



Changing and Becoming

George Siemens
February 16, 2015
Association of International Education Administrators
Washington, DC



We are in a chameleonesque era, able to change but not able to become.

Jean Baudrillard, 2002

Outline of presentation

Changing: Five trends

Becoming: Five values to preserve

We are presented with a once in
(several) generation opportunity to
remake and rethink education

What we do here will reverberate far into the
future

Changing
Becoming

Five Trends

1. Digitization

Digital: Connected

To understand what tomorrow's education system will look like, we have to understand the **architecture of information** today:

how is it created

how is it shared

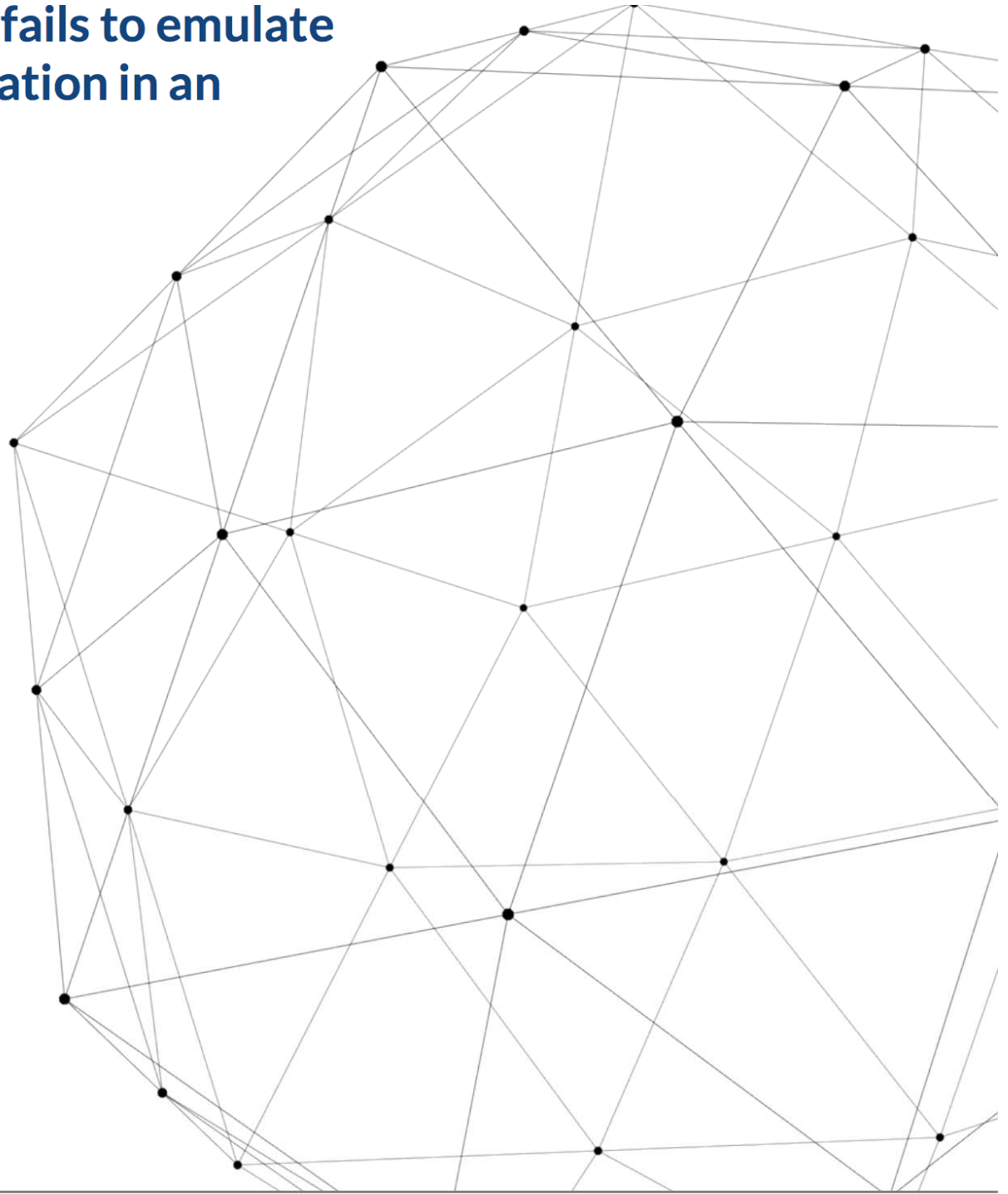
how is it iterated

how is it controlled?

