL

As widely demonstrated in global educational policy (Ball, 2012) and in the Brazilian context, political networks have been a pro-privatization trend in education, representing part of Jessop's (2017) definition of new forms of governance in contemporary capitalism. However, due to the acceleration of technoscientific advances in modern capitalism, new *political networks of digital governance* (Saura; Cancela; Adell, 2022) are emerging, grounded in the hybridization of public and

private political actors, along with private technological tools and digital commodities. These networks no longer operate toward analog changes in educational policy but rather towards accelerating the digital transformation of educational systems.

What has not yet been studied are the new political networks of financialization. The analysis of political actors (investors, corporations, venture capital, conglomerates) operating in the financialization dynamics of private technological tools and digital commodities, which materialize in public education systems, is a way of understanding part of the political networks of digital governance in contemporary capitalism in and through education. These conceptualizations of networks imply a new understanding of how educational policies are driven and ways of raising arguments regarding what counts as a technological solution to what would be considered good policy for digital transformation.

Digital governance political networks, in general, and EdTech financialization political networks represent a new form of articulation among actors from different spheres to diagnose educational problems and solve them through digital technologies that dominate contemporary reforms. These technological solutions to social issues respond, in part, to what Morozov (2018) calls technological solutionism: capitalists solving the problems of capitalism through technologies.

In the management of digital governance political networks and EdTech financialization, the presence of various actors is neither predetermined nor fixed; actors may enter and exit, as the process is dynamic and opaque, with relationships often dissolving or new ones being created. It is understood that the relationship established in this particular study depends on market analysis, factors that are produced, and responses made to solve the problem. Regarding EdTech financialization, such a response involves developing technology-based solutions to address these processes. Thus, actors who require investors come together. Below, the network of investors and EdTech in Brazil is presented, as previously noted.

explore exit options for investments made. Generally, about 2% to 3% of the capital fund value is paid, plus operational costs. Regarding the investment focus, VC funds are more interested in the company’s future potential rather than its current value.

Table 1 below presents the data used to generate the network, allowing for the visualization of the investment rounds made by investors and EdTech companies. Investments are made in distinct rounds, and one company may have more rounds than another for various reasons.

Table 1 - EdTech Industry and Its Investors by Investment Round

EdTech	Investors	Round	Investment	Date	Raise
Descomplica	Chan Zuckerberg Initiative	Series E	450.000.000	18-feb-21	733,33%
	David Evans				
	Valor Capital Group				
	Intercop				
	Invus Opportunities				
	SoftBank				
	Peninsula Participacoes				
	Bossanova Investimentos	Series D	54.000.000	6-mar-18	671,43%
	Amadeus Capital Partiners				
	Invus Opportunities				
	Endeavor Catalyst				
	Amadeus Capital Partiners				
	Valor Capital Group				
	Social Capital				

Table 1 - EdTech Industry and Its Investors by Investment Round

EdTech	Investors	Round	Investment	Date	Raise
Descomplica	Amadeus Capital Partners	Series C	7.000.000	12-jun-15	40%
	Edelweiss.vc				
	Valor Capital Group				
	ZenStone Venture Capital				
	Daniel Curran				
	Valar Ventures				
	Digital Prosperity Fund				
	Social Capital	Series B	5.000.000	6-feb-14	150%
	Lex Liao				
	500 Global				
	Kevin Breay				
	Valor Capital Group				
	Valar Ventures	Series A	2.000.000	20-dic-12	3233,33%
	Valor Capital Group				
	Social Capital				
	Mario Letelier				
	Holland George Capital Management	Seed Round	60.000	20-nov-12	0
500 Global					
Holland George Capital Management					
Mario Letelier					
EL Area Consultoria & Empreendimentos					
StartSE	Patria Investments	Series A	75.000.000	8-nov-21	0
Passei Direto	Redpoint eventures	Series A	4.200.000	1-feb-13	740%
	Grupo Xango				
	Crescera Investimentos	Series B	23.000.000	9-abr-16	448%
	Valor Capital Group				
	Headline				
	Grupo Xango				
	Bossanova Investimentos				
	Endeavor Catalyst	Pre-seed	undisclosed	2-may-19	---
	Bossanova Investimentos	Series B	undisclosed	21-feb-20	---
	Península Participações				
	Endeavor Catalyst	Seed Round	500.000	1-ene-12	---
Grupo Xango					

