

**Educational Capitalisation:  
A Co-formational Feminist Framework for Conceptualising Investment in For-Profit  
Education within the Racialised and Gendered Political Economy**

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**Abstract:**

This paper examines the processes through which education becomes valued as capital within the racialised and gendered political economy. Using the empirical case of venture capital (VC) investment in for-profit education companies, principally education technology companies and for-profit school chains, it puts forward the concept of *educational capitalisation*. We conceptualize it as the set of uneven processes, practices, and socio-spatial relationships through which value is extracted from educational processes and practices, and, thus, education is valued in terms of expected monetary return on investment. While our conceptualisation focuses on VC investment, this framework could be used to outline other processes of extraction and valuation in education, including private equity, investment banking, venture philanthropy, and public-private partnerships. We conclude with a co-formational feminist framework for guiding future research, policymaking, and educational decision making that considers the financial, socio-technological, learning & teaching, and political-legal aspects of educational capitalisation, with ethical considerations embedded within each of these domains.

## **Introduction**

The reliance of schools and universities on educational technologies (edtech) has rapidly accelerated over the past two decades (Williamson 2021). These technologies influence the ways of knowing and power relations embedded in curriculum, pedagogy, data use, labour relations, policy, and everyday social relations among learners, educators, administrators, and technologies. Behind most edtech products adopted by educational institutions is funding by venture capital (VC) firms (Regan & Khwaja 2019; Davies et al. 2023; Williamson & Komljenovic 2023). Venture capitalists (VCs) are investors who buy an equity stake in companies, typically technology companies, that have high growth potential with the aim of receiving high rates of return on their capital investments. By gatekeeping which educational “problems” get identified and which “solutions” are funded, VCs exert an exceptional amount of power over what is available in the market for educational systems to purchase. Not only do they increase the likelihood that solutions are digitised without much consideration for ethical consequences, but they also impact how the futures of education are imagined and what future possibilities may be foreclosed due to the power of capital.

VC investment in the global education sector as a whole grew from \$.5B in 2010 to 20.8B in 2021, before reducing by 49% in 2022 and continuing to trend downward in 2023 (Holon IQ 2022, 2023). VCs have thus played an important role in funding for-profit education companies in the U.S. and around the world (Author 1 2020; Ball 2012; Attick and Boyles 2016; Ermolaev & Yormatov 2023; Williamson 2017, 2021; Williamson & Komljenovic 2023; Komljenovic, et al. 2023). We define VC investment in education as a speculative financial practice of wealthy individuals and firms investing in for-profit education companies within the broader global capitalist system. While VC investment in education is concentrated in edtech companies, VCs also invest in other for-profit education companies, such as for-profit charter schools and low-fee private school chains like

Bridge Academies International. Through their investments in this risky asset class, VCs anticipate a high rate of return, taking on risks that other types of investors will not pursue. As Nicholas (2019, 1) described, “It is a ‘hits’ business where exceptional payoffs from a few investments in a large portfolio of startup companies compensate for the vast majority that yield mediocre results or simply fail.” These mediocre results or failed investments may be an educational data aggregation platform that promises insights for teachers and administrators (e.g., inBloom) or a charter or low-fee private school chain that promises an equitable education (e.g., Edison Schools and Omega Schools). However, while risk of failure may be part of VCs’ gamble, public funds from limited partners (LP) that invest in VC firms like pensions and university endowments, often partially finance these failed companies. Moreover, public education money is frequently used to purchase these companies’ products through schools, districts, and ministries. Thus, the consequences of their failures may be disproportionately shouldered by marginalised individuals, communities, and institutions who have the most to lose.

Despite the rapid growth of the VC industry investment in education, until recently, education research on non-state financial actors has largely focused on corporations, corporate and private foundations, and intergovernmental organisations. Researchers have specifically examined the practice of venture philanthropy (VP) whereby foundations and social impact funds purport to engage in strategic, long-term investment in (non-)revenue generating non-governmental organisations and social enterprises to maximise the social impact for intended beneficiaries (Scott 2009). Educational research has critiqued VP’s influence on the expansion of school vouchers, charter schools, for-profit schools, and school board and district policy (c.f. Ball 2012; et. al. 2013; Scott 2009; Lipman 2015; Saltman 2010; Tompkins-Stange 2016; Zeichner & Peña-Sandoval 2015). Although the term venture capital is sometimes used to refer to VP and although “VP is modelled on venture capital,” as Saltman (2010, 2) notes, VC is distinct from VP in its legal structure,

processes, and goals, particularly in terms of venture capital firms' equity stake in early-stage and middle or growth-stage companies.

