How (the MOOC) and Other Online Innovations are Transforming Learning

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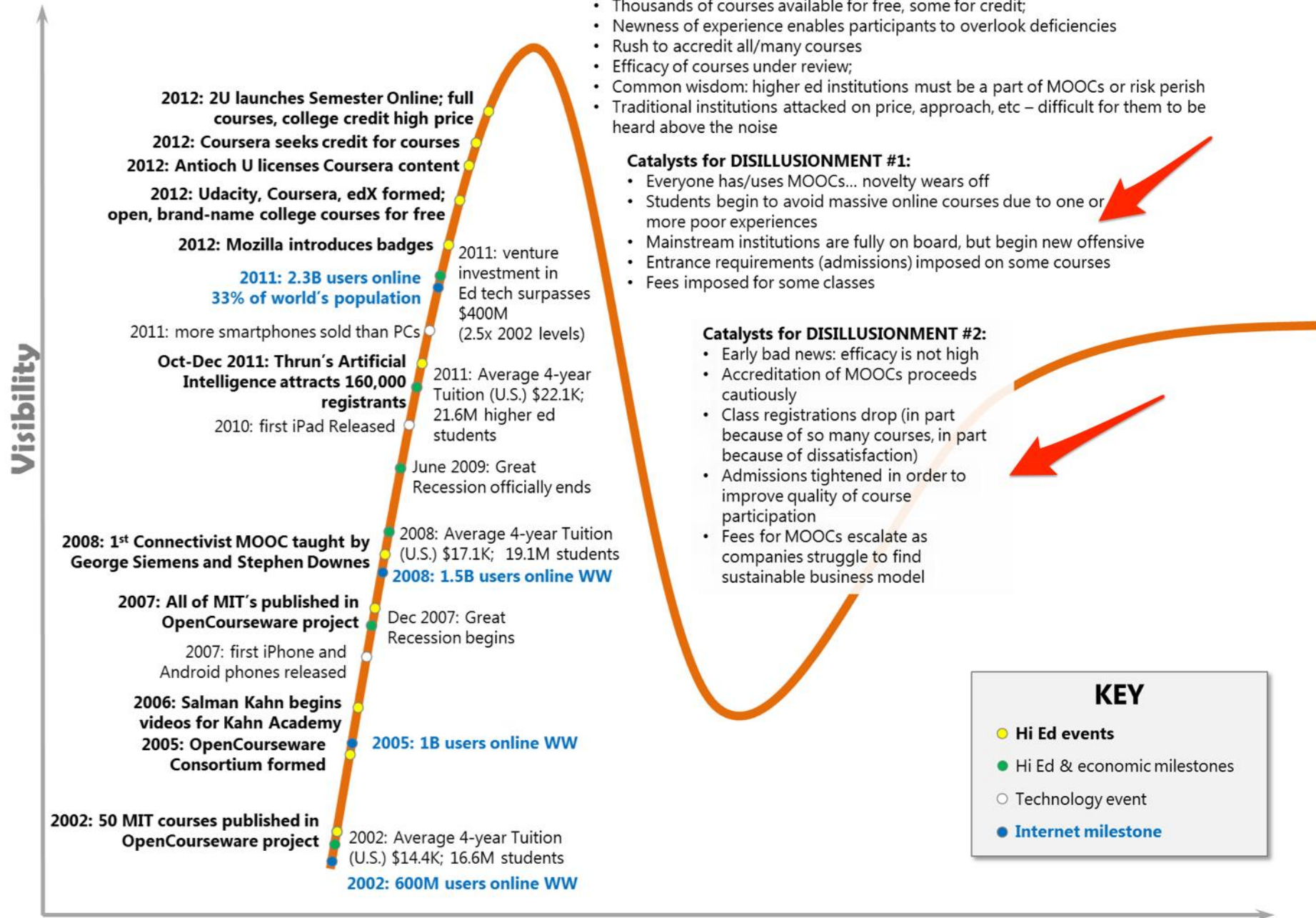
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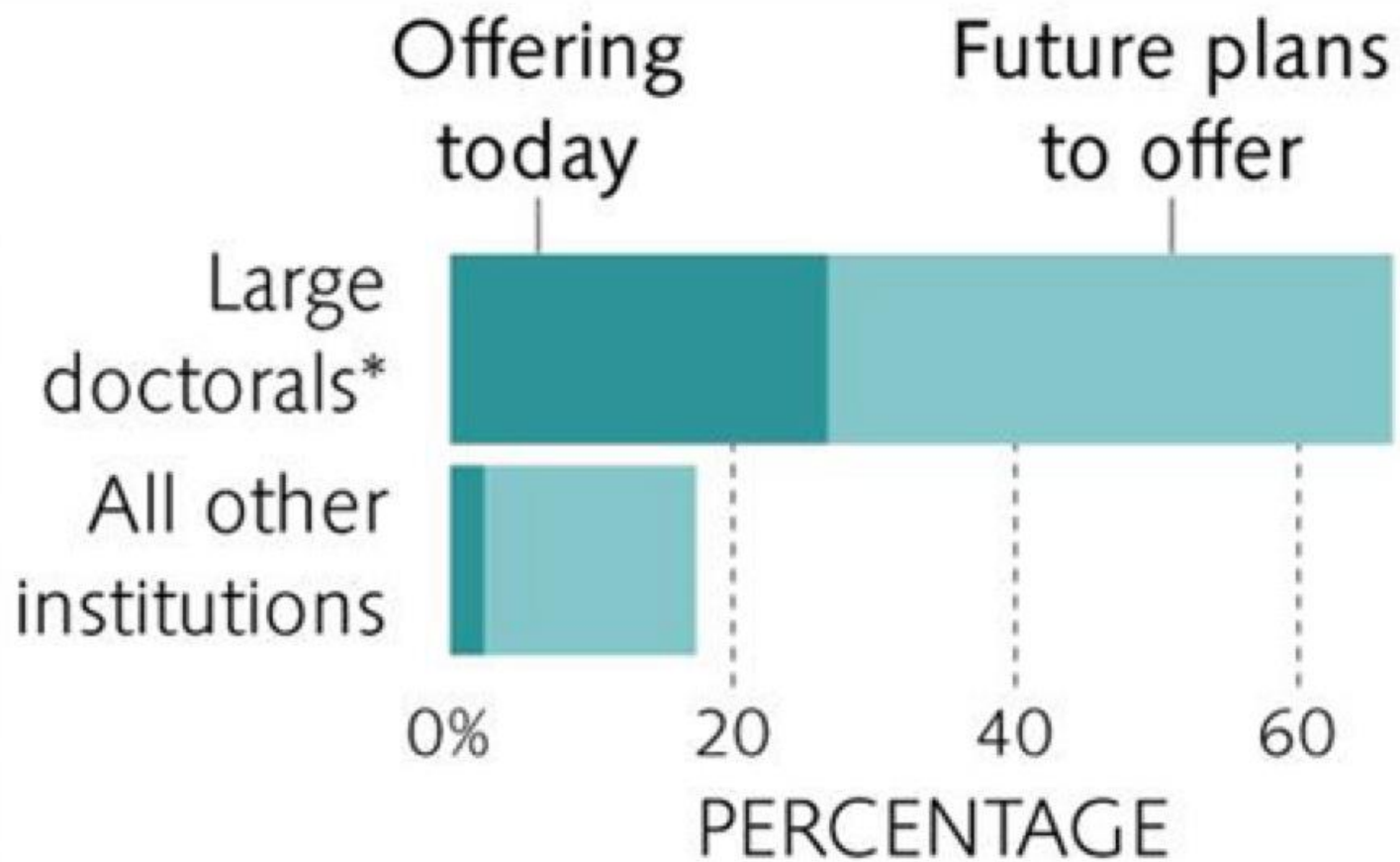
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EDUCAUSE

