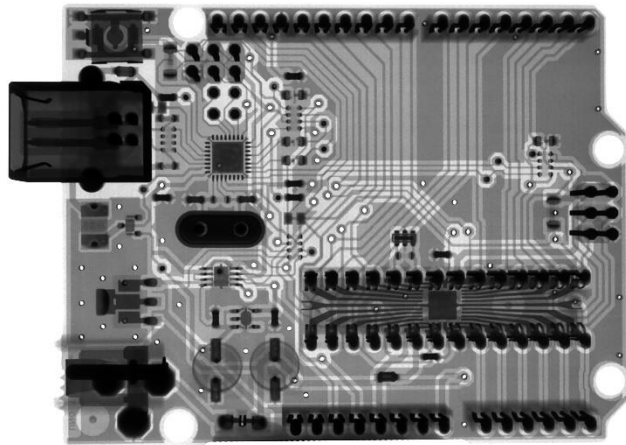


The cloud campus

Imagining and investing in the digital future of HE

Ben Williamson | @BenPatrickWill



Education
International
Research



EdTech

**Pandemic Privatisation
in Higher Education:
Edtech & University Reform**

Ben Williamson & Anna Hogan
February 2021



Education International
Internationale de l'Éducation
Internacional de la Educación
@EduInternationale

1 Education technology futures in the making



Deloitte Insights

By topic ▾ By sector ▾ Spotlight ▾

Article

24 minutes · 27 January 2021

The hybrid campus

Three major shifts for the post-COVID university

EY Parthenon

Search for insights, services and people...

A photograph of a classroom where students are seated at desks, each with a laptop. They are all wearing face masks. A teacher is visible in the foreground, gesturing towards the students.

How digital's impact on higher education can be improved

McKinsey & Company

Public & Social Sector

Our Insights | How We Help Clients | Our People | Contact Us

A photograph of a busy university campus walkway. Many students are walking away from the camera, some carrying backpacks. The trees have yellow autumn leaves.

How to transform higher-education institutions for the long term

March 9, 2021 | Article

The peak of higher education – a new world for the university of the future



Can the universities of today lead learning for tomorrow?

The University of the Future

The better the question. The better the answer.
The better the world works.

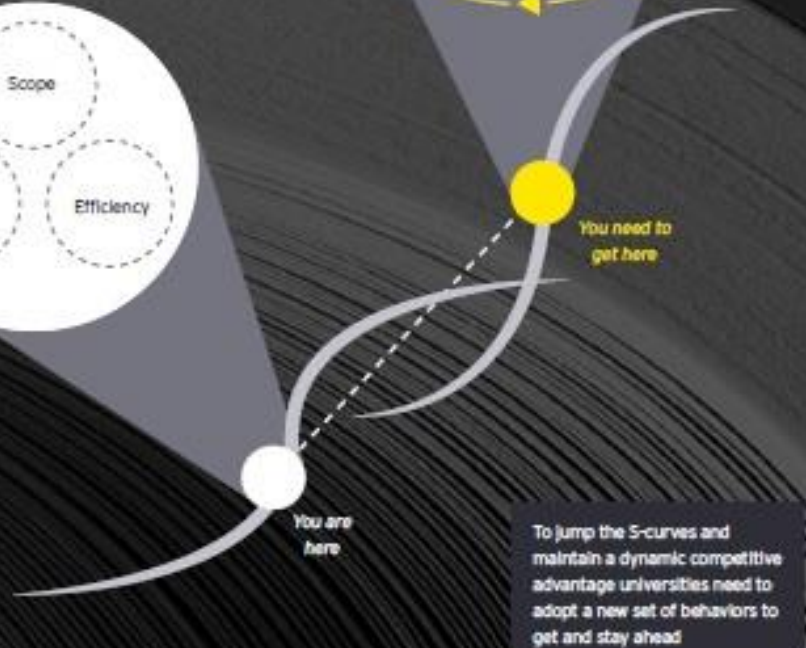


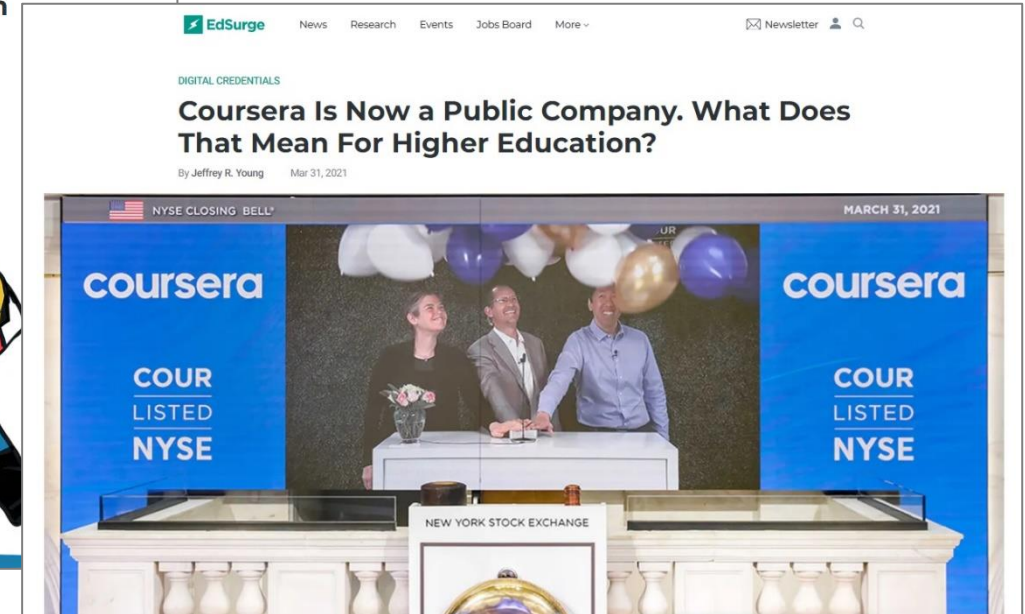
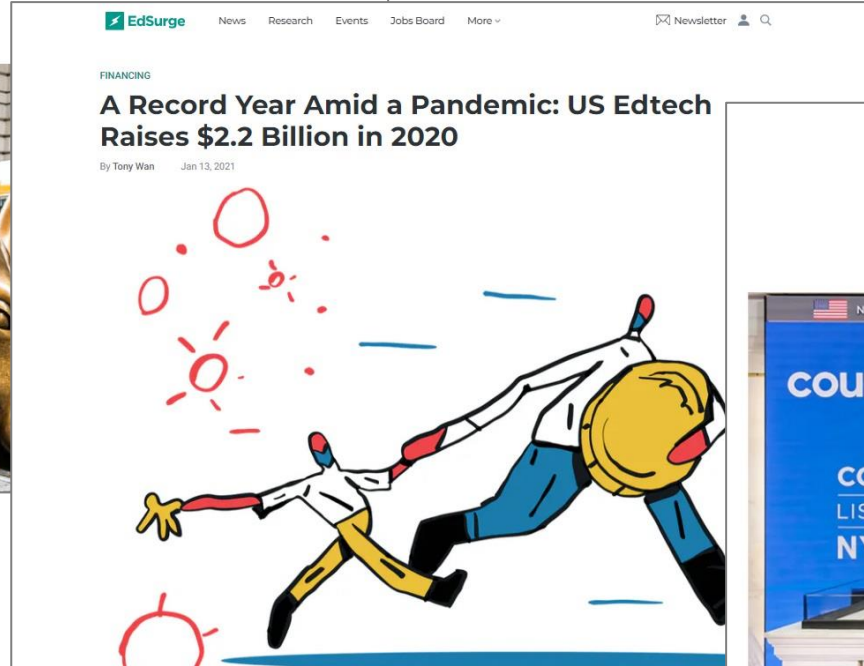
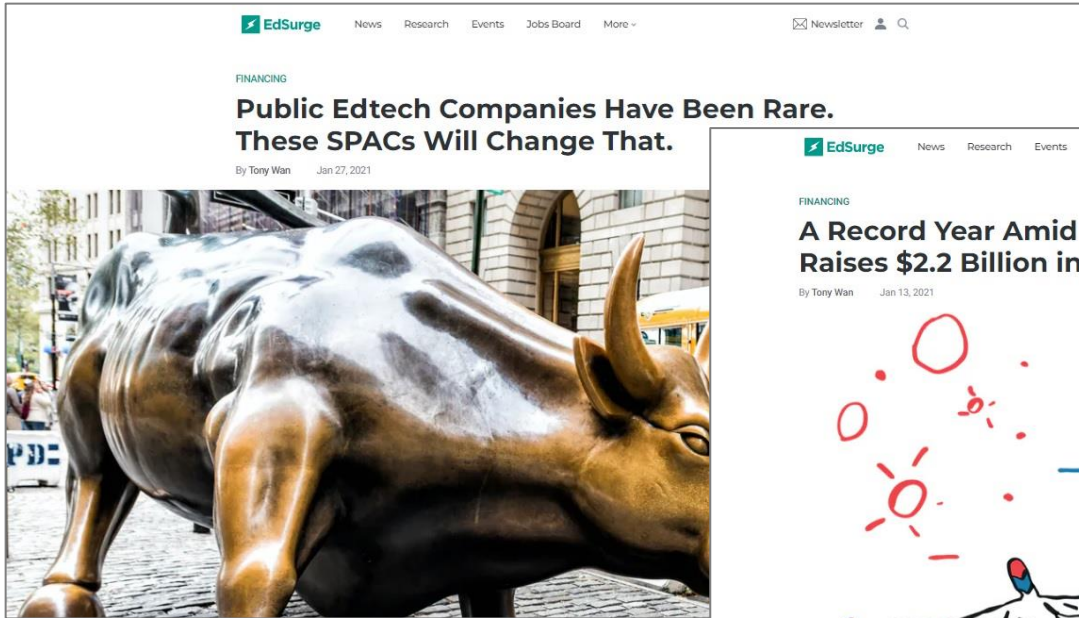
“
Business model disruption is here. We are experiencing it. I had been sceptical it would land in my lifetime, but it is happening now.”