There are also influential Limited Liability Corporations (LLC) like Chan-Zuckerberg Initiative, Omidyar Network, and Emerson Collective that act as VC firms by investing in for-profit education companies while simultaneously conducting traditional philanthropic grant-making and political advocacy. There is minimal government oversight over LLCs and limited transparency regarding their influence on public education (Reiser 2018; Reiser & Dean 2023). Whereas the non-profit tax status of either the investors or recipients makes VP finances relatively transparent, the flows of VC funding (including from LLCs) are not transparent. The VC business, writes Jonathan Axelrad (2014), "is actually a fairly confidential one." Most of the research and commentary on VC in education has come from industry sources like HolonIQ, an education market intelligence firm, and media sources like EdSurge and Education Week. While there is significant empirical research on VC in the fields of business, management, history, anthropology, and geography, until recently there has been minimal empirical research in education, with most research focused on the higher education sector (Kramer 1980; Williamson 2017, 2019; Regan & Khwaja 2019; Williamson & Komljenovic 2023; Komljenovic, et al. 2023). The educational research community therefore still has limited empirical understanding of how VCs conceptualise education, how they make their decisions, and where they are investing their money; whether their market-based solutions are designed for investor profit and/or for the benefits of learners, educators, and communities (Fang 2014); how these investment decisions are influencing curricular, pedagogical, learning, and administrative practices and education policy agendas around the world; and, ultimately, who profits from the public resources that pour into edtech companies and VC firms.

As such, the field of education research needs to better understand how VC structures operate, the racialised, gendered, classed, and geographically-based power relations that comprise the

industry, and how investment decisions are made that may or may not align with all stakeholders, particularly those who are most marginalised within the system of global capitalism.

In this paper, we begin by conceptualising VC investment in education as a process of *educational capitalisation* within the racialized and gendered political economy of the education, finance, and technology industries. While we specifically developed the concept of educational capitalisation through our analysis of VC investment in edtech and other for-profit education companies, the concept could be adapted to empirically examine and theorise other forms of investment in education, including venture philanthropy, private equity, and investment banking, among other forms of educational investment.

We then draw on this conceptual framework to lay out the growth, structure, and effects of VC investment in education using qualitative analysis based on interviews with VCs and ethnographic observations at forums where they come together with education companies and other relevant actors like educational administrators, public policy makers, and NGO and community leaders. Lastly, we present an intersectional, or more specifically, a co-formational feminist framework for researching the influence of VC on educational policy and practice. It works to account for how the power relations of raciality, coloniality, class, patriarchy, heteronormativity, and geography come together to shape the logics, constitution, and effects of investments (Bacchetta 2007; Bacchetta et. al. 2018).

## **Methodology**

This paper builds on research our team has conducted over the past five years. Author 1, a white US woman academic and former teacher who is located at a university in the UK, has conducted a total of 15 semi-structured interviews with 14 prominent venture capital founders and/or partners investing in education. One of the interviewees, a Silicon Valley generalist VC who

invests in education, was interviewed in both the first and second rounds of interviews to understand changes over time. The interviewees were chosen on the basis of their involvement in the venture capital industry and their extensive history of investing in education companies. They all provided written consent to participate in the interviews. The first round of seven interviews was conducted in 2018-2019 with seven US VCs, six of whom were based in Silicon Valley and one who was based on the US East Coast. The interviews were conducted when the author was a Visiting Assistant Professor at \_\_\_\_\_ university, a position that facilitated establishing relationships with VCs, the majority of whom had attended or were connected with the same university given its significance within the landscape of Silicon Valley. A second round of eight interviews was conducted with eight VCs in 2023-2024, including with two VCs based in Silicon Valley, three on the US East Coast, two in UK/Europe, and one in India. Of the 14 interviewees, 11 of them are education VCs and 3 of them are generalist VCs that invest in education and future of work in addition to other investment areas, such as financial and health-related technologies.

The interviews prioritised, first, understanding the structure of the venture capital industry: how it is organised; how capital flows; who makes decisions; and who profits from what, when, and how. Second, they focused on the history of VC investment in education beginning in the early 2000s through the present, including how investment in different sub-areas of education has changed over time and geography; how technological, infrastructure, and policy changes have influenced investment; and how the industry has been affected by significant global events, like the 2007-2008 financial crisis, COVID-19, and 2023 banking crisis, and social movements, like the Global Movement for Black Lives and #MeToo. Third, the interviews focused on the cultural practices of the industry and how VCs make sense of their world, including who VCs are; how and why they began investing in the education industry; how they conceptualise risk, profit and impact; and what effects they believe VCs, in general, and their investments, in particular, have on the field

of education. Lastly, the interviews explored the power dynamics and demographics of the VC industry, including racialised, gendered, and classed inclusions and exclusions, changes over time, the impetus for those shifts, and backlashes in the industry.

