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Capitalising the future of higher education: investors in education technology and the case of Emerge Education

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Abstract

The aim of this chapter is to document and conceptualise the influence of new investment actors in higher education transformation. Digital education technology is rapidly expanding in higher education and profoundly changing teaching and learning processes, management of higher education institutions, and subjectivities of staff and students. We argue that investors are crucial actors in digitalising higher education by deciding which products and services will be developed and influencing the business models behind those products. In this chapter, we empirically focus on Emerge Education, a UK-based seed investor. It has already penetrated the higher education sector by investing in a portfolio of digital products and services, partnering with key organisations and stakeholders, creating guidelines targeted at university leaders, and offering advice to education startup entrepreneurs. By mobilising theoretical and methodological resources from the sociology of markets and critical data studies, the chapter presents an analysis of Emerge Education as an exemplar of how new education technology investors are seeking to transform higher education via digitalisation.

Keywords: education technology, investment, Emerge Education, value, future

INTRODUCTION

Emerge Education (EE), a UK-based seed investor in education technology (edtech) was founded in 2013 (Crunchbase, n.d.) and quickly positioned itself as “the most active European investor in education” with “deep knowledge of the education market” (Emerge Education, n.d.-a). EE’s main strategies include partnering with higher education (HE) stakeholders, recruiting edtech founders, financiers and leaders as advisors, and organising networks to lubricate connections between university leaders, industry employers, and edtech start-up entrepreneurs. In this chapter, we examine EE as a specific case of the growing role of investment companies in the transformation of HE and of the powerful influence of investors over the future of universities. As we analyse below,

EE imagines a particular kind of HE future, strategically communicates it to build consensus, and materialises it by making investment decisions and guiding its start-up entrepreneurs. This particular imagined future of HE is not only digital, but also enforces a new role for universities centred around employability, skills development, and lifelong learning, as the following quote from the EE Manifesto indicates:

Picture a 16+ education system that can double its capacity in just ten years, align swiftly with employers to provide training for newly invented skills and keep helping people train and re-skill throughout their lives.

That's not the world we're living in — yet. But it's what's being demanded, with increasing pressure, by the people and industries that are shaping the world of today and tomorrow. It is a fast-emerging fundamental global need and education needs to rise to the challenge. Rapidly.

This matters to me ... and will matter to everyone (Lynn-Matern, 2020b).

Universities around the world are becoming highly digitalised, albeit to differing extents. They use various digital products and services for their everyday operations, including institutional digital infrastructure, virtual learning environments, research management systems, business intelligence solutions, online degree platforms, and so on (Williamson, 2020), for which universities often pay various kinds of subscription fees or 'rent' (Komljenovic, 2020). Some of these proprietary digital platforms are developed by established tech giants, such as Microsoft or Google, but there is an incredibly vibrant edtech start-up sector (Mirrlees & Alvi, 2019) supported by financial investors. Venture capital investment in edtech is steeply rising with \$15 billion investment in the first three quarters of 2021 alone (HolonIQ, n.d.-a).

Investment in education is growing rapidly for several reasons. First is an alignment of national policies with the entrepreneurial ambitions of edtech actors (Williamson, 2019). The current COVID-19 pandemic has increased policy support for edtech globally, including government financing and political promotion in both schools and HE (Williamson and Hogan, 2020, 2021). Second, investors and entrepreneurs see their key markets are not only schools and universities but consumers directly—students, parents and teachers (Komljenovic et al, 2021). Third, an increasing number of edtech-specific accelerators, seed and venture capital investors support entrepreneurs to launch new start-up companies and platforms (EDUCATE Ventures, 2020). Finally, education overall is seen as an attractive investment opportunity since it is far less capitalised in comparison to other sectors, such as healthcare. The global healthcare market is worth \$8 trillion, and its market capitalisation is \$5 trillion, while the education market is worth \$6 trillion and capitalised at only \$300 billion (HolonIQ, n.d.-b). Such comparison highlights enormous potential for capitalising on the education sector, and edtech especially. The industry intelligence agency HolonIQ reports that 3% of global education expenditure was spent on technology in 2020, and this is predicted to grow to 5% by 2025 (HolonIQ, n.d.-c).

Edtech has raised the attention of various types of investors, including venture capital, equity funds, strategic private investors, and even special-purpose acquisition companies (SPAC). As in other social and economic sectors, investors are becoming well embedded in decision-making on the future of HE by deciding on future products and services in the sector. Investors play increasingly significant roles in the contemporary economy:

the task of a financial system is to make the most important decisions that society makes. Where is its capital going to be allocated for the future? How is the use of that capital going to be monitored when it is entrusted to particular individuals or particular institutions? How much of a society's resources are going to be allocated to the present and how much are going to be oriented to the future? And that is very much what financial systems are all about. (Lawrence Summers cited in Muniesa, 2017, p. 448)

Through financial and material decisions on technology that will be developed and used in HE, the investor has become a key actor in both shaping the present and the future of universities. However, not much is known about the investor in HE edtech. In this chapter, we aim to contribute to this much needed research.

In what follows, we first discuss the Investor gaze as our conceptual approach. After explaining our methodology, we present our analysis in three steps. First, we analyse EE's narrative about the social and economic future and the role of edtech in it. We then analyse how EE communicates to the entrepreneur as the future founder of a start-up who is expected to materialise the imagined future. In our third step, we discuss the social work that EE needs to perform to ensure its future imaginary is accepted as legitimate and plausible. We conclude with four implications of our analysis.