Bruce Lines
Chief Operating Officer
University of Adelaide

“
In the age of machine learning we all need to become learning machines.”

Riaz Shah
EY Global Learning Leader





Visions & valuations

- Edtech investments play a vital role in determining which companies are favored and funded, and what types of educational programs are implemented —Regan & Khwaja 2019
- The opportunity recognised by edtech investors and entrepreneurs lies in calculating the digital share in the global spending on education—edtech asset value is constructed in the light of expectations about future returns on investments —Komljenovic 2020

Global Education Market Intelligence Platform

Cloud Based Education Market Intelligence Platform to explore the connections, trends, and insights that will help you understand your customers, competitors and markets.



Edtech capitalization

- Capitalization as a process of valuing something in terms of expected future monetary return from investing in it
 - eg translating a technology into an asset with expected future earnings/ROI
- Capitalization is a kind of job, performed in particular kinds of organizations within a wider system of professions and geopolitical locations, using specialized techno-economic practices and methodologies

—Muniesa et al 2017

HolonIQ is the world's smartest source of education intelligence to power decisions that matter.

Powering the new education economy. Track investment trends and deal flow

Subscribe →



About HolonIQ



HolonIQ was founded in 2018 with the vision of building the trusted global source of market intelligence in order to connect the people, ideas and capital that are driving and supporting innovation in social and economic impact sectors.



Starting with the future of education, the fundamental driver for the future of humanity, our work is rapidly growing to focus on the world's major social and economic challenges. From work and healthcare, climate, food and water to infrastructure, energy and beyond earth to space.



Share



Tracking and mapping innovation in these critical challenges is difficult, and yet critical to sustainability and the future of humanity. HolonIQ's global market intelligence platform provides data and analysis of developments in these global markets, providing connected data, analysis and insights on technology, companies, countries and industries and how their innovation activities form patterns and trends in the market.

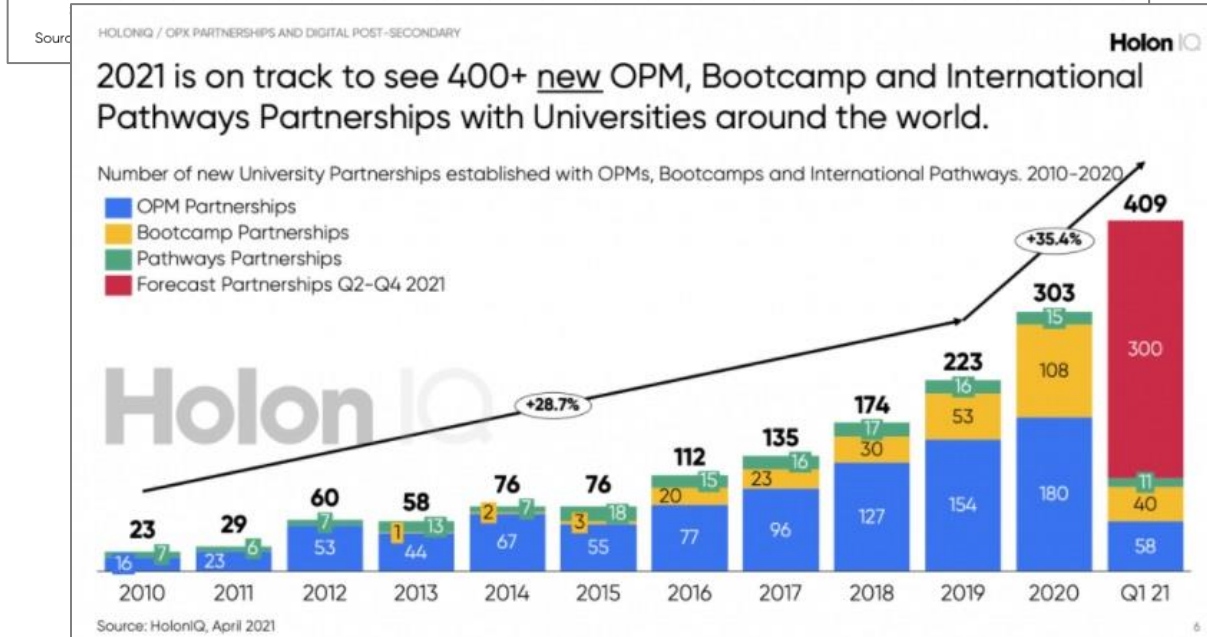
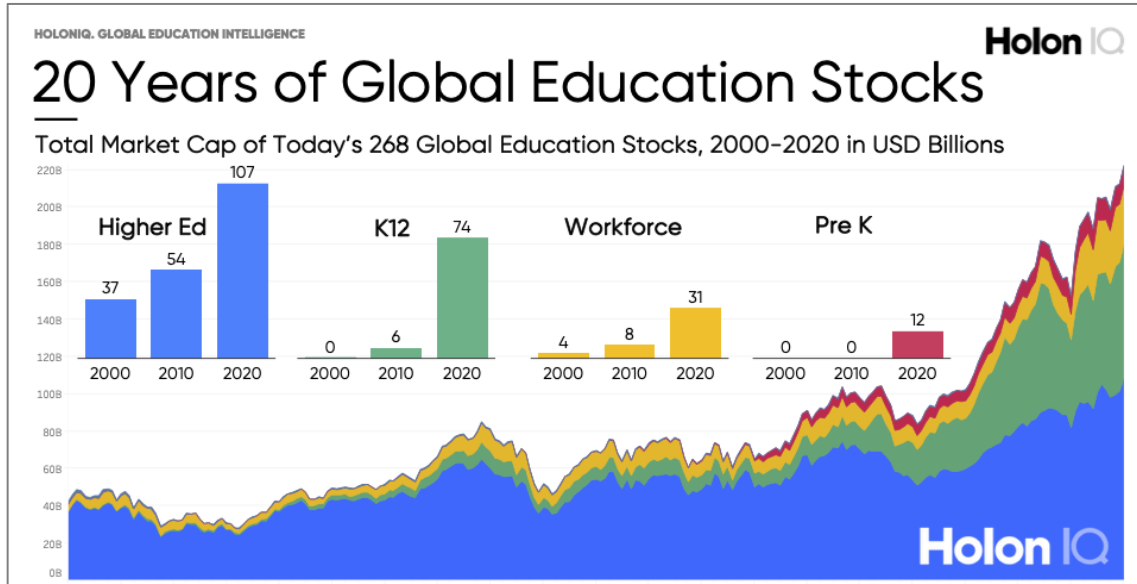


We power governments, institutions, companies, and investors by connecting billions of data points about innovation, technologies, capital flows, jobs, skills, research and patents and apply machine learning to analyze, evaluate and identify patterns, generating insights that help clients make data-driven decisions that matter.