In addition to VC partner interviews, to understand other perspectives on the education industry, Author 1 also interviewed one LP in one of the principal education VC firms; an investment banker who works in the education market; two members of UK Parliament who work in the area of education and edtech policy; and three NGO leaders.

We are careful about revealing the exact cities and/countries of the funds outside of Silicon Valley given the small scale and highly networked nature of the industry. Firms and the individuals interviewed would be easily identified by those familiar with the industry. Moreover, despite some demographic changes over the past five years, there are also still very few women, Black, and Latinx VC partners. While we would ideally reveal the racial and gender identification of the interviewees for the purpose of analysis, doing so might risk the anonymity of those who are minoritised in the industry given that most VCs know each other due to the insular nature of VC networking.

All of the interviews were audio recorded, with one exception where careful notes were taken of the conversation due to the interviewee's legal concerns about an audio recording. The interview transcripts were analysed by Author 1 in NVivo to understand emerging themes, patterns, and anomalies in the data. Building on the interviews, the coding for this paper focused on the following themes: history of VC investment in education; structure of investment; factors influencing education markets; factors influencing VC investment; conceptualisation of markets and sub-markets in education; conceptualisation of risk, profit, and impact; demographics in VC; networking structures in VC; the politics of VC investment in education; and geographies of VC investment. Sub-themes were developed and coded for each thematic area.

Between 2018-2024, Author 1 also conducted virtual and in-person participant observation in forums convening VCs in education. They have attended ASU + GSV (which is short for Arizona State University- Global Silicon Valley Summit), the most important edtech investment gathering in the field, in San Diego in April 2023 and April 2024, as well as virtually in 2021 and 2022. The event attracts VCs, entrepreneurs, educational administrators, policy makers, and NGO leaders in the field from the US and around the world, with significant representation from India, China, UK/Europe, and Latin America. Moreover, they attended SOCAP in San Francisco in 2018, NewSchools Venture Fund Summit in Oakland in 2019, Brazil at Silicon Valley in 2019, the virtual meetings of Edtech Week in 2020, and Women in Tech: The Future of AI in 2019, in addition to other smaller events. These events have been important for recruiting interviewees and understanding how these industry spaces bring together a range of educational actors, including industry, philanthropic, NGO, government, and administrative leaders, to shape the political terrain of education policy and practice. The analysis of themes that emerged from Author 1's interviews and observations over time inform our theoretical insights in this paper. The interviews and observations were conducted as part the fieldwork Author 1 is conducting for the monograph in progress, *Silicon Futures: How Venture Capitalists and Edtech Companies are Influencing Education around the World*.

In addition to Author 1, our research team is comprised of Author 2, a US white male, former K-12 teacher, and a recent graduate of \_\_\_\_\_ university where Author 1 was a Visiting Assistant Professor. Author 3, a US white female, is also a former graduate of \_\_\_\_\_ university, and now works at a non-governmental organisation focused on California education policy. Author 4, a US white male, and Author 5, an Iranian-American woman, are both doctoral candidates in education policy at \_\_\_\_\_ university. Our analysis, theorising, and conceptual framework come from our collective work engaging in feminist and race critiques of the political economies of

education, finance and technology, our empirical, quantitative work examining VC investment in education, and our professional experiences in education in the US and multiple country locations in Latin America, Africa, and the Middle East.

The framework we put forward in this paper is the conceptual basis for our ongoing empirical research on VC investment in edtech during the pandemic through the lens of disaster capitalism; the uneven geographies of VC investment with a particular focus on the markets of India, China, Nigeria, and Brazil; and Author 1's forthcoming monograph on the history of Silicon Valley investment in education.

### **Theorising *Educational Capitalisation* within the Political Economies of Education, Finance & Technology**

To understand educational capitalisation, we draw on scholars who locate these political economies within histories of racial and gendered capitalism—in which white supremacy, heteropatriarchy, and coloniality are conceived as constitutive of capitalism (c.f. Benjamin 2019; Browne 2015; Ferreira da Silva 2007; Gerrard et. al. 2022; Hamilton & Darity 2017; Hicks 2017; Hook 2023; Melamed 2015; Author 2016, 2018; Noble 2018; Robinson 2020; Quijano 2000). In particular, scholars of racial capitalism and decolonial scholars have demonstrated that the development, organisation, and expansion of global capitalism has pursued essentially racial directions since the birth of capitalism, which cannot be disentangled from European colonialism, the enslavement of African peoples, and the genocides of Indigenous peoples around the world. Education scholars have recently incorporated racial capitalism into their political economic analyses of edtech (c.f. Crooks 2021; De Roock 2021; Hook 2023; Morales-Doyle & Gutstein 2019; Moore 2021).