INVESTOR GAZE

In this chapter, we focus on the start-up part of the edtech industry, and two distinctive types of actors. The actors are entrepreneurs who found start-up companies, and investors who finance those start-ups. There are different types of investors, such as venture capital, private equity and strategic investors. Investment stages run from pre-seed, seed and, after a company establishes a track record, it moves to series of funding called series A, then B, C, and so on. The size of investment is normally larger with every next stage, and for the most successful start-ups concludes ('exits') with an initial public offering on stock markets or private acquisition by another financial firm. Although investors play a key role in determining the kind of products and services that get innovated, made, and marketed for use in education settings and practices, research on their role in HE remains lacking (cf. Regan & Khwaja, 2019).

Entrepreneurs and investors have different expectations and views of value, with material consequences for end consumers (Muniesa et al., 2017). In healthcare, for example, "[i]nvestors support a technology that can find a market, no matter its intrinsic value for clinical practice or healthcare systems" (Lehoux, Miller, Daudelin, & Denis, 2017), while biotechnology innovation is increasingly enclosed by intellectual property rights which shape its use in public health (Birch & Tyfield, 2013). We do not know how investors impact HE, including in ways that are not intended by entrepreneurs and other HE actors. But if the entrepreneur has a different motivation than the investor, then the question is, what is the underlying logic of digital innovation in HE? How do different interests of entrepreneurs and investors reconcile?

The answer lies in the business model, which is a company's core plan for making profit. It is a central artefact in an encounter between an entrepreneur and an investor. It stands as a value proposition given by an entrepreneur, which is received and assessed by the investor over a mutually beneficial state of capitalisation (Doganova & Muniesa, 2015). The business model acts as a site of negotiation and potential conflict (Brettel, Mauer, & Appelhoff, 2013). During this stage the initial entrepreneur's proposal of the business model is most often changed and accommodates the

investor's plans and ideas (Muniesa et al., 2017). After the business model is negotiated and the investment decision is made, an investor impacts the company, such as by owning a share and by participating in its governance. Moreover, the investor supports the founder in various ways. For example, the investor can act as a social defence for young low-power companies, helping them to make use of resources and navigate their vulnerabilities (Hallen, Katila, & Rosenberger, 2014). Indeed, in our case, EE supports their investee entrepreneurs substantially, as we analyse below.

While entrepreneurs might be interested in the use value of their products and services, investors aim for a return on investment (ROI). In the investor's gaze, the value of the business is not seen as its market price now, but its prospective *earning power*. Valuing an investment means ensuring the continuity of the revenue stream into the future (Muniesa et al., 2017). For investors, financial valuation based on future prospects is "a method to decide which things should be financed and which should not, and, accordingly, which things should exist and which things should not" (Muniesa & Doganova, 2020, p. 105). Thus, the investor's concern is the shareholder value of the companies they finance. Consequently, the financed companies' success is not measured in profits generated by the sale of goods and services they produce but in the capital gain resulting from its share sale (Feher, 2018). Therefore, the business model also acts as a capitalisation device shifting valuation from present products to future relationships. An investor "does not look at what the start-up is and has got in the present, but at what it can become in the future" and imagines "prospective business links" (Muniesa et al., 2017, p13).

All investments and predictions are based on imaginaries of the future, ideas and stories of what the future will be like. Beckert (2016) calls these "fictional expectations" as they represent future outcomes that are desired, but not guaranteed. For investors, it is key that their version of the future materialises so ROI can be secured from the market success of their investees, and their versions of the future are materialised by their investment decisions. In other words, the investor has the power to decide which products and services will comprise the real economy (Feher, 2018). In the contemporary financialised economy, financial speculation is increasingly challenged as being morally wrong, but investment in innovation is seen as moral and responsible (Muniesa, 2017). An investor is characterised as a moral and virtuous persona, uniquely endowed with the knowledge, skill and expertise to decide where societal resources should be invested (Chiapello, 2015). In the semantic complex of value creation, the straightforward reasoning of financial investment is accompanied by abstract reasoning of social utility. Not surprisingly, the language of investors in HE edtech is that of "digital disruption" and "transformation," which is said to bring unprecedented benefits to the sector and society at large (Marmol Queralto, 2021, Ramiel, 2020).

METHODOLOGICAL APPROACH

Our methodological approach consists of document analysis. We downloaded all pages of EE's website, as of 25 March 2021. The webpage links out to content written by EE staff on the Medium and LinkedIn platforms, which were included in the analysis. The second part of our corpus includes web content generated through a partnership between EE and Jisc, the UK non-profit agency funded by HE institutions (and also the formal 'digital body' of the national HE regulator, the Office for Students) which supports digital technology and services in the sector (Jisc, n.d.-a). We downloaded all the reports written by EE staff and co-published by EE and Jisc, plus additional pages from the Jisc website related to their partnership. In total, we analysed 21 pages from the EE website, 5 pages and 8 published reports from Jisc's website, plus 5 posts from Medium and LinkedIn.

We analysed these documents utilising qualitative thick description as a method (Ponterotto, 2006) informed by our theoretical focus on the investor's gaze. From the descriptions, we identified thematic patterns as evidence of the construction of future imaginaries, investment priorities and social practices deployed by EE to realise its vision of the future of HE. First, to analyse how EE constructs a persuasive narrative of the future, we investigated its reports targeted at universities and the HE sector more broadly. Second, to understand what EE pursues in negotiations with entrepreneurs about the particular business models, we investigated its communication targeted at them. Finally, to investigate EE's engagement in the politics of expectations, we examined the social events, networks, and projects that EE organises to make its story persuasive and construct the conditions to materialise its vision of the future.

NARRATING THE FUTURE

In this section, we identify the vision of the future that motivates EE, particularly by examining its communications targeted towards the HE sector. By projecting a particular imaginary of education, EE seeks to inculcate multi-sector consensus across fields of education, technology, and finance that this is a morally desirable aim delivering transformative value for universities and students.

