

# The higher education digital revolution

Primer document

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# Executive summary

**We are in a moment of great unfreezing**, with a number of forces creating the conditions for digital disruption in U.S. higher education.

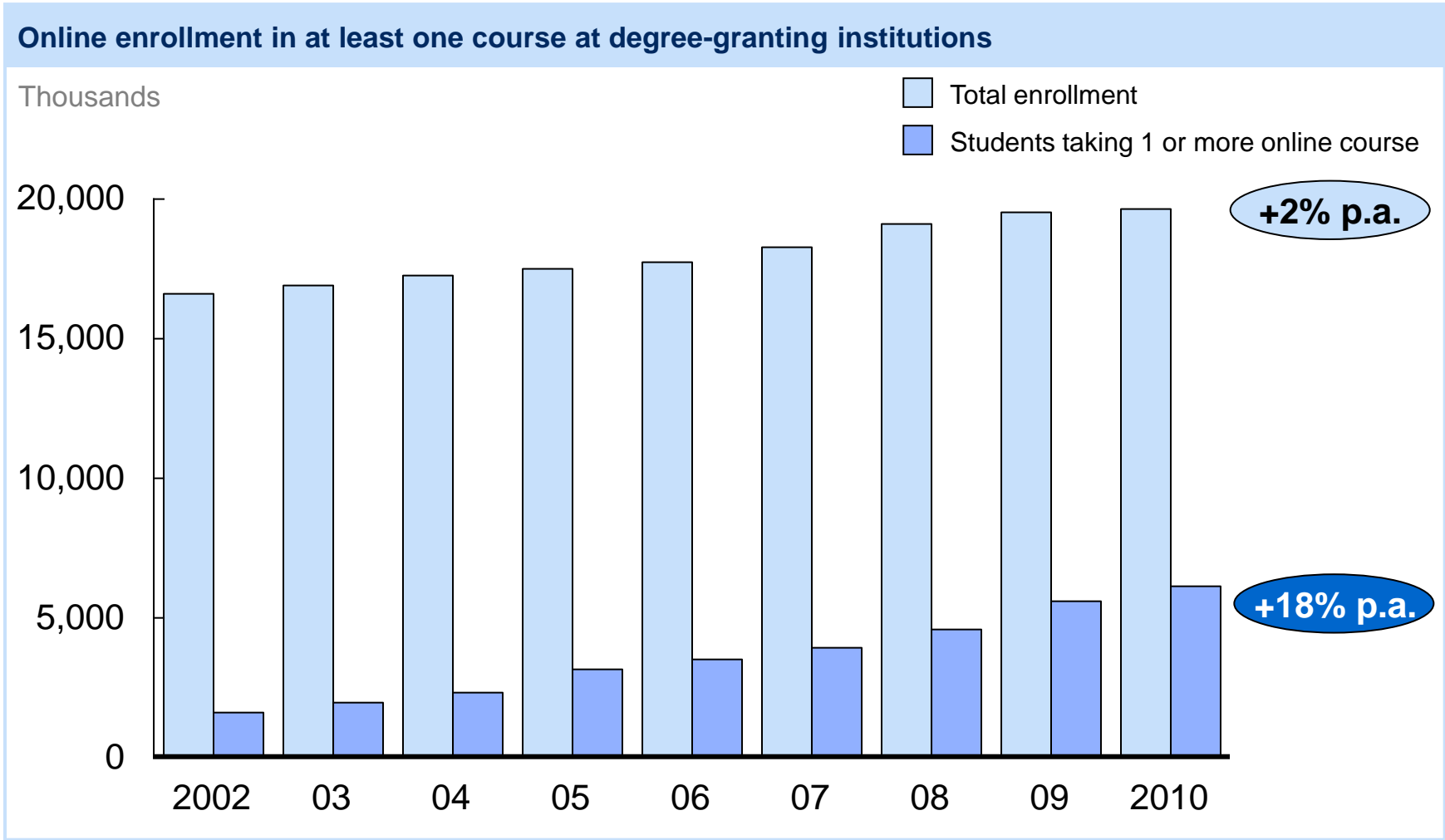
**U.S. higher ed institutions segment into 5 distinct, digital archetypes:**

- For-profit degree grantors
- Non-profit degree grantors
- Digital supplementors
- Open knowledge providers
- Emergent providers of elite online education

**At the same time, a new ecosystem of digital innovators have emerged** to support universities, often performing functions that universities have previously performed themselves.

