

THE FUTURE OF EDUCATION IN A DIGITAL WORLD

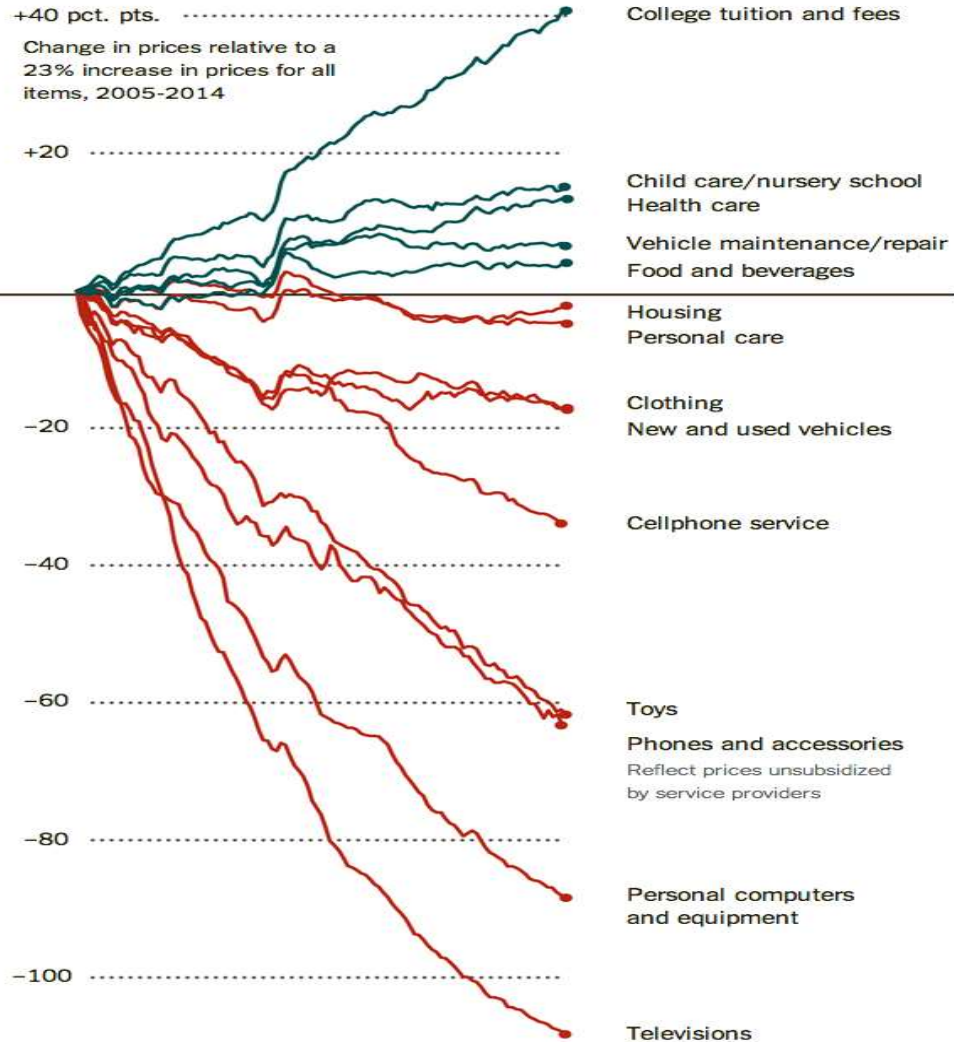
Chrysanthos (Chris) Dellarocas
Associate Provost for Digital Learning & Innovation
Shibley Professor in Management
Boston University



Costs for Americans ...

... have soared for education, child care and health care ...

... and have plummeted for televisions, toys and phones, relative to other prices.



