Holon IQ

Education Disrupted.
Education Reimagined.

—

The impact of COVID-19 and the future of education systems around the world.

WISE

Holon IQ

New approaches, opportunities & challenges for EdTech in a post-COVID world.

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1 **HolonIQ Introduction**. Global analysis of EdTech innovation and funding, the technologies and models that are shaping the future of education.

2 COVID-19 has accelerated the use of technology across all areas and sectors in education. Which technologies/tools are thriving/needed and what are the gaps yet to be addressed?

3 COVID-19 provides both immense challenges and significant opportunities. From your perspectives, what are your thoughts on the longer-term impact of how COVID may change elements of the world's education delivery?

4 Q&A

Presenters

Smita Deorah

Co-Founder & Chief Operating Officer

LEAD School

Mumbai, India

Mikkel Mouritz Marfelt

Director, Investor Relations and New Strategic Initiatives

Labster

Copenhagen, Denmark

Maria Spies

Co-CEO and Co-Founder

HolonIQ

Sydney, Australia
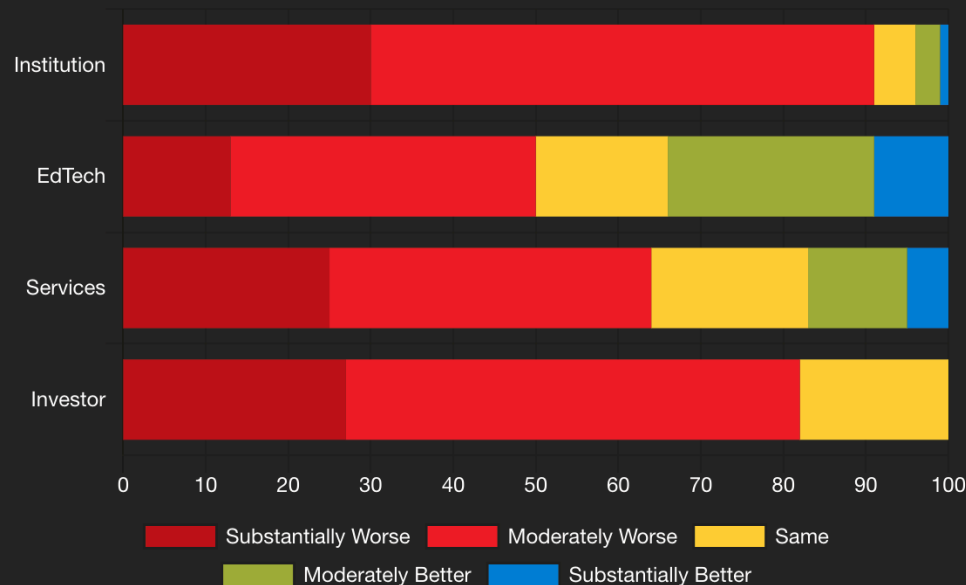
Benoit Wirz

Partner

Brighteye Venture Capital

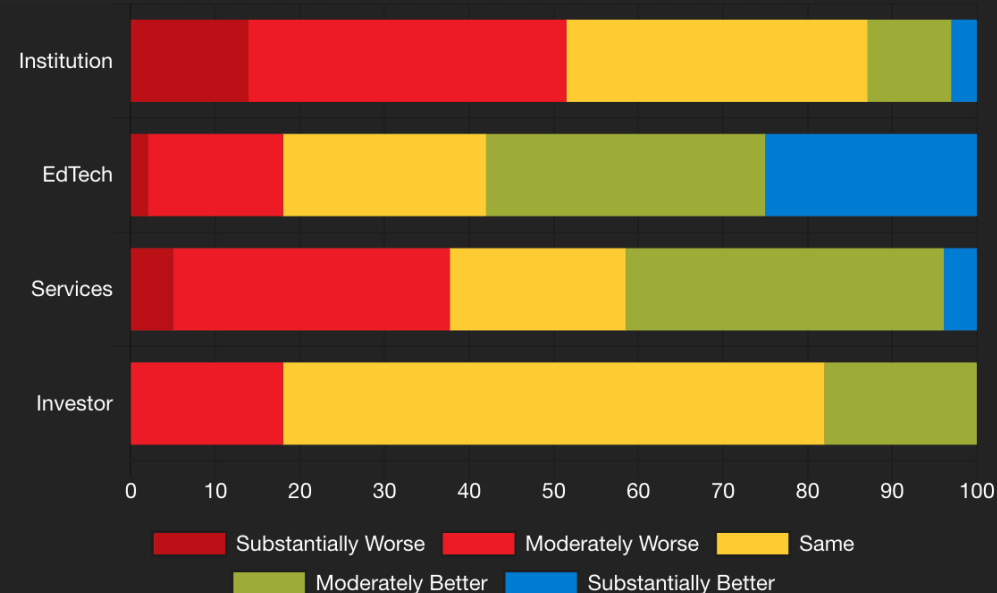*Paris, France*

1. GLOBAL ANALYSIS OF EDTECH INNOVATION AND FUNDING

COVID-19. Global Education Outlook

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Across the board, organizations of all types are expecting to be worse off in the short term as a result of COVID-19. Education institutions are expecting to be the hardest hit with 91% of respondents indicating they will be moderately (61%) or substantially (30%) worse off in the short term.

Short Term Impact of COVID-19 by Organization Type

Institution
EdTech
Services
Investor

0 10 20 30 40 50 60 70 80 90 100

Legend:
- ■ Substantially Worse
- ■ Moderately Worse
- ■ Same
- ■ Moderately Better
- ■ Substantially Better

Long Term Impact of COVID-19 by Organization Type

Institution
EdTech
Services
Investor

0 10 20 30 40 50 60 70 80 90 100

Legend:
- ■ Substantially Worse
- ■ Moderately Worse
- ■ Same
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- ■ Substantially Better

Source: HolonIQ March 2020

http://globaloutlook.holoniq.com/

COVID-19. Geo Impact.