2014

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THE MOOC HYPE CYCLE – Nov 2012

Characteristics of PEAK of INFLATED EXPECTATIONS:
- Thousands of courses available for free, some for credit;
- Newness of experience enables participants to overlook deficiencies
- Rush to accredit all/many courses
- Efficacy of courses under review;
- Common wisdom: higher ed institutions must be a part of MOOCs or risk perish
- Traditional institutions attacked on price, approach, etc – difficult for them to be heard above the noise

Catalysts for DISILLUSIONMENT #1:
- Everyone has/uses MOOCs... novelty wears off
- Students begin to avoid massive online courses due to one or more poor experiences
- Mainstream institutions are fully on board, but begin new offensive
- Entrance requirements (admissions) imposed on some courses
- Fees imposed for some classes

Catalysts for DISILLUSIONMENT #2:
- Early bad news: efficacy is not high
- Accreditation of MOOCs proceeds cautiously
- Class registrations drop (in part because of so many courses, in part because of dissatisfaction)
- Admissions tightened in order to improve quality of course participation
- Fees for MOOCs escalate as companies struggle to find sustainable business model

Visibility (vertical axis)

Time (horizontal axis)

2012: 2U launches Semester Online; full courses, college credit high price

2012: Coursera seeks credit for courses

2012: Antioch U licenses Coursera content

2012: Udacity, Coursera, edX formed; open, brand-name college courses for free

2012: Mozilla introduces badges

2011: 2.3B users online 33% of world's population

2011: more smartphones sold than PCs

Oct-Dec 2011: Thrun's Artificial Intelligence attracts 160,000 registrants

2010: first iPad Released

2011: venture investment in Ed tech surpasses $400M (2.5x 2002 levels)