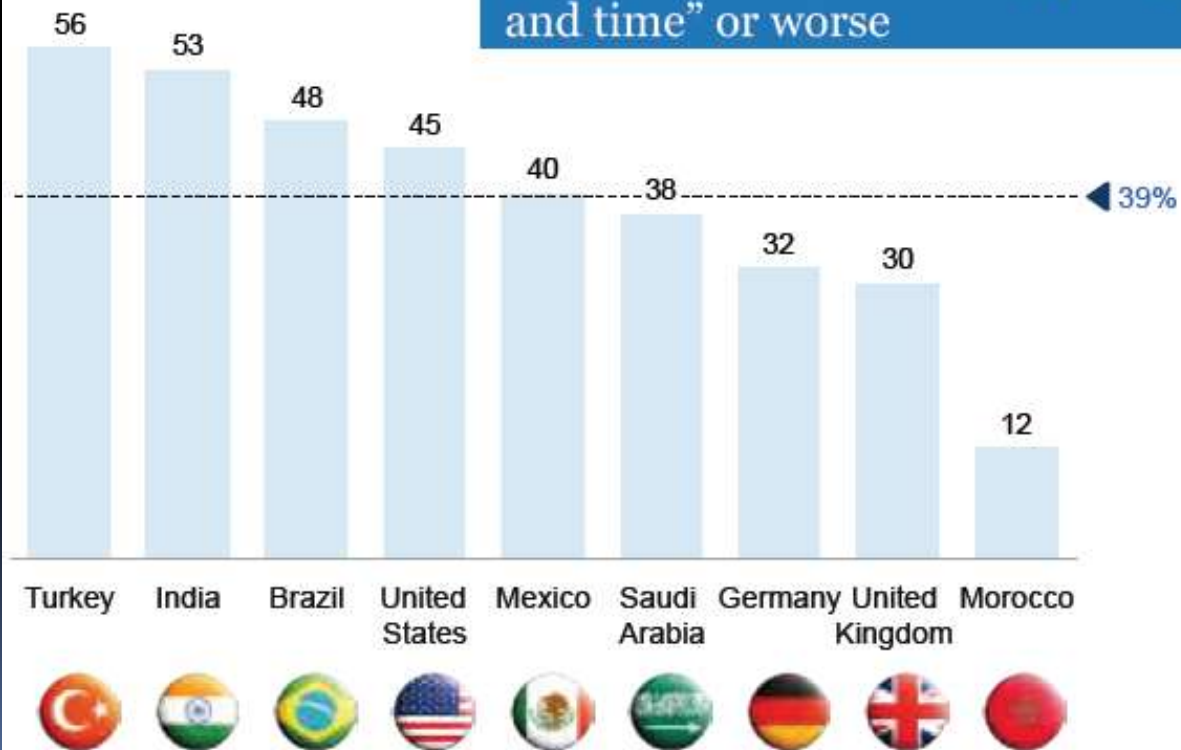
BY LARRY BUCHANAN and ALICIA PARLAPIANO

Source: Bureau of Labor Statistics

Lack of skills is a common reason for entry-level vacancies

% of employer respondents

36% of employers also reported a lack of skills caused “significant problems in terms of cost, quality, and time” or worse



Prediction #1

Skills frameworks will become the common language that connects learners, employers and educators

In the near future many workers will need to substantially renew their skills every 5 years

Average tenure in a job



4.5 years

Half-life of a learned skill



5 years

Length of career



60 to 70 years



[WHAT IS IT?](#)

[WHO IS IT FOR?](#)

[HOW CAN I BENEFIT FROM IT?](#)

[HOW DOES IT WORK?](#)

[WHICH ARE THE SECTORS?](#)

WHAT IS IT?