**In this moment of great unfreezing, there is tremendous strategic opportunity** for institutions who will act boldly to define the next generation of higher education.

# Digital education has grown rapidly, with >30% of students already taking at least one course online today



# We are in a moment of great unfreezing, in which external forces and new enablers are converging to create the conditions for a digital revolution

## Traditional higher education

### External forces driving the revolution

#### Institutional budget pressures

Reductions in funding drive innovation for lower cost models

#### Affordability of education

In the face of skyrocketing costs, parents and students demand lower cost, higher quality educational models

#### Increased international demand

Rise in the middle class internationally generates new demand for elite US higher education

#### Technology revolution

Digital consumption infiltrates every aspect of daily life driven by widespread access and new 'digital natives'<sup>1</sup>

### Factors that enable the transformation

#### Increased access

Ubiquity of broadband and devices enables vast adoption of new forms of learning

#### Openness to new learning platforms

Faculty, student, and employer increasingly openness to digital learning methods fuels adoption

#### Wisdom from previous attempts

Earlier attempts at digital learning reveal pitfalls and inform future success

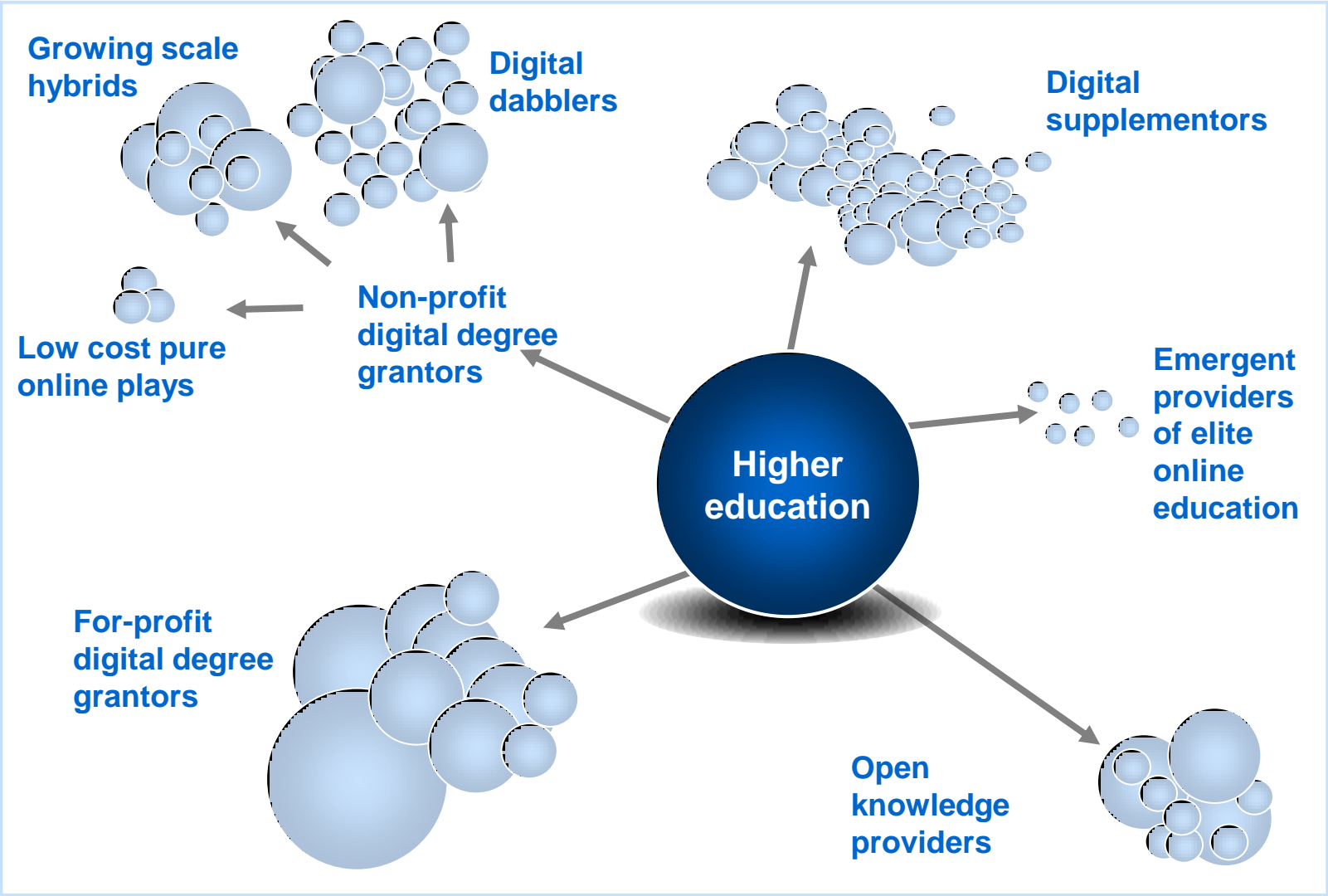


### Higher education revolution

- Conditions are ripe to define the next generation of higher education
- Great uncertainty exists, but also tremendous opportunity for those who will act boldly

<sup>1</sup> 'Digital native' is the new population of students that have grown up in the digital world

# U.S. higher education institutions have adopted a broad range of postures with respect to online and digital education



# Broadly, institutions segment into five “digital archetypes”

## 1 For-profit digital degree grantors

- Target large number of students, broadening access to higher education offering options to those who can't attend a full-time on-campus course
- Large number of degrees granted online although several players have physical presence as well
- First movers in the field, they hold technological expertise and reach a large scale of students
- Most lack high “brand recognition”, being frequently perceived as mid-to-low tier quality education

## 2 Non-profit digital degree grantors

- Non-profit institutions seeking to increase reach and revenues through full online degrees