Table 1 - EdTech Industry and Its Investors by Investment Round

EdTech	Investors	Round	Investment	Date	Raise
Estratégia Concursos	Spectra Investimentos	Unidentified	undisclosed	---	---
	Axxon Group	Series B	24.200.000	5-sept-19	---
EduK	Monashees	Series B	29.600.000	1-may-15	---
	Felicis				
	Accel				
	Monashees	Series A	undisclosed	22-may-13	---
Agenda Edu	Bossanova Investimentos	Seed Round	undisclosed	10-dic-18	---
	DOMO.VC	Seed Round			
	Omydiar Network	Seed Round			
	Bossanova Investimentos	Seed Round	3.000.000	27-feb-18	---
	DOMO.VC	Seed Round			
	Bossanova Investimentos	Venture Round	undisclosed	1-ago-14	---
Geekie Games	Mitsui & Co	Series B	21.200.000	14-may-15	---
	Virtuose				
	Omydiar Network				
	Gera Venture Capital				
Samba Tech	Bossanova Investimentos	Venture Round	undisclosed	3-nov-21	---
	Bossanova Investimentos	Venture Round	undisclosed	31-ago-20	---
	José Augutso Schincarion	Series A	3.000.000	15-jun-16	---
	Fir Capital	Venture Round	3.000.000	1-jun-08	---
Isaac	General Atlantic	Series B	685.000.000	9-nov-21	---
	Endeavor Catalyst				
	Kaszek				
	SoftBank				
EduSynch	Parallel18	Grant	162.000	21-may-19	---

Source: elaborated by the authors based on data from CrunchBase and Tracxn.

Table 2, which includes data on VC companies with location and mission, helps to understand connections beyond territorial issues, including ideological aspects linked to the perspective of the financialization of education embedded in the actors’ missions. Although the main Brazilian VC firms operating in the EdTech market are present, most of the invested capital is foreign. This finding confirms the predominance of foreign investment in national companies, as demonstrated by Seki (2021) in a study on higher education in Brazil. This indicates that the Brazilian context occupies a position of global significance in the financial capital flows of the EdTech industry.

Table 2 - Investors of the Industry EdTech

Country	Company	Mission
Brazil	Península Participações	Long-term value creation with an ownership approach.
Brazil	Bossa Nova Investimentos	Investing in technology-based startups at pre-seed and seed stages, with a focus on innovative, digital, and scalable B2B businesses.
Brazil	Crescera Investimentos	Value creation and investor focus; investments in companies with high growth potential.
Russia	Axxon Group	Value generation in mid-sized companies in Brazil, with a focus on diverse sectors and an active management approach.
Brazil	FIR Capital	achieving extraordinary profits in partnership with exceptional entrepreneurs and companies, adhering to the principles of responsible investment.
Brazil	DOMO.VC	Investing in disruptive and innovative entrepreneurs, supporting early-stage startups, and contributing to the development of the ecosystem.
Puerto Rico	Parallel18	Providing funding, mentorship, business connections, and investment to underrepresented founders worldwide.
Brazil	Kaszek	Investing financially, strategically, operationally, and emotionally in entrepreneurs, supporting them in building successful companies in Latin America.
Brazil	José Augusto Schincariol	Investment in diverse businesses, with a significant role in Brazil's brewing market.
USA	Headline	Investing in winners across various stages and geographies.
USA	Endeavor Catalyst	Invest in companies led by Endeavor Entrepreneurs and support Endeavor's operations.
USA	Redpoint	Partner with exceptional entrepreneurs from the early stages of scaling.
USA	Omidyar Network	Build more inclusive and equitable societies worldwide by investing in new models and ideas.
USA	Felicis	Make founders and companies unbreakable, with empathy and trust at the heart of their partnerships.
USA	Amadeus Capital Partners	Support entrepreneurs in building great companies across various sectors, from the early stage to global growth.
USA	Monashees	Support passionate founders who not only innovate but also put people first.
USA	Chan Zuckerberg Initiative	Support community-driven solutions to accelerate progress in science, education, and justice.
Republic of Ireland	David Evans	Private investor and musician from the band U2.

Source: Developed by the authors with data from CrunchBase and Tracxn.

In this case of the EdTech financialization network in Brazil, it is observed that the companies Descomplica and Passei Direto are the ones that raised the most money in distinct rounds of investment. Sometimes, the amounts are not disclosed, and the operation is listed as undisclosed. However, from the data captured, emphasis can be placed, for example, on the fundraising capacity of the *Descomplica* platform. The variation after each round, as specified in Table 1, shows that the investments received by it were of large proportions.