One of the most significant aspects of the work of EE is its production of representations of the future, or "investor narratives". While economic assessments and financial valuations based on specific mathematical finance tools and techniques have become characteristic of investment approaches in a range of sectors (Chiapello, 2015), including education, the deployment of specific discursive representations and narratives is also central to the practices, operations and performances of investors (Muniesa et al., 2017, p17). Investment can never be based wholly on accurate calculations of future earnings since future economic market conditions always remain too uncertain (Beckert, 2016). For early-stage and seed investors, the financial uncertainties are higher still, as often start-ups do not yet have a fully marketable product. As such, techno-economic valuation devices and practices designed to produce "a calculative preview of the future" (Beckert, 2014, p. 14) have to be combined by investors with "fictional expectations" that take "the form of narratives that show their convictions, beliefs, fears, and hopes, supported by calculative tools" (Beckert, 2016, p133). The investor narratives composed from combining fictional expectations with techno-economic calculative valuations establish particular cognitive and normative frames of reference for motivating and coordinating economic action, thereby opening up the future as a site of probabilistic value, potentially limitless possibilities, and prospective financial returns, while reducing perceptions of risk, uncertainty and loss.

The investor narratives of EE can be ascertained across its website, manifesto, blog posts, and its reports with the HE digital learning agency Jisc. The main expectation of EE, expressed in its manifesto and elsewhere, is based on a particular deficit valuation claim, namely that a "global \$8.5 trillion skills gap" will require a dramatic transformation of HE systems (Lynn-Matern, 2020b). This calculation is attributed to Korn Ferry, a global management and consulting firm, which predicted by 2030 "a global human talent shortage of more than 85 million people" which "could result in about \$8.5 trillion in unrealised annual revenues" in the financial, technology, and manufacturing industries (Korn Ferry, n.d.). This deficit valuation claim is cited in the EE manifesto alongside another claim sourced from the World Economic Forum that "over 50% of the one billion global knowledge workers are projected to need upskilling or retraining to avoid being pushed into under- or unemployment". EE also speculates that "Spending on education and training will grow from \$6.5T to \$10T by 2030" and that "two universities will need to be built per day for the next 15 years to meet demand" (Emerge Education, n.d.-b). As such, the animating expectation of EE is based on a

series of “financialised quantifications” (Chiapello, 2015), which function “as a political technology that readily steps forward to be a valuation of the future and a critique of the present” (Muniesa & Doganova, 2020, p.98).

To respond to these valuations, EE generates and circulates its own imagined futures. In its manifesto EE emphasises *scale*, *flexibility*, and *skills* as strategic priorities. Scale refers to growing the HE sector, partly through investment in new university infrastructure but primarily through investing in alternative models of provision; flexibility means reconfiguring HE delivery, such as in “small, stackable chunks, online, with more flexible, less risky financing options”; and skills refers to aligning the HE system to industry, to mitigate the problem that most contemporary HE is “education-centric rather than employer-centric: courses are designed with educational objectives in mind, rather than employer needs”. Its overarching imaginary for “transforming education” focuses on investing in “engines of opportunity” across two categories: ‘Enablers’ that “work with existing HE institutions to help them become more scalable, flexible and industry-aligned”, and ‘Disruptors’ that “build standalone providers that compete with the incumbent institutions”. The ‘enablers’ include “university-employer collaboration” through “platforms that enable industry to co-design and co-deliver courses with universities”, and “operating systems for teaching at scale” to help “universities enter new markets”; the ‘disruptors’ include “online vocational schools” for “teaching of skills that allow people to access new careers”; “digital-first challenger universities” that “challenge the status quo through innovative curricula, teaching and operating models”; and “personalised, scalable workforce training: programmes to help corporates upskill and reskill their staff at scale in the flow of work”.

All of these imagined transformations of education, according to EE, can be realised through better integration of technology start-up businesses and universities, lubricated by investor expertise. However, EE also has to engage in the painstaking work of persuading the HE sector that its vision is desirable for universities, not just for investors and entrepreneurs. This is especially apparent in the series of reports produced through their long-term Jisc partnership called “Learning and Teaching Reimagined” (LTR), in which the UK HE leadership agencies Universities UK and Advance HE are also partners. Announcing the LTR initiative, EE claimed:

At Emerge and Jisc, we are working closely with our partners to deliver a comprehensive package of support for universities. In response to the current needs of the sector, we have launched ‘learning and teaching reimagined’, a cross-sector initiative led by Jisc, Emerge, Universities UK and Advance HE. The purpose of this initiative is to create a roadmap for a digital shift in HE for 2020/21 and beyond, setting out the steps needed to harness digital technologies in addressing the biggest challenges facing the sector (Navas, 2020).

Mirroring EE’s claims about the impending 2030 talent shortage, the LTR program aspires to a 2030 vision of HE being “radically transformed” through widespread “digital acceleration” (Maguire et al, 2020). In the accompanying report series authored by EE staff, the fictional expectation of HE transformed by 2030 is elaborated and made to appear durable and fixed, as EE has translated its fictional expectation into messaging for the HE sector itself.

The key themes of LTR are articulated in the ‘Digital Strategy 2030’ report written by EE staff. They include “investment in infrastructure”: enabling “universities to build on network aggregation effects of digital platforms to scale collaboration with employers massively in order to meet changing student needs and policy priorities”; and treating ‘digital’ as ‘a strategic asset’ that will “open up new ways of working and learning, and ultimately produce a clearer return on the investment” (Iosad,

2020). Another key aspect of the fictional expectations of EE evidenced in the strategy is the 'assetisation' of data, that is, the transformation of digital information into valuable objects for future revenue generation as exemplified by Big Tech companies such as Google, Facebook and Amazon (Birch & Cochrane, 2021). In EE's vision this process of assetisation translates into generating student data as assets through highly integrated and interoperable "intelligent information networks" in order to create "entirely new value streams" for "data-empowered universities". Directly drawing on examples of "consumer market leaders such as Netflix, Apple and Uber" as 'data-driven' enterprises that generate value from "consumer information", EE suggests student data hold prospective value as intelligence to inform institutional transformation. These transformations could only be realised through their collection and analysis by commercial education platforms, and thus be of simultaneous financial value to edtech companies who can process it for service improvement, feature upgrades, and the development of new products (Komljenovic, 2020). As such, the EE/Jisc vision of 2030 depends on universities changing their operating business models to invest in digital infrastructure and make student data into assets as future value streams.