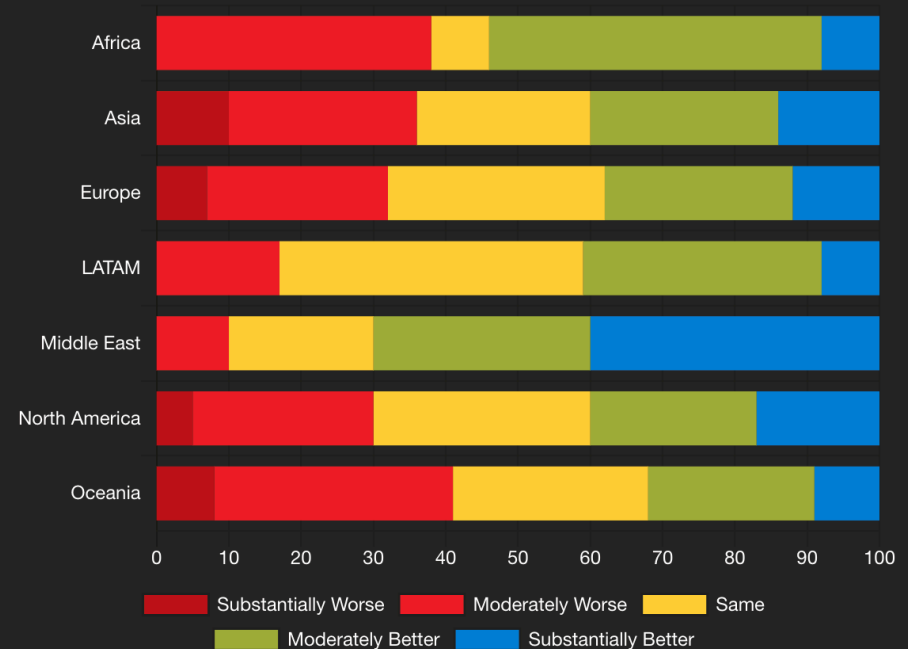**Holon IQ**

72% of respondents from Oceania expect to be substantially or moderately worse off in the short term, moderating to 41% worse off in the long term, closely followed by Europe and Asia .

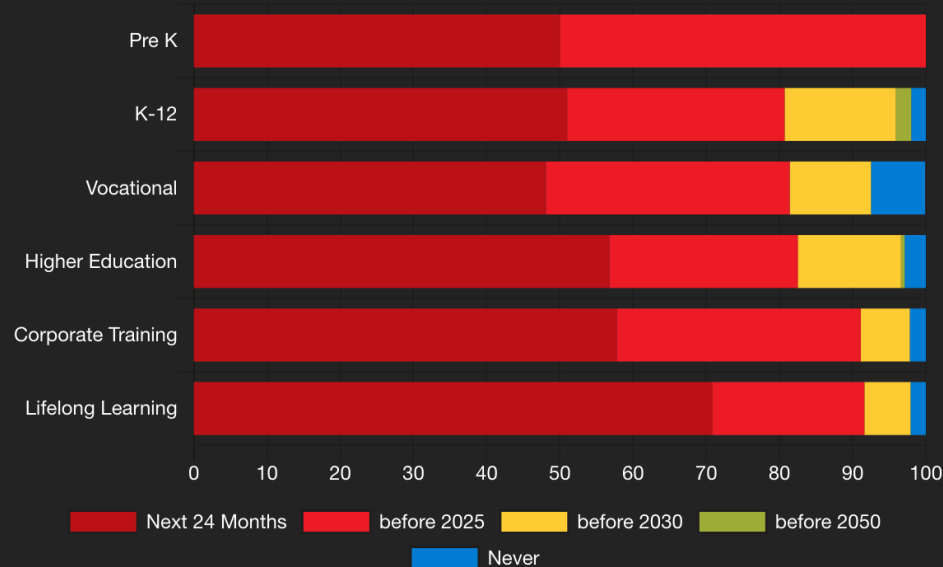## Short Term Impact of COVID-19 on Education Organizations.

Long Term Impact of COVID-19 on Education Organizations.

Legend: Substantially Worse · Moderately Worse · Same · Moderately Better · Substantially Better

http://globaloutlook.holoniq.com/
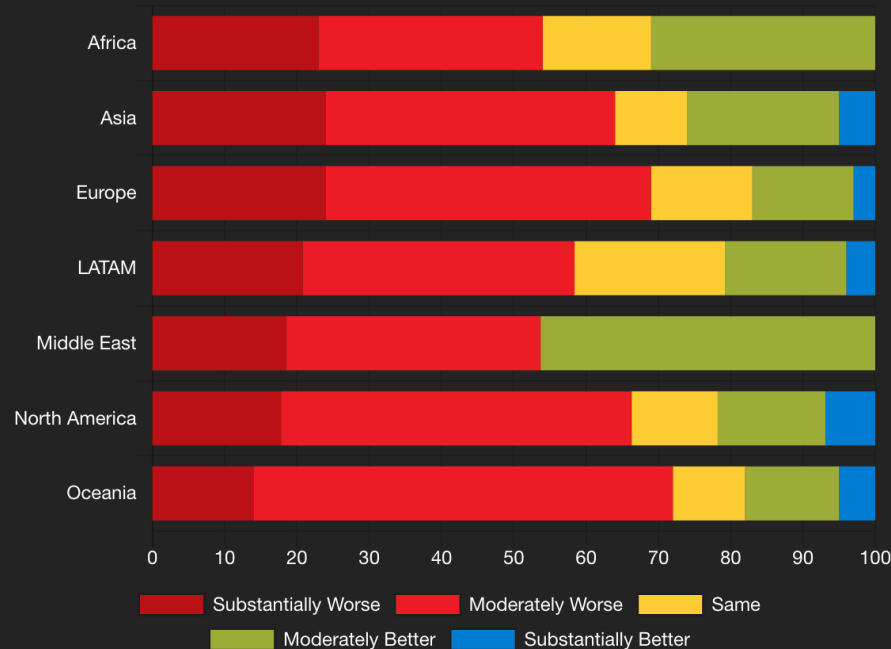
Disruption & Growth Strategy.

HolonIQ

Almost 85% of respondents expect disruption to their part of the education market before 2025 - 57% of those expecting disruption within the next 24 months. Almost a quarter of respondents cite technology as their top growth strategy going forward, an increase of 10% over the past two surveys.