Moreover, feminist scholars of political economy have noted that capitalism has always been marked by gendered and sexualized directions, highlighting the control of women's bodies through

the witch hunts in the transition from feudalism to capitalism (Federici 2004) and the sexual violence against enslaved Black women and Indigenous women that was fundamental to the birth and reproduction of colonial empires and capitalism itself (Davis 1983 [1981]). Feminist analyses of contemporary capitalism demonstrate how it relies on the productive and reproductive labour of marginalised girls and women around the world, the majority of whom are Black and Brown, from the home to factory floors to development projects (c.f. Author 2018; Salzinger 2003).

Thus, when examining the political economy of these intersecting industries, we posit it is essential to bring together racial and gendered analyses of political economy. We thus attempt to move towards an analysis of what Bacchetta (2007) calls the co-formations of power, including racism, hetero-patriarchy, classism, coloniality, and capitalism, that co-constitute these intersecting industries. This lens enables scholars to identify the ways in which these power relations are embedded within processes of extraction, dispossession, production, consumption, and profit at the heart of these industries (Yu and Couldry 2020).

In this paper, we lay out the ways in which these racialized and gendered power dynamics are reflected in the political economy of VC investment in education in the following ways: 1) in a majority white U.S. male composition of the global VC industry; 2) networking circuits that marginalise women and entrepreneurs of colour; 3) algorithmic and other biases embedded in edtech products that (re)produce gendered, racialized, and other forms of marginalisation; and 4) the ongoing search for new investments and contracts in so-called frontier geographies with majority Black and Brown populations in the Global North and South which may lead to relations of dispossession and extraction as for-profit companies position learners, educators, and communities as sources of profit. Indeed, this list is not exhaustive of the ways this racialized and gendered political economy functions, yet, we provide these examples to begin conceptualising how race,

gender, class, and uneven geographic development come together to produce profit and redistribute the costs of failure.

We posit that the expansion of edtech and for-profit schools is ultimately predicated on *educational capitalisation*. Muniesa et. al. (2017, 11) conceptualise capitalisation as the process of becoming capital, “a particular form of valuation, which is best understood as a process, a relationship, a social relation.” Educational capitalisation is the set of uneven processes and social relations through which value is extracted from educational processes and practices, and, thus, education is valued in terms of expected monetary return on investment. Through our focus on VC, as a particular “mode of valuation” (Birch 2023), we consider the processes, practices, and socio-spatial relationships through which these forms of extraction and valuation occur.

Our conceptualization of educational capitalisation is predicated upon certain processes, including 1) the socio-material processes whereby capital is *invested* in VC firms by public and private educational institutions through pensions and endowments (the source of capital being partially public in the case of public institutions); 2) capital is *invested in* educational companies by VC firms; 3) capital from public and private educational institutions is *used to purchase* educational products (including software, hardware, services, content); 4) capital is *extracted* and *expropriated* from natural resources, educator labour, student consumption, data use, community relations, infrastructure, and so forth to generate profit. As scholars have noted, these profits increasingly come from rents extracted through the digitalisation and platformisation of education, which increasingly dominates the different sub-markets of education (Komljenovic 2021; Nichols & Dixon-Román 2024), due in part to the power of what Cooman (2024) calls “imprinting” or the power of VCs to “shape businesses according to their logic” (587).

In the case of profitable companies, the profits are returned to VCs and their LPs (including pensions, endowments, wealthy investors), and then distributed in the case of pensions and

university endowments, albeit unevenly, to their beneficiaries (teachers, professors, or university publics). In the case of failing companies, the failure is distributed as financial and other forms of loss, including potentially learning loss and misused or poorly allocated resources. Other forms of loss can occur irrespective of the profit status of the company and the financial returns it creates for investors, which include loss of democratic and community control, data sovereignty, localised knowledge systems, transparency, and accountability.

In this way, educational capitalisation is a set of social relations (Marx 1966) between unequally situated social and institutional actors that are structured in ways that disproportionately financially and socially privilege VC investors and entrepreneurs—who are majority U.S. white and Asian men—(Kerby 2018; Kapor Capital 2019), even with calls to shift demographics, prompted in part by the demands of #MeToo and the Movement for Black Lives (BLCK VC & Silicon Valley Bank 2022).

Indeed, profitable products may benefit students, educators, and communities; yet the problem is that the relationship between profit and social value is neither transparent nor straightforward. Whether, how, and for whom a product has social value depends on a variety of factors, including: 1) how investors invest and which entrepreneurs and companies they invest in; 2) how companies conceptualise and design their products, and whether they include the communities they seek to impact within the design process in meaningful ways; 3) whether or not these products are serving diverse learners, including accounting for the cultural contexts of teaching and learning, languages of learners, unconscious biases of designers and educators, and the pedagogical needs and autonomy of educators; 4) the extractive environmental costs of technological production and the labour exploitation that often accompanies technological production, machine learning, and artificial intelligence (AI) (Jones 2021); 5) how products and services are distributed, at what costs, incurred by whom, and in what geographies.