- Most frequently grant significant portion of degrees from physical campus
- Reach is variable but, in general, can be sub-grouped into three categories:
  1. Low-cost pure online plays: Seek to provide affordable education for a large number of students
  2. Growing scale hybrids: Online degrees are core to the strategies of traditionally campus-based institutions
  3. Digital dabblers: Provide few full online degrees in select departments or schools within the university

## 3 Digital supplementors

- Non-profit institutions seeking to enhance traditional educational experience with some element of digital learning in traditional programs; however, do not grant full online degrees
- May offer online courses for credit, and likely integrate technology into the classroom through online study groups, videos of courses, e-books, etc
- Technological capabilities of providers varies

## 4 Open knowledge providers

- Publishers of educational content for global, mass consumption largely offered free of charge
- Non degree granting offering, with variable amount of interaction and/or feed-back loop between provider and students
- Broadly, content can be categorized as two forms:
  1. Courseware: Published courses slightly modified or directly leveraged from traditional classroom instruction
  2. Non-courseware: General knowledge published on the web for mass consumption

## 5 Emergent providers of elite online education

- Target a global audience, offering high quality, elite education
- Non degree-granting, free-of-charge.
- Content delivery varies across models, but often courses include interactions and feed-back loops beyond lectures delivery
- Future business models are unclear (e.g., revenue sources, target audience, content sources)

# 1 For-profit digital degree grantors

## Description

For-profit degree grantors target large number of students, broadening access to higher education offering options to those who historically couldn't attend a full-time on-campus course. A significant portion of their degrees are granted through online courses, although all have a version of a physical campus

**Opportunities:** Expand hybrid offerings, partnerships with employers for specific programs, international expansion

**Threats:** Student perception, weak brand to expand abroad, entry of non-profit players into full degree granting space

## Student profile

- GED or equivalent required
- Large number have work-related commitments
- High discipline for program completion required
- Adults working towards completing degrees (Average age > 30)