Disruption Expectations by Sector, March 2020

Top Growth Strategy by Sector, March 2020

Disruption Expectations legend: Next 24 Months, before 2025, before 2030, before 2050, Never

Top Growth Strategy legend: New Technologies, New Products, New Markets, Existing Markets, Operational Improvement

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Global **Education Market**
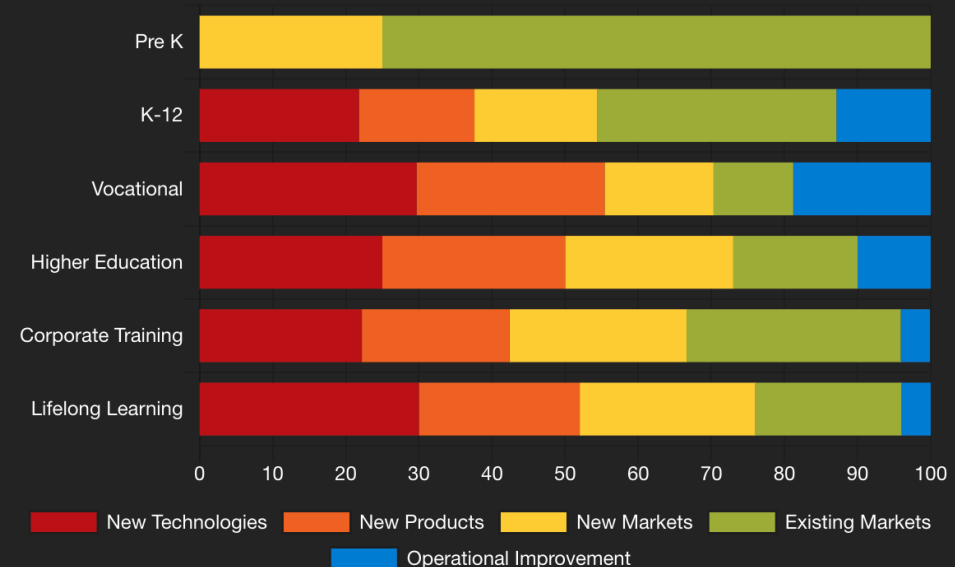
Total Global Education Expenditure in USD trillions

Corporate Training

Pre-K

5.9T
2018

K12

Post Secondary

Corporate Training

Pre-K

8.1T
2025

K12

Post Secondary

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Education Technology Expenditure
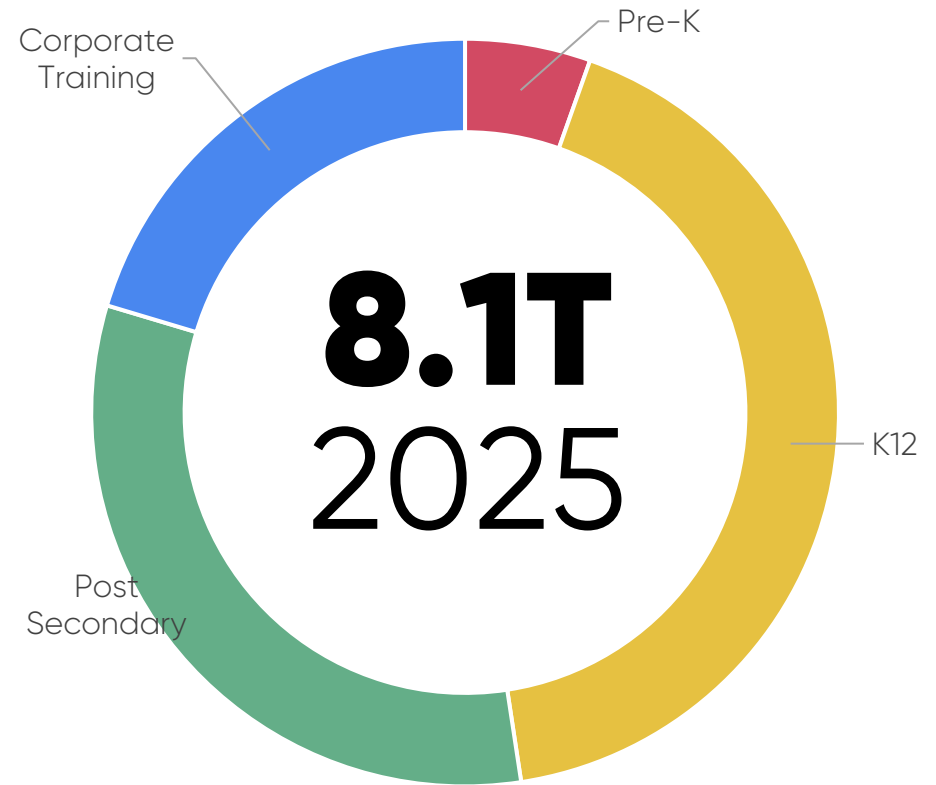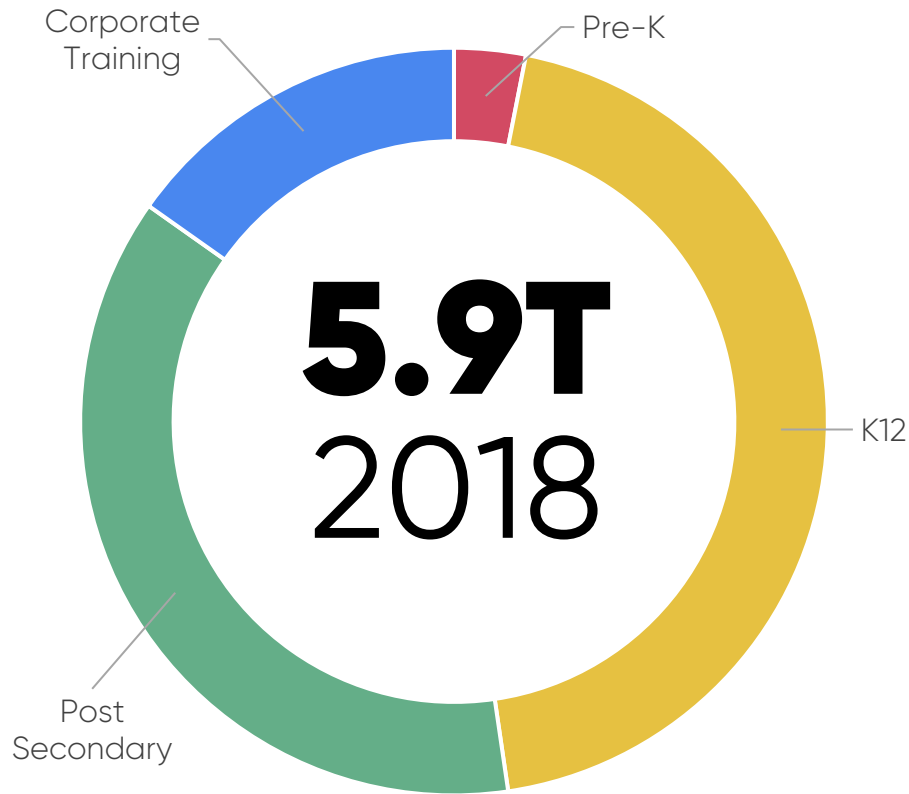
Global Education Technology Expenditure. Billions USD