Following this investor logic of student data streams as value streams, students are also encouraged to view their own learning and skills in terms of assets for future exchange in labour markets, with EE proposing use of platforms to match students' data profiles to career destinations. According to EE, employers would exploit platform 'network effects' to identify and target potential graduates, and "there will be a 'skills API' – a common way of sharing information about skills and competencies that closes the gap between the languages of academia and the workplace" (Emerge Education and Jisc, 2020). The idea of a 'skills API' implies students' credentials and competencies could become assetised objects of datafied exchange, in an investor logic where 'human capital' and skills are objects of multiple forms of investment, and individuals are encouraged to invest in their personal development (Beckert, 2016).

Finally, EE highlights transformation through "revenue diversification", characterised as a "shift from the commercialisation of physical assets to new online offerings" such as public-private platform partnerships for online degree delivery at scale; "workforce-ready" professional programs; and alternative digital "pay-as-you-go stackable" credentials (Emerge Education and Jisc, 2021). It also recommends institutions commercialising their "education IP" and making "higher-risk strategic investments, for example in spinout companies or "skunkworks", where crazy people come up with radical new ideas that will create the profit centres of 10 years from now" despite being "loss making" in the short term. These examples highlight how EE promotes an investor gaze in HE institutions, emphasising a financialised view of the sector that prioritises issues of investment, value streams, commercialisation of IP, assetisation, and the creation of new profit centres.

The LTR reports written by EE for Jisc, therefore, demonstrate how specific imaginary investor narratives have been inscribed qualitatively as a way of envisaging, narrating and 'fixing' the future. These fictional expectations highlight EE's aim to shape the HE sector itself to align with its vision of digital transformation, particularly evident in the ways it encourages universities to adopt business models associated with the enterprise and consumer technology industry. Overall, through the production of sharable fictional expectations, along with financialised quantitative valuations emerging from specific techno-economic practices, EE is "investing in new unique and dedicated digital educational forms ... in ways that reformat, redo, restructure, and reconceive what education is or could be about" (Decuyper, Grimaldi, & Landri, 2021, p7).

COMMUNICATING TO THE ENTREPRENEUR

Besides building consensus about an expected fictional future within the HE sector, EE also enables start-up entrepreneurs to help realise this vision. EE's communication directed to the entrepreneur is structured and instructive. It revolves around finding and scaling new markets, promoting financial growth, and identifying potential start-up founders for guidance on edtech investment, measures of success, and the support offered by EE.

EE focuses on three areas of investment, all strategically aligned to its future imaginary. First, EE encourages digital innovation in full degrees, stackable short courses, unaccredited courses, training for employers and selling content to other universities (Lynn-Matern, 2021). Another suggested innovation potential is to establish 'challenger universities' to compete with traditional universities and 'disrupt' the sector. Second, in workforce development, themes for innovation are skills assessment, applied collaboration platforms, tailored learning and career navigation (Barosevcic, 2020b). Finally, in the area of university-employer collaboration, themes are course co-creation and co-delivery, experiential learning, career navigation and education as a work benefit (Lynn-Matern, 2020a). By elaborating these investment themes, EE is framing a particular kind of innovation and potentially closing alternative paths for entrepreneurs in search of investment even before it comes to the negotiation over the business model and investment decision-making.

The aims of start-ups are presented to be financial in nature and in line with investors' pursuit of shareholder return on investment (Muniesa et al., 2017). There are variations in expressing these aims that founders are expected to pursue. One is to become a company with a turnover of \$100 million. For this aim, EE founder and partner Jan Lynn-Matern recorded instructive videos on designing the business model by aligning the product, channels of selling it, setting the right price and the needed number of target customers (Lynn-Matern, 2019a). These instructions are calculations on the balance between the price of the product and imagined market penetration. For example, he states that by charging a university \$200,000 for a product, the start-up would need to acquire 10% of the university market in the USA to reach \$100 million revenue, which he deemed plausible. He continues to say that most HE companies rather charge \$30,000, at which point they would acquire 66% of the US market, which he perceived as less likely. There are variations in the videos in terms of target customer base, price to charge and the number of customers that need to be acquired. He states that "a ton of companies do not get this" and his advice is to study the business models of established high-valuation edtech companies (Lynn-Matern, 2019b). He concludes that when EE assesses start-ups, they "don't expect any of these to be in place when we invest, but we do want a coherent story of how you will reach them. Because we do want those big outcomes" (Lynn-Matern, 2019b).

The second variant to express edtech start-ups' aim is to teach potential founders how to become a 'unicorn'—a company valued at more than \$1bn. Detailed advice on the business models, including target markets, sectors and partners, are elaborated, with market opportunities presented in terms of scale and ROI. In these guides, the concerns are purely financial. We found no social aims or use expressed beyond repeating the key figures such as resolving the \$8.5tn skills gap. Suggested markets and target sectors are based on predicted market size and potential for capitalisation. An important part of EE's communication is teaching potential founders via analysing existing edtech unicorns and their business models. For example, a segment is developed on "how to build Guild for Europe". Guild is a 'unicorn' based in the USA, focusing on connecting universities and employers. EE's analysis suggests which countries to focus on (France, Germany, UK), which sectors to target (logistics and fulfilment, retail, supermarkets, hospitality, insurance and healthcare) and which

universities to partner within each country. The suggestion is to pick one partner university that can scale fast with the start-up to deliver training for employees. Numerous other cases of companies are analysed and suggestions are made. The question of what this means for the higher education sector more broadly, is not addressed.