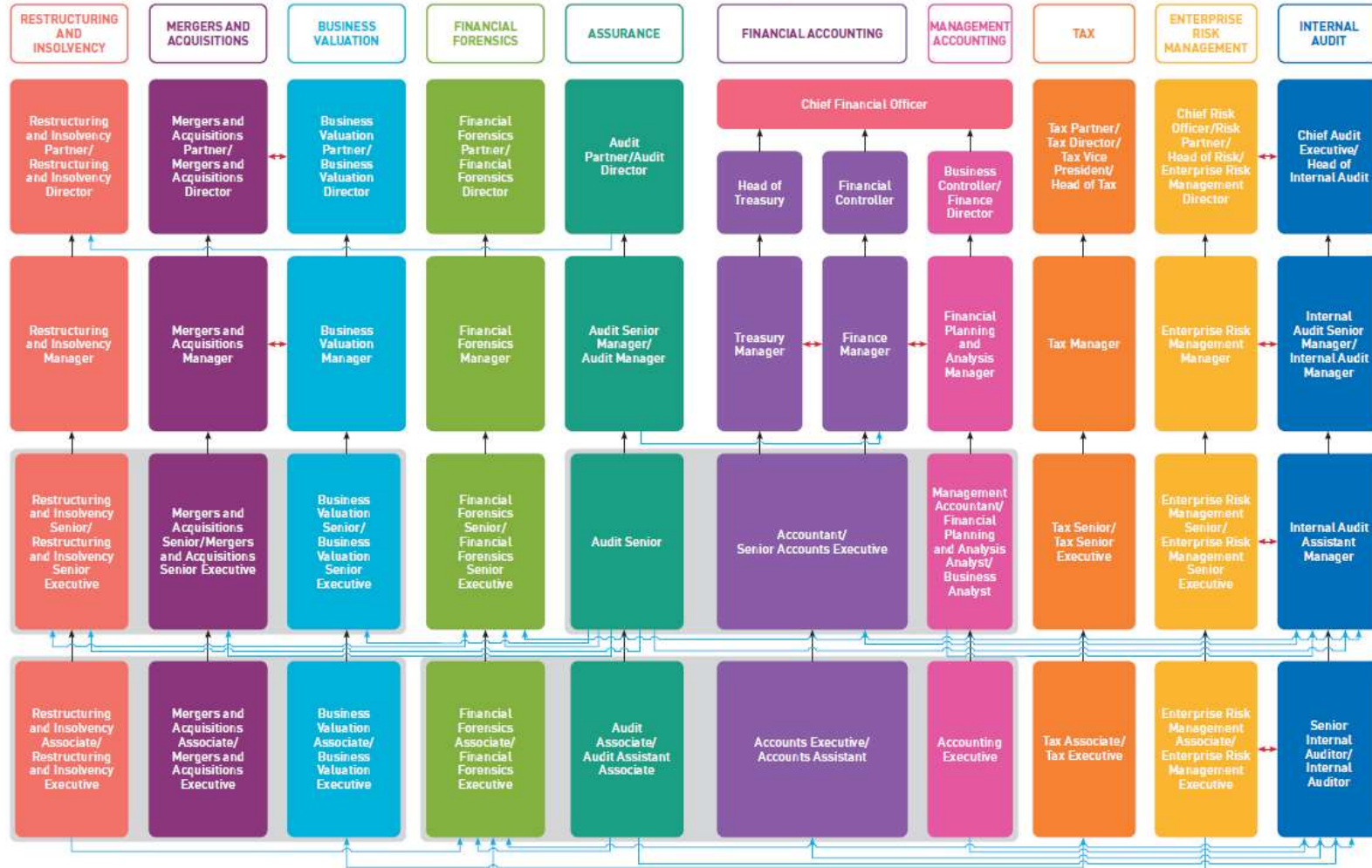
Ask Jamie @ SkillsFuture (Beta)

Type your question ...



SKILLS FRAMEWORK FOR ACCOUNTANCY

Career Pathways



The Career Map serves as a reference to reflect the available job roles and possible career pathways in the Accountancy sector, which may vary depending on each organisation's structure and business context. The career progression pathways would depend on individual performance, capability, experience, aspiration, as well as organisation needs.

Legend:

- ↑ Vertical movements between job roles
- ← Lateral movements between job roles
- ↔ Cross-functional movements between job roles within colour bands
- ↔ Diagonal-directional lateral movements between all job roles within colour bands

Accounts Executive/Accounts Assistant

SKILLS AND COMPETENCIES

TECHNICAL SKILLS AND COMPETENCIES

Accounting Standards	Level 4
Accounting and Tax Systems	Level 2
Audit Compliance	Level 4
Business Innovation and Improvement	Level 3
Data Analytics	Level 3
Digital Technology Adoption and Innovation	Level 3
Digital Technology Environment Scanning	Level 3
Financial Closing	Level 3
Financial Management	Level 2
Financial Reporting	Level 2
Financial Reporting Quality	Level 3
Financial Transactions	Level 3
Group Accounting and Consolidation	Level 4
Internal Controls	Level 2
Professional and Business Ethics	Level 3
Professional Scepticism and Judgement	Level 3
Professional Standards	Level 3
Project Management	Level 3
Tax Computation	Level 3
Tax Implications	Level 3
Taxation Laws	Level 3
Transactional Accounting	Level 3
Transfer Pricing	Level 3

GENERIC SKILLS AND COMPETENCIES (TOP 5)

Communication	Basic
Interpersonal Skills	Basic
Lifelong Learning	Basic
Problem Solving	Basic
Sense Making	Basic

Accountant/Senior Accounts Executive

SKILLS AND COMPETENCIES

TECHNICAL SKILLS AND COMPETENCIES

Accounting Standards	Level 4
Accounting and Tax Systems	Level 3
Audit Compliance	Level 4
Audit Frameworks	Level 4
Business Innovation and Improvement	Level 3
Business Planning	Level 4
Capital Expenditure and Investment Evaluation	Level 4
Conflict Management	Level 3
Data Analytics	Level 3
Digital Technology Adoption and Innovation	Level 3
Digital Technology Environment Scanning	Level 3
Finance Business Partnering	Level 3
Financial Closing	Level 4
Financial Management	Level 3
Financial Reporting	Level 4
Financial Reporting Quality	Level 4
Financial Statements Analysis	Level 4
Group Accounting and Consolidation	Level 4
Internal Controls	Level 3
Professional and Business Ethics	Level 4
Professional Scepticism and Judgement	Level 3
Professional Standards	Level 4
Project Management	Level 3
Stakeholder Management	Level 3
Tax Computation	Level 4
Tax Implications	Level 3
Taxation Laws	Level 4
Transactional Accounting	Level 4
Transfer Pricing	Level 3

