



PRIVATE EQUITY PERFORMANCE IMPROVEMENT GROUP

# Education Technology: Investing In Companies That Meet the Needs of The New Learning Landscape

As the United States moves into the next phase of the COVID-19 pandemic, many questions persist about its likely long-term effects. Few industries within the U.S. economy have been affected by COVID-19 as profoundly as the Education sector, and many believe that some of the most fundamental changes are still to come.

In this context, we have developed a viewpoint of this dynamic sector, through the lens of current and potential private equity investors. Our main conclusion is that Education Technology (EdTech) is likely to be the subsector of Education that is ripest for private equity investment. Opportunities may also exist in supplemental education (e.g., tutoring) and, on a select basis, in for-profit educational institutions.

## Sector Overview

The sector can be considered, in its entirety, as a chronological sequence that begins with Preschool / Day Care, continues into K-12 and Higher Education, and concludes with the Corporate Training / Continuing Education segment. For the purposes of this document, we think of organizations that provide education directly to students as Educational Institutions. By contrast, Service Providers support these institutions but do not compete directly with them.

In aggregate, the sector is estimated to be a \$1.4 trillion enterprise in the United States, comprising about 6 percent of annual U.S. GDP. K-12 accounts for about half of the overall Education market, and Higher Education another 35–40 percent. The remaining 10–15 percent is in Corporate Training / Continuing Education (5–10 percent) and Preschool / Day Care (~5 percent). Private equity investment currently occurs throughout the sector, across both Educational Institutions and Service Providers.

## Effects of the COVID-19 Pandemic

In our viewpoint, COVID-19 has had four major short-term effects on the U.S. Education sector:

1. Modality shift toward online learning, across the educational spectrum
2. Slower academic progression for K-12 students
3. Overall college enrollment decreases, coupled with online enrollment increases
4. Divergence in financial outcomes (e.g., higher levels of investment in private companies, but downward revenue pressure on public higher education institutions)

As has been so often the case with COVID-19, the pandemic has accelerated some trends within the sector that were already underway (e.g., No. 3 above). Also, there are potential longer-term effects from each of these four outcomes. For instance, the slower academic progression for K-12 students may lead to an extended demand increase for supplemental education such as tutoring.

## Summary of Major Pandemic Effects on U.S. Education

Major Effect	Short-Term Effects (Already Occurred / In Progress)	Potential Longer-Term Effects	Commentary
<b>Modality Shift</b>	<ul style="list-style-type: none"> <li>Closure of U.S. Preschools and Day Care Centers for an extended period</li> <li>Shift of most other learning online, from K-12 through Continuing Education</li> </ul>	<b>Potential Permanent Online Shift</b>	<ul style="list-style-type: none"> <li>Though remote learning is not viable for preschoolers, and may not be preferred for K-12 students, some of the shift online in Higher Education may be permanent</li> </ul>
<b>Slower Academic Progression for K-12 Students</b>	<ul style="list-style-type: none"> <li>Slowdown of student progression throughout K-12, with one study suggesting that the average student has lost more than four months of learning during the pandemic<sup>1</sup></li> <li>Increase in demand for supplemental education, such as tutoring and enrichment programs</li> </ul>	<b>Tutoring Demand Up</b>	<ul style="list-style-type: none"> <li>Much of the K-12 tutoring demand will likely continue until parents are convinced that their children's progression has caught up to expectations</li> </ul>
<b>Overall College Enrollment Decreases, Coupled With Online Enrollment Increases</b>	<ul style="list-style-type: none"> <li>Reduction in overall U.S. Higher Education enrollment, even as online-only learners continue to increase</li> <li>Re-opening of debate, in at least some circles, about traditional U.S. Higher Education models</li> </ul>	<b>Dis-aggregation of Higher Education Value Chain</b>	<ul style="list-style-type: none"> <li>Pandemic may accelerate secular trends that had already begun pre-pandemic (e.g., movement of some students away from Higher Education toward alternate options)</li> </ul>
<b>Divergence in Financial Outcomes</b>	<ul style="list-style-type: none"> <li>Spike in total private investment dollars in Educational Technology (EdTech) startups</li> <li>Sharp rise in publicly-traded U.S. education stocks</li> <li>Reduction in revenues of U.S. public Higher Education institutions</li> </ul>	<b>Consolidation</b>	<ul style="list-style-type: none"> <li>Revenues of public Higher Education institutions may not recover quickly</li> <li>COVID-19 could ultimately cause cash flow issues for U.S. Higher Education institutions – in some cases possibly leading to closures and/or mergers</li> </ul>

<sup>1</sup> Oliver Wyman





## Attributes of Attractiveness

Our assessment identified four attributes of attractiveness for education companies that will differentiate both service providers and their clients:

1. Ability to remove friction along one or more of four dimensions: Flexibility / Customization, Supply, Brand / Positioning, and Operations
2. Helping educational institutions cut costs and “pivot to cash”
3. Working with educational institutions to better define and/or improve outcomes
4. Capability of companies to both operate at scale and with a lean cost structure

We believe that companies with one or more of these attributes will be well-positioned within the sector and may offer a strong value proposition to private equity investors.

