

# Edtech

**Chris Wittstock**  
Senior Investment Analyst



## Transformation comes to education

We believe there is no sector that is more ready for modernisation than education. Advances in all aspects of technology have for the most part bypassed education until now. Today, **education represents c9% of GDP** but there are only 11 education companies with a market value of >\$1bn. While opportunities exist to improve across the entire spectrum (from early childhood to higher education to professional training) we see the best investment opportunities right now in higher education and associated upskilling. The higher education market alone is estimated to be worth \$2.5trn in 2025 within a larger \$7.7trn market globally. Much of this larger market is state-sponsored education.

NOW	FUTURE 2025
9% of GDP	12% of GDP
Focus on Non-Profits vs. For-Profits	Focus on Costs vs. Outcomes
Cottage Industry	100+ Education Companies with Market Cap \$1+ B
Technology Lite	Ubiquitous Technology
0.4% of Capital Markets	4% of Capital Markets

Source: GSV Capital

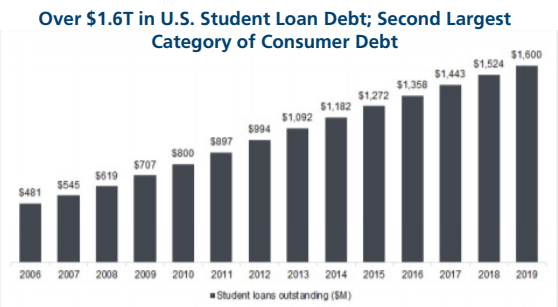
## Higher education

To date, US higher education has been exclusive both for financial and availability reasons. Higher level institutions have been highly conservative in their approaches, with jealously guarded reputations and exclusionary admissions. In short, university attendance has been aspirational for much of society. Motivated students could gain admission, but at a massive financial cost that has often resulted in crippling debt. Society has yearned for highly trained and educated graduates, yet not found a way to pay. Students seek higher education to get better employment outcomes.

## A broken system

The cost of education is higher than it needs to be. US student loan debt increased to \$1.6trn in 2019, representing the second highest category of consumer debt. In addition, students are taking longer to graduate, often up to six years to complete a four-year course due to underfunding, overcrowding and the inability to secure the necessary classes on the necessary schedule.

**Online approaches** offer universities the opportunity to scale their courses across a larger number of students, enabling prices to be lower, while offering the university greater revenue across what has become a very unproductive and costly asset base. In addition, graduating students are not always well prepared to enter the workforce and need upskilling. In a recent study, c40% of surveyed employers felt their recently hired graduates met the hiring criteria on areas such as critical thinking, professionalism, collaboration etc.



Source: Keybank, Federal Reserve Economic Data

## Changes afoot

The status quo is changing as it must with all stakeholders set to benefit from a more efficient and uniform approach. The traditional college suffers from very high costs surrounding a campus that is underutilised compared to its potential. The student needs lower costs to avoid crippling debt that

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can take decades to settle. The rise of scalable applications and widespread cheap bandwidth means these challenges can be more effectively overcome. However, universities want to jealously protect their reputation and maintain standards, while getting a better return on their capital base. Students may not be physically able to attend remote locations in person (especially if they have a job), and education is no longer limited to young adults: increasingly working age people are upskilling.

An online-enhanced education can also be high quality; students can engage in a well-constructed course, perhaps even more so than from the back row of a lecture hall. As well, in-person training can be arranged if needed closer to where the student lives and works (ie nursing experience). At the same time, there is a social change around learning, with an understanding that **learning is a lifelong pursuit**. The previous thought of 'filling up the knowledge tank' until age 25, and then cruising has given way to ongoing improvement. This is significant in growing the size of the investment opportunity.

### Enter COVID-19

As per many of our favoured themes, the COVID-19 pandemic has exacerbated this. In the past, students were limited from attending physically due to economic circumstance; now everyone's attendance is limited. However, most higher education institutions lack the knowledge, resources and technical skills to host their courses online. They want to maintain control of their programs, content and educational reputation but they are not set up to build out technical capabilities themselves, nor do they want the associated upfront costs. Instead, they will look to partner with companies that can deliver what is necessary, including finding new students.

The global **online education** market is forecast to grow from \$36bn to \$74bn by 2025 – still only a fraction of the amount spent on higher education. Online program management (OPM), a subset of this opportunity, is growing rapidly, from c\$3.9bn last year to \$9.9bn in 2025. Meanwhile, the number of eligible students worldwide looks set to double in the next 30 years.