For challenger universities, the set aim is that the founder and investors exit out of the venture in three possible ways: acquisition by university conglomerates, such as Laureate and Global University Systems; by large corporations, such as Google and Microsoft; or by private equity, such as Apollo (Barosevic, 2020a). The logic in these exits seems to be that challenger universities are not there to serve the greater social good and students in the long term, but to be set up, scaled up, and then sold for profit for the founders and investors. What happens with students after such exits is not discussed. However, emerging research from other types of investment or buy-outs indicates less favourable outcomes for the public. In terms of private equity, “[a]fter buyouts, we observe lower education inputs, graduation rates, loan repayment rates, and earnings among graduates” (Eaton, Howell, & Yannelis, 2020, p. 4024).

Measures of success consistently communicated across various EE texts and sites are either the capital raised in a given time frame, the number of users of a particular platform or a product, user growth, a number of partner universities, or the geographical scale of operation. Success might be phrased as “winning 6 digit contracts” (Emerge Education, n.d.-b). These are all measures speaking to the future earning power and ROI in line with the investor’s gaze. They are not measures of the quality of the digital product or service either from the view of the end-user – students, staff, and others in the HE community – or from the view of established practices in the HE sector, such as stakeholder accountability.

EE’s goal is to transition a start-up company from their seed investment stage to the next phase, i.e. series A financing, within 12-18 months (Emerge Education, n.d.-c). It supports founders with its team, network and standing groups that it organises by lubricating connections between entrepreneurs, potential clients (university top leadership), and experts from the education industry who can offer insights, advice, and social contacts. A way to exhibit the work EE does with entrepreneurs is by showcasing examples of invested companies, such as Aula:

Aula has now achieved a full scale replacement of a University’s LMS, and is winning multiple 6 digit contracts. Aula’s most promising partner institution resulted from our invitation to an Higher Education network dinner ... Emerge Education has facilitated relationships between Aula and the 2 largest HE organisations in the UK, Jisc and UUK (Emerge Education, n.d.-b).

Finally, the key messages and evidence are accompanied by the idea of a moral investor (Chiapello, 2015; Muniesa, 2017). The strategy involves offering personal stories and background of founders and partners of EE. These stories include being an immigrant or first in the family HE student and benefiting from social mobility enabled by HE and now wishing to give this opportunity at scale to everyone around the world. The discourse suggests that having such personal experience equips the EE team with moral intentions, working towards social good. EE also constructs its moral persona by emphasising the vital role of education in society, and thus the social good to be achieved by edtech investment:

As immigrants and first generation university graduates, all of us at Emerge have had transformational education experiences that have unlocked access to careers our parents would never have dreamed of.

That's why we're investing in companies that make such experiences accessible to millions of people. We partner with entrepreneurs who provide people with access to education and gainful employment, and industry with access to talent.

Join us (Emerge Education, n.d.-a).

EE frames its encounter with the entrepreneur as virtuous and as a moral act stimulating social progress and bettering the opportunities for those in need (Doganova & Muniesa, 2015). The object of investment is presented not only as innovation but as a social and morally just intervention.

MANAGING EXPECTATIONS

Here we approach the significant social and political work of EE to coordinate action towards desired outcomes, examining these activities as part of the performance of investment and the 'operations' and 'scenarios' of capitalisation (Muniesa et al., 2017). As capitalisation professionals, investors engage in the 'politics of expectation':

Because investment outcomes also depend on the contingent decisions of third parties, actors are attentive to the convictions of other actors and try to know or even influence their expectations. The politics of expectations thus plays a prominent role also in investment decisions. (Beckert, 2016, p. 133)

By managing expectations, investment organisations must then undertake the social and political work of demonstrating their credibility, forging sectoral alignments, producing shared beliefs and consensual convictions in their perceptions of the future. This manoeuvring takes place in situated socio-spatial settings and through specific operations and practices, with the aim of bringing investment imaginaries into social and material form. "By influencing decisions, imaginaries of future states of the world can influence outcomes, causing the event anticipated in the fictional depiction to transpire", so that in a performative sense, "the outcome is merely the result of action motivated by a shared belief in an expectation" (Beckert, 2016, p. 84).

EE deploys a range of techniques to influence expectations and specific actions to affect outcomes, such as engaging in significant multi-sector networking and brokering activity. One of its key unique selling points to other organisations is its network-building capacity across education, industry, policy and finance:

We believe that capital is only a small part of what you need to be successful. ... We also focus on making high-level introductions that can catalyse their company's growth. We have built a close network of LPs and advisors, which range from university vice-chancellors of leading UK universities, to heads of Learning & Development at the world's largest employers, to education entrepreneurs who have built the very type of companies we invest in (Emerge Education, n.d.-c).

EE positions itself not just as an investor, but as a network-spanner that encompasses a core team of EE partners; fund advisors from other investment firms and technology companies; partner organisations that act as "some of the largest distribution channels in education" (including Jisc, Nesta, UUK, Cambridge University Press and Cambridge Assessment); co-investors "who have invested into our portfolio companies"; and the portfolio of organisations in receipt of EE funds from its "investment syndicate" and networking support. The core EE partners are all densely connected into other networks of finance, technology, education and policy too, acting as inter-network

brokering agents who are able to straddle sectors and industries. To broker relations and amplify its social status, EE asks founders to “get someone we know to introduce you to us”, and uses a strategy of utilising influential names and figures from HEIs, such as inviting high level HE leaders to chair its advisory groups and add their name to its reports. This strategy invokes familiarisation and trust by recognition.