$153B

2.5%
Digital Spend

$342B

4.3%
Digital Spend

2018

2025
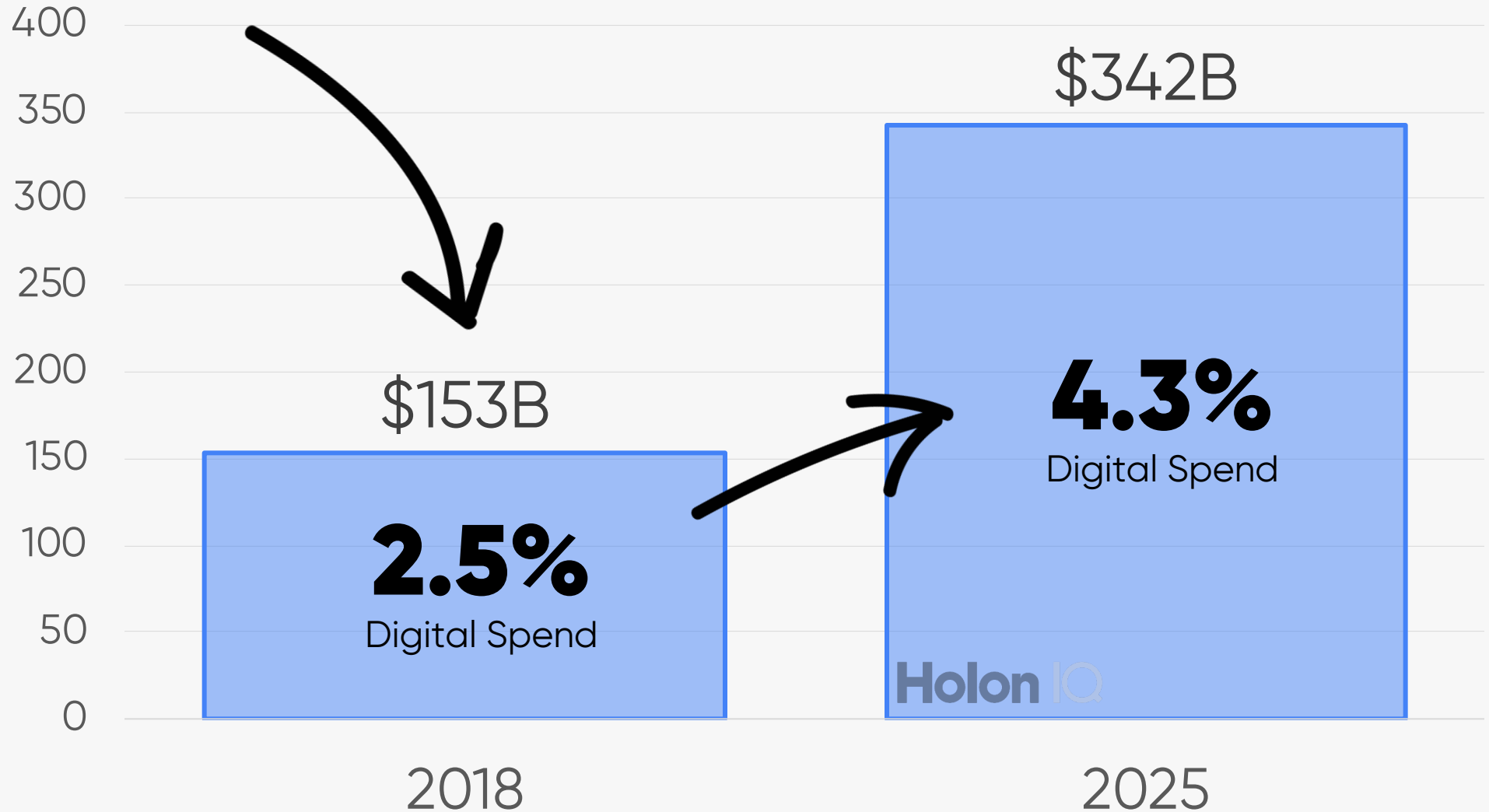
Global EdTech Investment

holoniq.com

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Global Education Venture Capital Flow
12,034 Deals. Sized by Deal Size USD. Colored by Region

12,033 Deals   ★ ▦ ▤ ◉

Search   Charts   Design   Legend

● China	$19.8B
● United States	$9.5B
● Europe	$2.5B
● India	$2.3B
● Rest of World	$1.3B

Billions USD

Q1 2020

2019 H2 Global EdTech VC

Global Education Venture Capital Deals H2 2019 >= $5m USD
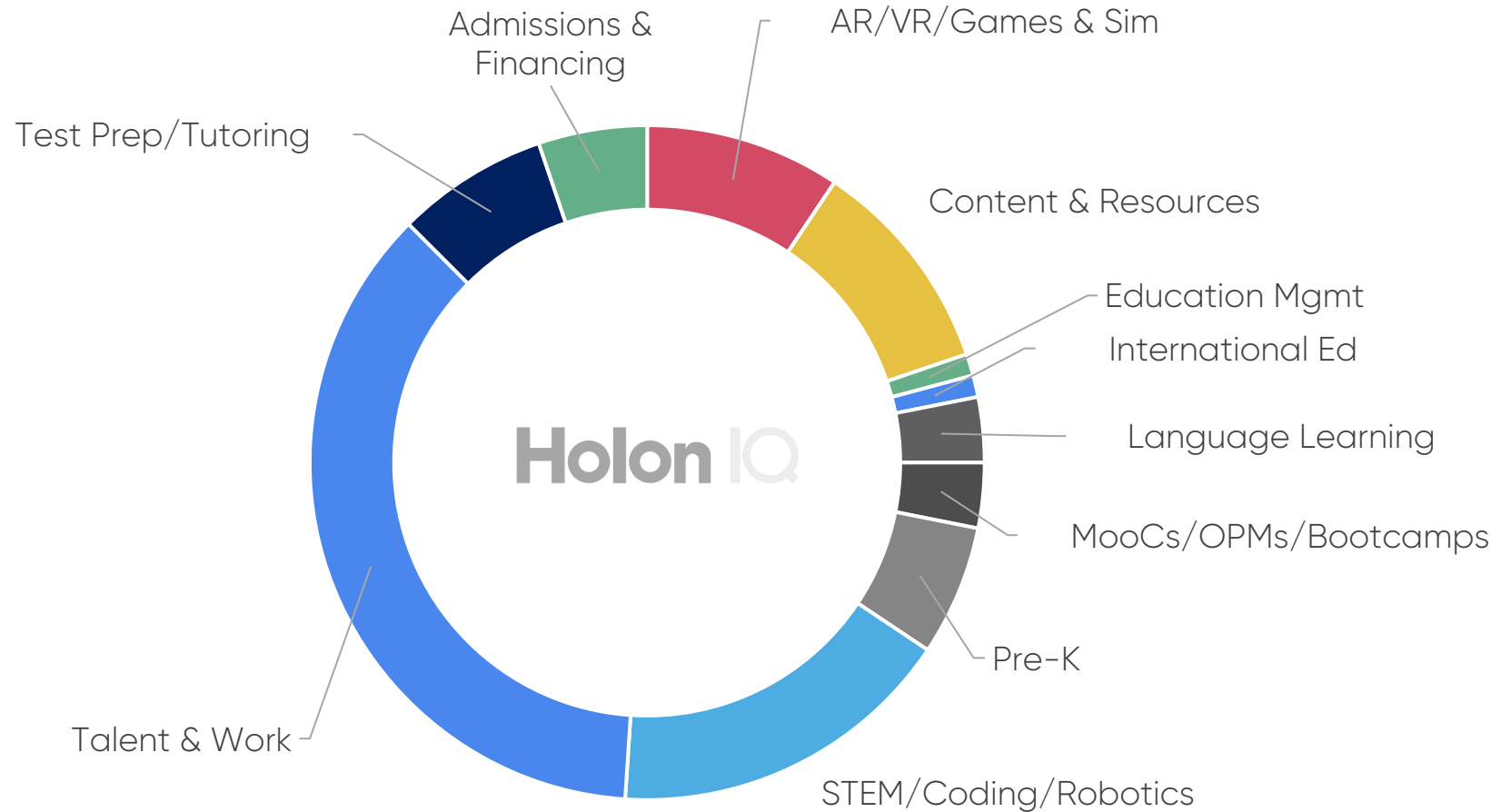
EdTech investment trends