## Technology in Education is the Common Thread Across All Four Attributes of Attractiveness

Attribute	Summary / Definition	Examples of Technology Involvement
<b>#1</b>  <b>Continued Removal of Friction</b>	Ability to remove friction along one or more of four dimensions: Flexibility / Customization, Supply, Brand / Positioning, and Operations	<ul style="list-style-type: none"> <li>• Online enablement (e.g., platforms for remote attendance / learning)</li> <li>• IT outsourcing</li> <li>• Learning Management Systems (LMS)</li> <li>• Online class scheduling tools</li> <li>• Digital / systems tools for internal processes (e.g., Student Information)</li> </ul>
<b>#2</b>  <b>Enablement of Ongoing Cost Take-Out</b>	Helping educational institutions cut costs and “pivot to cash”	<ul style="list-style-type: none"> <li>• IT outsourcing</li> <li>• Digital solutions for delivery of online courses / seminars</li> <li>• Records digitization</li> <li>• Computer-based processes</li> <li>• Digital tools for Student Services (registration, tuition, etc.)</li> <li>• Digital tools for Finance, HR, and other back-office processes</li> <li>• Systems integration</li> </ul>
<b>#3</b>  <b>Clear Focus on Outcomes</b>	Working with educational institutions to better define and/or improve outcomes	<ul style="list-style-type: none"> <li>• Online marketing / student acquisition</li> <li>• Digital study aids / tools</li> <li>• Digital content</li> <li>• Tools to enhance student experience</li> </ul>
<b>#4</b>  <b>Lean Operations Layered Onto Previous Scale Requirement</b>	Simultaneously operating at scale and having a lean cost structure	<ul style="list-style-type: none"> <li>• Computer-based information storage and processes</li> <li>• Electronic time tracking and utilization monitoring</li> </ul>

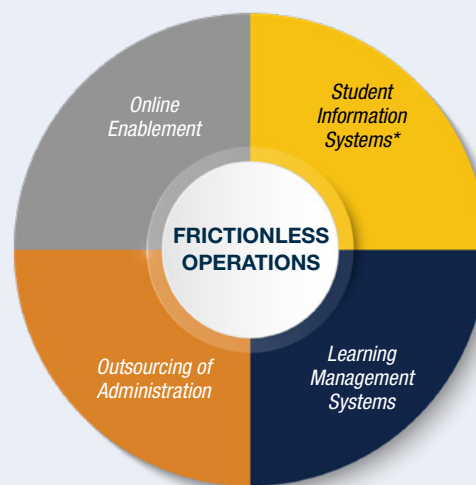
Source: A&M Analysis

### #1 Continued Removal of Friction

Successful education providers remove friction along one or more of general four dimensions:

1. Flexibility / Customization – student-centric customization of services to enhance the student experience
2. Supply – proprietary technologies that allow for better operations
3. Brand / Positioning – offerings that allow for differentiated value proposition
4. Operations – unique offerings that allow to transform institutions' P&L in a way that fixed costs become variable (Example: real estate)

### FOUR MAJOR LEVERS TO MAKE OPERATIONS LESS FRICTIONAL



\* Also known as “Student Management” or “Student Management Systems”