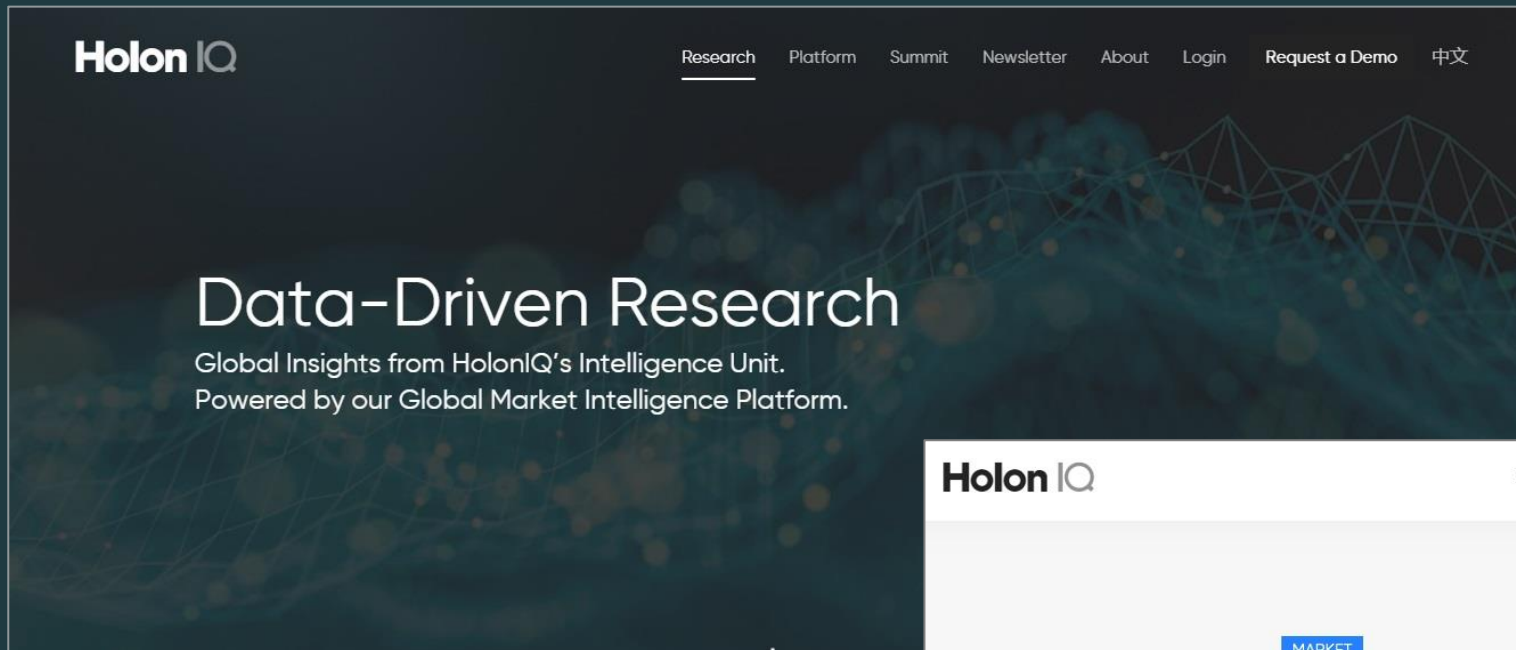
Mapping, valuing and stratifying global edtech markets





Valuation platform

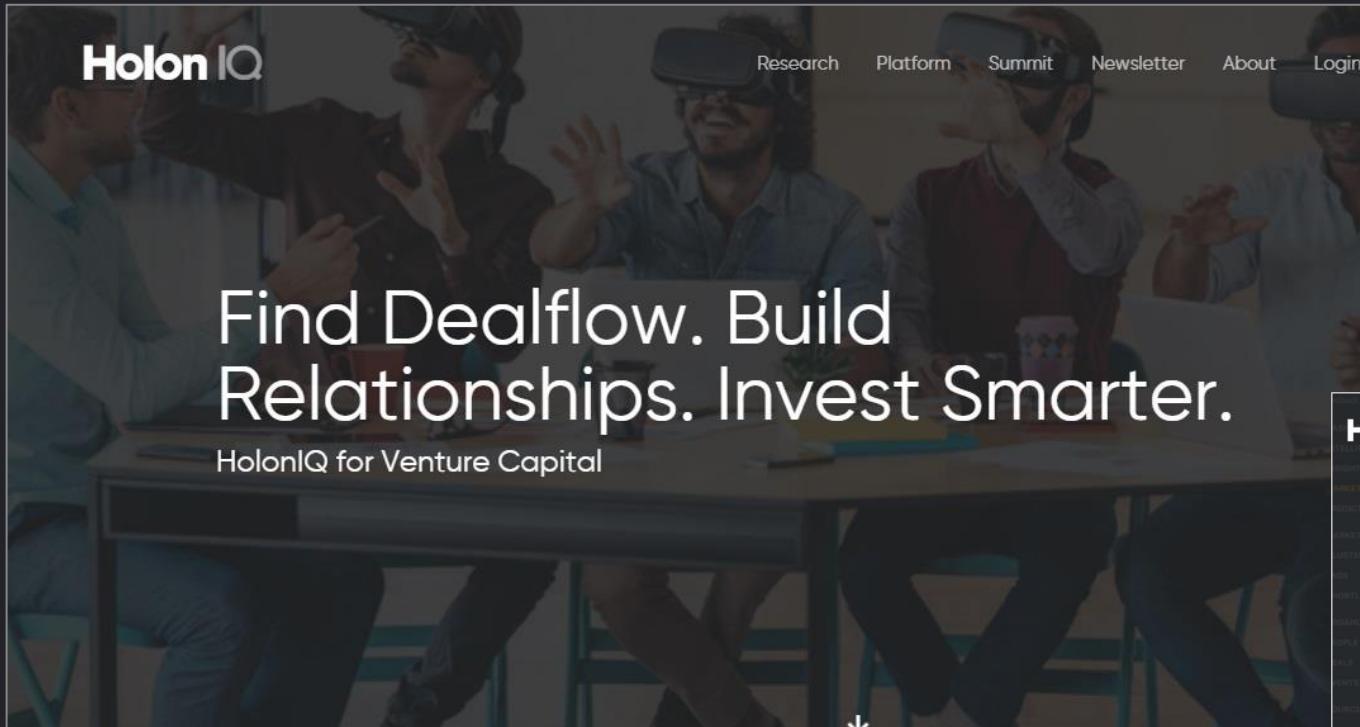
- HolonIQ 'Global Intelligence Platform' uses machine learning to analyse the edtech market, catalogue past investments and catalyse future investments based on calculations of prospective future value
- Valuation claims of future return depend on effort among networks of techno-economic expertise in order to calculate the value of future earnings and therefore the suitability of something for investment —Birch 2019



Valuation devices and methods

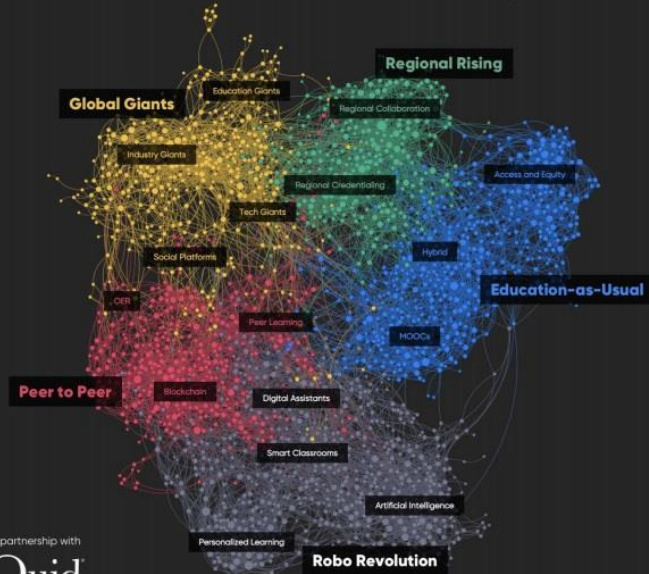
— Things become assets by being made so through sociotechnical entanglements of human valuation practices and technoeconomic devices
— Birch & Muniesa 2020

A screenshot of the HolonIQ website showing the "Scoring Fingerprint" section. The top navigation bar is identical to the previous screenshot. The main content area features a central graphic with a large number "78" in the center, surrounded by five colored boxes: MARKET (blue), PRODUCT (green), TEAM (yellow), CAPITAL (red), and MOMENTUM (grey). To the right of the graphic, the text reads "HolonIQ's Scoring Fingerprint" followed by a paragraph: "HolonIQ and select European market experts assessed each organization based on HolonIQ's startup scoring rubric, which covers the following dimensions:". Below this, there are five bullet points, each corresponding to one of the dimensions in the graphic: Market, Product, Team, Capital, and Momentum, each with a brief description of what that dimension represents.