GENERIC SKILLS AND COMPETENCIES (TOP 5)

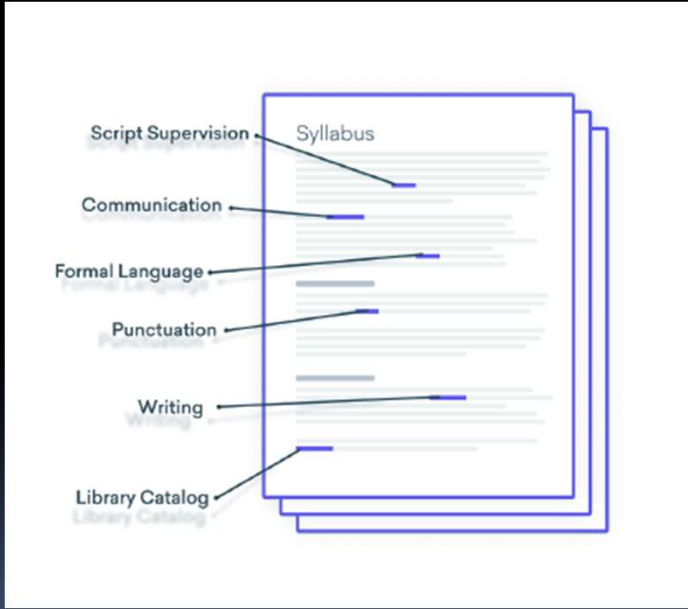
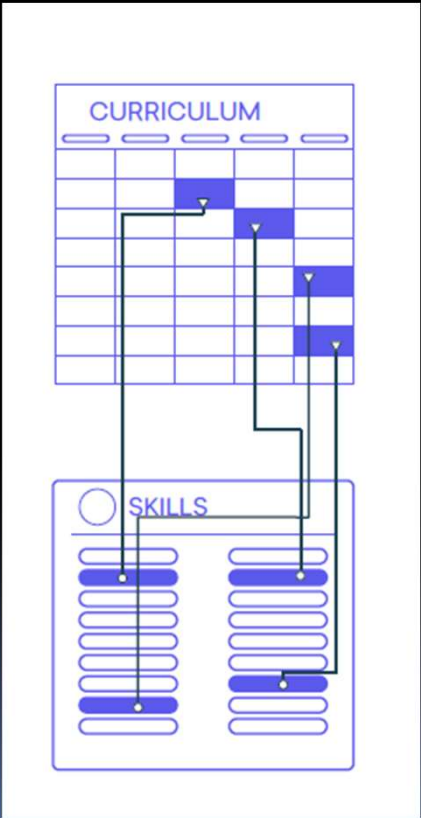
Problem Solving	Intermediate
Communication	Intermediate
Interpersonal Skills	Intermediate
Sense Making	Intermediate
Teamwork	Intermediate

Critical Core Skills (CCS)

Programmes which focus on employability/transferable skills and competencies that support acquisition of technical skills and competencies, and facilitate workplace mobility