An education system that fails to emulate the characteristics information in an era is doomed to fail.

Information Today Is:

- + Open
- + Distributed
- + Scalable
- + Social
- + Generative
- + Networked
- + Self-organized
- + Adaptive
- + Global



Making the world's knowledge
relatable

Knowledge development, learning, is (should be) concerned with **learners understanding relationships**, not simply memorizing facts.

i.e. naming nodes is “low level” knowledge activity, understanding node connectivity, and implications of changes in network structure, consists of deeper, coherent, learning

Knowledge in pieces

diSessa, 1993

Digital: Complex

What we are seeing is the complexification of higher education

Learning needs are complex, ongoing

Simple singular narrative won't suffice going
forward

The **idea of the university** is expanding and
diversifying

Digital: Open



TEXT ONLY

 Search

- Welcome
- Academics
- Workforce Solutions
- New Students
- Current Students
- Faculty and Staff
- Donors
- Community

Locations Jobs @ TCC Library Connections >>>

- Bb
- Email
- SIS
- LRC

News @ TCC

- News**
- > Announcements
 - > Go Anywhere
 - > Faces of TCC

NEWS RELEASES @ TCC

TIDEWATER COMMUNITY COLLEGE PARTNERS WITH LUMEN LEARNING TO OFFER TEXTBOOK-FREE DEGREE

HAMPTON ROADS, Va. (March 14, 2013) — Tidewater Community College will launch a pilot project this fall aimed at easing the pain of soaring textbook costs for college students.

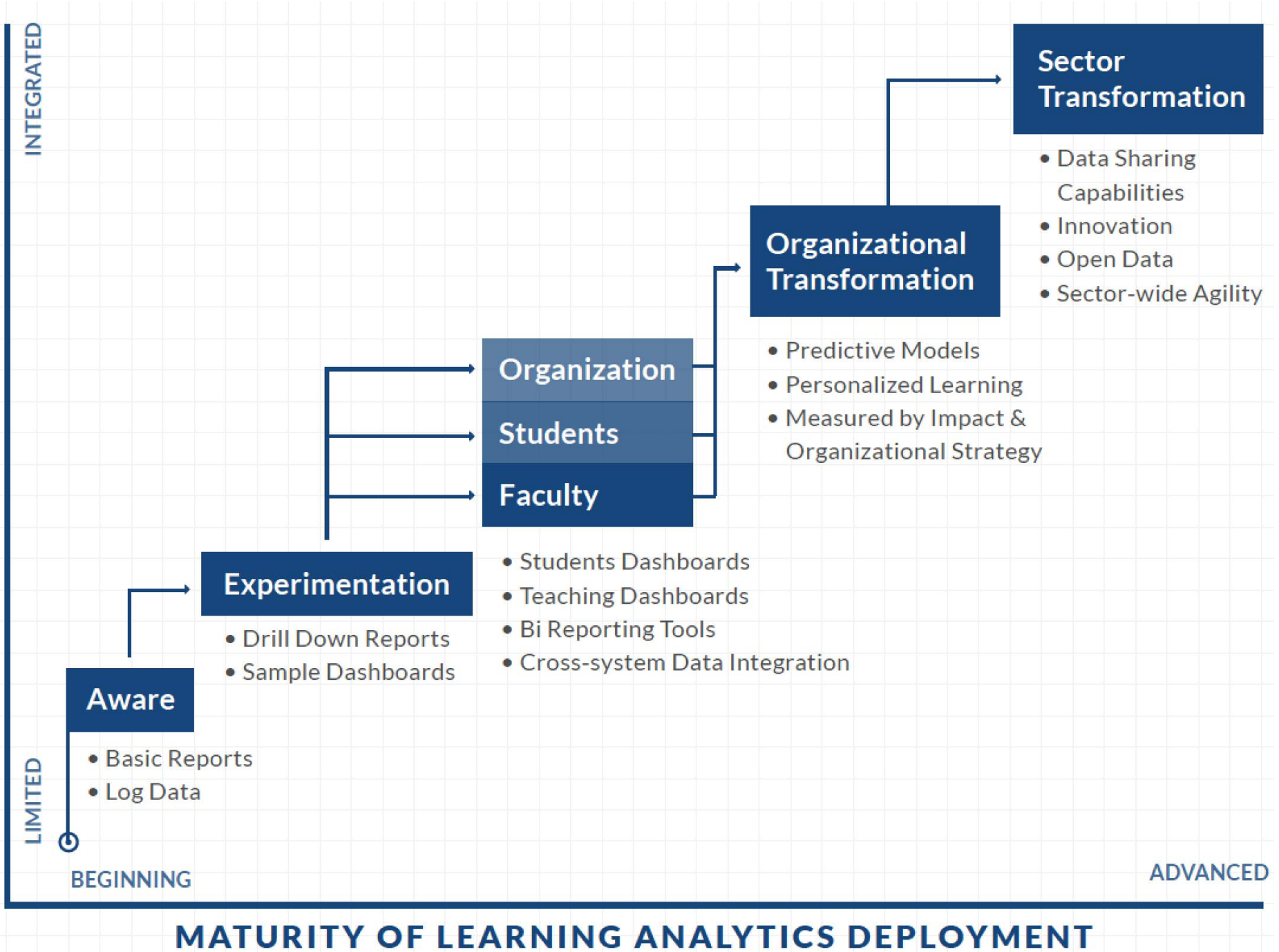
Partnering with Lumen Learning, a Portland, Ore.-based company that helps educational institutions integrate open

