In pursuit of relevance

Higher education’s struggle to meet customer needs

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IBM Global Education Industry
IBM, in collaboration with the Economist Intelligence Unit, surveyed more than 900 academic and business leaders globally.
Five roles were surveyed across industry and academia

We also interviewed 25 leading academic SMEs

* Educational innovator: includes individuals from leading technology companies responsible for developing and innovating new education products and services
  ** Education service provider: organizations that provide specialized educational services (e.g., technology or curricula) to higher education institutions
1. A system in turmoil

2. Prioritize and focus on practical and applied educational experiences

3. Embrace technology to improve education access, experience, variety, and outcomes

4. Build / expand relationships with industry and other ecosystem partners
The value of higher education has come under increased scrutiny; traditional education models are being questioned.

“Many people worry that even as the cost of higher education has risen, its quality has fallen.”
Nicholas Carr, MIT Technology Review

“Tuition fees are out of control.”
David Robinson, Education International Senior Advisor

“…employability after you graduate is driven by things that don’t have to do with your college education…”
Peter Cappelli, Wharton School of Business

“..literacy among college graduates has actually declined.”
Secretary of Education’s Commission on the Future of Higher Education

Sources in notes
Business and academic leaders believe that higher education fails to meet the needs of core customers (students, employers etc.)…

Of academic and business leaders surveyed…

- 49% believe the current higher education system is meeting the needs of **students**
- 41% believe the current higher education system is meeting the needs of **industry**
- 47% believe the current higher education system is meeting the needs of **society**

"The biggest challenge facing higher education is meeting the expectations of customers and gain[ing] an understanding of their needs in the world…"

*CIO, North American Public University*

Source: Q1 “To what extent do you believe the current higher education system in your country is meeting the needs of the following groups?” n=935
...and falls short in delivering value and meeting customer expectations in many areas

Of academic and business leaders surveyed...

- 51% believe higher education is providing value for money
- 49% believe higher education is contributing to economic growth and competitiveness
- 49% believe higher education is providing access to students from a broad range of economic and social environments
- 43% believe higher education is preparing students with the skills they need for the workforce

Source: Q2 “To what extent does the current higher education environment in your country fail or succeed at the following?” n=935
Customer frustrations with higher education have reached the breaking point in many countries

Thousands of protesters flooded downtown Montreal again in 2014 to protest austerity measures\(^1\)

In 2012, Chilean students held 7 months of protests that shuttered schools and led to weekly confrontations with police\(^2\)

In February of 2015, students at the University of Amsterdam launched a protest movement against ‘authoritarian’ and ‘neoliberal’ management\(^3\)

Sources in notes
Leaders identify numerous challenges as to why higher education struggles to meet customer needs.

Top 5 reasons why higher education does not meet the needs of customers:

- **59%** Higher education (HE) cannot obtain adequate funding.
- **58%** HE does not invest in engaging and relevant educational experiences.
- **55%** HE delivery models are misaligned with the needs of society, industry, and students.
- **54%** HE has a culture that is slow to respond to change.
- **53%** HE struggles to maintain relevant curriculum.

“*The biggest challenge facing higher education is complacency.*”

Senior Administrative Executive, North American Public University.

Source: Q12 “What are the most fundamental challenges of higher education?” n = 890
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Most academic and business leaders identified job placement as the best measure of higher education effectiveness.

Top measures of effectiveness of higher education institutions:

- **Job placement rates of students**: 63%
- **Creativity and innovative problem solving capabilities of students**: 62%
- **Contribution of students to social enlightenment and cultural development**: 51%
- **Graduation rates of students**: 48%

Of the 63%, academia disproportionately supports job placement as the most important measure of success:

- **Senior educators**: 73%
- **Educational innovators**: 57%
- **Corporate recruiters**: 56%
- **Academic leaders**: 64%

Source: Q14 “What do you consider to be the best measures of effectiveness or success of higher education institutions?” n = 872
Higher education institutions are not equipping enough students with the skills they need to be effective employees.

<table>
<thead>
<tr>
<th>Most important requirements for success in the workforce</th>
<th>Most significant shortfalls of students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to analyze problems and draw out possible solutions</td>
<td>67%</td>
</tr>
<tr>
<td>Ability to collaborate effectively and work in teams</td>
<td>65%</td>
</tr>
<tr>
<td>Ability to communicate effectively in the business context</td>
<td>59%</td>
</tr>
<tr>
<td>Willingness to be flexible, agile, and adaptable to change</td>
<td>55%</td>
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</tbody>
</table>

71% of corporate recruiters surveyed cannot find applicants with sufficient practical experience.
To improve employability, higher education needs to become more practical and applied.

What is required to address performance gaps in higher education:

- Provide experienced based learning: 65%
- Provide internships, apprenticeships: 63%

“One of the biggest challenges facing higher education is optimizing practical learning, focus on skills and experience. Knowledge of skills transfer instead of transferring knowledge base,”

CIO, European Vocational University

Source: Q11 “Which of the following interventions should institutions consider to address performance gaps in higher education?” n = 888
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Millennials comprise the bulk of students, and they are demanding deeper, richer experiences across the board.