2011: Average 4-year Tuition (U.S.) $22.1K; 21.6M higher ed students

June 2009: Great Recession officially ends

2008: 1st Connectivist MOOC taught by George Siemens and Stephen Downes

2008: Average 4-year Tuition (U.S.) $17.1K; 19.1M students

2008: 1.5B users online WW

2007: All of MIT's published in OpenCourseware project

Dec 2007: Great Recession begins

2007: first iPhone and Android phones released

2006: Salman Kahn begins videos for Kahn Academy

2005: OpenCourseware Consortium formed

2005: 1B users online WW

2002: 50 MIT courses published in OpenCourseware project

2002: Average 4-year Tuition (U.S.) $14.4K; 16.6M students

2002: 600M users online WW

KEY
- ○ **Hi Ed events** (yellow)
- ● Hi Ed & economic milestones (green)
- ○ Technology event (white)
- ● **Internet milestone** (blue)

Figure 2. MOOC offerings and plans by institution type

NEW EXPERIENCES

EVOLUTIONARY
Inventing new experiences for current user base

REVOLUTIONARY
Inventing a new experience and tailoring it to the needs of a new audience

EXISTING EXPERIENCES

CORE
Better delivery of current experiences for current users

EVOLUTIONARY
Evolving a current experience for a new set of users

EXISTING USERS

NEW USERS

NEW EXPERIENCES

EVOLUTIONARY

Inventing new experiences for current user base

REVOLUTIONARY

Inventing a new experience and tailoring it to the needs of a new audience

MOOC: Increase agility and innovation in the other portfolio areas

EXISTING EXPERIENCES

CORE

Better delivery of current experiences for current users

EVOLUTIONARY

Evolving a current experience for a new set of users

EXISTING USERS

NEW USERS

HOW TO TAKE A MOOC AND GET COLLEGE CREDIT

START
CLASS — Complete massively open online course.
PROOF — Get noncredit certificate of completion.
PORT-FOLIO — Use course in prior learning portfolio.
ENROLL — Enroll in college with 3 prior learning credits.
PASS — Get credit recommendation from authorized group.
REVIEW — Academic expert decides MOOC is worth 3 credits.

Designed by Lauren Rouppas

Here's what it takes:

$125 per portfolio review
by one of our expert faculty

Here's what you receive:

3 credits for each portfolio
Each portfolio is matched to **one** college course.

To make sure you earn the maximum number of portfolio credits, enroll in one of our portfolio development courses.

- Our Instructor-Led course costs $895 and is completed with a small cohort in six weeks. Your passing grade in the course is worth 3 lower division credits, and the portfolio you complete during the class could also be worth 3 credits.

- Our Do-It-Yourself course costs $149, doesn't have an instructor, and can be completed at your own pace. This does not include any portfolio assessments. All portfolios must be purchased separately after completion of the course.

Ready to put your knowledge to work? Enroll in a portfolio development course today!

WAYS TO TAKE THIS EDX COURSE:

Simply Audit this Course

Audit this course for free and have complete access to all of the course material, tests, and the online discussion forum. You decide what and how much you want to do.

Free to All   More about Auditing a Course

or

Available Now and for a limited time

VERIFIED

Pursue a Verified Certificate of Achievement

Plan to use your completed coursework for job applications, promotions or school applications? Then you may prefer to work towards a verified Certificate of Achievement to document your accomplishment.

Minimum fee required. see details   What is an ID verified Certificate of Achievement?

Verified Certificates of Achievement

edX | UniversityX Logo

VERIFIED CERTIFICATE
Issued: September 15th, 2013

This is to certify that

Jean Z. Rodriguez

successfully completed

S101x: Sample Course

a course of study offered by **edX**, an online learning
initiative of **UniversityX** through **edX**.

UniversityX Faculty Name
Associate Professor
UniversityX

UniversityX Faculty Name
Assistant Professor
UniversityX

View a Sample

EARN YOUR EDX VERIFIED CERTIFICATE AND SHARE IT WITH THE WORLD

Sometimes you want to take and pass a course just for the sheer joy of learning something new. But sometimes you need to complete a course to get a better job, or a promotion, or to include in a college application.

EdX has launched a Verified Certificate of Achievement to help you with this. Employers and schools sometimes want proof of what you have achieved in an online course; a Verified Certificate of Achievement provides that proof.

Get Started & Browse Courses

Build skills and your career

Impress your employer with a Verified Certificate of Achievement that documents your learning.

Challenge yourself

Sometimes we all need that extra push. Working towards a certificate keeps you motivated.

Share it with the world

Share your verified certificate

Pearson Partners with Texas A&M University-Commerce and South Texas College on Competency-Based Learning Degree

Competency Report

Liberal arts *Major*
Small Business Administration *Minor*

WHAT ARE COMPETENCIES?