EE events are also settings for affective and interpersonal exchange, with EE acting as a broker of relations and consensus across sectoral positions. It convenes and hosts events where its imaginaries can be shared and new relationships lubricated, such as webinars, roundtables and dinner parties:

We regularly convene vice-chancellors, deputy vice-chancellors, CIOs, and chief operating officers of more than a dozen top UK universities ... to discuss how technology is shaping higher and further education. ... At these meetings, founders from our portfolio discuss the problems these leaders face and network with them over drinks and dinner (Emerge Education, n.d.-c).

These events are important scenarios of investment, bringing different constituents together into interpersonal contact, often on an invitation-only basis, where EE is able to present their expertise and their fictional expectations and seek to enrol political, institutional, financial and industry allies to their vision. EE mobilises techniques of persuasion to attract coalitions of consensus not only to its imagined future, but to participate in its specific strategies of capitalisation. To this end, EE launched a specific edtech fund, the EE I fund, to make seed investments in new start-ups. Here, it is clear that network-building is central to the realisation of EE’s investment strategy and vision:

To do all this on an even greater scale, we’ve launched a new fund. It’s backed by a dream team of top global investors, including US education industry Dan Sommer, founder of Trilogy Education (acquired by 2u for \$750m in April 2019) and Rob Cohen, first full-time employee at The Princeton Review, founding CFO of 2U, and early-stage Advisor/investor in Trilogy, UK education leaders Cambridge University Press, Cambridge Assessment, the higher and further education technology body Jisc, and Nesta, as well as Brazilian higher education group Grupo Tiradentes (Lynn-Matern, 2020b).

As such, the fund brings together HE sector organisations and the education technology industry with the investment industry around a moral mission to directly fund transformations in education as a way of materialising their shared imaginary. Through these events, exchanges, and network-brokering activities, EE is involved in the skilful and persuasive management of expectations about the future of HE, all in the service of securing investments in its portfolio of edtech start-ups and ensuring they are positioned advantageously in a structured socio-economic setting to generate return on investment.

CONCLUSION: CAPITALISING HIGHER EDUCATION FUTURES

In this chapter, we have examined the role of investment organisations in the transformation of HE. Through a case study of EE, we have shown how investors deploy a particular ‘gaze’ which is focused on securing return on investment; create and circulate ‘fictional expectations’ of a future of education; address start-up entrepreneurs with assurances of high-growth financial valuation; and engage in intensive social relations and practices with wider networks to catalyse transformational changes. Investors are not simply neutral back-stage actors making purely financial decisions about the allocation of capital, but active performers in HE with multiple roles and responsibilities.

Our analysis surfaces four concluding points. First, investors are using networking prowess, persuasive techniques, and financialised techno-economic valuations to attract multi-sector consensus to their transformative visions of the future, followed by deploying investment funds to invest in start-ups of entrepreneurs who promise to realise those visions while simultaneously yielding prospective returns on investment. EE is a significant case as a highly networked investor with strong connections across the education, policy, technology and finance sectors and industries, able to align diverse interests through the persuasive representation and narration of transformative fictional expectations. Positioning itself as a leader in edtech investing in Europe, it also seeks to fund and support start-ups that deliver on its transformative vision for HE. It is a vision in which HE systems are both 'disrupted' by alternative 'challengers', and 'enabled' by digital suppliers to transform to meet calculated market demands. But such decisions about investing inevitably favour some visions of the future over others. They produce cognitive frames and normative convictions about the value of education that are commensurate with their prospective financial valuations, and thereby fund certain development and programs into existence while neglecting alternatives and perhaps even displacing existing practices. EE, therefore, exemplifies the "colonisation of non-financial activities by financialised valuations" and the displacement of alternative forms of valuation by techno-economic assessments that determine "dominant orders of worth" (Chiappello, 2015, pp. 13, 14).

Second, investors fund more than edtech products alone, but invest in companies and technologies that are designed to realise other constructions of value. One such form of additional value is 'human capital' in the shape of 'upskilled' workforce competencies. The emphasis of EE on investing in human capital development, with skills quantifiable in relation to wider economic projections of an impending global \$8.5 trillion skills gap, represents a profound individualisation and privatisation of the public mission of HE. Instead of counting on the welfare state and collective bargaining power to maximise income, "the subjects of financial capitalism tend to wager their prosperity on the continuously rated value of their assets – material and immaterial – that make up their capital" (Feher, 2018, p24). The human capital investment strategy of EE sees prospective value in shaping student subjectivities, and in students treating their learning as personal assets with prospective exchange value for advantageous placement in the labour economy. This resubjectification of students themselves is one of the central premises of EE's business model, which seeks to provoke a future of individual asset-maximisation through privatised skills development by investing in companies that stand to gain from such a future state of workforce training.

Third, investors have adopted a moral position of authority over the transformation of HE. In the face of seeming institutional and sectoral inertia, and various 'crises' such as 'skills gaps', 'talent shortages', and lack of coherence between universities and employers, investors propose that finance alone can solve the most pressing challenges of education. For the financial industry, "the very viability of society, in the future, depends on decisions made in the present about the allocation of money" (Muniesa & Doganova, 2020, pp. 105-106). As such, the profession of investing has become a seemingly legitimate source of moral decision-making about the future shape of society and institutions such as education. In this context, the figure of the investor appears to stand as both virtuous and rational, as "the ultimate key to democratic political expression" (Muniesa, 2017, p. 448). This figuration of the virtuous, moral, and rational investor, dedicated to solving some of the most urgent social and public policy problems in democratic states, corresponds well with education technology investors such as EE. In its critique of the present state of HE and its projection of an expected future, EE establishes itself as a centre of moral authority in education, able to make virtuous and rational interventions in the absence or withdrawal of state support.