## Business model

- In 2010-11, average price \$13,935 vs \$7,605 for public four-year tuition and \$27,293 on private non-profit
- Revenue base driven by large student body leveraging federal loans, grants, and tuition
- Aggressive marketing strategies aimed at identifying leads to enroll in schools
- Increasing student services to improve experience

## Example institutions



DeVry targets part-time, older students. They offer online courses and degrees in addition to physical courses. Currently DeVry's online program has enrolled ~120K students, ~23% of total student body. The schools is publically held and for-profit



University of Phoenix targets working adult students through a heavy reliance on online education. Online program started in 1989, reaching large scale, educating 400K students and granting ~50K degrees/ year. The school is private and for-profit



## 2 Non-profit digital degree grantors

### Description

Public and private non-profit institutions offering full online degrees, most frequently in addition to degrees granted by their physical campus. Often develop online presence as an efficient means of increasing reach and growing revenue. Broadly classified in 3 groups:

- 1) Low-cost pure online plays: Provide affordable education in specific areas for a large number of students
- 2) Growing scale hybrids: Established campus-based institutions that have incorporated online degrees as core to their strategies
- 3) Digital dabblers: Established campus-based institutions offering online degrees in select departments or schools within University

**Opportunities:** Higher revenues at lower costs, increasing international demand, significant growth capture in coming years (e.g., ASU projects a 10 fold increase in fully online students in next 10 years)

**Threats:** Poor faculty adoption of new instructional model, administrative resistance, student acceptance, IT budgetary cuts

### Student profile

- Similar admission standards as on-campus programs
- Targeting older, degree-seeking population who are technologically savvy and comfortable with online interactions

### Business model

- By and large, charge same price/credit as face-to-face model with lower cost of delivery
- Leverage online education to provide opportunities to
  - Expand reach at a low cost
  - Increase profitability for the core physical campus
  - Attract students who would otherwise not attend

### Example institutions



**Western Governors University** is a low-cost pure online play. 30-40% enrollment growth since accreditation in 2003. Students pay annual tuition and are allowed to complete as many credits as possible. Students have an advisor with whom they speak every other week and courses are passed based on mastery.



**Arizona State University** is a growing scale hybrid institution. Program grew 100% last year to 600 students and aims to grow the program to 30K by 2020. Their online student population is geographically diverse. The school has leveraged an outsourced digital platform, Pearson's Learning Studio, to execute online programming.





### 3 Digital supplementors

#### Description

Traditional campus-based institutions that seek to enhance the traditional education experience with technology. They do not grant degrees online, but might offer courses for credit. Likely integrate technology into the classroom. Technological capabilities vary widely and most are experimenting with new technologies across a wide spectrum of educational experiences from instruction to assessment.

**Opportunities:** Leverage brand to quickly enter online space. Otherwise, can remain at Integration of ebooks, podcasting of lectures, mobile app learning outlets,

**Threats:** Poor faculty adoption of new techniques, risk dropping demand by not offering completely online degrees, late entry might result mover may be to late

#### Student profile

- Traditional college student applicants

#### Business model

- Traditional business model for core undergraduate and graduate degree granting education (i.e., revenues from federal grants and loans, student tuition and research commercialization)
- Revenue supplementation from non-degree granting offerings (e.g., continuing education). Particularly relevant for public schools that have higher freedom in pricing non-degree granting courses and offerings

#### Example institutions



**Yale** recently introduced online courses for credit into their summer curriculum for students who cannot physically be at the university. The course selection is limited and they are not offered during the school year



**Harvard** offers 150 continuing education online courses through their extension school. Students cannot receive a degree entirely online, but can meet specific requirements online



## 4 Open knowledge providers

### Description

Open knowledge providers target large populations, with the goal to share knowledge with the masses. Often the content is static (i.e., one-way), is not degree granting, and has been repurposed from a lecture, conference or publication. Technological capabilities of providers varies and content can draw from existing pools of knowledge (e.g., class lectures) or created. Two broad groups:

- 1) Courseware: Published courses slightly modified or directly leveraged from traditional classroom instruction
- 2) Non-courseware: General knowledge published on the web for mass consumption