Each bold title listed below is a **Competency** – a skill or conceptual understanding demonstrated by all graduates of NAU Personalized Learning. To earn his or her degree, this student demonstrated proficiency in all competencies listed here through analysis or application of the subject matter described. Competencies are intentionally cross-disciplinary, and consistently reinforce how students can apply multiple approaches to solving real-world problems.

WHAT IS MASTERY?

After taking each lesson, a student may optionally attempt to show **Mastery** by demonstrating high-level comprehension of the material. Mastery demands more complex application of the subject matter through an additional test, presentation, paper, case study, or other form of assessment. By choosing to attempt and successfully complete a mastery assignment, the student has demonstrated personal initiative and knowledge relevant to their career and personal development. You can see which competencies contain mastered lessons in the column at left.

COMPETENCY REPORT KEY:

Competency
Student has demonstrated competency in this area.

4
Lessons Mastered
(6 available)

Partial Mastery
Student has put in additional work to master some lessons within this area.

4
Lessons Mastered
(4 available)

Full Mastery
Student has gone above and beyond, mastering every Lesson within this area.

Analyze complicated materials

2
Lessons Mastered
(5 available)

Analyze paintings and literature along with major themes in Marx, Spencer, Durkheim, and Simmel. Evaluate the differences between cognition and perception and analyze theories of human nature. Discuss emerging narrative and ideological components of postwar film and world literature. Demonstrate an understanding and knowledge of Film Noir, "Nations at War in the Middle East" and of the Cold War and its aftermath.

Write about culture effectively

✓

Write a summary of a major position in Social Psychology, a clear analysis of victimization, and a position paper based on an argument.

Compose academic essays in various rhetorical styles

2
Lessons Mastered
(2 available)

Write a summary of a major position in Weber, Veblen, Cooley, and Mead and a research proposal and paper in a liberal arts discipline with an annotated bibliography.

Demonstrate knowledge of potential and limitations of technology's advances

1
Lesson Mastered
(1 available)

Demonstrate understanding of impacts of technology on institutions and humanity. Discuss impact of technology on facets of psychology and Sociology, the perpetuation of stereotypes through technology and possible changes in human nature and ethics due to technology.

Practice an examined or self-reflective life

2
Lesson Mastered
(2 available)

Discuss a personal statement of the importance of literature, film, and art in understanding human nature; also discuss a personal statement about film's impact in understanding culture. Journal about the meaning of life, explore connections between religion and art and explore connections between history and art/literature.

Describe ethical theories

2
Lessons Mastered
(2 available)

Use a social theorist to describe "ethics" and "morality" in multiple applications and analyze moral conflicts.

Apply ethical theories to education

1
Lesson Mastered
(2 available)

Explain the ethical and moral arguments for desegregation and for technology in education.

Formulate and substantiate theses

3
Lessons Mastered
(3 available)

Formulate hypotheses about literary and social theories. Apply theories of intercultural communication identifying places of success and failure.

Formulate and test hypotheses in humanities and social science

4
Lessons Mastered
(6 available)

Formulate and test hypotheses in humanities and in social science and formulate a theory about political events.

Demonstrate knowledge of leadership in the working of organizations

✓

Describe diverse types of organizations and distinguish between them.

Where is transformation occurring?

Personalized/Adaptive Learning
Credentialing
Data Informed Education

- Promotion of personalization, engagement, and efficiency in learning through the development of new instructional delivery models that make creative use of content and
- Use of learner analytics to support quality, affordability, and continuous improvement in instructional programs
- Tools, such as service blueprinting, that can help us to serve students through our innovations
- Use of instructional technologies and platforms that support competency-based learning, adaptive learning, and other customized learning approaches

http://www.educause.edu/ELI139/Program

Personalized Learning @ ASU

http://www.educause.edu/events/eli-online-fall-focus-session-2013-2/2013/personalized-learning-using-continuously-adaptive-technology

Objectives

- Improve student critical reasoning and subject mastery
- Increase student retention
- Increase student satisfaction
- Improve instructor insight and performance

students failing intro math courses at alarming rates:

- 28% college mathematics
- 44% enhanced freshman mathematics
- 48% college algebra

2011: complete redesign using adaptive/active learning approach with Knewton and Pearson

- 20% college mathematics
- 22% enhanced freshman mathematics
- 38% college algebra

college algebra is a key foundational course

Students who earned <u>below a C</u> have a:	Students who earned <u>a C or better</u> in have a:
57% retention rate in year one.	85% retention rate in year one.
42% in year two.	75% in year two.
31% six-year graduation rate.	64% six-year graduation rate.