Digital: Data

“The world is one big data problem”

Gilad Elbaz

TEAM/ORGANIZATIONAL IMPACT



What will LA do for education

Add a new research layer

Personalization

Optimization (move from negative orientation)

Organizational insight

Improved decision making

New models of learning

Increase competitiveness

Improve marketing/promotion/recruitment

“a team at Google couldn’t decide between two blues, so they’re testing 41 shades between each blue to see which one performs better”

Douglas Bowman

Five Trends

2. Integrated system to ecosystem

Control of university:
decline of end-to-end integrated
system

Ed-tech startups

With transformations already underway in news, music, videos/movies, **startup gold rush** now turning focus to education



LearnLaunch



UNIVERSITY NOW



CENGAGE Learning

parchment™
credentials unleashed



AltiusEd

edmodo

Social Networking for Education



KNEWTON

2U

ASU ARIZONA STATE UNIVERSITY / GSV

Knowledge	Market Size (2012)	Market Size (2015)	2012-17 Growth (CAGR)	Market Size (2017)
Global Market Size				
Global Education Expenditure	\$4,450.9 B	\$5,508.7 B	7%	\$6,372.5 B
K-12	\$2,227.0 B	\$2,625.6 B	6%	\$2,930.3 B
Postsecondary	\$1,495.2 B	\$1,883.5 B	8%	\$2,196.9 B
Corporate & Govt. Learning	\$356.6 B	\$449.3 B	8%	\$524.0 B
eLearning	\$90.9 B	\$166.5 B	23%	\$255.5 B
K-12 eLearning	\$16.6 B	\$39.0 B	33%	\$69.0 B
Higher Ed eLearning	\$48.8 B	\$95.4 B	25%	\$149.0 B
Corporate eLearning	\$25.5 B	\$32.1 B	8%	\$37.5 B
For-Profit Postsecondary	\$96.1 B	\$146.1 B	15%	\$193.2 B

Five Trends

3. New learner profiles

Enrolment: “perfect storm of challenges ahead”

University Business, January 2015



January 08, 2015, 09:00 am

Higher education must change to reflect shifting student demographics

By [Jamie P. Merisotis](#)



The profile of today's college-going population looks much different than it did decades ago, when the average student was a fresh-faced 18-year-old moving directly from high school to campus. Students today are older, more experienced in work, and more socioeconomically and racially diverse than their peers of decades past.