But ultimately, the VC business model that drives the edtech industry is meant to serve for-profit companies and their individual and institutional investors. This model may also undermine the social, political, and educational interests of teachers and professors, even, in some cases, while benefiting their pensions and university endowments. This is due to the ways for-profit educational technologies and schools can constrain educators' autonomy in the classroom, outsource their labour, jeopardise their intellectual property rights, and shift control from community and local actors to for-profit companies. Moreover, given that teachers are majority women in most primary and secondary contexts around the world, it is critical to examine how, in light of these issues, edtech and for-profit education companies influence their precarity as a labour force.

We use this conceptualization of educational capitalisation and its social, political, and economic constitution to inform our understanding of the political economy of VC in education. Future research should be conceptualised within an understanding of how profit is extracted, or how attempts are made to secure revenue and extract profit, through a complex interplay between processes of investment, design, production, marketing, purchasing, distribution, and consumption, each of which is constituted through unequal power relations across difference that influence profit potential and may marginalise students, educators, and communities in both the Global North and South with *the least say* and *the most at stake*.

### **Structure of Venture Capital Investment in Education**

To understand how VCs have the capital described above to invest in edtech and other education companies around the world, we need to understand where VC capital comes from and the structures through which it operates. According to one educational VC, "The VCs get their money from the LPs, the limited partners. Who are those folks? They're traditionally high-net-worth

individuals. They are traditionally the pension funds. They're traditionally the fund of funds, and I don't think we talk enough about that, right?" As our interviewee described, VC firms mobilise capital from institutional and individual investors, who invest in VC funds in return for a share of their profits. LPs are generally institutional investors, such as pension funds, university endowments, foundations, and insurance companies as well as a small percentage of high-net-worth individuals (Zider 1998). LPs are often not disclosed by VC funds, and information on their investment transactions is not publicly available. Thus, as the interviewee notes, their powerful influence is rarely discussed. Firms must raise funds from these LPs unless the fund is fully funded by the partners themselves as in the case of Chan-Zuckerberg Initiative and Omidyar Network where the capital came from single LPs whose fortunes were made through Facebook and eBay, respectively.

Outside of these partner-funded firms, "A large portion of the money invested in VC funds comes from public agencies, and these agencies are governed by myriad laws intended to protect the public's right to know" (Axelrad 2014). While there have been specific attempts for the public to access information about these transactions, the information behind the investments of public pension funds and university endowments is largely confidential (Axelrad 2014). This is due to the legal structure shielding the industry from public scrutiny.

Yet despite this shielding, our interviews with VC partners show that teachers' pension funds, public university pension funds, and public and private university endowments are important institutional investors in VC funds and thus deeply embedded in the industry. As one generalist VC, whose leading limited partner on a recent fund is one of the largest private university endowments in the world, explained in an interview in 2019, "Every education institution with money gives money to venture capitalists." And, more than that, "These education institutions are thought to be the best investors for venture funds...the most sought after are the endowments. They're just multibillion-dollar entities." In other words, the financial power of VC investment in education depends, in part,

on the capital of educators and educational institutions fuelling and profiting from the industry. This is the paradox at the heart of educational capitalisation – those educators with a significant stake in the nature of edtech in their institutions or for-profit schooling can simultaneously be harmed by *and* profit from VC investment in education. And yet, as this VC responded when asked about the transparency of these investments: “That’s not public. No, that's all confidential.” While universities and pensions often report their overall financial gains, the specificities of how they earned these gains and through what types of investment remain hidden from public view and, in some cases, from the purported beneficiaries.

To invest in companies, VC firms bring this financial capital from LPs together with forms of authoritative knowledge on education, technology, and finance and their exclusive social networks to develop and scale a profitable company. For many of the educational VCs we interviewed, the financial impact depends on achieving scale, and scale and educational value are understood as interrelated. As one education VC described: “So think about DreamBox Learning, the pathway to impact is getting kids onto the platform, kids to engage the platform that leads to their learning gains. And the more kids we have in the platform and the more they use it, the more districts are signing up and the more revenue we're receiving.” While the VC’s reflection on this relationship appears straightforward, how educational value is defined, by whom, for whom, and to what end is highly contested. Consequently, the stakes of purchasing edtech products are very high for school districts, ministries, or any educational institution given that student learning is often influenced by or dependent on products determined by, in part, their potential market profitability, which may not necessarily align with the needs of learners, educators, and educational institutions. If a company fails, it could leave educators and students without the platform they were using; or if a company’s product does not positively influence student learning outcomes, then students and educators bear the educational costs of unsuccessful companies. Yet, in a field defined by unequal power relations,