Critical Core Skills (CCS)		Course	Providers (please state School or Department of IHL)	Programme also maps to which other CCS	
Title	Proficiency Level			Critical Core Skills (CCS) Title	Proficiency Level
Adaptability	Basic	Managing Change in an Age of Disruption	Nanyang Polytechnic		
	Intermediate	Managing Change and Developing a Change-Ready Team	National University of Singapore		
		Managing Change for Digital Transformations	National University of Singapore		
		Employee Engagement and Change Management: Building an Agile Customer-centric Culture	Singapore Management University	Customer Orientation	Basic
		Managing Change in the Digital Age	Singapore Management University		
		Middle Managers' Role in Strategy Implementation - The Lynchpin of Success	Singapore Management University		
	Advanced	Change Management at the Workplace	Singapore Polytechnic		
		Facilitating Innovation and Leading Change	Singapore Management University	Creative Thinking	Intermediate
Building Inclusivity	Basic	Organisational Culture Change Begins With Me	National University of Singapore		
		Dialogue in the Dark	Ngee Ann Polytechnic		
		Managing New Workforce Diversity- Cultural Intelligence in Action	Ngee Ann Polytechnic		
	Intermediate	Intergenerational Communication	Singapore Polytechnic		
Collaboration	Basic	Achieving Peak Performance with Mental Skills, Emotional Strength and Team Approach	Nanyang Technological University		
		Art of Saying No to Customers Without Offending Them	Nanyang Technological University		
		Capitalising on Productive Emotions	Nanyang Technological University		
		Key Emotional Competence for Managers	Nanyang Technological University		
		Managing Difficult People	Nanyang Technological University		
		Stay Calm and Stand Up: Becoming more assertive in the workplace	Nanyang Technological University		
		Warrior or Worrier? Conflict and Stress Management	Nanyang Technological University		
		Achieving the Psychological Advantage in Leadership	Nanyang Technological University		
		Secret to Motivating Your Team	Nanyang Technological University		
		Designing the Winning Locker Room	Singapore Management University		
		Effective Workplace Skills For Professionals	Singapore Polytechnic	Self Management	Intermediate
				Communication	Basic
				Emotional Competence to Manage Self at the Workplace	
			Professional Writing		
		Report Writing and Effective Communication			

Mapping curricula to skills



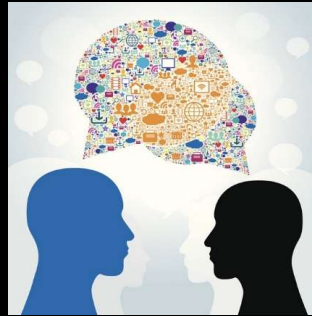
Prediction #2

The value of university education will increasingly come from relationships,
not content

What lifelong learners need?



training

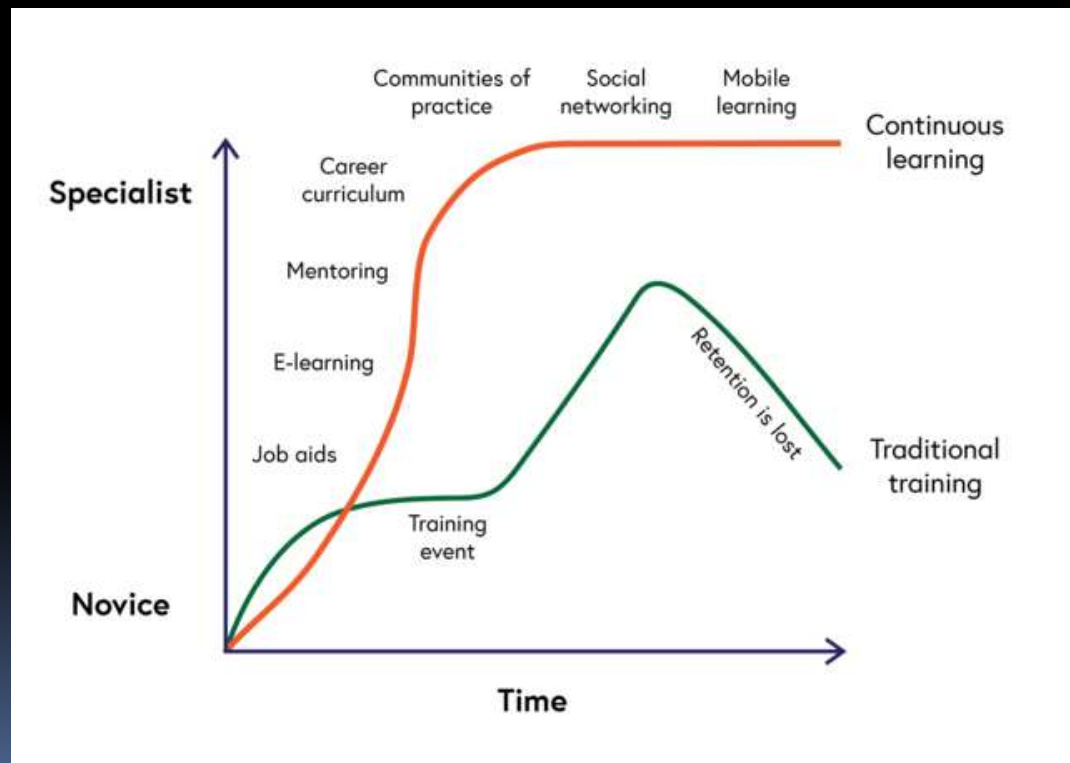


mentoring



networking

Effective learning is based on relationships



Northeastern University's

SAIL Framework: Foundational masteries



INTRAPERSONAL SKILLS

- Help-Seeking
- Independence/Autonomy
- Initiative
- Perseverance/Resiliency
- Resourcefulness
- Self-Efficacy/Confidence