Student profiles

Diversifying

(OECD)

Less than 50% now full time

(US Census Bureau)

<http://www.oecd.org/edu/skills-beyond-school/EDIF%202013--N%C2%B015.pdf>

<http://www.census.gov/prod/2013pubs/acsbr11-14.pdf>

Favours women over men

More learners as % (up to 60%)

Average entrance age increasing

Top three countries for entering students:

China, India, USA

Traditional science courses waning in popularity

Greater international student

OECD 2013



ONLINE EDUCATION

The average undergrad getting an online degree is older

MARLENE HABIB

Special to The Globe and Mail

Published Tuesday, Nov. 18 2014, 5:00 AM EST

Last updated Tuesday, Nov. 18 2014, 11:48 AM EST

Comments

AA

As Jason Nixon watches his twin seven-year-olds kick their way through karate class, the dad, husband, politician and champion for the homeless can often be seen booting up his computer – to work toward earning his bachelor of commerce degree through Alberta’s Athabasca University.

At 34, Mr. Nixon possesses many of the traits of the typical Canadian taking an undergrad program online – he’s older than the average early-20s student attending university in person, has been working for years, and has a growing family.



**Regional challenges:
North America**

Income inequality:

“The defining challenge of our time”

Five Trends

4. Alternative credentialing

The New York Times

Colleges Reinvent Classes to Keep More Students in Science

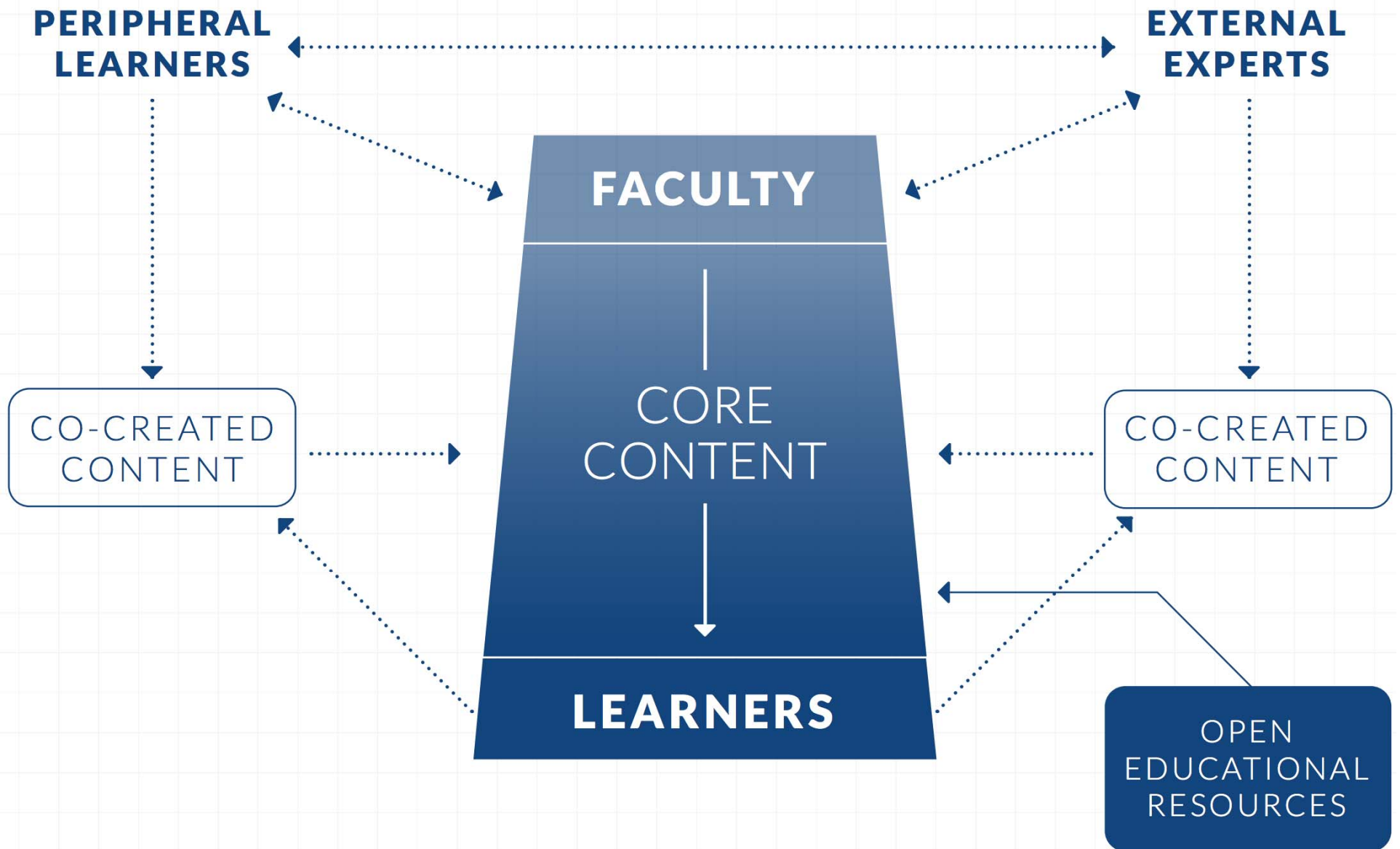
By RICHARD PÉREZ-PEÑA DEC. 26, 2014



FACULTY

—
**CORE
CONTENT**

↓