Student

Adaptive Systems

Syllabus
Library
Activities
Assessments

Tracking Systems

Progress
Gradebook
Assistance
Materials Use/ Value

Grouping Systems

Mastery
Demographic
Degree/Major
Learning Style

Instructor

Pedagogy

mastery of each concept rather than passing a test

- to advance, students must master 100% of all concepts at a certain proficiency level

- no longer is it possible to pass the course with holes in one's knowledge – the "Swiss cheese approach"

supportive learning environment

- both individualized and interactive learning activities are provided

- applied exercises are emphasized to improve critical reasoning skills

Pedagogy

flexible pacing

- students can accelerate their progress through the material

continuous monitoring

- at all times, both the student and instructor know exactly what the student has mastered

Learning analytics implementation

1. We're doing it!
2. We're ready
3. We need a little planning, but we are basically ready
4. We've talked about learning analytics, but made no plans
5. We are not ready

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LA Readiness Factors

1. Ability
2. Data
3. Culture and Process
4. Governance and Infrastructure
5. Overall Readiness Perception

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2012 ECAR STUDY OF ANALYTICS IN HIGHER EDUCATION

ECAR RESEARCH HUB

Author: Jacqueline Bichsel

Published: June 22, 2012

Analytics in Higher Education: Benefits, Barriers, Progress, and Recommendations
The objectives of this research were to assess the current state of analytics in higher education, outline the challenges and barriers to using analytics, and develop a maturity index to provide a common means of assessing progress in analytics.

A Collaboration Between:

EDUCAUSE

AiR
Association for
Institutional Research

REPORT AND SUPPORTING MATERIALS

Report

Infographic

Slide
Presentation
PPTX

Data Tables

Maturity Index

Survey
Instrument

2012 ECAR Study of Analytics in Higher Education is publicly accessible thanks to generous support from **The Bill & Melinda Gates Foundation**.

http://www.educause.edu/library/resources/2012-ecar-study-analytics-higher-education

Introduction

The Analytics Maturity Index was formulated as a general assessment of progress in analytics. You may find that the scores along the six dimensions (Data/Reporting/Tools, Governance/Infrastructure, Investment, Expertise, Culture, and Process) will differ depending on the department or area of analytics (e.g., learning analytics, academic analytics, business analytics) you are assessing.

We encourage you to take the assessment more than once if you need to assess progress in more than one area. We also encourage more than one person from your institution to take the assessment. We hope you will use the results as a tool to open a dialogue at your institution to consider the next steps that are needed to progress to the next level of analytics.

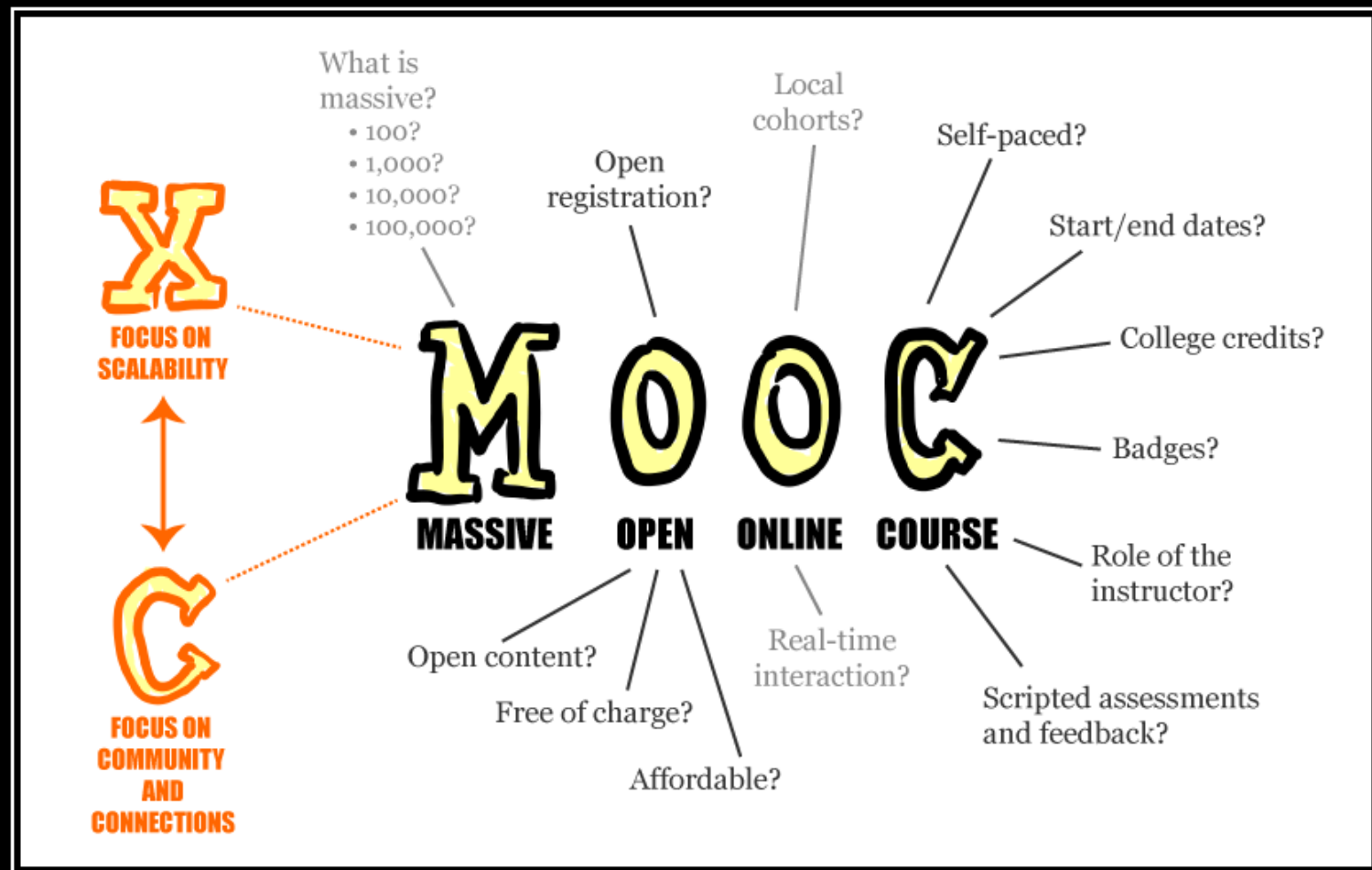Click here to preview the assessment before beginning.