**Opportunities:** Worldwide broadband access exponentially grows target audience, technology allows more instructional methods and topics to be covered and consumed, rising online consumption of learning, targeted segmentation, employer development partnerships

**Threats:** Online offerings from school, funding constraints, unclear revenue model, limited acceptance/assessment of content learned

### Student profile

- Intellectually curious
- Wide profile of individuals consume this knowledge (e.g., age, social status, income level all vary widely)
- Technologically capable, as consumption occurs mainly online

### Business model

- 1) Non-profit institutions. Funded by government or foundations
  - Low cost content production and limited staff keep grant requests manageable
  - Quality and utility determine consumption and feed future funding
- 2) For-profit
  - Revenues from various sources such as advertising, content use
  - Quality, uniqueness, and utility determine consumption & profitability

### Example institutions



MIT OpenCourseWare is a free publication of MIT courseware that reflects almost all the undergraduate and graduate subjects taught at MIT. Courses are not-for-credit and do not provide access to professors



**TED**, Technology Entertainment Design, is non-courseware ideas shared through a series of published talks from international conferences. Recent efforts to translate talks from English to other languages through volunteer translators has resulted in 21,000 completed translations in 40 languages



## 5 Emergent providers of elite online education

### Description

Emergent providers of elite online education target a global audience, offering high quality, elite education. Content delivery varies across models, but often courses provide more than static, one-way lectures (e.g., tutorials, discussions). There are currently no degree-granting models, and currently are free-of-charge. Future business models are unclear (e.g., revenue sources, target audience, content sources)

**Opportunities:** Significant demand for elite degree both domestically and internationally, technology enables more effective interaction and teaching, more technology savvy students, employer development partnerships, higher education partnerships

**Threats:** Increased competition from all other archetypes, poor work-force acceptance of elite online degree, poor faculty adoption and production of content

### Student profile

- Intellectually curious
- Range of students who already hold a degree to high school students who want to better understand college offerings
- Geographically diverse

### Business model

- Partner with top-tier institutions to provide courses
- “White-label” platform to institutions that seek to expand their online offering
- Partner with corporations to use platform for corporate learning

### Example institutions

Coursera

**Coursera** aims to make the best education in the world freely available to any person who seeks it. It is a for-profit endeavor which leverages professors and lecturers from consortia of universities – Stanford University, Princeton, University of Michigan, and University of Pennsylvania– and does not grant degrees or certificates.



**edX** is a non-profit partnership between MIT and Harvard to enhance campus-based teaching and learning and build a global community of online learners. Leverages a platform created by MITx; offers online versions of courses featuring video lesson segments, embedded quizzes, immediate feedback, student-ranked questions and answers, online laboratories and student-paced learning. Certificates are awarded for course completion.