FINANCING EDUCATION

Micro-financing solutions;
Education as a new vertical;
Scholarship services.

AR/VR, GAMES & SIMULATION.

Integrating into formal education
and workforce learning.

STEAM & CODING

AI infusion in robotics, adaptive;
OMO models; social & games.

SKILLS & JOBS

Mentoring; Analytics and Workforce
skills mapping; Industry specific.

LMS/SIS Management Systems

Increasingly comms & social; Easy
analytics; Content building.

LANGUAGE LEARNING

Peer-to-peer models; Voice
technology; Chat-bot learning.

LEARNER SUPPORT, TEST PREP & TUTORING

Starting to look more like consumer-tech
than classroom tech; P2P Q&A platforms; on-
demand; mobile first.

HIGHER EDUCATION

Public-private partnerships; Embedding skills verification
within traditional degrees; Back-solving from jobs and
employers.

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Audience Poll 1

Post-COVID 19, which of the following do you think will have the greatest impact on education innovation over the next 5 years?

A. University/School/Institution led innovation

B. Government Policy/Action/Funding

C. Public-private partnerships supporting new models

D. Private capital funding innovation/technology

2. WHICH TECHNOLOGIES/ TOOLS ARE THRIVING/ NEEDED AND WHAT ARE THE GAPS YET TO BE ADDRESSED?

Where we are now

Increased use of technology in education is accelerating, while progress in the last 10 years has been steady, **COVID-19 is reinforcing this trend** by confirming the necessity of online education globally. Globally 1.5Bn school and university students have been unable to attend school, creating a massive increase in general awareness about educational technology products.

Startups enabling distance learning for schools, universities and consumers are experiencing impressive growth. For instance, in the K12 space, companies like VIPKids, Epic!* and Brainly are seeing 2-3x user growth in Q1 2020 since their solutions offer immediate responses for home-schooling challenges that schools cannot address. Globally, education app downloads in the peak week in March grew 90% vs. the weekly average of Q4 2019.

Distance learning for universities has to now be viewed as a core and not an ancillary activity. Edtech platforms like Google Classroom, Canva, Aula* that facilitate distance learning and engagement for students off-campus are seeing necessary adoption as social distancing measures preclude on-campus learning.