Fictional edtech expectations

- \$16bn 'funding backing a vision to transform the way the world learns'
- Investments are motivated by imaginaries of how the future will unfold, expressed in persuasive narratives that show their convictions, beliefs, fears and hopes, supported by techno-economic tools providing a calculative preview of the future—Beckert 2016



Education-as-Usual

Traditional education institutions remain the trusted source of learning and the most effective vehicle for jobs and prosperity. Higher Education consolidates, global talent platforms emerge and government remains the core source of funding around the world.

Regional Rising

Regional alliances dominate the competitive education landscape, supported by strategic and political cooperation. Cooperative blended delivery and regional talent hubs cross-lead labor supply and demand to strengthen regions.

Global Giants

This global free market environment has fostered the emergence of 'mega-organizations' with ubiquitous brand recognition and the scale to achieve significant efficiencies and industry power.

Peer to Peer

Learning online through rich, personalized human to human experiences dominates the post-secondary and skills training sectors. Blockchain technology fundamentally reconfigures credentialing and unlocks the collective creativity and IP of teachers.

Robo Revolution

in partnership with
Quid

Instruments of expectation

- Scenarios, prototypes, forecasts, graphs, calculations, visualizations and infographics as instruments influencing expectations in the edtech investment and procurement decision-making chain

3 Scenarios for Higher Education. 'Alpha Prototype'

Born out of Education in 2030 (HolonIQ's 'Pre-COVID' five scenarios deep dive), our Global Higher Education Network reviewed an 'alpha' prototype of 'Three Scenarios for Higher Education'.

EdTech Education in 2030 Higher Education



Higher Education Digital Capability Framework

An open-source capability framework for higher education. 4 dimensions, 16 domains and 70+ capabilities.

Framework Sort

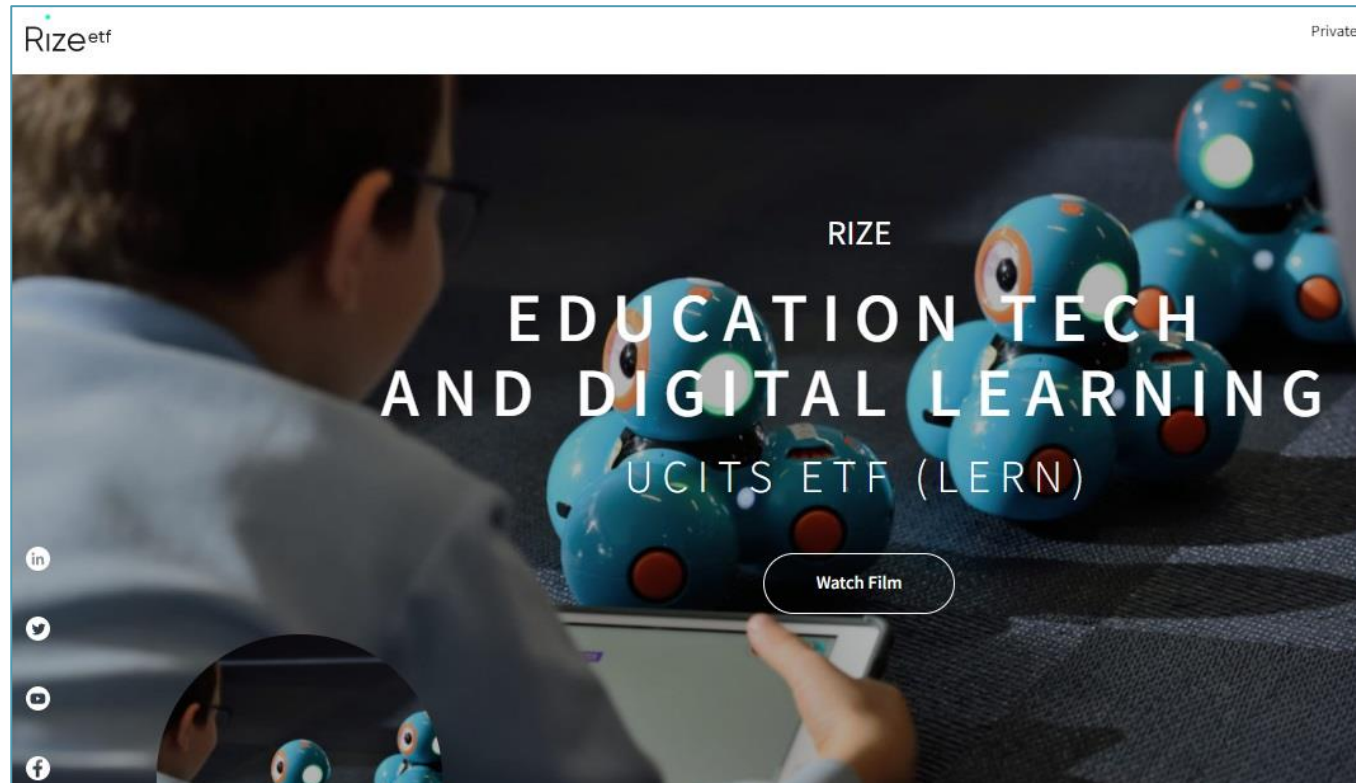
DEMAND AND DISCOVERY (DD)				LEARNING DESIGN (LD)				LEARNER EXPERIENCE (LX)				WORK & LIFELONG LEARNING (WL)			
PRODUCT & SERVICE DESIGN	MARKETING PROCESSES	STUDENT RECRUIT	ENROLMENT MGMT	CURRIC. DESIGN	DIGITAL CONTENT & C'WARE	SUBJECT MATTER EXPERTISE	TEACHING STRATEGIES	ACADEMIC ADMIN.	LEARNING & ACADEMIC EXPERIENCE	STUDENT LIFE	ASSESS & VERIFY	WORK & LEARNING	CAREER PLANNING & PLACEMENT	INDUSTRY & BUSINESS SKILLS	ALUMNI & CONTINUING EDUCATION
1.01	2.01	3.01	4.01	5.01	6.01	7.01	8.01	9.01	10.01	11.01	12.01	13.01	14.01	15.01	16.01
MARKET INSIGHTS & TRENDS	STUDENT CRM	RECRUIT. EVENTS	COURSE SELECTION & GUIDANCE	PROGRAM DESIGN	DIGITAL CONTENT CREATION	FACULTY EXPERTISE & SPECIALISMS	LEARNER NEEDS & ANALYTICS	FACULTY DEVLP.	STUDENT PORTAL & LMS	ONBOARDING & ORIENTATION	TESTS & EXAMS	JOB SKILLS BUILDING	SKILLS EVALUATION	INDUSTRY PARTNERS	CONTINUING EDUCATION
1.02	2.02	3.02	4.02	5.02	6.02	7.02	8.02	9.02	10.02	11.02	12.02	13.02	14.02	15.02	16.02
CUSTOMER NEEDS	COMMS & CAMPAIGN MGMT	CHANNEL PARTNERS	APPLICATION & ADMISSIONS	LEARNING ENVIRON. & PLATFORMS	IMMERSION, SIMULATION & LAB	SOURCING & MANAGING EXPERTISE	EXPERIENT LEARNING	FACULTY MGMT & SUPPORT	SYNCH. LEARNING	WELLBEING & MENTAL HEALTH	FEEDBACKS	WORKPLACE SKILLS/WORK & PRODUCTION	CAREER PLANNING SERVICES	INDUSTRY ASSOC.	INDUSTRY MENTORING
1.03	2.03	3.03	4.03	5.03	6.03	7.03	8.03	9.03	10.03	11.03	12.03	13.03	14.03	15.03	16.03
COMPETITOR & SALES	MARKETING AUTOMATION	SCHOOLS & COMMUNITY OUTREACH	RECOGNISE PRIOR LEARNING	LEARNING DELIVERY MODES	DER & CONTENT LICENSING	SPECIALIST INDUSTRY PARTNERS	PERSONAL & ADAPTIVE LEARNING	TIME/TABLING & SCHEDULE MGMT	ASYNCH. LEARNING	STUDENT CLUBS & SOCIETIES	ASSESSMENT FEEDBACK	INTERNSHIPS & PLACEMENTS	CAREER & INCRETE CREDIT	CUSTOMISED PROGRAMS (B2B)	ALUMNI ENGAGE.
1.04	2.04	3.04	4.04	5.04	6.04		8.04	9.04	10.04	11.04	12.04	13.04	14.04	15.04	
PRODUCT & BRAND STRATEGY	SOCIAL MEDIA	TRIP PROGRAMS	TUTORING FINANCING	ADDRESS & ACCRED.	MANAGING INTEGRATED CONTENT		DESIGNING GROUP WORK	RETENTION & LEARNING SUPPORT	INTERACTIVE LEARNING	VOLUNTEER & STUDENT LEADSH.	FEER & GROUP ASSESS	STUDENT WORK	JOB APPLICATION SUPPORT	EDUCATION AS SERVICE	
1.05		3.05		5.05				9.05	10.05	11.05	12.05	13.05	14.05		
NEW BUSINESS MODELS		B2B RECRUIT & PARTNERS		CURRICULUM QUALITY MGMT				REGULATORY COMPLIANCE	LEARNING RESOURCES	STUDENT VOICE & SURVEYS	BARINGS & CREDENTIALS	STARTUP & STARTUPS	JOB FINDING & CAREERS PLACEMENT		
									10.06	11.06	12.06				