LEARNER



Parallel developing partners: Adaptive and personalized learning

Platform	Publisher
Knewton	Pearson
Smart Sparrow	McGraw-Hill
Desire2Learn	adaptcourseware
LoudCloud	CMU OLI

Granularization of assessment

Cracking the credit hour

(New America Foundation)

Badges

(Mozilla & others)

http://newamerica.net/publications/policy/cracking_the_credit_hour

<http://openbadges.org/>

Certificates

Fastest growing form of credentialing (800% increase in 30 years)

Industry-facing

Carnevale, Rose, Hanson 2012

Competencies

Competency-based degrees

(Chronicle, 2014)

Prior learning assessment

(Insider Higher Ed, 2012)

<http://chronicle.com/article/Competency-Based-Degrees-/144769/>

<http://www.insidehighered.com/news/2012/05/07/prior-learning-assessment-catches-quietly>

Five Trends

5. University relationship to society

International/global focus

Credit harmonization

Learner mobility

Global competition

International brand development

Shifts on learning views

Skills gap

Life long learning

Learning to get a job

Personal learning (for the joy of it)

Becoming
Changing

The best time to change is when
things are already changing

Five Values to Preserve

1. Human factor

Student experience

At all levels: preparation, entrance, career

(Spanier, 2010)

Five Values to Preserve

2. Regional economic/work/life impact

Could a Private University Have Made a Difference in Detroit?

Pittsburgh has Carnegie Mellon. In Cleveland, there's Case Western Reserve. What if there had been, say, a Henry Ford University in Detroit?