User/Usage growth

Online education
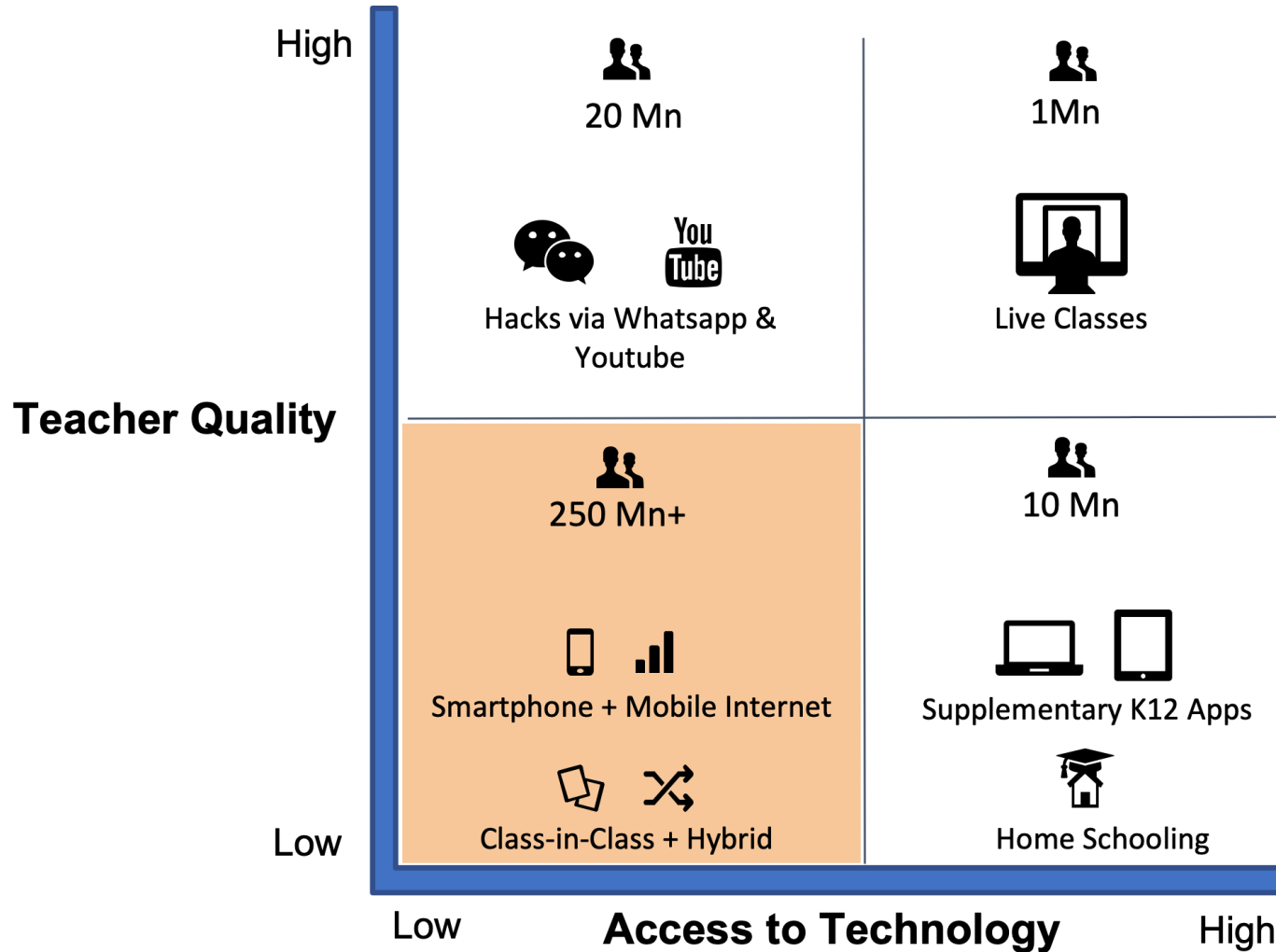
Distance learning

Higher & Continuing Ed.
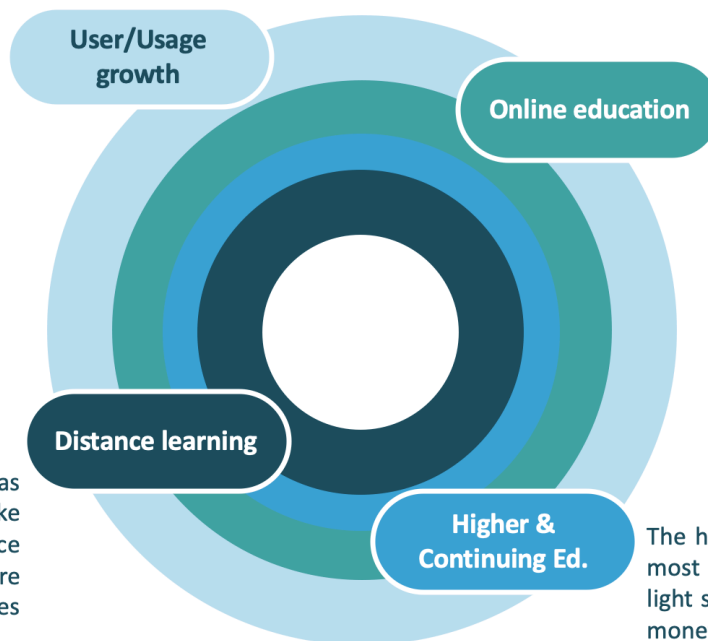
COVID-19 is accelerating the adoption of online learning platforms across the board. Companies such as Kahoot!, Quizlet, Coursera, Ornikar* and language learning platforms like Tandem*, Duolingo or Busuu are seeing a similar 2-3X surge in affected markets. While we anticipate this growth will slow when the crisis abates, we expect patterns of behaviour to remain, resulting in an overall increased adoption (higher user base) post-crisis.

The higher education and lifelong learning space will be the most transformed in the long-run. The crisis has brought to light some challenges for adult learning in terms of value for money and preparation of students for entering labour market. Over time, the shift will benefit alternative solutions like Ironhack*, OpenClassrooms, Guild Education, Degreed that are well positioned to address the growing skill gap in cheaper and more efficient ways.

Brighteye portfolio company – Internal company data

Brighteye Ventures

Current Situation in K-12 Education Space in India (~300 Mn Students)

Teacher Quality (vertical axis: Low to High)

Access to Technology (horizontal axis: Low to High)

- Top-left (High Teacher Quality, Low Access): 20 Mn — Hacks via Whatsapp & Youtube
- Top-right (High Teacher Quality, High Access): 1Mn — Live Classes
- Bottom-left (Low Teacher Quality, Low Access): 250 Mn+ — Smartphone + Mobile Internet — Class-in-Class + Hybrid
- Bottom-right (Low Teacher Quality, High Access): 10 Mn — Supplementary K12 Apps — Home Schooling

Which **technologies/tools** are **thriving/needed** and what are the **gaps yet to be addressed**?

Is Labster filling a gap?

We received over 625,000 student responses about their experience with Labster.

85% of students

were pleased with their Labster experience.

We surveyed **educators** who started using Labster's virtual labs as a result of **COVID-19.**

90%

of respondents reported a **positive experience.**

We surveyed **educators** who started using Labster's virtual labs as a result of **COVID-19.**

91%

of respondents are considering **using Labster after in-person classes resume.**

Labster

Audience Poll 2

Which advanced technologies do you think will make the biggest positive impact on education and learning in the medium to long term?