Provoking a standardized future

- Validating, visualizing and valorizing edtech for VC investment and HEI procurement
- Promoting standardized capability classification and matching edtech market segmentations
 - Data-driven education
 - Learning analytics
 - MOOCs, OPMS, public-private platform partnerships
 - Aled
 - Smart learning environments
 - Personalized learning platforms
 - Workforce development and career matching

Edtech index investing

- Single ETF portfolio of ‘favourably positioned’ edtech ‘redefining’ future of education
- ROI prediction as education future-making



Why LERN?

- **Favourable Growth Prospects**
LERN is Europe's first education technology ETF, and provides investors with exposure to "EdTech" companies that are redefining how education is accessed, resourced and consumed around the world to deliver positive results for the individual and society.
- **Powered by HolonIQ®**
LERN is purpose-built in collaboration with HolonIQ, a global education market intelligence firm based in Sydney, Australia, and leverages their unique insights and proprietary classification system of companies that are market leaders in digital and lifelong learning technologies.
- **Unconstrained Approach**
LERN's composition transcends classic sector, size and geographic classifications by tracking an emerging theme.
- **ETF Efficiency**
In a single trade, LERN delivers access to dozens of companies that are favourably positioned to ride the tailwinds of the education tech and digital learning theme.

2 Enacting HE futures through 'oligopolistic' online platform partnerships in the cloud

2021 is on track to see up to 450 new OPM, Bootcamp and International Pathways Partnerships with universities around the world.

Holon IQ Research Platform Summit Newsletter About Login Request a Demo 中文

Number of new University Partnerships established with OPMs, Bootcamps and International Pathways. 2010-2021

Year	Partnerships
2010	15
2011	25
2012	35
2013	45
2014	55
2015	65
2016	75
2017	85
2018	95
2019	105
2020	223
2021 (H1)	450 (+42.1%)

2021 H1 Partnerships: Q1 (108), Q2 (79), Q3 (21), Q4 (206)

OPM + MOOC = OPX. 244 University Partnerships in the first half of 2021

OPM + MOOC = OPX. 244 University Partnerships in the first half of 2021

GLOBAL OPM AND ACADEMIC PPP MARKET

Global OPM and Academic PPP Landscape

This landscape combines pure-play OPMs, International Pathways, Bootcamp University Partnerships with adjacent and emerging models that together make up the Global Academic PPP Landscape.

Large OPMs: 2U, Academic, BISK, ILUMNO, KAPLAN, Playcath, NOODLE, Pearson, WILEY, ZOVIO

Specialist OPMs: iLaw, Impact Campus, iLense, iLX, UNISA, etc.

Networks: Academium, MINEVA, edX, Future Learn, etc.

MOOC-as-OPM: coursera, edX, Future Learn, etc.

Ed-as-Benefit: GUILD, InStricio, etc.

Large Pathways: INTO, Kings, navitas, SHORELIGHT, Study Group, up!

Generalist OPM/OPAs: Archer, Blackboard, Canvas, etc.

Holon IQ Global Market Intelligence

HOLONIQ. GLOBAL ONLINE DEGREE & MICROCREDENTIAL MARKET

\$117B Online Degree and Micro-Credential in 2025

Global Online Degrees and Micro-Credentials and Global OPM Market Size. USD 2019-2025

Category	2019	2025
Global Education	\$6.1T	\$7.3T (3% growth)
Global Post Secondary Education (HE+TVET)	\$2.2T	\$2.3T (0.7% growth)
Global Online Degrees and Micro-Credentials	\$45B	\$117B (17% growth)
Global OPM Market	\$5.7B	\$13.3B (19% growth)

Source: HolonIQ Smart Estimates, February 2021. Not to scale.

coursera for Campus Coursera Home | For Business | For Government

Home | Start for free | Compare Plans | Resources | For Students Contact sales


Teach your students the skills of the future

Coursera for Campus empowers any university to offer job-relevant, credit-ready* online education to students, faculty, and staff.

* Credit eligibility determined by your institution.

Contact sales Start for free

Are you a student? [Find out how to learn for free.](#)



‘Higher ed is being replatformed’

- 2012-2020—\$450m venture capital investment
- 2021 valuation—\$7bn post-IPO

EdSurge News Research Events Jobs Board More Newsletter

DIGITAL CREDENTIALS

Coursera Is Now a Public Company. What Does That Mean For Higher Education?

By Jeffrey R. Young | Mar 31, 2021



NORTH AMERICA



EUROPE



ASIA PACIFIC



LATIN AMERICA



MIDDLE EAST, AFRICA



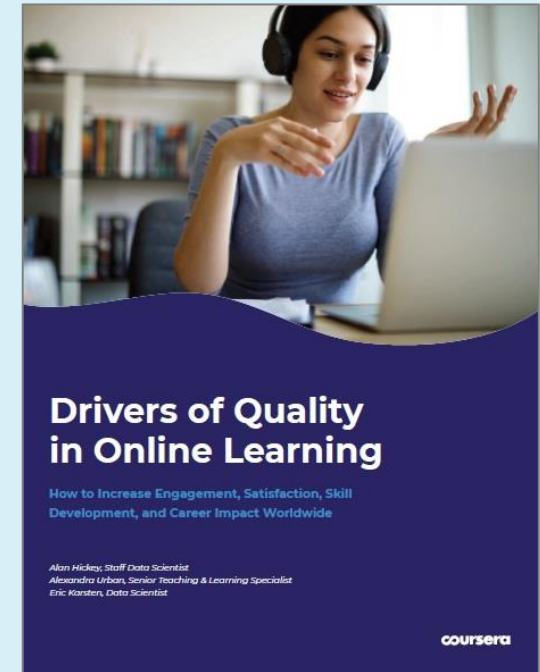
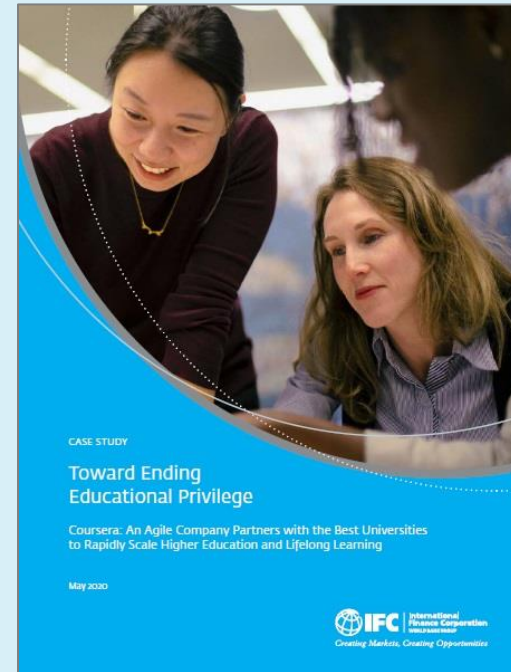
Expanding Access to World-Class Learning