Udacity

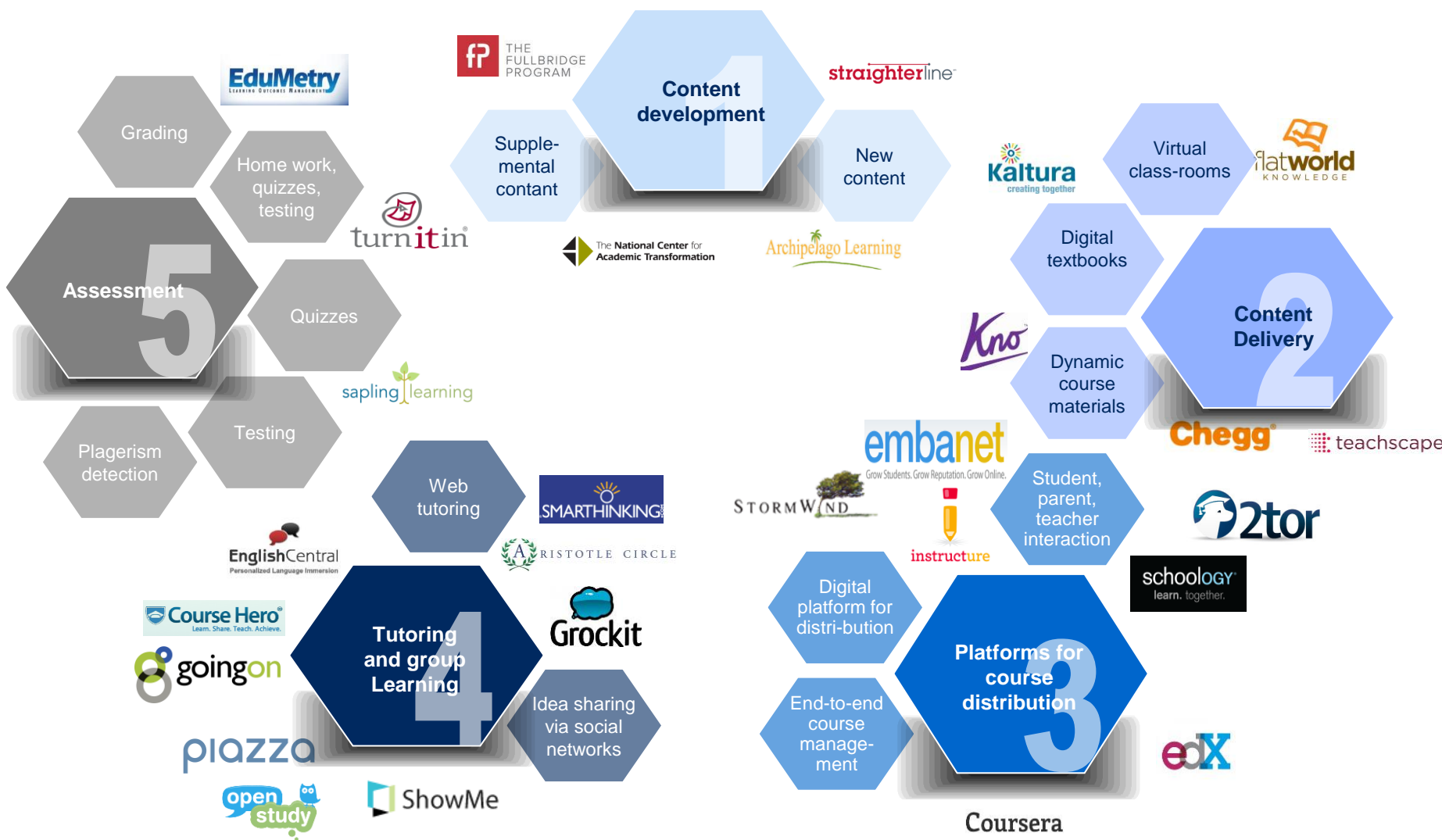


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# An ecosystem of digital innovators has emerged to support institutions in delivering a more comprehensive digital experience



# This influx of technology is impacting all functions of the university

## Impact of technology

### Infrastructure

- Physical infrastructure (e.g., classroom buildings) is more efficiently utilized by providing virtual instruction
- Facilities and capital are more efficiently managed through automated systems
- Online platforms for content distribution

### Marketing & Sales

- Outreach and admissions can all be done virtually allowing for a full digital platform
- Alumni are better tracked and cultivated through digital CRM platforms
- School brand is developed through multiple channels

### Knowledge development

- Technology allows for collaboration unbounded by geography
- Research techniques are heavily influenced by technologies (e.g., genomic sequencing)
- Research can be more easily disseminated through online sharing