JUSTIN POPE | JUL 27 2013, 9:09 AM ET

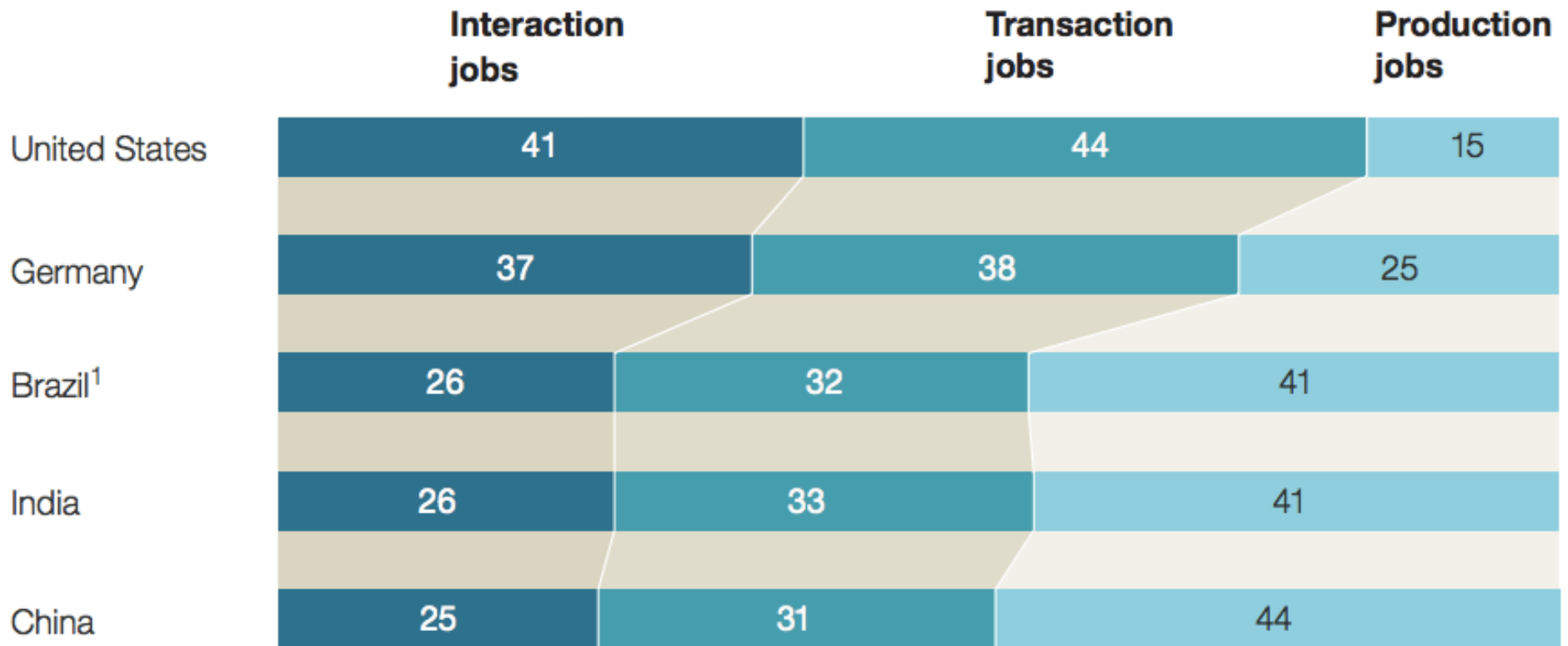


Rebecca Cook/Reuters

Detroit's bankruptcy filing last week and the decades of decline that preceded it have been a predictable political and historical Rorschach test. The right blames the city's demise on moral failures and weak character -- the [banana-republic-caliber corruption](#) and fiscal fecklessness of its politicians, the [greed of its unions](#), the spinelessness of automobile executives who gave into them. To the

Interaction-based work represents a significant proportion of jobs in developed and emerging markets alike.

% of workforce



¹Figures do not sum to 100%, because of rounding.

The Death Of Knowledge Work And The Rise Of 'Learning Workers'

[+ Comment Now](#) [+ Follow Comments](#)

During the past few decades we have spent a lot of time talking about knowledge workers and knowledge work. However today knowledge is nothing more than a commodity and to be the smartest guy in the room all you need access to is a smartphone. This is especially true when we consider that more “smart