The companies that conducted the most rounds of investment in the network were *Bossanova* Investimentos and *Valor* Capital Group. *Valor* Capital Group focused more than half of its investment on the EdTech company *Descomplica*, while *Bossanova* Investimentos focused on Geekie Games, and both work with other companies in the sector. *Valor* Capital Group is an investment firm focused on financing and investing beyond its regional borders. It is based in New York, United States. According to the CrunchBase platform, as of May 2, 2024, the company was investing in 183 distinct companies, leading to investments in 64 of them across 17 different sectors. *Bossanova* Investimentos, based in São Paulo, focuses on growth-stage companies. According to CrunchBase, as of May 2, 2024, it invests in 1,686 different companies across 184 sectors.

Descomplica is a for-profit EdTech company founded in 2011. It started by offering online courses for the *Exame Nacional do Ensino Médio* (ENEM), in the form of preparatory courses. Its course offerings are online, providing a study platform for students. The company argues that educational inequality in the country, both in terms of the number of schools per region and factors like color or race, are reasons that justify the existence and necessity of a company that aims to democratize access to education (Valor Capital, n.d.). Years after its founding, in 2020, *Descomplica* received approval from the Ministry of Education (MEC) to launch undergraduate courses, creating *Faculdade Descomplica*. This marked the first time an EdTech company was granted permission to offer higher education courses, an unprecedented achievement according to them, due to the bureaucracy and lengthy process involved in obtaining such authorization.

Descomplica has partnerships with private sector projects, such as L'Oréal, iFood, and TIM Brasil, as well as with the city of Rio de Janeiro through the “*Chegou a minha vez*” program, which offers courses for another Brazilian national standardized exam, the *Exame Nacional para Certificação de Competências de Jovens e Adultos* (ENCCEJA). This exam enables students to obtain their high school diploma without attending a public school, leading to the deschooling of students enrolled in the Youth and Adult Education (EJA) modality. Between 2012 and 2020, funding for this modality decreased by 95.5% (Pinto, 2021). In this way, *Descomplica* legitimizes itself as a key factor in addressing the region's low educational attainment while gaining authority as an institution accredited by the Ministry of Education (MEC) for its higher education courses and by the city of Rio de Janeiro for its basic education course, further consolidating EdTech as an opportunity for improvements in the education sector.

Geekie Games, another EdTech startup, was founded in 2011 and operates similarly to *Descomplica* but has garnered more support from government entities for the purchase of its materials. The platform now also offers an evidence-based

curriculum system (Adrião et al., 2009) for schools. It receives investments from *Bossanova*. Additionally, it partners with the Ministry of Education, which, since 2016, has accredited it as the official platform for ENEM studies and simulations. Since then, it has formed partnerships with the governments of Mato Grosso do Sul and Paraná (Geekie, 2023).

Both companies focus on the digitalization of education through online video lessons, tests, and preparation for national exams. These platforms have grown due to the increasing commercial interest in the sector. Investors have diagnosed and echoed that education, as a profitable market, is under-digitized, and thus, the idea that transformation and disruption are needed in the sector has been pursued, while also seeking investment returns. This disruption process, particularly the consolidation of new markets in education (such as adult education), represents a process of assetization. The control of what is commercialized, with knowledge as the property to be sold through EdTech, and its method of production and value generation, shapes the future imaginaries about education and the possible disruptions carried out by EdTechs. By creating value for the asset, its valuation and, consequently, its return are projected.

SOCIOTECHNICAL IMAGINARIES OF EDTECH FINANCIALIZATION IN BRAZIL

All financial investment in the EdTech industry is inherently linked to projecting the future of education. This leads to the emergence of new discourses that envision and design the digital transformation of education. This is closely related to what can be broadly understood as sociotechnical imaginaries in education. However, these are not sociotechnical imaginaries based on *collective desires* that project social and technological futures, as Jasanoff (2015) and others argue. Rather, the discourses surrounding financialization, which imagine the future of education, are ideological; they are driven by the prospect of future economic gains and seek to shape educational systems according to the interests of the capitalists who create them, grounded in the expansive dynamics of capital accumulation.

In this sense, the discourses of the EdTech financial industry shape what can be described as *mercantile sociotechnical imaginaries* (Saura; Cancela; Parcerisa, 2023), representing economic and political images projected by private political actors in the technology sector (Big Tech, Big EdTech, tech unicorns, venture capitalists, financial actors, etc.). These actors aim to make the new technological markets they create more attractive, envisioning the futuristic success of their private technologies in education while simultaneously projecting and shaping the future of humanity and technological-scientific advancements.