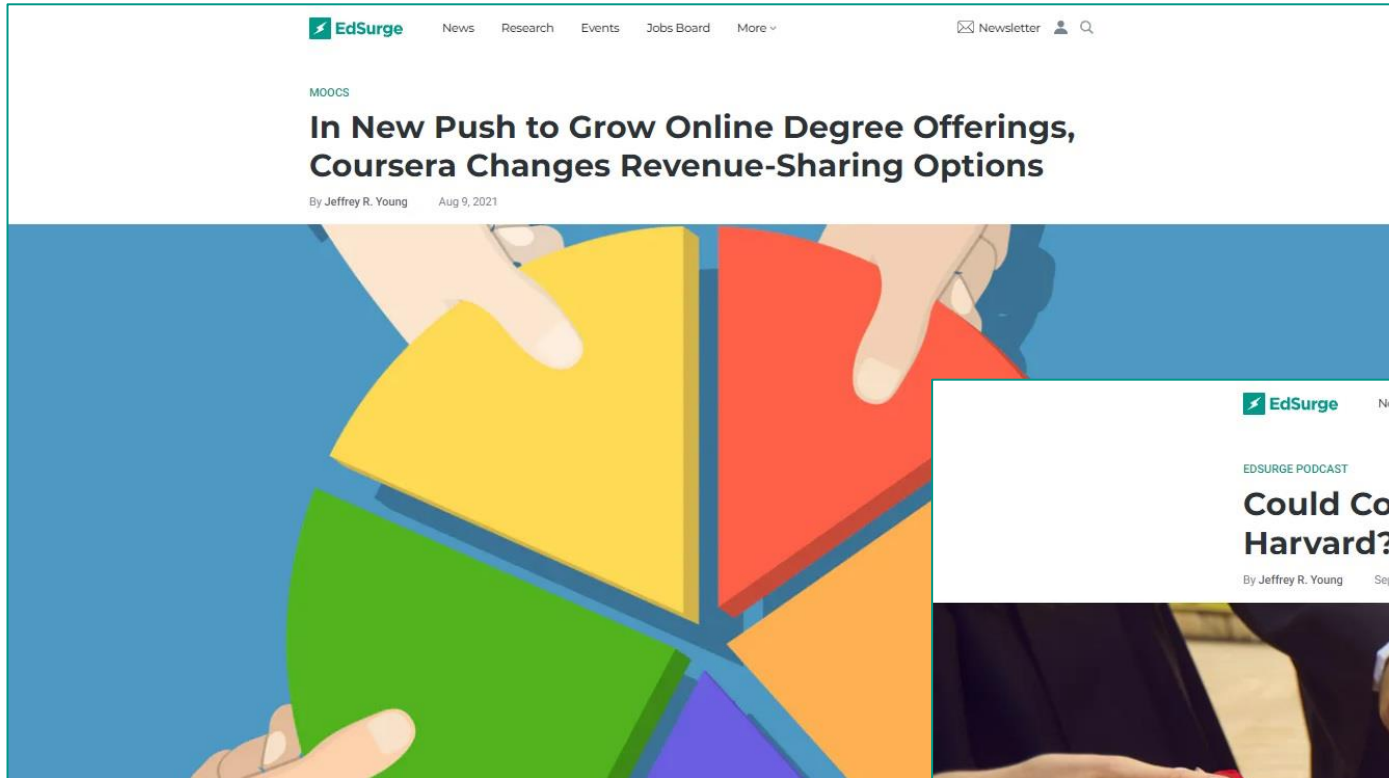
150 University partners	3,800 Courses	385 Specializations	17 MasterTrack™ Certificates	20 Degrees
-----------------------------------	-------------------------	-------------------------------	--	----------------------




Valuing platform network effects

- A ‘Three-Sided Platform Ecosystem’ servicing learners, educators and employers that ‘generates network effects, or improvements to the value of the service that is generated because of the increased number of participants on the platform’ – IFC (investor) evaluation
- Coursera Skills Graph maps the connections among skills, content, careers, and learners on the Coursera platform —Impact report
- The Drivers of Quality in Online Learning Report looks across eight years of learner data and nearly 200 million course enrollments to provide actionable, data-driven insights into how instructors and learners can optimize their digital learning experience —Quality report





A 'new economic model'
—Realizing investors' expected ROI through techno-economic platform business models



—Revenue-sharing public-private platform partnerships as a new economic model for universities to increase value



2UOS.

Combining tech, people, and data, 2UOS is our proprietary operating system designed to seamlessly build, deliver, and support the offerings we power.

[Learn More About 2UOS](#)

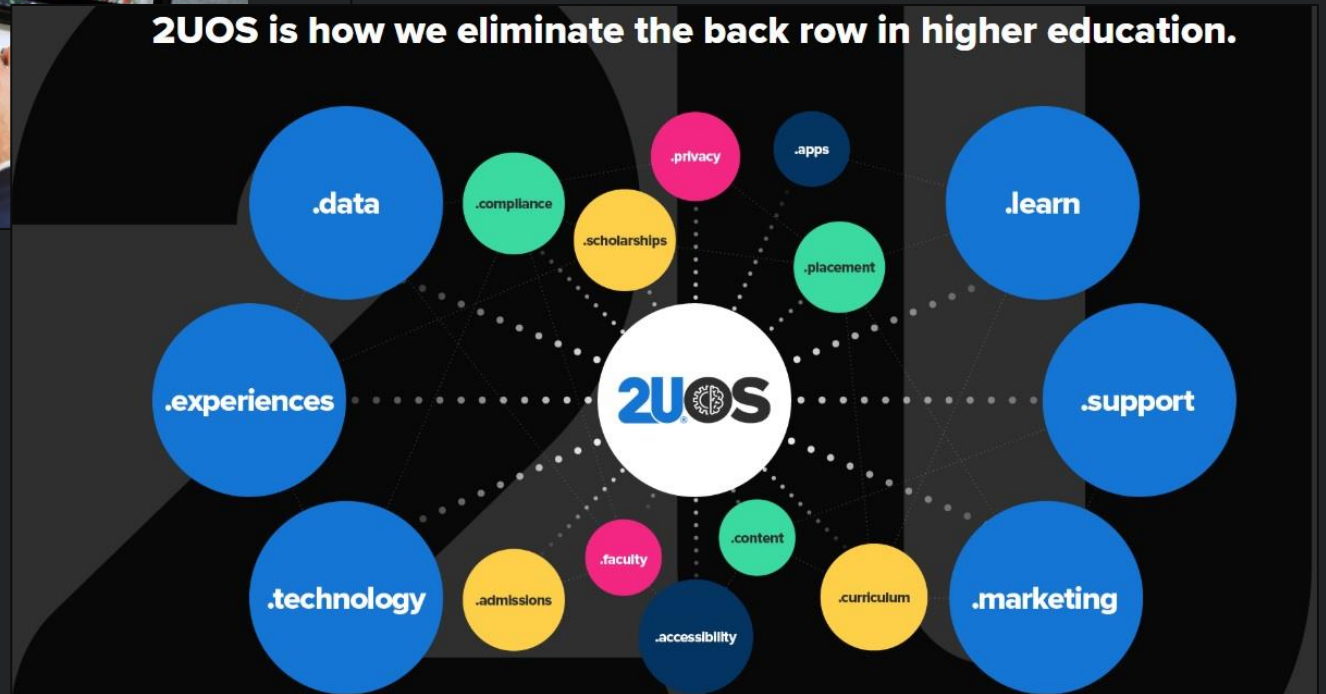


HE 'operating systems'

The data here is early, but our funnels are filling and converting currently at higher rates than before the pandemic—2U CEO

2UOS is how we eliminate the back row in higher education.

- 2009-18—\$426m venture capital and private equity funding
- 2021 valuation—\$3bn, with 30% annual growth, and predicted \$1bn revenue in 2021 alone





Our Approach

CCC 2UOS

CULTURE

Building an Analytical Backbone: Meet Harsha Mokkarala, 2U's Chief Data Scientist

Learn about Harsha's trajectory from being a "programmer through and through" to leading 2U's marketing efforts to now heading up our Data Science team—using analytics to streamline operations, improve student outcomes, and strengthen 2U's value proposition for university partners.

Sep 27, 2021 · [Bannon Puckett](#)

Integrating data infrastructure

At 2U, we see students throughout their entire education journey.... The Data Science team helps create a closed-loop ecosystem that brings all of that information together.... [B]ringing advanced analytics to the fore is a powerful way to maximize the value of our data. ... We can get more efficient with our operations, improve student outcomes, and enhance our value proposition for partners by building a strong analytical backbone. ... We're also working to merge data across our portfolio of programs ... to provide a more well-rounded view of current and prospective students.