INTERPERSONAL SKILLS

- Collaboration/Teamwork
- Communication
- Empathy
- Leadership

ATTRIBUTES

- Comfort with Ambiguity
- Humility
- Integrity
- Mindfulness
- Open-Mindedness

STRATEGIC TOOLKIT

- Creative Thinking/Innovation
- Critical Thinking
- Decision-Making
- Ethical Reasoning
- Inquiry & Analysis
- Problem Solving



Your key to capturing and expressing the skills you develop from all your experiences



Prediction #3

Algorithms and communities will
reduce the cost of education

Massive Transformative Purpose (MTP)



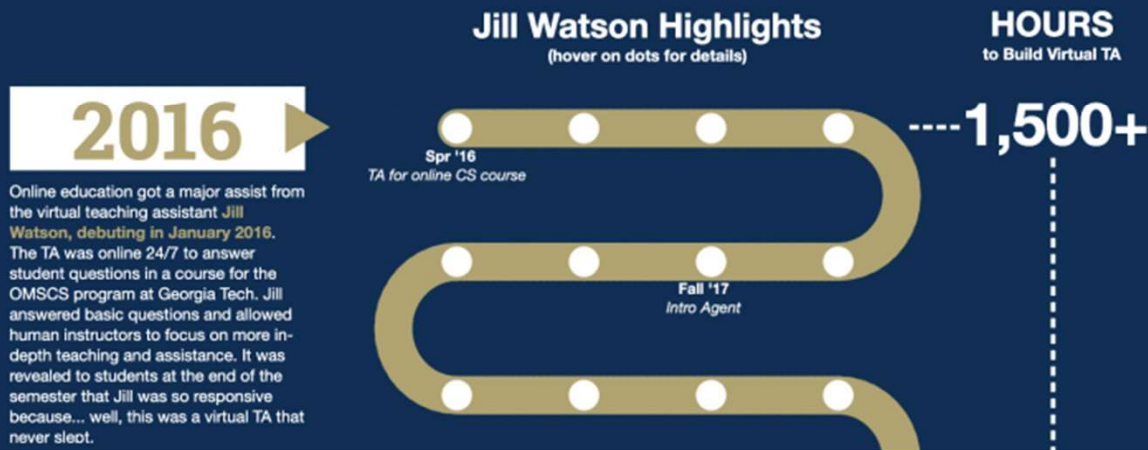
The World's First AI Teaching Assistant Turns 4



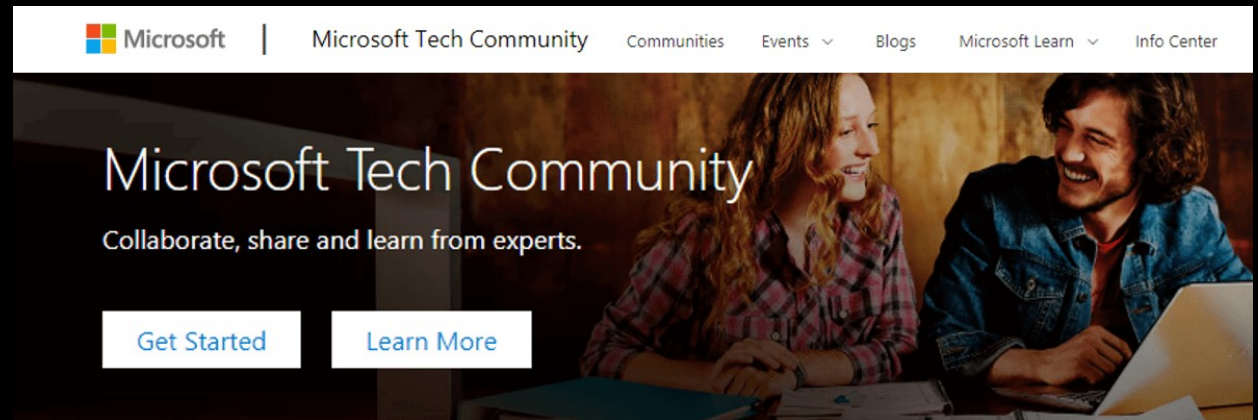
Friday, January 24, 2020

Georgia Tech's AI Revolution in Education

With the Jill Watson AI system at Georgia Tech turning four years old January 2020, the team behind the system – members of the Design & Intelligence Lab – have developed a new Jill Watson Teaching Assistant that can be customized by non-experts and teachers who want to create a virtual TA for their courses. This is a major step in scaling the AI system for any course – online or residential – without the need to code. *Learn more about milestones in the evolution of Jill Watson in the graphic below and contact the team to learn more: <http://dilab.gatech.edu/people/>*



The power of knowledge communities





**THE
QUESTROM
ONLINE MBA**

Mod Live!