Source: A&M Analysis

## #2 Enablement of Ongoing Cost Take-Out

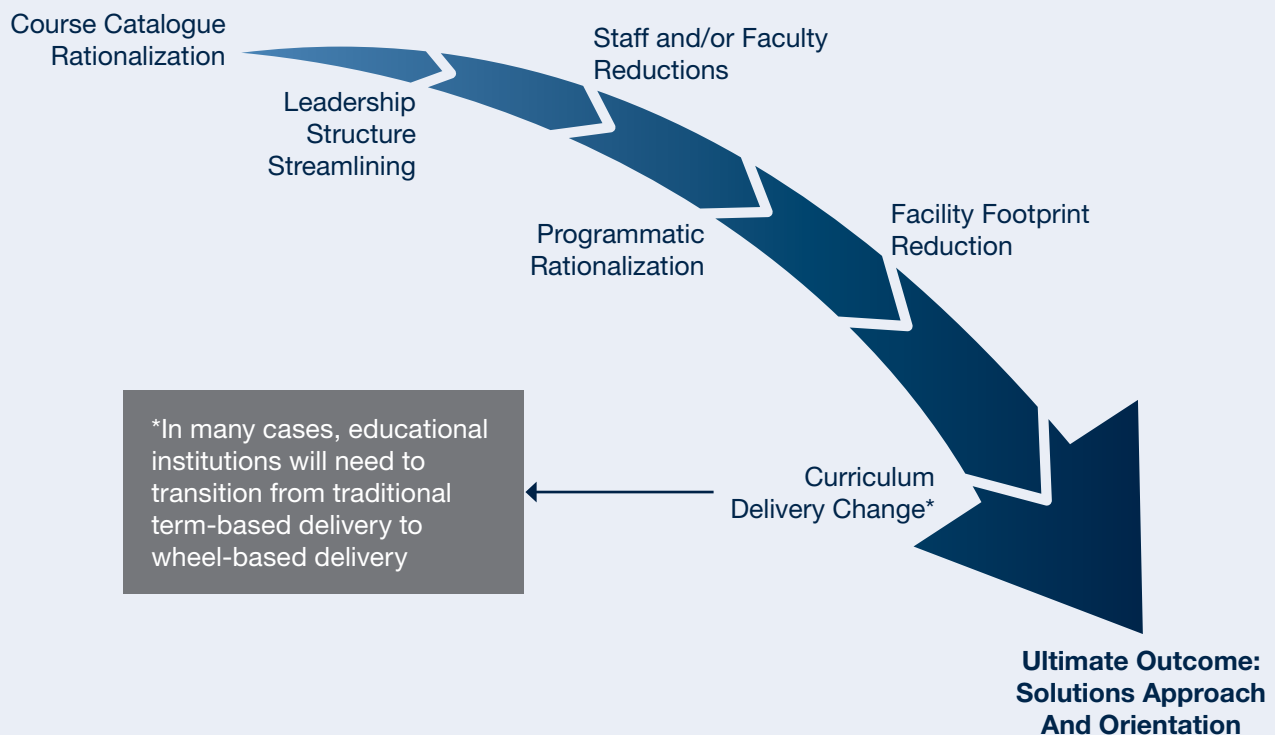
The market in the current environment will force education institutions to look away from historical levers used to sustain operations. Postsecondary institutions will be forced to **move away** from the below activities as **the only** way to continue operations:

- Steady tuition increases that have been sustained for the past several decades
- Replenishment of student classes with out-of-state or foreign students
- Mining for nontraditional students

More and more institutions are forced to look at the cost side of the P&L and think through potential operational improvements:

- Programmatic profitability and break-even analysis
- Cost of delivery considerations
- Streamlining student services, as well as back office operations
- IT rationalizations

### EDUCATION INSTITUTIONS WILL LIKELY BE FORCED TO MATCH REVENUE DECELERATION WITH COST TAKE-OUT INITIATIVES



### #3 Clear Focus on Outcomes

Market offerings that help education institutions to better **define and improve outcomes** are inherently attractive:

- Student aggregators, lead generators
- International student recruiters
- Companies concentrating on enhancing student experience and persistence
- Online enablers
- Test prep offerings
- Institutions offering credentialing up

### #4 Lean Operations Layered Onto Previous Scale Requirement

Circa 2010	Circa 2020
“Go Big or Go Home”	“Go Lean (and Big) or Go Home”
<b>Scale was an important requirement, particularly for service providers and for-profit educational institutions</b>	<b>Scale remains relevant, but now lean operations are an even bigger necessity – even for non-profits</b>

- Scale remains a key advantage for all types of service providers, many of whom must build and maintain infrastructure so that their clients don't need to
- In some cases, scale may be important on the revenue side as well (e.g., when peer behavior and/or references are a big part of buying decisions)
- As is the case in other industries, scale can also help service providers remain or become price competitive with similar vendors
- For-profit educational institutions often need to create or maintain scale to both withstand competitive pressures and provide attractive returns to investors
- Because educational institutions will (in effect) be transferring their own cost pressures to suppliers that they hire, those service providers will need to be lean in order to both win business and maintain it
- For example, service providers may need to monitor staff utilization the same way that educational institutions begin managing class utilization
- Many non-profit service providers will face similar cost pressures, given the Education sector's emerging structural challenges
- Subscale organizations - even if lean - are the most vulnerable to cost pressures, and many predict that their fight for survival will be the most difficult

## EdTech Subsector

Technology in education is the common thread across all four of the above attributes. The EdTech subsector within Education refers to entities that use technology to provide instructional or education-related services directly to educational institutions and/or students. EdTech serves the entire educational spectrum in the U.S. — from K-12 through Continuing Education — and includes digital curriculum, Learning Management Systems, Student Information Systems and numerous other products and services.