Mergers, conversions and infrastructure transfers



edX Courses Programs & Degrees Schools & Partners edX for Business Sign in Join for free

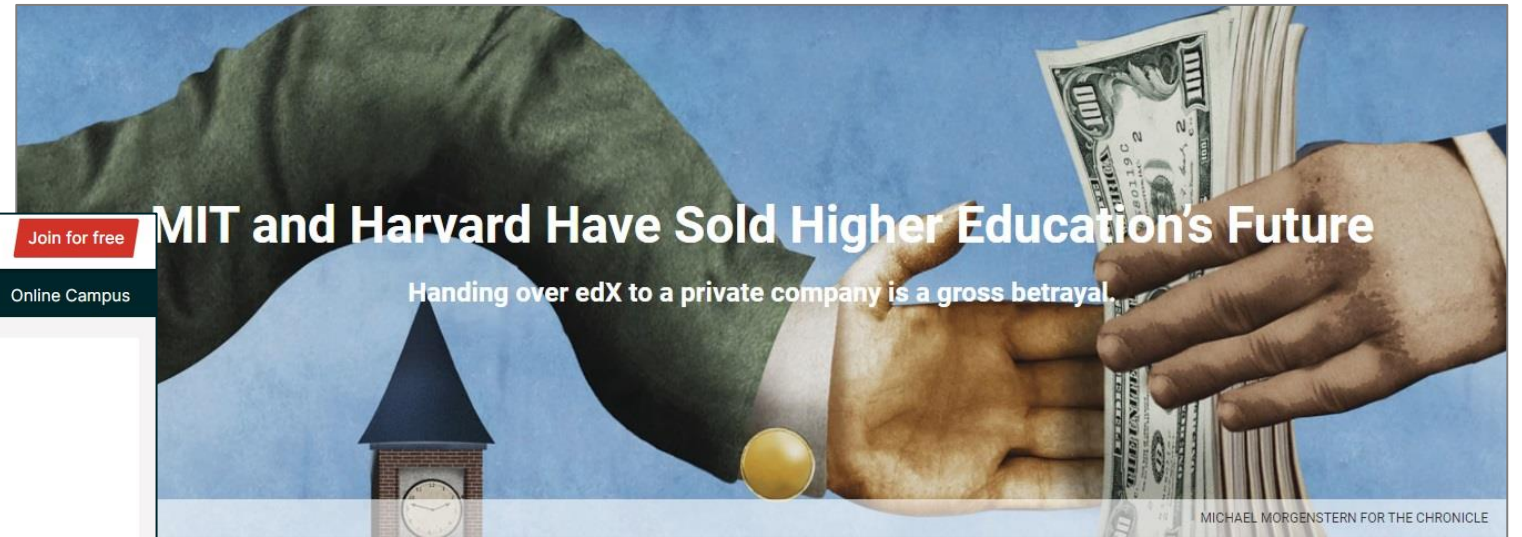
edX Newsroom News & Announcements In the News edX Blog edX For Business Online Campus

June 29, 2021

2U, Inc. and edX to Join Together in Industry-Redefining Combination

2U to acquire substantially all edX assets, including edX brand, website, and marketplace

Together, 2U and edX will reach over 50 million learners, serve more than 230 partners, and offer over 3,500 digital programs on the world's most comprehensive free-to-degree online education marketplace

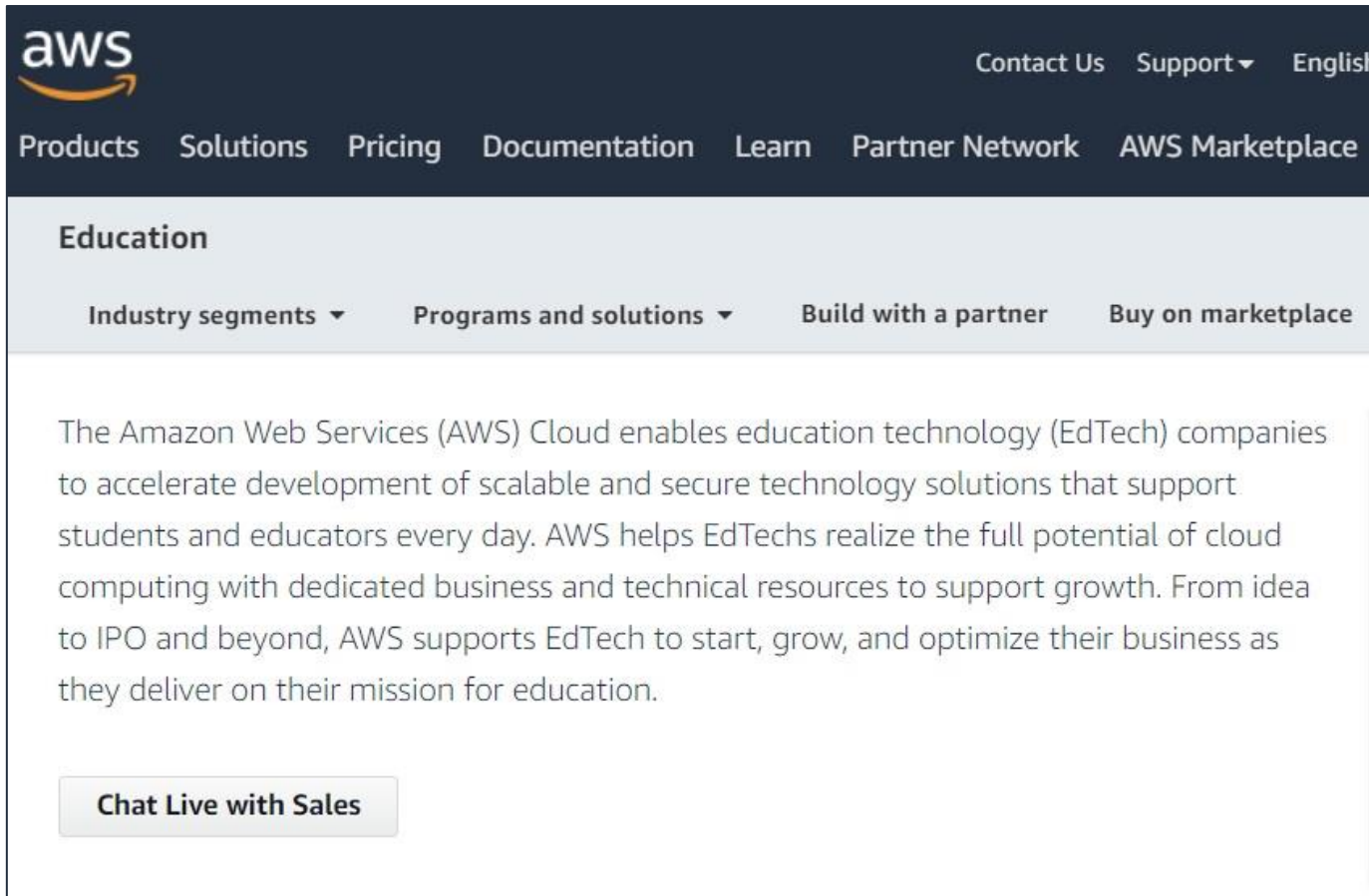


‘Financially, it’s a good deal. 2U gets access to edX’s 50 million users, 1,200 enterprise clients, a top brand, and hundreds of university and corporate partners. And MIT and Harvard get \$800million’

—The Verdict 2021

The ‘infrastructure transfer’ of non-profit edX to for-profit 2U is ‘an act of betrayal... 2U’s mission is fundamentally misaligned with the university tradition. 2U, Coursera, and their venture-funded competitors are built to squeeze profit from our students, using our faculty and course offerings. ... None of us—not faculty members, not students—signed up for edX to increase Silicon Valley’s wallet share’

—Pooley 2021



The screenshot shows the AWS website's navigation bar with the AWS logo on the left and links for 'Contact Us', 'Support', and 'English' on the right. Below the navigation bar, there are links for 'Products', 'Solutions', 'Pricing', 'Documentation', 'Learn', 'Partner Network', and 'AWS Marketplace'. The 'Education' section is highlighted, with sub-links for 'Industry segments', 'Programs and solutions', 'Build with a partner', and 'Buy on marketplace'. The main content area features a paragraph about AWS Cloud enabling EdTech companies to accelerate development of scalable and secure technology solutions. At the bottom of the content area, there is a button labeled 'Chat Live with Sales'.