Prediction #4

Faculty will become just one role
of a larger team



Roles needed for an online course

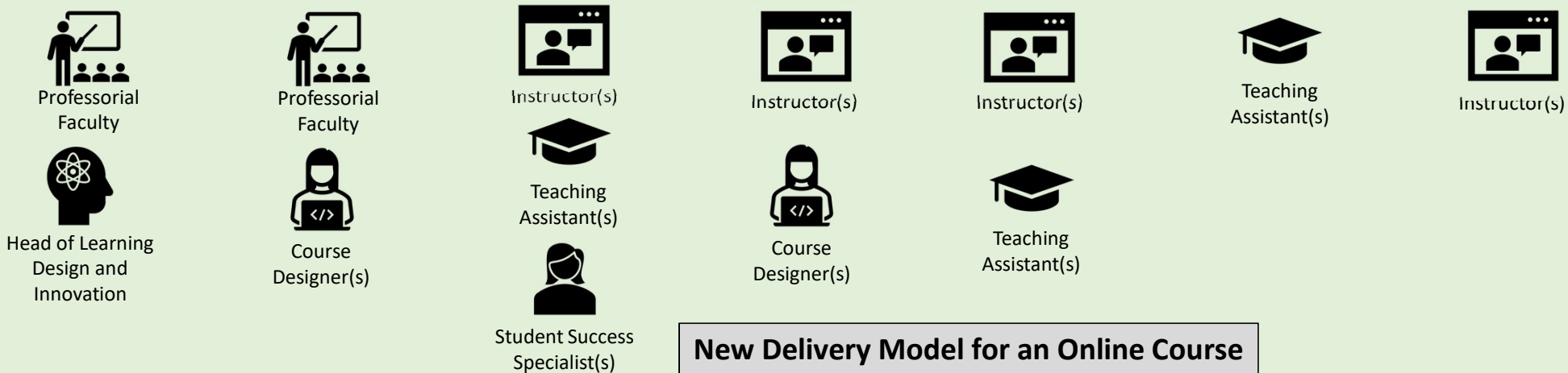
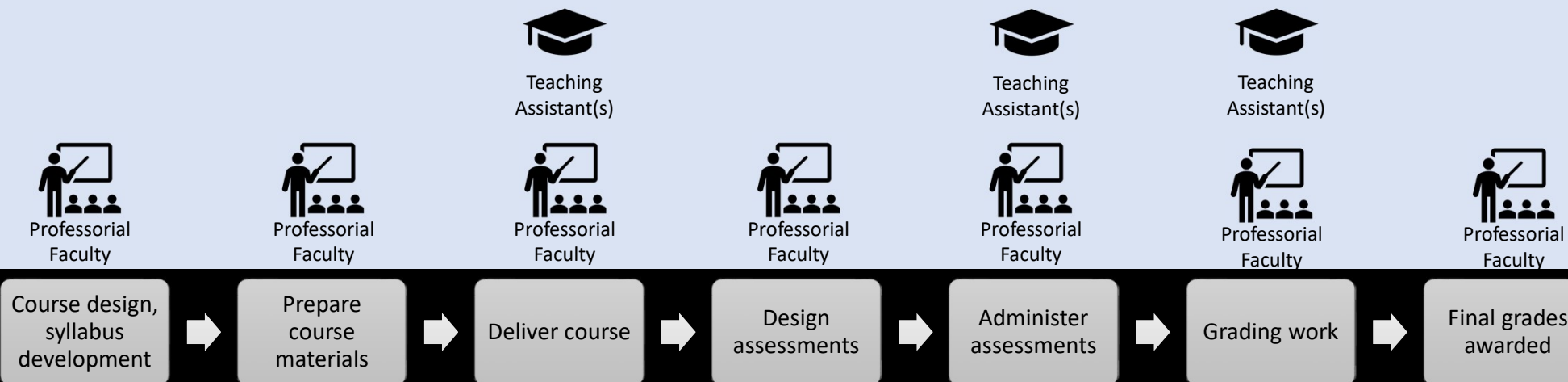