Our final reflection is on the need for more detailed, up-close studies of the financialisation, capitalisation and valuation of significant domains of social and public policy such as HE. HE policies and institutions have been gradually penetrated by the narrative and calculative technologies of finance, as our case study of EE's penetration into sector bodies and networks has amply demonstrated. And this has brought with it new 'temporalities of finance' as the future-looking gaze of the investor has become authoritative in defining the desirable future for HE:

The analysis of finance must extend to the analysis of a peculiar form of valuation, characterised by the relationship it builds with present and future temporalities, and embedded in discourses and calculative devices that intervene in a variety of settings, way beyond financial markets.(Muniesa & Doganova, 2020, p. 97)

Our analysis of EE surfaces some aspects of the new temporalities of financial valuation that are affecting the education sector. The investor's concern with calculating prospective returns and future earnings based on complex combinations of techno-economic forecasting and speculative imaginings is increasingly normalised, transforming HE into "objects of investment, prone to producing returns in the future" (Muniesa & Doganova, 2020, p. 97). Not only are individual edtech products and platforms themselves objects of investment in this sense; so too are student subjectivities as human capital to be upskilled for greater economic productivity through digitally-mediated career readiness training. The 'digital transformation' of HE imagined and circulated by EE is in this sense imprinted by the new temporalities of investment finance, its restless attempts to produce valuations of the future, and its allocation of money to bring into being future states of education that promise long-term prospective earnings for the entrepreneur and the investor.

REFERENCES

- Barosevic, M. (2020a, August). *Challenger Universities* [Video]. Kapwing. <https://www.kapwing.com/videos/5f46c6d34c5a7600140018b9>
- Barosevic, M. (2020b, November 12). *A guide on how to build a unicorn in workforce development*. *Emerge Education*. <https://medium.com/emerge-edtech-insights/how-to-build-a-unicorn-in-workforce-development-3a137a675daf>
- Beckert, J. (2014). Capitalist dynamics: Fictional expectations and the openness of the future. MPIfG Discussion Paper. No. 14/7.
- Beckert, J. (2016). *Imagined Futures: Fictional Expectations and Capitalist Dynamics*. Cambridge and London: Harvard University Press.
- Birch, K., & Tyfield, D. (2013). Theorizing the Bioeconomy: Biovalue, Biocapital, Bioeconomics or . . . What? *Science Technology and Human Values*, 38(3), 299–327.
- Brettel, M., Mauer, R., & Appelhoff, D. (2013). The entrepreneur's perception in the entrepreneur-VCF relationship: The impact of conflict types on investor value. *Venture Capital*, 15(3), 173–197.
- Chiappello, E. (2015). Financialisation of Valuation. *Human Studies*, 38(1), 13–35.
- Crunchbase. (n.d.). *Emerge Venture Lab*. Retrieved October 28, 2021, from <https://www.crunchbase.com/organization/emerge-venture-lab>
- Decuyper, M., Grimaldi, E., & Landri, P. (2021). Critical studies of digital education platforms. *Critical Studies in Education*, 62(1), 1–16.

- Doganova, L., & Eyquem-Renault, M. (2009). What do business models do? Innovation devices in technology entrepreneurship. *Research Policy*, 38(10), 1559–1570.
- Doganova, L., & Muniesa, F. (2015). Capitalization Devices: Business Models and the Renewal of Markets. In M. Kornberger, L. Justesen, J. Mouritsen, & A. Koed Madsen (Eds.), *Making Things Valuable*. Oxford Scholarship Online.
<https://doi.org/10.1093/acprof:oso/9780198712282.003.0006>
- Eaton, C., Howell, S. T., & Yannelis, C. (2020). When investor incentives and consumer interests diverge: Private equity in higher education. *Review of Financial Studies*, 33(9), 4024–4060.
- Educate Ventures. (2020). *Helping EdTech startups make an impact*. EDUCATE Ventures Accelerator:
<https://www.educateventures.com/startups>
- Emerge Education. (n.d.-a). *Startups*. Retrieved October 16, 2021, from
<https://emerge.education/startups/>
- Emerge Education. (n.d.-b). *Aula: Bringing engagement to the core of the digital student experience, by replacing learning management systems*. Retrieved October 16, 2021, from
<https://emerge.education/startups/>
- Emerge Education. (n.d.-c). *Frequently asked questions*. Retrieved March 17, 2021, from
<https://emerge.education/startups/>
- Emerge Education and Jisc. (2020). *Assessment rebooted: From 2020's quick fixes to future transformation*. <https://repository.jisc.ac.uk/7854/1/assessment-rebooted-report.pdf>
- Emerge Education and Jisc. (2021). *The future of revenue diversification in higher education*.
<https://repository.jisc.ac.uk/8333/1/future-of-revenue-diversification-in-he.pdf>
- Feher, M. (2018). *Rated agency: investee politics in a speculative age*. New York: Zone Books.
- Hallen, B. L., Katila, R., & Rosenberger, J. D. (2014). How do social defenses work? A resourcedependence lens on technology ventures, venture capital investors, and corporate relationships. *Academy of Management Journal*, 57(4), 1078–1101.
- HolonIQ. (n.d.-a). *\$14.9B Global EdTech Funding 2021 - Q3 Update*. Retrieved October 26, 2021, from <https://www.holoniq.com/notes/14.9b-global-edtech-funding-2021-q3-update/>
- HolonIQ. (n.d.-b). *EdTech vs HealthTech in 2020*. Retrieved May 13, 2021, from
<https://www.holoniq.com/notes/edtech-vs-health-tech-2020/>
- HolonIQ. (n.d.-c). *10 charts to explain the Global Education Technology Market*. Retrieved May 13, 2021, from <https://www.holoniq.com/edtech/10-charts-that-explain-the-global-education-technology-market/> (Last access: 13.05.2021)
- Iosad, A. (2020). *Digital at the core: A 2030 strategy framework for university leaders*. EmERGE Education, Jisc and Universities UK. <https://repository.jisc.ac.uk/8133/1/2030-strategy-framework-for-university-leaders.pdf>
- Jisc. (n.d.-a). *Powering world-class education and research*. Retrieved November, 5, 2021, from
<https://www.jisc.ac.uk/>
- Komljenovic, J. (2020). The future of value in digitalised higher education: why data privacy should not be our biggest concern. *Higher Education*. <https://doi.org/10.1007/s10734-020-00639-7>