Technology change enables deeper, richer experiences ...and students expect education institutions to deliver\(^1\)

Millennials want to obtain knowledge across a range of distinct, but integrated channels

<table>
<thead>
<tr>
<th>Percentage of Millennials who selected option as one of their top three ways of obtaining knowledge and skills</th>
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</thead>
<tbody>
<tr>
<td>Attending a third-party sponsored event</td>
</tr>
<tr>
<td>Attending in-person classroom training</td>
</tr>
<tr>
<td>Working along side knowledgeable colleagues</td>
</tr>
<tr>
<td>Accessing self-paced interactive modules, apps or online simulations</td>
</tr>
<tr>
<td>Reading education/training manuals/instructions</td>
</tr>
<tr>
<td>Figuring it out on my own</td>
</tr>
<tr>
<td>Attending a live webinar</td>
</tr>
<tr>
<td>Attending a Massive Open Online Course (MOOC)</td>
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</tbody>
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Source: IBV Millennial survey: How do you prefer to obtain network-related knowledge and skills? (Millennials n=1,153, Gen X n=353, Baby Boomers n=278)
At the same time, new technologies are disrupting traditional value chains, business models and occupations across all industries...

**New and emerging technologies**

- Biotech
- Nanotech
  - Advanced robotics
- 3-D printing
- Cloud
- Cognitive computing
- Mobile
- Analytics
- Social
- Biotech
- Nanotech

**Impact**

**Retail**
- Advancements in analytics and mobile allow retailers to track preferences and tailor experiences

**Electronics**
- Micro technologies are simultaneously increasing capacity and reducing size; 3-D printing transforms supply chains

**Healthcare**
- Digitization of healthcare coupled with mobile and analytics enables real time health diagnostics and treatment

**Automotive**
- Traditional value chains are transforming into mobility ecosystems, redefining ownership and experience

IBM Institute for Business Value
…and higher education is no exception

Technology is disrupting the traditional higher education model¹…

27% Agree
73% Disagree

Academic leaders believe…

…and is significantly impacting customer needs

56% of educational service providers believe keeping workforce skills current with rapid advancement of technology is the greatest challenge²

Source: 1) Q25 “To what extent is new technology disrupting the traditional higher education model?” n = 529
2) Q24 “What are the greatest challenges faced by buyers of your services?” n = 54
Technology is disrupting and driving new requirements and opportunities for higher education by...

- Increasing competition through greater options
- Forcing rapid changes to curriculum to remain relevant
- Rapidly changing student expectations
- New opportunities for enhancing the learning experience
There is greater recognition of the benefits of new technologies for higher education in the long term.

**Biggest impact of new technologies in the next five years**

- **70%**
  Raising standards of higher education

- **61%**
  Increased financial pressure on traditional higher education institution

- **57%**
  More people being able to access education

- **57%**
  Increased globalization of higher education, with students choosing the best institution regardless of location

- **54%**
  Shifting of students away from formal higher education toward alternative education environments

Source: 1) Q26 “What do you think the biggest impact of new technologies will be on the traditional higher education sector in the next five years?” n = 54
New technologies can improve higher education across the board, specifically education access, experience, variety and outcomes.

- **Promote access**: Provides greater access to classes, curricula, and other educational content.

- **Deepen experience**: Integrates physical and digital worlds for a more compelling and engaging educational experience.

- **Expand variety**: Enables pursuit of educational experiences beyond traditional higher education institutions.

- **Improve outcomes**: Enables improved decision making by focusing on patterns that demonstrably improve student success.

“**The biggest opportunity in higher education, take advantage of the technological advances**”

_CIO, North American Public University_
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Industry and academic leaders agree that increased collaboration is needed to improve the effectiveness of higher education.

“…[We are] trying to service new ways of doing business, partnerships, global relationships, and inter-disciplinary collaboration…”

Senior Administrative Executive, North American Public University

Source: Q13 “To what extent do you agree or disagree with the following statements?” n = 884
This collaboration will increasingly occur within economic ecosystems

Evolution of higher education – a millennium perspective

- University of Bologna, the first university (1088)
- Rapid emergence of standardization follows

Traditional higher education model mostly unchanged for 900 years

- Basis for new education delivery models, impacts existing education models (1998)
- Market for students becomes truly global

- Emergence of higher education ecosystems (2018)
- Collaboration between higher education and industry

Sources in notes
New forms of higher education ecosystem are evolving
The Role of Cloud in Transforming Higher Education

Extend access and improve the student experience
- Leverage cloud services to reach new students, new venues, and offer new experiences

Leverage Big Data and cloud services to improve outcomes
- Personalize learning to students, manage retention risks, improve employability

Use cloud as a means of shared services to lower operating costs
- Streamline operations, reduce replication, better manage expenditures