Traditional Role

New Roles



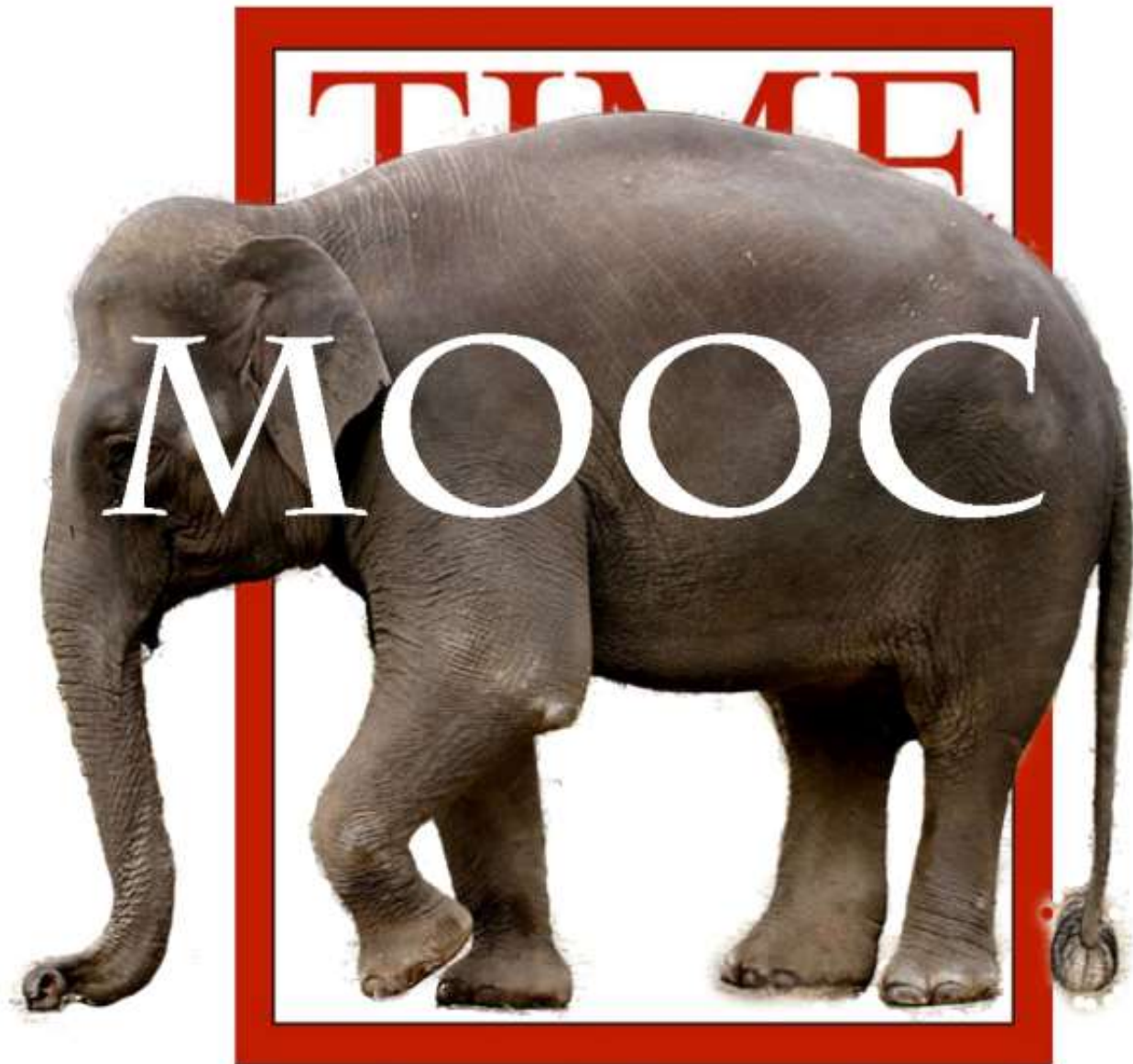
Traditional Course Delivery Model



New Delivery Model for an Online Course

Conjecture:

For innovation to truly take off, better
ways of assessing educational
outcomes must emerge







NEWS 04/08/2015 10:55 BST | **Updated** 07/08/2019 11:47 BST

Ernst & Young Removes University Degree Classification From Entry Criteria As There's 'No Evidence' It Equals Success

Education 2030: Four trends and one conjecture

1. Skills frameworks will become the common language that connects learners, employers and educators
2. The value of education will increasingly come from relationships, not content
3. Algorithms and communities will reduce the cost of education
4. Faculty will become just one role of a larger team

For innovation to truly take off, better ways of assessing actual learning must emerge