it is often the definitions of VCs and companies that carry the most weight while learners, educators, and communities' understandings of educational value or social impact may be less prioritised in the context of market demands of profit maximisation. As VCs specifically seek out companies with current or potential public funding streams, such as government assistance programmes, to guarantee future revenue and profit, understanding the politics of VC investment in education is critical. One education VC described the US government assistance programs that were created to expand educational opportunity in higher education, such as the Employee Tuition Assistance Tax Credits, Pell Grants, and Community Reinvestment Act, as the "sacred cows" that subsidise successful companies, failing to reflect on the ethno-religious significance of the statement within Hinduism. Hence, VCs actively position their funds to benefit from these revenue streams, such recent public allocations of COVID-19 recovery funds in countries throughout the world (Williamson 2021).

### **The History, Geography, and Social Relations of the Racialized and Gendered Political Economy of Venture Capital**

In this section, we discuss five constitutive elements of the history, geography, and social relations of the racialized and gendered political economy of VC investment in education.

First, VC investment is inextricably tied to specific geographies in the U.S. While the power and reach of VC investment in education extends far beyond the U.S., the specific institutional origins of VC were in the U.S. As Tom Nicholas (2019) writes, the practice of investing risk capital has its origins in New England's 19th century whaling industry, where white male elites with sufficient capital could take on the risk of investing in whaling expeditions in hopes of a sizable return. Beginning in its inception in the mid-20th century, the VC industry grew as an alternative to traditional investors such as banks, government entities, and corporations, which were unable to provide the type of risk capital that was desired (Nicholas 2019; O'Mara 2019).

Moreover, this model of investment has always been linked to U.S. higher education and its geographies. Its emergence is bound up with the history of how elite universities like MIT, Harvard, and Stanford became centres of cutting-edge research and received public funds, particularly during and following World War II (O'Mara 2019). In particular, Stanford allowed new industrial technology to inform their academic programming, which led to new investments and spurred the creation of Silicon Valley (O'Mara 2019). Over the decades, VC firms and their portfolio companies have continued to be linked to the geography of Silicon Valley and the very insular, elite techno-financial community which has grown around it. These socio-spatial relations have thus influenced which entrepreneurs receive capital and which ideas grow into businesses—in part, because more than half of US firms are located in the San Francisco Bay Area, Boston, and New York, and the majority of U.S.-based education VC firms are located in these three US cities (Krishnan & Nguyen 2020; Chen, et. al. 2010). The success of VC investments is often tied to location, as US VC firms based in these centres outperform, regardless of their investment stage (Krishnan & Nguyen 2020).

Correspondingly, the geography of the edtechnology companies being funded by venture capital is highly concentrated in specific geographies. While VC firms focused on education are increasingly located in India, China, UK/Europe, and Latin America, including three of the interviewees in this research, these firms are often still linked to Silicon Valley in myriad ways, including through the academic and professional trajectories of the founders and partners.

Second, mapping onto this cartography of capital, VC is often called a “white boys’ club” due to its culture of networking and exclusive, tight-knit community made up of white, upper-middle and upper-class males (O'Mara 2019; BLCK VC & Silicon Valley Bank 2022). Data shows VC firms are 82% male, 60% white male, and 40% graduated from Stanford or Harvard, with 81% of firms not having a single Black investor (Kerby 2018). As one interviewee described, “It's like a profile, right? That profile is white male or Asian male or Indian male, but male, and think of

whether it's Stanford or Harvard, but an elite university. It's a stream and then having access to a network that looks like male and generally white, Asian or Indian as being the blueprint.” While recent interviews and observations, particularly at ASU-GSV in April 2023 and 2024, show that the demographics of the industry are slowly shifting, particularly at the principal or associate level, the industry still remains white or Asian male-dominated at the level of directors and managing partners with some notable exceptions.

Third, these demographics are important due to the way VCs and their firms are embedded within racialized and gendered social networks with extensive reach in the education world. As the same interviewee further described, “at so many firms, the only way you can get to the firms is by knowing somebody at the firm.” This points to the problematic cultures developed within homogenous firms or companies that can negatively influence the workplace experiences of women or people of colour who are hired into a firm where they are minoritised. An edtech VC described what this looks like in terms of company composition:

Well, there's many things. One is I think the bro culture, right? Whether it's in edtech, I think just in start-ups in general and why is that even a thing? When I think about it, you start companies with people you know or people who see the world the same way you do. And generally those people might be, if you don't have a diverse friend network, that those people might look exactly like you. And what happens is you get a CEO who's a white male, a CTO who's a white male, and let's assume that there's a third co-founder who might not be a white male, but definitely is a guy, and that's the start. When you think about the first 10 hires, it's like, okay, who's in our network generally from school? [Who] are we going to hire and bring on board? Before you know it, you're at 10 people and they're all guys. That is a challenge.... Out of the first 10 employees, now you're the 11th employee and you're a woman. There are certain things that might go on in a workplace that you might not feel comfortable with.

