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Universities and Unicorns: Mapping Financial Investment Flows in Higher Education Technology

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Abstract: Investment in education technology (edtech) has witnessed unprecedented growth and reached a record high during the current pandemic. Market intelligence providers such as HolonIQ show that most edtech investment happens in China and the US by large, with India catching up. Other regions, including the EU, lag behind. Moreover, most investment is directed towards lifelong learning and individuals and less towards schools and universities. This talk will present insights from quantitative mapping by the project “Universities and Unicorns: building digital assets in the higher education industry” (UU). A new classification of HE investment will be presented, focusing on the primary function, primary customer and end-users. One of the key elements of the new classification is to differentiate between intensive and extensive digitalisation. Our analysis reveals different trends than presented by the commercial market intelligence providers with different geo-political relations, as well as lower levels of data-driven innovation.

Paper: Universities are fast digitalising all of their operations with mostly proprietary digital platforms. These are created and owned by big tech companies such as Microsoft or Google, education specific companies such as Blackboard, and a growing number of education technology (edtech) start-ups. Digital products and services that these companies create and sell to the higher education (HE) sector are driven by investors. Investment flows thus became an important indicator of the future of edtech and consequently the education sector as a whole.

The education sector is increasingly attractive to investors and capital. It is far less capitalised than comparable sectors such as healthcare. Based on the HolonIQ data, the global healthcare market is worth \$10 T, and the market capitalisation is at \$5 T, while the education market is worth \$6 T and capitalised only at \$150 B. There is thus a significant opportunity for capitalisation and investment in education. Particularly digital products and services are seen as having the highest potential for fast growth as only 3% of global education expenditure is spent on technology in education (HolonIQ, source 1). HE forms an important part of this investment opportunity.

Admittedly, education has long been seen among investors as a sector that is too complicated with too many risks for investment, such as policy threats (countermovement to education privatisation), high and varied regulation, and country specific limits to scaling of service (such as different national curriculums). Not surprisingly, the markets that grew most in the HE technology industry are Online Programme Management (OPM) platforms, Massive Open Online Courses (MOOCs), and platforms for corporate training, which are all free (or at least freer) of these concerns.

However, investors' shyness of investing in HE is now changing. First, there is an alignment of policy and entrepreneurial ambitions for edtech (Williamson, 2018). The current COVID-19 pandemic has only increased the policy support for edtech, including governments opening spaces for edtech and even financing these initiatives (Source 2). Second, investors and entrepreneurs have learned that their most important markets are not schools and universities, but consumers directly, i.e. students, parents, and teachers. Indeed, "the paid user base is expanding, and customer acquisition costs are falling" as IBIS Capital reports (Source 3). And accelerators such as Emerge Education advise entrepreneurs on how to work in the venture capital space targeting these different audiences (Source 4).

The edtech industry is thus fast-growing. It is currently valued at \$187bn with an expected growth of 15 per cent and a value of \$370-\$410bn by 2025 (IBIS Capital, 2020). In terms of venture capital (VC), the "global EdTech started the last decade with \$500m of Venture Capital invested in 2010 and finished 32x higher at \$16.1B in 2020", and the VC investment is growing fast (Source 5). In the past few years, there is an increase in the investment amounts due to edtech companies moving to series B of investment (Brighteye Ventures, 2020). Private equity investment in edtech is growing too, and the industry saw its first special purpose acquisition company (SPAC) in 2020 (Brighteye Ventures, 2021).

In this talk, I will present the results from the "Universities and Unicorns: building digital assets in the higher education industry" (UU) project on financial flows in HE technology. First, I will discuss a classification of edtech companies that we created, which resulted in differentiating between intensive and extensive digitalisation. We follow (Bukht & Heeks, 2017), who state that "intensive applications intensify ... an existing economic activity. Extensive applications extend the boundaries of economic activity" (p12). Hence, extensive digitalisation in HE technology, in fact, brings new digital markets and products with a potential for disruption, while intensive digitalisation only extends already existing activity.

We find that most digitalisation in HE is intensive rather than extensive, which challenges a discursive construction of disruption in education. Furthermore, extensive technologies applications focus on categories other than teaching and learning content. This implies that content is positioned at the lower end of HE value chains and less prone to data-intensive digital innovation. Furthermore, a business model targeting individuals/consumers directly seems to be substantial, which might challenge universities as social institutions. And finally, it seems that HE focused edtech might fall under different geo-political dynamics than general edtech as presented by commercial providers.

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Sources

HolonIQ, Source 1: <https://www.holoniq.com/edtech/10-charts-that-explain-the-global-education-technology-market/>

Source 2: <https://codeactsineducation.wordpress.com/2020/04/01/new-pandemic-edtech-power-networks/>

Source 3: X report provided by IBIS Capital: https://preview.hs-sites.com/hcms/preview/content/29021764754?portalId=681972&preview=true&cacheBust=0&preview_key=KlatNqza&from_buffer=false&__hstc=86054855.4ecfa7682601243800cae1e7a782ce62.1589545958962.1589545958962.1589545958962.1&__hssc=86054855.3.1589545958962&__hsfp=1269839517

Source 4: <https://medium.com/emerge-edtech-insights>

Source 5: <https://www.holoniq.com/notes/16.1b-of-global-edtech-venture-capital-in-2020/>