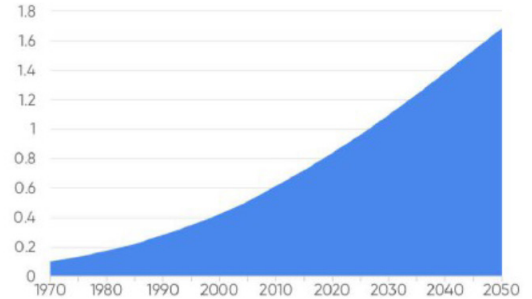
The global OPM market comprises four main segments: generalist, specialist, MOOC (massive open online courses) and university. As the chart opposite shows, we can see the landscape is not overlooked, but it is relatively nascent and most of the companies are still private. It is also helpful to categorise the market into degrees and certificates, and by business model and depth of solution. Some offer fee-based models, while others might do a revenue share.

Despite the large apparent opportunity, the public market is still relatively limited, with only a few high-quality players. However, we do expect the opportunity set to expand this year with a number of public offerings expected to be listed with potentially high valuations. Supporting our constructive view, the venture capital community has been investing aggressively in education (see opposite).

### Positioning

**2U** is a leader in the edtech evolution. They were early in identifying this market and began with focus on full-scale high reputation universities who wanted to scale their graduate programs with a high-quality partner with online skills. 2U did well building out top class programs where performance and reputational protection were paramount. This has broadened to include short courses, undergraduate programs and bootcamp offerings (a specialist that helps students in technology expertise). We think 2U is uniquely positioned to continue to grow strongly as the early leader in a huge market and can

Global Population by Post-Secondary Education Attainment (Billions)



Source: Holon IQ "Education in 2030" and Intl Institute for Applied Systems Analysis

THE ANATOMY OF AN OPM

Holon IQ

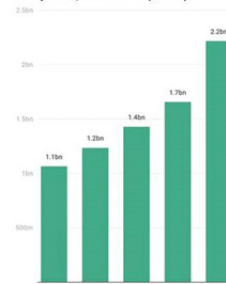
### Global OPM Market Map

The global Online Program Management market is composed of four major segments based on focus, model and vertical.

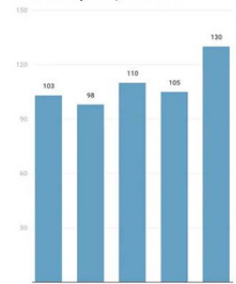


Source: Holon IQ "Education in 2030" Systems Analysis

Investment Capital Raised by U.S. Edtech Companies, 2016-2020 (\$ USD)



Number of Investment Deals for U.S. Edtech Companies, 2016-2020



Source: EdSurge

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leverage their existing partnerships with many top universities.

2U is reaping the benefit of prior upfront investments which are now delivering strong financial returns. In addition, the entry several years ago into alternative credentials (such as short courses) opened up synergies in enhancing other initiatives including the undergrad segment.

### Academic support tools

Another aspect to online education is the student's own role. The move online has meant that tutorials and other help that was done in person now needs to be handled online and study materials that were previously hard copy are now online. Chegg is the leader in direct-to-student content and has prospered by serving the needs of students directly with inexpensive and comprehensive offerings of not just the required materials, but also with asked and answered questions that help students when they are studying and get stuck. Like Netflix, Chegg offers a subscription service that is affordable. They have 6.6 million subscribers today, but there are 102 million students they can address: 36 million university and high school students, 18 million further secondary and tertiary students in Australia, Canada and the UK and now an additional 48 million English-language instruction students in other countries. Chegg is finding students are increasingly ready to pay for enhanced bundles of content to cover more study areas around STEM (science, technology, engineering, and mathematics), business, English writing, humanities and social studies. It has enhanced its solution set by moving into skills training that allows students to gain the required skills for certain jobs, including a bootcamp offering. Chegg has a unique business model that leverages its strong brand recognition which results in minimal sales motion and a very low customer acquisition cost. We think Chegg brings a very low-cost value to students and is poised to expand importantly in the student self-help market.

**Chris Wittstock**

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### Client Services

**E** [investor-relations@polarcapital.co.uk](mailto:investor-relations@polarcapital.co.uk)

**T** +44 (0) 20 7227 2721

**F** +44 (0) 20 7227 2799

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