aws

Contact Us Support English

Products Solutions Pricing Documentation Learn Partner Network AWS Marketplace

Education

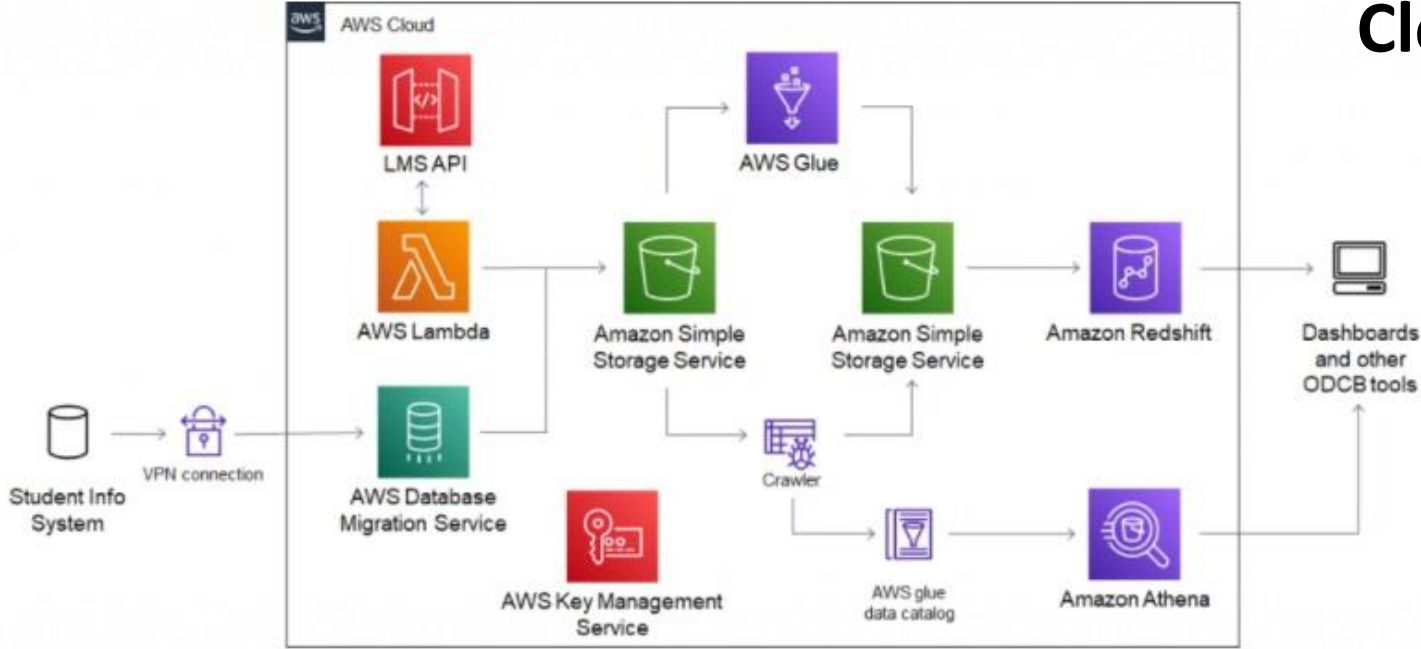
Industry segments Programs and solutions Build with a partner Buy on marketplace

The Amazon Web Services (AWS) Cloud enables education technology (EdTech) companies to accelerate development of scalable and secure technology solutions that support students and educators every day. AWS helps EdTechs realize the full potential of cloud computing with dedicated business and technical resources to support growth. From idea to IPO and beyond, AWS supports EdTech to start, grow, and optimize their business as they deliver on their mission for education.

Chat Live with Sales

The cloud campus

- Coursera and 2U as tenants of the AWS Cloud and beneficiaries of its storage, analytics, and AI
- Cloud as ‘a new multi-sided ecosystem’ from which operators ‘demand both a toll and masses of data’ as value sources
 - Birch & Cochrane 2021
- Replatforming and infrastructure transfers embed HE in the technoeconomic cloud model
- New ‘cloud campuses’ integrated into AWS Cloud architecture



Cloud architecture, data lakes, and algorithmic experimentation

The cloud is a bundle of experimental algorithmic techniques acting in and through data.... [C]ontemporary cloud computing is about rendering perceptible and actionable (almost seeing) that which would be beyond the threshold of human vision ... [which then] open onto targets of opportunity, commercial and governmental

Amazon Web Services (AWS) is on a mission to accelerate higher education's digital transformation..., connect the campus community to systems and tools, store institutional knowledge and data, make data-driven decisions to save money and resources, and power their educational technology systems—AWS 2021

—Amoore 2020

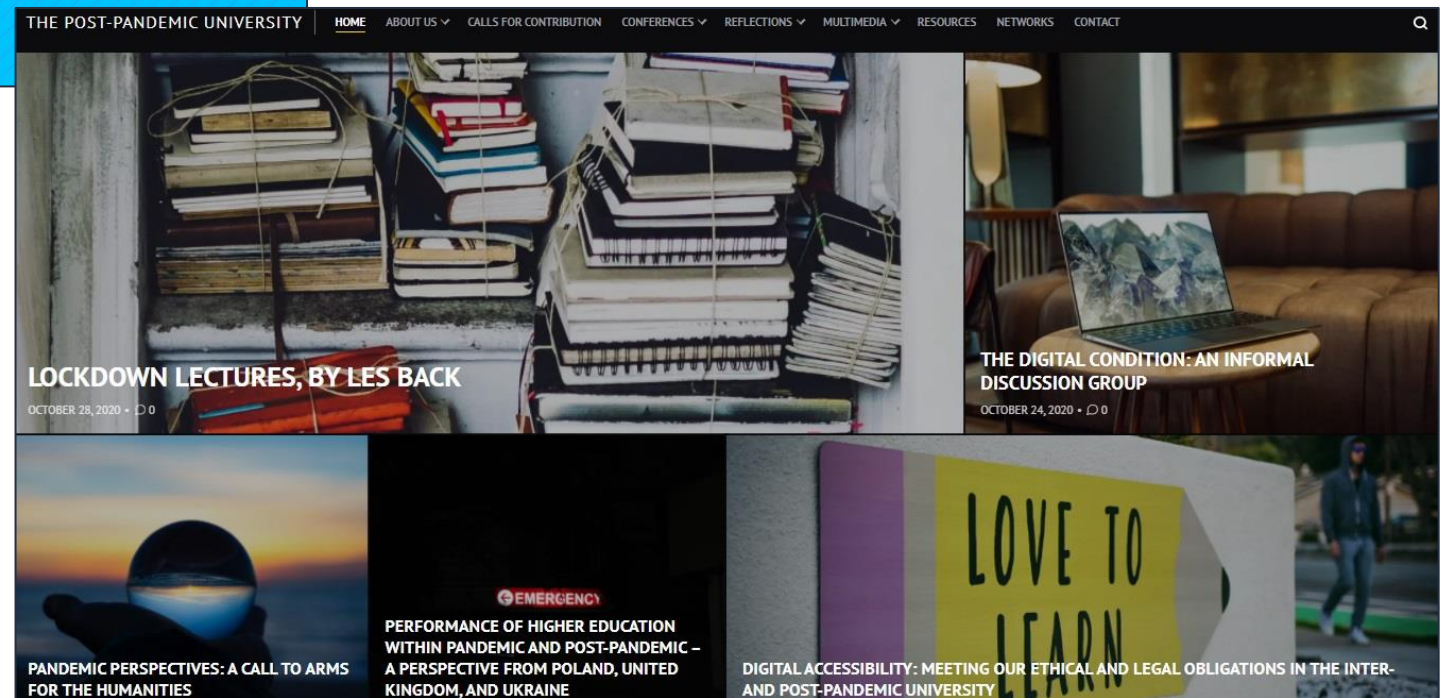


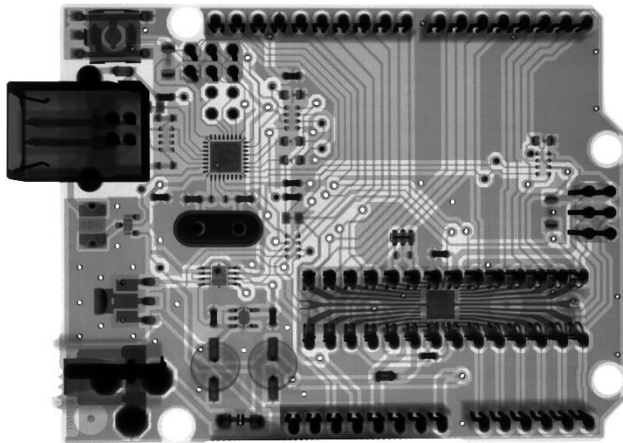
Defuturing and refuturing

Creating powerful images of plausible futures of education that people can envisage today, in order to open up seeds of possibility and to mobilise change in educational practices—Facer, 2021

Challenging the techno-imperatives driving the deprofessionalised, unbundled, globalised and datafied higher education futures produced by governments and corporations

—Bayne & Gallagher 2021





- Market actors as new sources of predictive authority, shaping HE futures through an investment logic of ROI
- Platforms, infrastructures and clouds instantiate imagined futures in durable technoeconomic forms in the present
- De-/refuturing as efforts to contest and reclaim HE futures