- Komljenovic, J., Sellar, S., & Birch, K. (2021). *Mapping Emerging Edtech Trends in the Higher Education Sector: Companies, Investment Deals & Investors. Universities and Unicorns project Report 2 of 4*. Retrieved from <https://www.lancaster.ac.uk/media/lancaster-university/content-assets/documents/universities-and-unicorns/UU-Phase1-Quant-Report2of4-final.pdf>
- Korn Ferry. (n.d.). *The \$8.5 Trillion Talent Shortage*. Retrieved October 16, 2021, from <https://www.kornferry.com/insights/this-week-in-leadership/talent-crunch-future-of-work>
- Lehoux, P., Miller, F. A., Daudelin, G., & Denis, J. L. (2017). Providing value to new health technology: The early contribution of entrepreneurs, investors, and regulatory agencies. *International Journal of Health Policy and Management*, 6(9), 509–518.
- Lynn-Matern, J. (2019a). *25% of Edtech companies are built here in Europe, but receive only 1% of the funding. I have created a short video to help edtech founders raise money more effectively from non education tech investors*. [Video attached] [Post]. LinkedIn. <https://www.linkedin.com/feed/update/urn:li:activity:6489097134116208640>
- Lynn-Matern, J. (2019b). *25% of Edtech companies are built in Europe, but receive only 1% of the funding. This is the second in a series of videos I'm making to help edtech founders raise money more effectively from venture capital investors*. [Video attached] [Post]. LinkedIn. <https://www.linkedin.com/feed/update/activity:6539143801229971456/>
- Lynn-Matern, J. (2020a, April 30). *Mass collaboration between employers and universities is the future of higher education | Part 1 — why are we investing in this space?*. Emerge Education. <https://medium.com/emerge-edtech-insights/mass-collaboration-between-employers-and-universities-is-the-future-of-higher-education-part-1-ed840467bfd5>
- Lynn-Matern, J. (2020b, March 12). *Emerge Education manifesto*. Emerge Education. <https://medium.com/emerge-edtech-insights/our-manifesto-emerge-fund-i-a3efe05788f3>
- Lynn-Matern, J. (2021, January 26). *How to build a unicorn by partnering with universities to diversify their revenue streams (Part 2)*. Emerge Education. <https://medium.com/emerge-edtech-insights/how-to-build-a-unicorn-by-partnering-with-universities-to-diversify-their-revenue-streams-part-2-6b3215f26d55>
- Maguire, D., Dale, L. and Pauli, M. (2020). *Learning and teaching reimaged: A new dawn for higher education?*. Jisc. <https://repository.jisc.ac.uk/8150/1/learning-and-teaching-reimagined-a-new-dawn-for-higher-education.pdf>
- Marmol Queralto, J. (2021). *A critical analysis of investors' logic in business discourse. Universities and Unicorns: Building digital assets in the Higher Education industry. Report 3 of 4*. Lancaster University.
- Mirrlees, T., & Alvi, S. (2019). *EdTech Inc: Selling, Automating and Globalizing Higher Education in the Digital Age*. Milton: Routledge.
- Muniesa, F. (2017). On the Political Vernaculars of Value Creation. *Science as Culture*, 26(4), 445–454.
- Muniesa, F., & Doganova, L. (2020). The time that money requires: use of the future and critique of the present in financial valuation. *Finance and Society*, 6(2), 95–113.
- Muniesa, F., Doganova, L., Ortiz, H., Pina-Stranger, A., Paterson, F., Bourgoin, A., ... Méadel, C. (2017). *Capitalization: A Cultural Guide*. Paris: Mines ParisTech.

Navas, S. (2020, July 8). *Can edtech startups help universities transition to a new normal?*. [Image attached] [Post]. LinkedIn. <https://www.linkedin.com/pulse/can-edtech-startups-help-universities-transition-new-normal-navas>

Ponterotto, J. G. (2006). Brief Note on the Origins, Evolution, and Meaning of the Qualitative Research Concept 'Thick Description.' *The Qualitative Report*, 11(3), 538–549.

Ramiel, H. (2020). Edtech disruption logic and policy work: the case of an Israeli edtech unit. *Learning, Media and Technology*. <https://doi.org/10.1080/17439884.2020.1737110>

Regan, P. M., & Khwaja, E. T. (2019). Mapping the political economy of education technology: A networks perspective. *Policy Futures in Education*, 17(8), 1000–1023.

Williamson, B. (2019). Policy networks, performance metrics and platform markets: charting the expanding data infrastructure of higher education. *British Journal of Educational Technology* 50(6): 2794-2809

Williamson, B. (2020). *The automatic university: a review of datafication and automation in higher education*. Glasgow: UCU Scotland.

Williamson, B., & Hogan, A. (2020). *Commercialisation and privatisation in/of education in the context of Covid-19*. Brussels: Education International.

Williamson, B. & Hogan, A. 2021. *Pandemic privatisation: Edtech and university reform*. Brussels: Education International.