Next

https://www.surveygizmo.com/s3/1020013/Analytics-Maturity-Index

ECAR Analytics Maturity Index
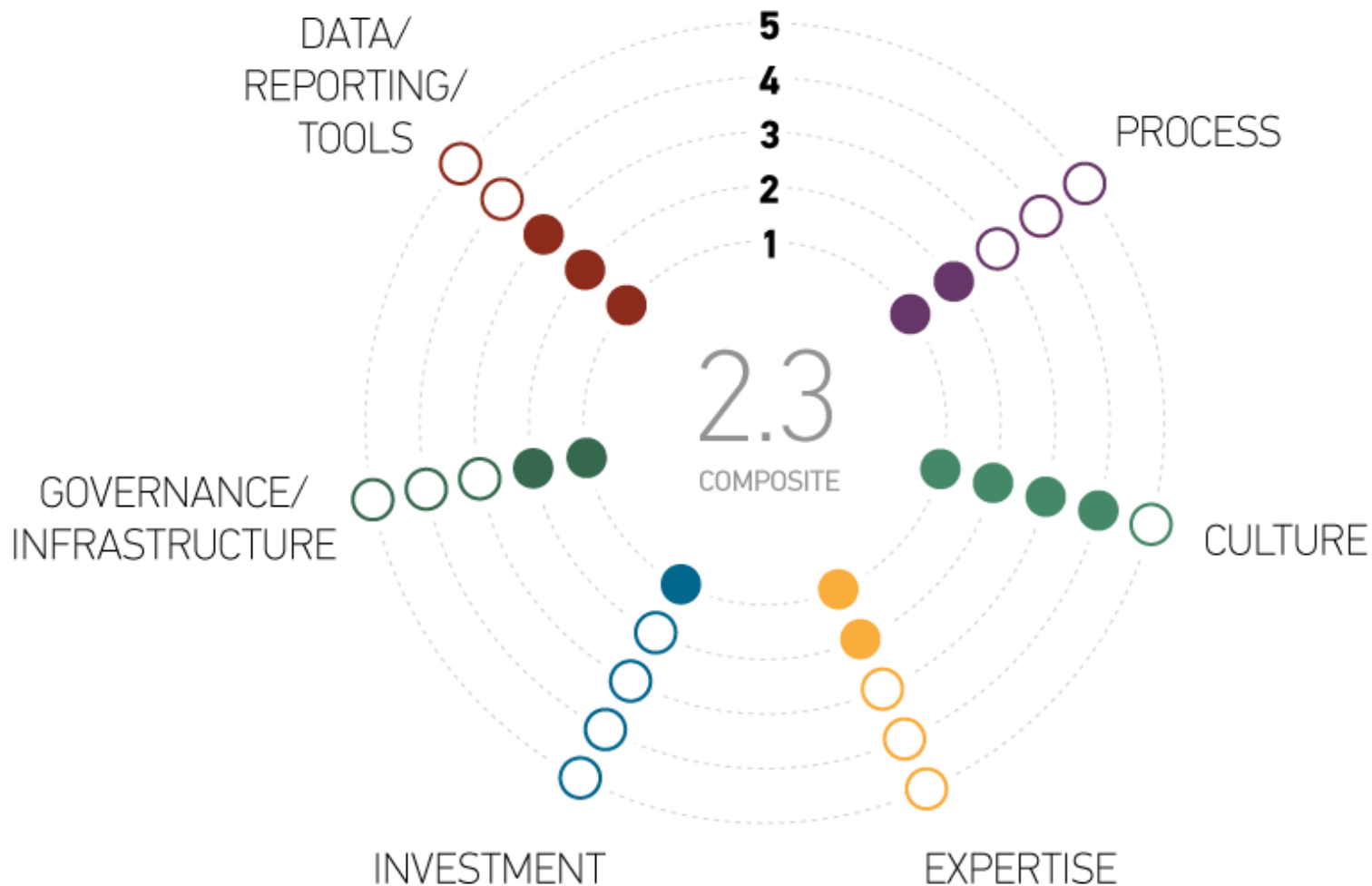
What Is In Place for Analytics
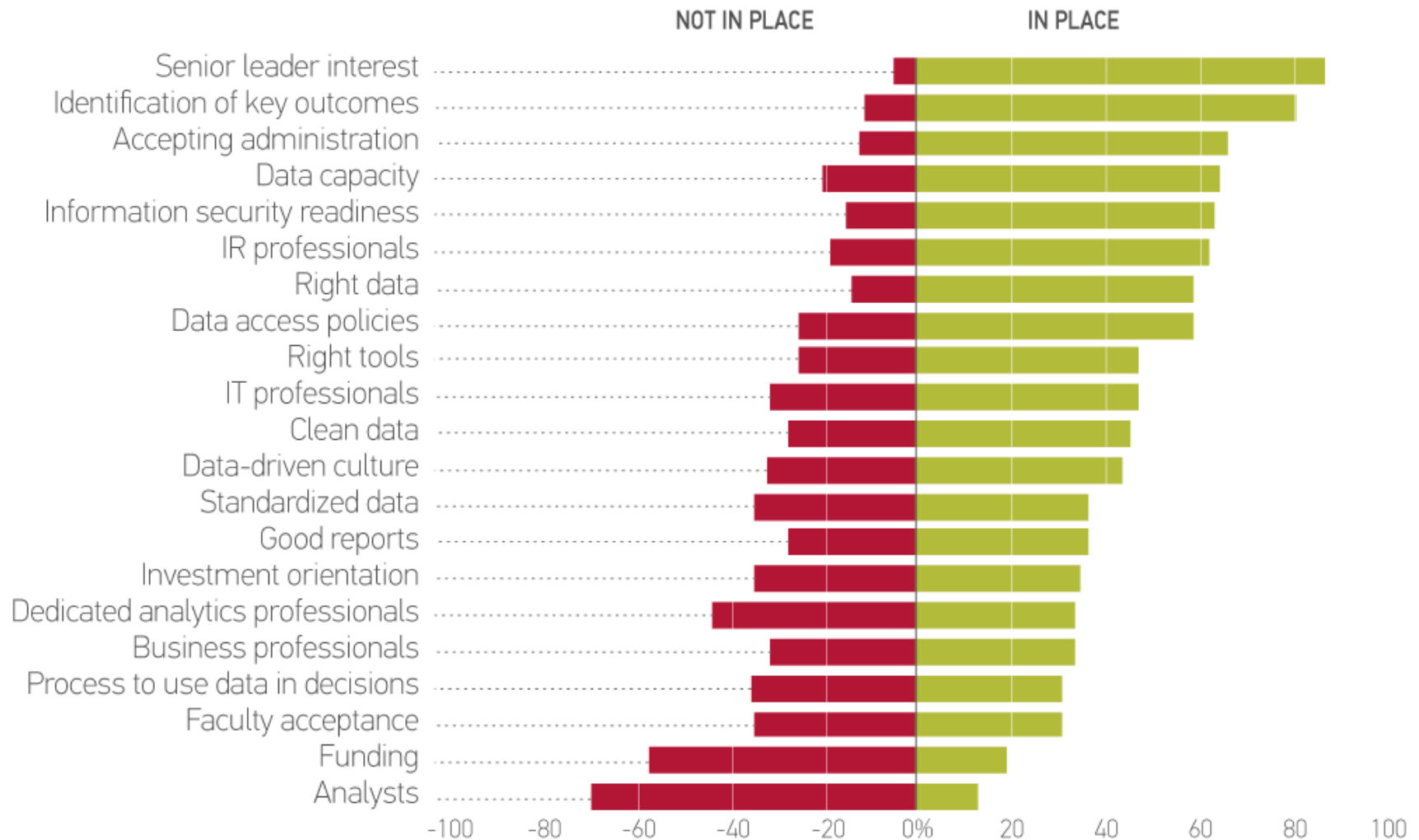
What's next for the MOOC?

SMOC

Synchronous Massive Online Class

(somewhere between a MOOC, a late-night television show, and a real-time research experiment)

SPOC

small private online course

EDUCATION

The anti-MOOC? Small costly online courses

Students pass under the campus archways at Duke University in Durham, North Carolina.

mooc.org

mooc.org is an edX destination. We're working to help educational institutions, businesses and teachers easily build and host courses for the world to take.

mooc.org goes live in the first half of 2014. Are you interested in creating or hosting courses on mooc.org? Complete one of the three forms below and let us know how mooc.org fits into your plans. We'll be in touch as we get closer to launch.