In addition to the problems of discrimination in hiring and workplace culture, white male dominant cultures have ripple effects beyond the firm, with serious implications for the field of education, as VCs identify educational problems; determine which entrepreneurs are funded to solve those

problems and given their financial stake in the company; decide who sits on the boards of funded companies (Amornsiripanitch, et al. 2019) and who is hired and fired; determine how companies grow, which markets they target, which sources of revenue companies seek out, and ultimately, who profits from education.

Fourth, when educational products are designed, who designs them, and the choices they make can significantly influence product development. As Benjamin's (2019, 8) work reveals, "discriminatory designs" and what she calls the New Jim Code (conceptually building on the US Jim Crow system of racial segregation) can be baked into products through design choices – "some that explicitly work to amplify hierarchies, many that ignore and thus replicate social divisions, and a number that aim to fix racial bias but end up doing the opposite." Joy Buolamwini (2022, 12) calls this potential, particularly within AI, the "coded gaze," in which the "priorities and prejudices of those who have the power to shape algorithmic systems can propagate harm such as discrimination, stereotyping, exploitation, and erasure" (see also Dixon-Román 2016; Dixon-Román, Nichols, Nyame-Mensah 2020).

Since edtech products are purchased by public school districts and ministries and departments of education using taxpayer money, it is necessary for the field of education to understand whose interests and what (un)conscious biases, including those based on class, gender, sexuality, religion, ability, and language, VCs may put forward by examining which investment decisions they make regarding who to fund and what products to financially back.

Fifth, regardless of racial and gender diversity, VC firms and the for-profit companies they invest in are organised around the goal of profit maximisation. They are ultimately seeking to profit from the education, finance, and technology industries, which cannot be disentangled from the uneven classed, racialized, gendered, and geographic relations of capitalism. VCs have a significant financial stake in education companies as their limited partners expect returns on their investments,

putting companies under pressure to become profitable to produce those desired returns. Thus, built into this structure are incentives for all these educational actors to deepen and expand the role of markets and profits in education. This can be seen in the venture-backed expansion of for-profit schools, such as Bridge Academies International (Author 4 2023), which grew in part due to investments of education VCs and LLCs, including Omidyar Network, Rethink Capital, Learn Capital, Chan Zuckerberg Initiative, that invested in during the company's Series A, B, and C funding rounds for undisclosed amounts.<sup>1</sup> Its investor list also included many generalist VCs and corporate, impact, angel, and government investors, including Khosla Ventures, Pearson Ventures, Nigerian Sovereign Investment Authority, UK's Department for International Development, and Bill Gates.

Profit maximisation can also be seen in the expansion of edtech for both formal and informal education into new geographic and population frontiers. Significant VC investment in the \$6 billion education industry in India shows the ways in which US, European, and Indian VCs, in particular search for profit in new geographies, as well as population frontiers within those geographies. The spectacular rise and fall of the Indian edtech "unicorn" Byju, a private online tutoring company, which was once valued at \$22 billion in 2022, but then estimated by its investor BlackRock to a valuation of zero in June 2024, shows the consequences of these expansions. Whereas VC and private equity investors (like Lightspeed Venture Partners, Aarin Ventures, GSV Ventures, and Chan-Zuckerberg Initiative)<sup>2</sup> hyped companies like Byju in particular bottom billion geographies and chased profits, they withdrew or lost their capital as expectations came crashing

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<sup>1</sup> The investor information was gathered from Pitchbook, a private investment database we have access to for research purposes.

<sup>2</sup> The investor information was also gathered from Pitchbook.

down, resulting in job losses for thousands of employees and unmet promises for consumers and investors.<sup>3</sup>

Furthermore, once edtech products are purchased, whether it is by consumers or school systems, it is important to understand how and to what extent companies are harvesting data from users, surveilling users and communities, and/or exploiting precarious labourers, often located in the Global South, who annotate the data to power AI as part of further entrenching the exploitative relations of educational capitalisation (Dzieza 2023).