### Non-instructional support services

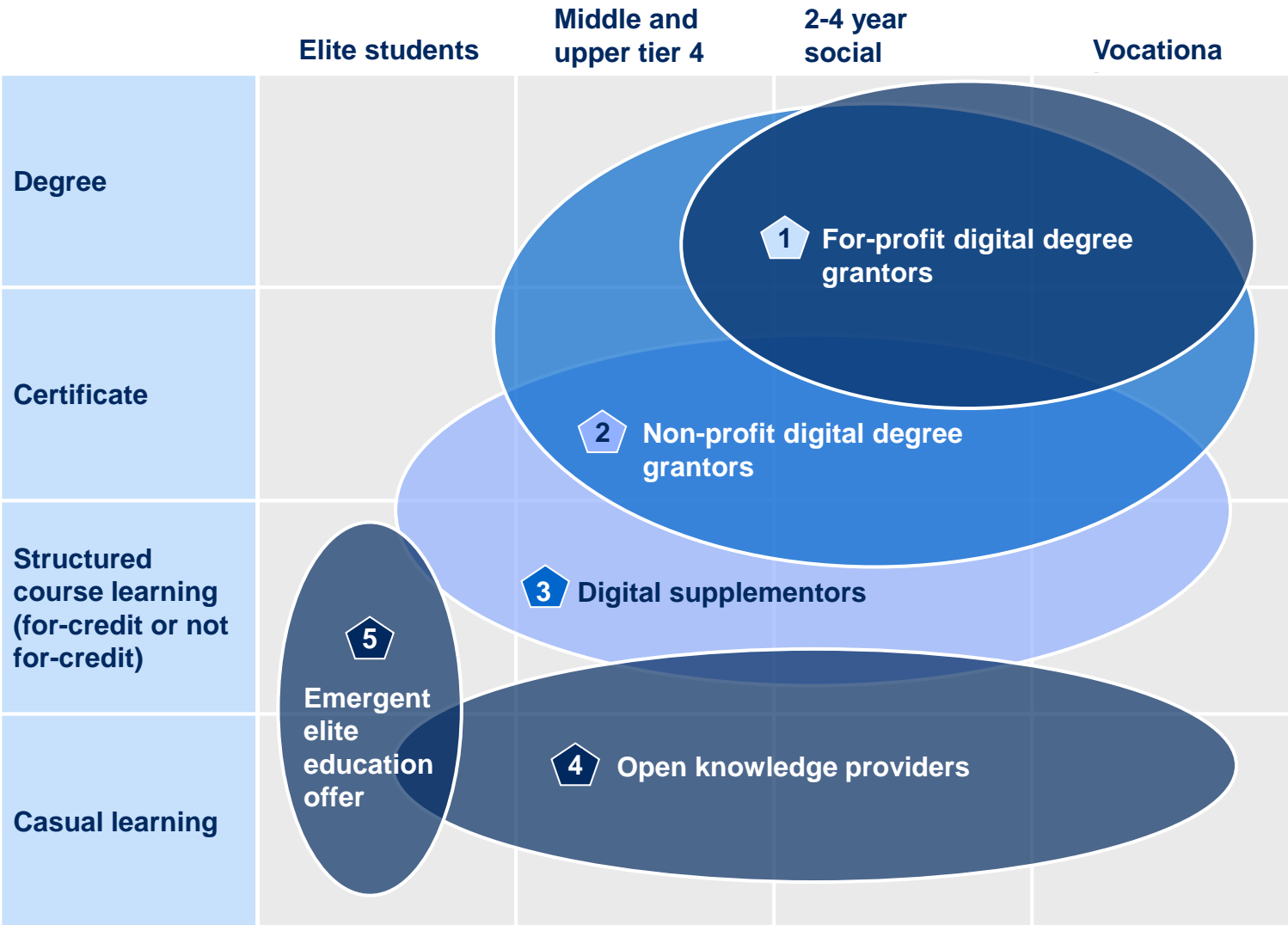
- Career services, financial aid and other non-instructional support services are automated, freeing up resources for dedicated support

### Instructional model

- The instructional model (content creation, delivery, student support and assessment) is being disaggregated and owned by multiple players
- The traditional role of faculty is changing as administrative processes become more efficient

# The emerging “gameboard” for the digital revolution in U.S. higher education

On-campus   Hybrid   Mostly on-campus   Pure play



# Questions to consider

- **What is your objective in offering digital education** (e.g., enhance current student experience, grow number of students served)?
- Are there **specific student segments** that you wish to attract?
- What are your **aspirations for owning each element of the value chain? What are the potential partnerships** that are necessary or allow you to reach your goals sooner?
- How could **current efforts pursued by different schools and departments be integrated into a single strategy?**
- Are there **risks to your brand** associated with specific digital education options?