The overall EdTech market was growing before the pandemic — and that trend is expected to continue for at least the next five to 10 years, with one forecast predicting that it will reach ~\$100 billion in annual revenue in North America by 2027.<sup>2</sup> EdTech has other appealing qualities also, such as low working capital requirements and favorable structural / economic forces.





<sup>2</sup> Grand View Research, A&M Analysis





## Education-Related Services

EdTech refers to entities that use technology to provide instructional or educational-related services to educational institutions and/or students directly

Market Dimension	Attributes included in EdTech	Examples / Comments
 <b>Segment</b>	<ul style="list-style-type: none"> <li>Preschool / Day Care</li> <li>K-12</li> <li>Higher Education</li> <li>Others</li> </ul>	<ul style="list-style-type: none"> <li>Preschool segment includes playgroups, nursery, and pre-primary</li> <li>K-12 includes kindergarten, primary, and secondary through 12th grade</li> <li>Higher Education includes Associate's through Doctoral degree candidates</li> <li>Others includes corporate training, self-learning, language learning, and Continuing Education</li> </ul>
 <b>End User</b>	<ul style="list-style-type: none"> <li>Business</li> <li>Consumer</li> </ul>	<ul style="list-style-type: none"> <li>Business component includes the adoption of EdTech solutions across institutions (e.g., Pre K-12 schools, Colleges &amp; Universities, and corporations)</li> <li>Consumer component is the use of EdTech by individual learners across all groups (e.g., Code and Language Learning)</li> </ul>
 <b>Type</b>	<ul style="list-style-type: none"> <li>Hardware</li> <li>Software</li> <li>Content</li> </ul>	<ul style="list-style-type: none"> <li>Hardware includes equipment deployed by users for procuring learning sessions online and in class (e.g., iPads)</li> <li>Software is incorporated through hardware to provide educational services at any time (e.g., LMS, E-Learning)</li> <li>Content is the material from which lessons are taught</li> </ul>
 <b>Region</b>	<ul style="list-style-type: none"> <li>North America</li> <li>Rest of World (not included here)</li> </ul>	<ul style="list-style-type: none"> <li>For this PoV document, North America includes the U.S. market only</li> </ul>

Source: Grand View Research

## Observations, Implications and the Road Ahead

With COVID-19 adding a new dimension to a landscape that was already shifting before the pandemic, it is impossible to predict perfectly what lies ahead for the U.S. Education sector. That said, we believe that cost pressure on many educational institutions will continue and intensify over time — particularly in Higher Education. The Higher Education segment is also already dealing with persistent questions about the value of some degrees and will eventually need to overcome a gradual decline in the number of annual U.S. high school graduates (likely to start in the mid-2020s).<sup>3</sup>

There may still be occasional opportunities for private equity firms to invest directly in for-profit educational institutions, particularly those focused on in-demand fields such as healthcare and technology. However, the time frame to realize value must align with the firm's expectations.

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<sup>3</sup>Western Interstate Commission for Higher Education, *Knocking at the College Door* (reported in *Chronicle of Higher Education*)

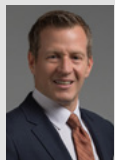
## Summary and Conclusions

Though challenges may persist within the overall sector, EdTech is best positioned to capitalize on market forces. By 2023, there will be \$16.7 billion spent on technology in the U.S. postsecondary sector, according to Gartner research. The testing and assessment market is projected to top \$6 billion in roughly the same period (despite headwinds in the standardized testing part of the market). Private tutoring and test preparation add another \$32 billion in spending according to Technavio analysts. Trends that started before COVID-19 will continue to dominate such as:

- Data-driven instruction and intervention
- Gamification
- Tools that promote creativity
- Personalized learning

In our discussions with our clients and based on our own experience, the sheer number of participants and new entrants into this ecosystem is of foremost importance. This is why we believe that, as the Education sector as a whole continues to adapt to the new norms, EdTech and Supplemental Education represent the most attractive subsectors for investment.

## Authors:



**Jeff Shaffer**

Managing Director

+1 310 975 2608

[jshaffer@alvarezandmarsal.com](mailto:jshaffer@alvarezandmarsal.com)

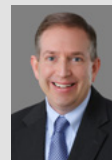


**Vadim Tsysin**

Managing Director,  
Education Sector Lead

+1 847 287 8690

[vtsysin@alvarezandmarsal.com](mailto:vtsysin@alvarezandmarsal.com)



**Edwin Van Dusen**

Manager, Education Sector Team

+1 847 848 1668

[evandusen@alvarezandmarsal.com](mailto:evandusen@alvarezandmarsal.com)

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