### **Framework for Researching Venture Capital Investment in Education**

To guide future educational research on VC investment, we put forward the following framework for conceptualising the different components that constitute VC investment in education: financial, socio-technological, learning & teaching, and political legal (Table 1). The *financial* explores the VC and education business models to understand the bi-directional flows of money through firms and companies from investors, governments, and consumers; the *socio-technological* seeks to analyse education products, particularly edtech products, their development, deployment, distribution, use, and (un)intended effects on labour, teaching conditions, and intellectual property of educators; the *learning & teaching* considers the implications of the technologies for teaching and learning and the social relations of education; and lastly, the *political legal* examines the multi-scalar legal structures across/within borders that impact financing, technology, and education. Ethical questions are embedded within each of the domains. These

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<sup>3</sup> For popular media discussions of the rise and fall of Byju see: [https://techcrunch.com/2024/06/07/blackrock-has-slashed-the-value-of-stake-in-byjus-once-worth-22-billion-to-zero/?guc\\_referrer=aHR0cHM6Ly93d3cuZ29vZ2xlLmNvbS8&guc\\_referrer\\_sig=AQAAAMvwoF24C8lIzk4RghY1qyridyD21b6b8UCuqdNqH3AyxKVjos-ktKuFXXzGYAubqxjh-1M4bN3oUs4sUW2FQfk1L20cgU4hYDPBCH6kAhEKgBARalhKGdopUn6fWm4FJeI6FLajjr8njc8IP\\_WNj3en-RG-oTbddIEA-iwk\\_T5M&gucounter=2](https://techcrunch.com/2024/06/07/blackrock-has-slashed-the-value-of-stake-in-byjus-once-worth-22-billion-to-zero/?guc_referrer=aHR0cHM6Ly93d3cuZ29vZ2xlLmNvbS8&guc_referrer_sig=AQAAAMvwoF24C8lIzk4RghY1qyridyD21b6b8UCuqdNqH3AyxKVjos-ktKuFXXzGYAubqxjh-1M4bN3oUs4sUW2FQfk1L20cgU4hYDPBCH6kAhEKgBARalhKGdopUn6fWm4FJeI6FLajjr8njc8IP_WNj3en-RG-oTbddIEA-iwk_T5M&gucounter=2); <https://www.cnbc.com/2024/03/01/the-rise-and-fall-of-byjus-once-a-startup-darling-in-india.html>, accessed 9 August 2024.

components assess ethical concerns related to profit, technological production, learning and teaching, addressing disparities, and mitigating harms to learners, educators, technology workers, educational systems, and the environment.

### **Insert Table 1.**

We use an intersectional feminist lens within the framework to understand how “co-formations” of power like racism, classism, and patriarchy are not simply epiphenomenon or a unique domain but rather are constitutive of the broader intersecting political economies of technology, education, and finance (Bacchetta 2007; Crenshaw 1990; Ferreira da Silva 2007). Thus, the lens must be interwoven across the domains. Our framework provides a set of high-level guiding questions to probe the different constitutive areas and to open new pathways for research.

Building on this framework, we identify a set of key unresolved questions for the field. They represent pressing questions for understanding VC in education but for which there is limited empirical data. As we continue this research, we will develop the framework accordingly.

First, researchers need to deepen the understanding of how the landscape of VC in education shifted over the past two decades, what the geographies of investment capital are, and what areas of edtech investors are investing in and profiting from, and how investment has been shaped by shifting policy contexts.

Second, researchers should also understand how, and to what extent, VC investors have profited from the pandemic, and how this profit potential has been derived from public resources in a moment of health crisis, particularly as edtech becomes more deeply entrenched in school systems in the (post)pandemic era through the deficit discourses of national and global learning loss (Robbins & Cipollone 2023; Williamson 2021).

Third, an empirical examination of the racialized, gendered, and classed dynamics of the industry is necessary to further reveal how educational capitalisation functions in the field of

education. How, and to what extent, has the industry responded in meaningful ways to calls for accountability regarding how VCs and companies deal with racial, gender, and class bias in investing, hiring, product design, distribution, etc., and how is the industry reproducing broader inequities as they are linked to relations of difference and power?

Fourth, the emergence of AI has created a new landscape in schools and higher education, the long-term implications of which will evolve over time, both in terms of its influence on VC investment and the ways the industry deals with the educational potential, the harms incurred, and the ethical, human rights, and social justice dilemmas at the heart of AI (Gebru 2020; Buolamwini 2022).

We seek to respond to these pressing questions using the proposed conceptual framework as a guide, and to engage with other interdisciplinary researchers looking to understand the multiple dimensions of VC investment in education. This framework has the potential to inform systems aimed at transparency and accountability—those that prioritise learners, educators, and educational institutions over profit. It could also be used to track the ways in which such systems are not yet in place, might be corrupted or evaded, or may need further legal or cultural contextualisation.

Understanding VC's influence in education mattered pre-COVID, and it only grew in significance during the pandemic. The field of education research needs to better understand how VC structures operate, the power relations that comprise the industry, and how investment decisions are made that may or may not align with all stakeholders, particularly those who are most marginalised within global capitalism. VCs exert an exceptional amount of concealed power over educational futures, what can be imagined and for whom, and, ultimately, what transformative possibilities may be foreclosed due to the power of capital.

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