Some platforms that promote more aggressive venture capital projections in education play a significant role in the discursive projection of EdTech financialization in Latin America as a means of envisioning and imagining future education scenarios within global politics. In this view, HolonIQ operates through discourses that guide financial investments while imagining the future of education:

In 2021, nearly \$500M were invested in venture capital for EdTech, representing more than six times the average of the previous five years. Investors in the Latin American and Caribbean (LAC) region can now see the significant opportunity that EdTech represents, and the region is attracting global investors who also recognize this opportunity (HolonIQ, 2021, p. 12).

During the decade of 2011-2021, Brazil accounted for 60% of the startups and 60% of the venture capital finance in EdTech relative to the total in the region. In relation to the EdTech segment in Brazil, narratives are established through HolonIQ to promote the idea that investments in startups and companies ensure future economic gains, such as Arco, Afya, Anima, Cogna, Eleva, Hotmart, Ser Educacional, Vasta, Vitru, and Yduqs. Through HolonIQ, the future of the digital transformation of the Brazilian educational system is imagined, offering techno-solutionist success narratives of startups. For example, in relation to its argument, the startup of Brazil: “Árvore’s mission is to empower readers throughout Brazil, in a scenario where there is a decline in young readers and low reading indicators.” HolonIQ (2021) states that “Descomplica is the largest online education company in Brazil. It helps millions of students prepare for standardized exams and enter undergraduate courses, a major and competitive obstacle in finding quality jobs in Brazil.”

In addition to HolonIQ, both Crunchbase and Traxcn operate, in part, within this logic in the context of the EdTech financial industry in Brazil. Traxcn highlights Descomplica as a case study in relation to its competitors in raising investment rounds, emphasizing the oligopoly relationship with Byju’s. Within these processes of interrelation between investment calculations and the creation of sociotechnical market imaginaries, political actors, such as financial impact platforms, tend to project the future of education with narratives that align with where to invest and present case studies of successful companies in various contexts.

Valor Capital Group, on its website (n.d.), states that Brazil is attractive because it is the most connected and digitally engaged market in the world, ranking as the fifth-largest mobile internet economy. Its justification also highlights the population’s screen time (9 hours daily) and its position in the ranking as second or third in terms of digital platform usage, with high levels of engagement. Its slogan for Brazil is “Brazil: the country of the future... and the future is now.” In this way, a future imaginary is created with the consolidation of a market that has 13 companies

designated as unicorns, more than Germany and only behind the USA, China, the UK, and India. This has drawn the attention of investors worldwide to the EdTech investment market in Brazil (McKinsey & Company, 2021). As a VC firm, Venture Capital Group analyzes Brazil and places it at the center of investment defense discourses, aiming to attract new investors.

With a language focused on vision and future construction, *Bossanova Investimentos* (n.d.a) acknowledges that a company without impact has no future. The goal, therefore, is to attract funding for startups with immediate impact in their various fields. At the same time, it positions itself as an investor that does not invest in companies aiming to provide services to the government, referred to by them as GovTech. Its objective is to target a broader market and, under its Education section (*Bossanova Investimentos*, n.d.b), it provides materials for learning about entrepreneurship and investment.

In this sense, the narratives presented by VC actors, claiming that a new future is now, and that Brazil represents this future, highlight the creation of expectations for the market and the investment opportunities the country offers. They also exert persuasive power over other actors, influencing decision-making that aligns with these potential future imaginaries. The signaling by VC actors aims to stimulate the belief that such a future imaginary will be the driving factor in generating returns.

Having described these two actors as corporations that shape and consolidate a future imaginary, with one focusing on Brazil and the other emphasizing the potential impact of their investments in the country, it is essential to draw attention to the processes of establishing authority regarding the impact of the actors receiving this investment. The narratives that portray Brazil as a growing startup market and a technological hub, with a population spending significant time online, position the country as fertile ground for EdTech companies. These companies have also been able to integrate into public policy tools, further legitimizing their role and impact within the education sector.

In this process, the creation of an imaginary fictitious capital can be identified. The data presented and the discourses raised indicate that, although many companies are large, they are still very young, and the capital they have raised is largely due to their reach with the public and the services offered, as well as the investments obtained previously. Thus, the capital in an investment generated a subsequent idea of value that did not exist before: capital generated more capital. Not only through investment, but also through a discourse window that is formed, generating more market possibilities and gains for investors in their portfolios.