A.   Artificial Intelligence

B.   Virtual / Augmented Reality
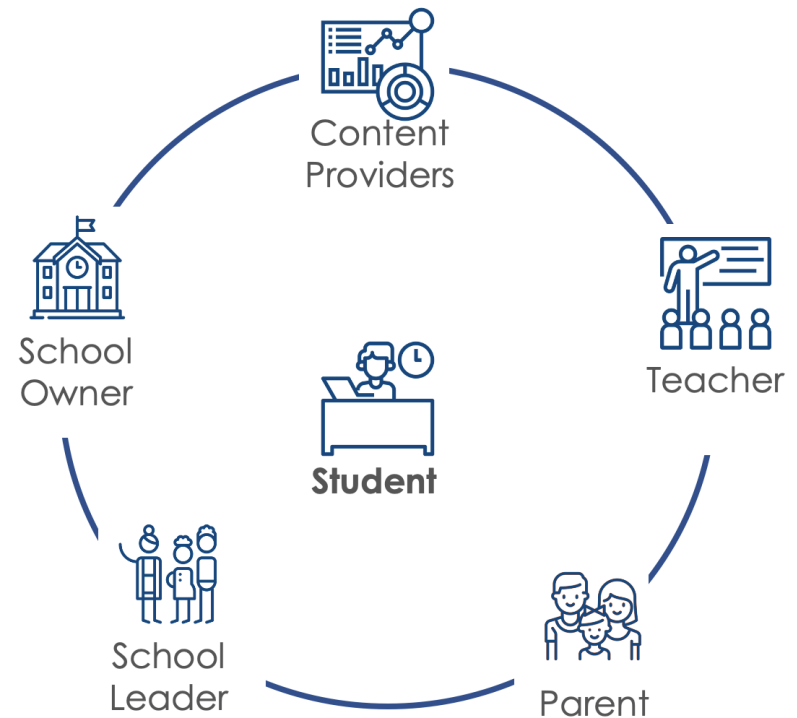
C.   Voice-Based Technology

D.   Robotics

3. PERSPECTIVES ON THE LONGER-TERM IMPACT OF HOW COVID MAY CHANGE ELEMENTS OF THE WORLD'S EDUCATION DELIVERY?

How Core School Learning Will Shift With Technology

Core School Learning is currently analog, segregated and completely lecture-based with all stakeholders working in silos
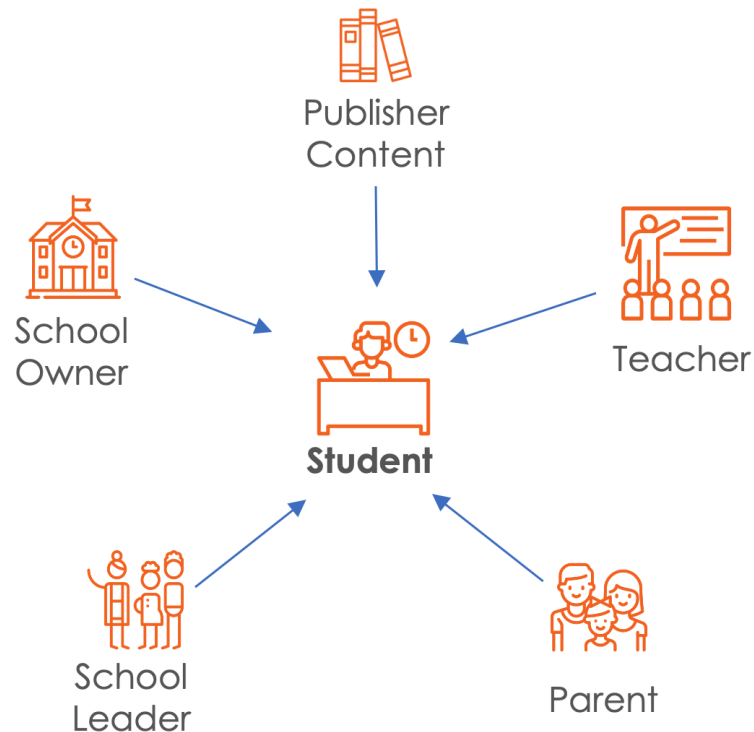
Integrated Technology Platforms will seamlessly connect all stakeholders, enable multi-modal delivery to students and personalize the learning experience
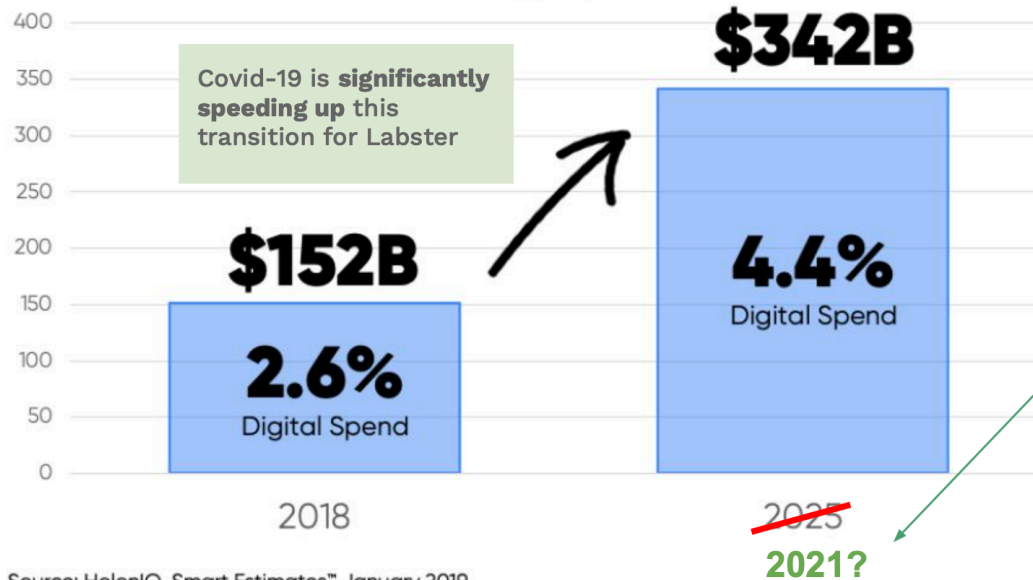

LEAD SCHOOL

From your perspectives around the world, **what are your thoughts on the longer-term impact** of how COVID may change elements of the world's education delivery?

Holon IQ

Global **Education Technology**

Growth in Global Education Technology Expenditure

Covid-19 is **significantly speeding up** this transition for Labster

$342B

$152B

4.4%
Digital Spend

2.6%
Digital Spend

2018

~~2025~~
2021?

Source: HolonIQ, Smart Estimates™ January 2019

The **expenditure shift** highlighted by HolonIQ has been pushed forward significantly by **Covid-19**