Educational Institutions	Businesses and Non Profits	Instructors and Course Authors

Are you looking to take an online course now? While you wait for mooc.org, explore over 65 courses at edX.org.

Easily create quality courses using best practices, instructions, and course creation tools tested and improved on edX.org.

Tailor the learner environment for your students through full control of your content and the overall learner experience.

Frequent platform improvements driven by the Open edX community allow institutions to deploy latest tools and interactivity.

Manage your brand to deeply connect with your students using tools developed by the Open edX platform community.

Open source authoring tools ensure course creators can incorporate the latest 3rd party interactive learning features.

Platform hosting services for Open edX can be configured for institutions or others interested in teaching online. Interested? Contact edX.

MOOC RESEARCH

Home
Get Started!

Research Initiative
Submit Your Project

Conference
MOOCs in Action

Evidence Hub
Resources

Blog
Posts...

Contact Us
Email Us

Welcome to the MOOCResearch Hub

The dramatic increase in online education, particularly Massive Open Online Courses (MOOCs), presents researchers, academics, administrators, learners, and policy makers with a range of questions as to the effectiveness of this format of teaching and learning. To date, the impact of MOOCs has been largely disseminated through press releases and university reports. The peer-reviewed research on MOOCs has been minimal. The proliferation of MOOCs in higher education requires a concerted and urgent research agenda.

The MOOC Research Initiative (MRI) will begin to address this research gap by evaluating MOOCs and how they impact teaching, learning, and education in general.

This project is funded by the Bill & Melinda Gates Foundation.

BILL & MELINDA GATES *foundation*

Research Initiative

MOOC Research Initiative (MRI) is funded by the Bill & Melinda Gates Foundation as part of a set of investments intended to explore the potential of MOOCs to extend access to postsecondary credentials through more personalized, more affordable pathways.

Join Our Evidence Hub

Evidence hub will include research papers and research reports relating to open online learning and open online courses. This resource will be available by September 30, 2013

MOOC Conference

The MOOC Research Conference, December 5-6, 2013, will be held at University of Texas, Arlington. Details on program and keynote addresses will be posted by September 15, 2013.

People Involved

To support the MOOC Research Initiative Grants, the following Steering Committee has been established to provide guidance and direction.

http://www.moocresearch.com

Student experiences and outcomes

- How can MOOCs help students succeed in remedial and introductory coursework?
- What are the challenges, issues, and barriers to engaging less academically prepared and less self-motivated students in MOOC coursework? What are promising approaches?
- Can MOOCs effectively customize/personalize the learning experience for students?
- For which students, disciplines, types of learning and contexts are MOOCs more/less effective?
- What perceptions about MOOCs exist among students, faculty, administrators, and state/regulatory leaders? How do these perceptions influence current and future opportunities for MOOCs to serve the higher education community and, in particular, low-income and disadvantaged young adult populations?

Learning Design

- How can MOOCs improve other types of instruction, including blended learning, face to face and online instructional experiences for academically weak students?
- What additional supports effectively help students and faculty succeed in MOOCs? What MOOC features support social and emotional factors for students?
- Are some MOOC platforms more successful with academically less advanced students than others?
- What MOOC models exist; which design components drive impact for non-self-directed learners and what additional wrap-around supports need to be added to online or blended approaches?
- What institutional, pedagogical, learning design, technological, and business models are currently employed and which have the most potential to have a positive effect for our learner population?

Cost, Performance Metrics and Learner Analytics

- What data captured from MOOCs are most informative, and how might such data be accessed and used for the advancement of learning?
- What are the costs associated with the development, maintenance, instruction, and other MOOC operations?
- What business models have are most effective for different types of institutions and MOOC platform providers?
- Is there a realistic business model for MOOCs focused on remedial and introductory coursework?
- What are appropriate metrics to assess the success of students in MOOC delivered introductory coursework?
- How do MOOC dropout rates compare with other models of education (including, distance education, online learning, blended learning, and in-classroom learning)? What accounts for differences and what is the impact of those variances on learner motivation and success?

Corporate MOOCs

Small MOOC Changes (technologically)

MOOCs go Global

More personalized and adaptive learning

"credentials remain the last economic value point of higher education"

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Inventing new experiences for current user base

REVOLUTIONARY

MOOC: Increase agility and innovation

EXISTING EXPERIENCES

CORE

Better delivery of current experiences for current users

EVOLUTIONARY

Evolving a current experience for a new set of users

EXISTING USERS   **NEW USERS**

ELI Online Spring Focus Session

Learning and the MOOC

. . . . .

http://tinyurl.com/elimooc

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