In other cases, there are venture capital political actors, such as Imaginable Futures, the philanthropic venture investment arm of The Omidyar Group, which presents itself with the intention of investing in people and ideas that unlock human

potential through holistic learning, while generating the imagination of the future of education. Imaginable Futures operates predominantly within the Brazilian context to promote the financial markets of the EdTech sector, while also designing and materializing the future of the digitalization of the Brazilian educational system. Within the financialization network in Brazil, Imaginable Futures has been instrumental in the venture capital financialization of Geekie and Agenda Edu. Imaginable Futures (n.d.) is promoted in the Brazilian techno-educational markets with discourses such as:

We believe that learning is the key to well-being and to equitable and healthy societies. As a global philanthropic investment firm, we prioritize impact. We aspire to change unequal systems and bring transformative solutions to students of all ages. We carry out this work in collaboration with partners from the public, private, and social sectors in Brazil.

Ultimately, all these socio-technical imaginaries of EdTech financialization are discursive configurations of speculative futures of education, which are central to expanding the advances of contemporary capitalism. These financial calculations and discourses are understood here as speculative logics of EdTech fictitious capital. These speculative dynamics of EdTech financialization are no less real than industrial ones. The speculative logic is not unreal or belongs to the dreamlike or ghostly world. The speculation of EdTech fictitious capital is materially real because it converts investment into future profit, rent-seeking, and material production of matter, and therefore, the production of social-labor relations.

These speculative logics are means of creating assets. Assets are central to the financialization of the technology industry (Langley, 2020; Birch; Muniesa, 2020). The ongoing trend of financialization is increasingly focused on the constant production of matter into assets, i.e., assetization. The processes of assetization and rent-seeking have gained relevance over the past decade, particularly due to the expansion of the digitalization of higher education (Komljenovic, 2021).

However, at this moment, they are central and more widespread in basic education. This is due to two recent events in this particular period of capitalism. The first is the acceleration of technoscientific advancements resulting from Covid-19. This acceleration of assets in basic education has expanded primarily through the materialization of new techno-educational markets, such as digital platforms and the relations of nesting and rent-seeking they generate with the EdTech industry, particularly in software (Saura; Díez-Gutiérrez; Rivera-Vargas, 2021).

The second event of the expansion of assets and assetization of EdTechs in basic education occurs after the launch of ChatGPT by the OpenAI Industry in November 2022. During 2023 and 2024, the acceleration of the financialization

of the EdTech industry intensified through the assetization of AI, the Metaverse, virtual and augmented reality, as well as technological materials and goods to produce disruption (devices, virtual reality glasses, etc.) and digital commodities (mainly digital platforms and subscriptions). Instead of studying financialization through large corporate groups, which would be a deductive analysis dynamic, starting with a case to understand what they finance, the amount of profit they expect and obtain, here the inverse is done.

CONCLUSIONS

Currently, the financialization of the EdTech industry is central to the technoscientific advances of contemporary capitalism in and through education. In global educational policy, digital platforms, investment funds, corporations, and venture capital investors proliferate, constantly generating data on EdTech financialization, while also projecting future calculations to continue expanding financial investments. On some occasions, the calculations of future investments in financialization are directed towards very specific segments, and on other occasions, directly towards investment in specific corporations or startups.

Alongside this, platforms for projecting financialization, venture investors, investment funds, consulting firms, entrepreneurs themselves, and the entire set of political actors who convert financial investments in EdTech into a material reality, track investments through new speculative discourses of fictitious capital, aiming to shape and design the future of educational systems. The socio-technical imaginaries related to the financialization of educational technology are discourses that outline possible speculative futures in education, being crucial for driving the advancement of contemporary capitalism. These speculative dynamics are material because they convert investment into future profit, rent-seeking, and material production: in the expansion of capital.

Brazil is the laboratory for financialization in education. To date, research has given little attention to the financialization of the EdTech industry. This article analyzed some economic data on EdTech financialization through investments made by corporations, investment funds, and venture capitalists in startups and EdTech companies with the highest fundraising. In addition, an analysis of a political network of EdTech financialization was presented, demonstrating the actions and operations of some key political actors who are expanding the development of the digital transformation of the Brazilian educational system. Furthermore, some of the discourses that promote the speculation of EdTech industry financialization were

identified, while also imagining and designing the future of education in Brazil. These are socio-technical imaginaries understood as speculative logics of fictitious EdTech capital in contemporary capitalism within educational policy.

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