▶ **Labster**

Student failure rates dropped from 20% to 5%

Cal State Northridge BIOL101: Pass/Fail Rates Before & After Labster

Before Labster   After Labster

After using Labster virtual labs, student failure rates dropped

from 20% to 5%

95.00%
80.00%
20.00%
5.00%

ΔZ Score

100%
75%
50%
25%
0.00%

Pass   Fail
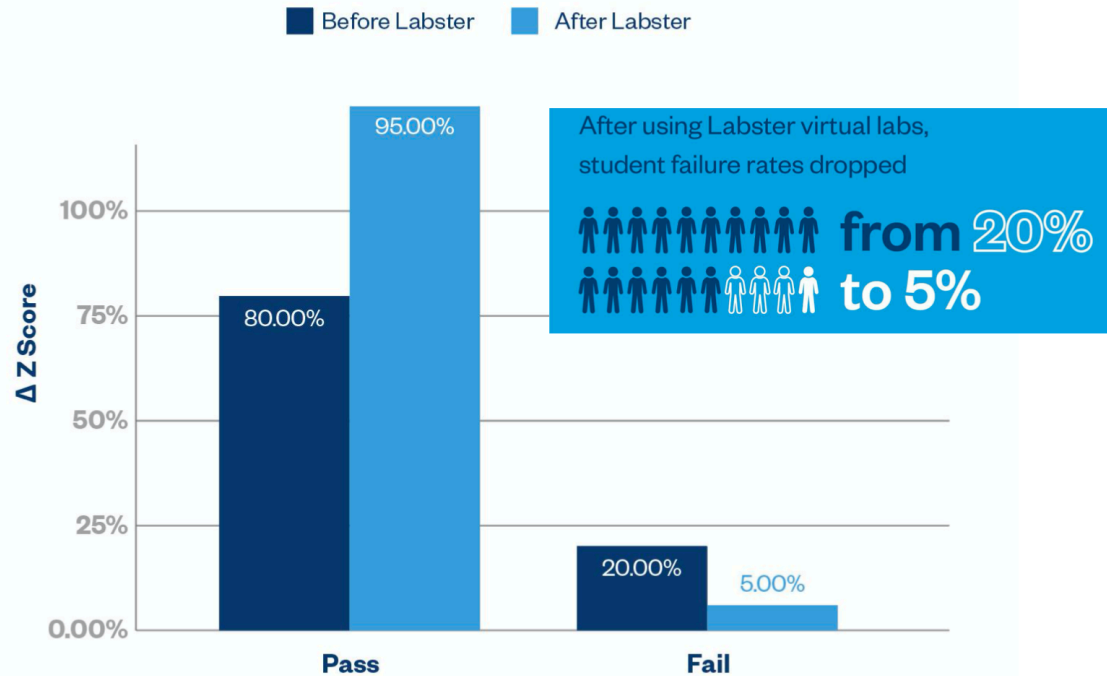
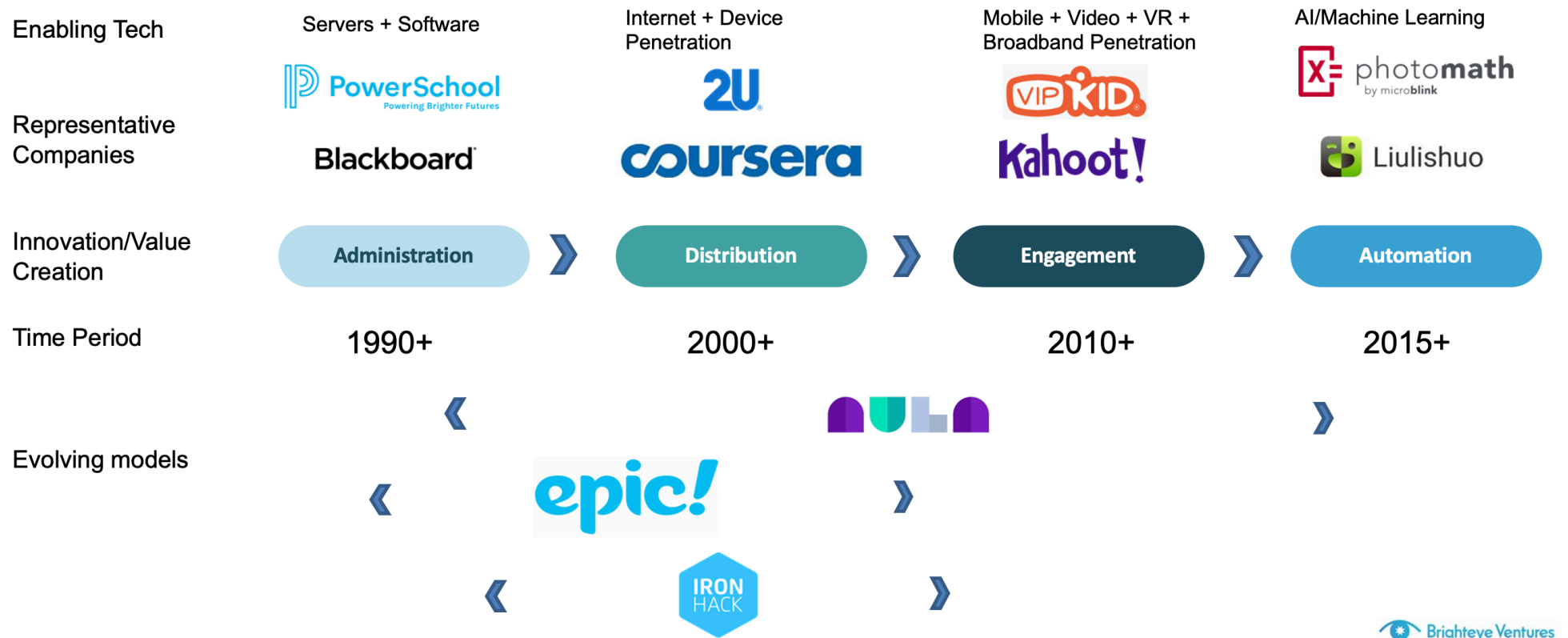## Changes coming ...

✓ **Increased accreditation** of online content

✓ Increased **leadership acceptance** of new forms of teaching and **massive budget allocations**

✓ **Political reforms** when educational sectors experience the upsides of using online tools nationwide

Labster

What's next – accelerating innovation & competition

Increased digital penetration will demand products that deliver value across multiple dimensions and increase competition. Historically, limited penetration of digital in education (3% as of 2018 per HolonIQ), has meant most of the biggest success stories in edtech to date have ridden successive waves of technological innovation across fairly narrow bases. COVID-19 has both increased the size of the market and the growth rate going forward, and you will see **full stack** products begin to incorporate multiple innovations to create a more robust core value propositions in order to compete and grab market share.

Enabling Tech	Servers + Software	Internet + Device Penetration	Mobile + Video + VR + Broadband Penetration	AI/Machine Learning

Representative Companies

Administration	>	Distribution	>	Engagement	>	Automation

Innovation/Value Creation

Time Period — 1990+   2000+   2010+   2015+

Evolving models

Brighteye Ventures

Audience Poll 3

What are your thoughts on the extent to which the traditional system of education will change as a result of COVID-19?

A. **Very little change** – the traditional system of education will return to its pre-COVID state

B. **Some changes** – COVID-19 has accelerated changes that were already occurring in the education sector

C. **Significant change** – COVID-19 has sparked a systematic change in the education traditional system – it will never be the same again.

4. AUDIENCE Q&A

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Education Disrupted. Education Reimagined.

The impact of COVID-19 and the future of education systems around the world.

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من مبـادرات مؤسسـة قطـر
An Initiative of Qatar Foundation