Local Identity

A public place in service of society and the local economy

A new model of economic development

Building the economy of the future

Shaffer & Wright, 2010

Five Values to Preserve

3. Creating a better society

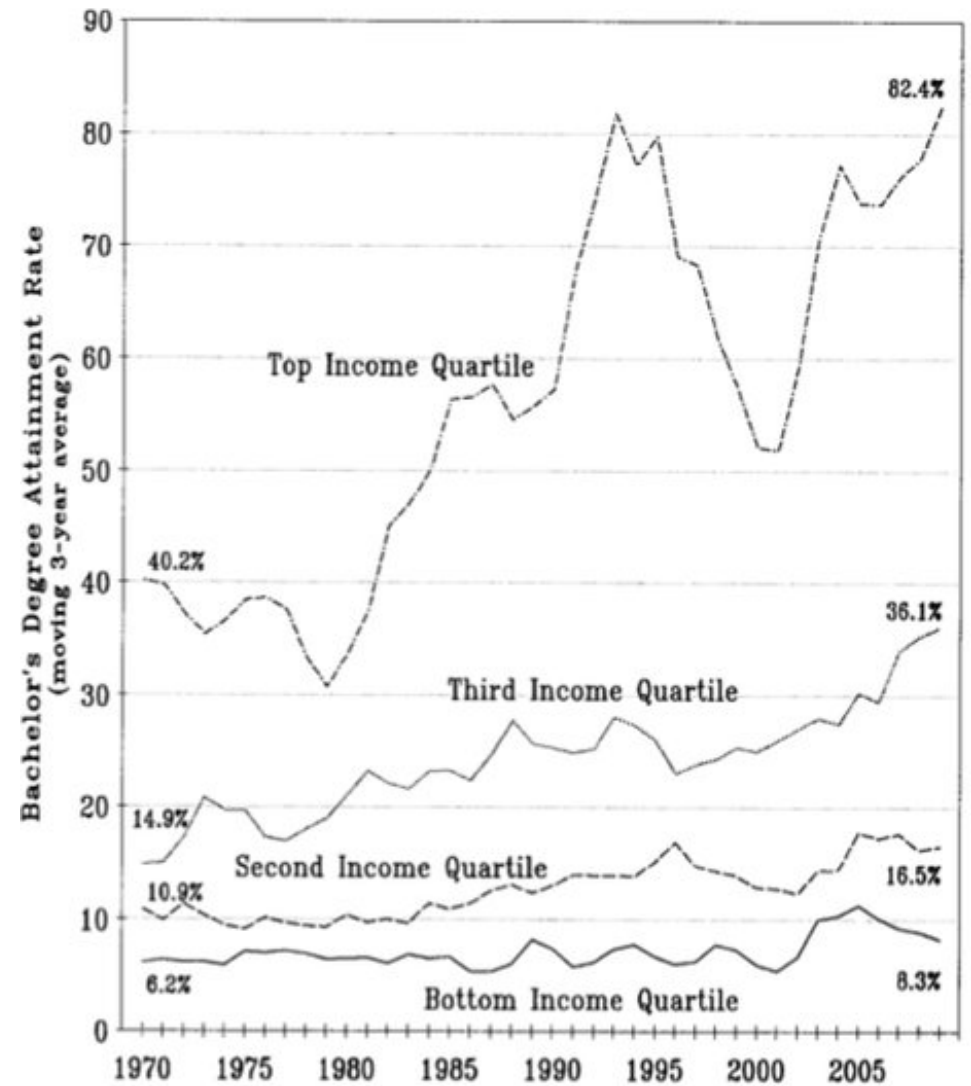
Equity of access

Under represented learners

Quality of learning

Opportunities for success

Estimated Baccalaureate Degree Attainment
by Age 24 by Family Income Quartile
1970 to 2009



Five Values to Preserve

4. Power counterbalance

A Network Theory of Power

MANUEL CASTELLS

University of Southern California

Power in the network society is exercised through networks. There are four different forms of power under these social and technological conditions:

1. **Networking Power:** the power of the actors and organizations included in the networks that constitute the core of the global network society over human collectives and individuals who are not included in these global networks.
2. **Network Power:** the power resulting from the standards required to coordinate social interaction in the networks. In this case, power is exercised not by exclusion from the networks but by the imposition of the rules of inclusion.
3. **Networked Power:** the power of social actors over other social actors in the network. The forms and processes of networked power are specific to each network.
4. **Network-making Power:** the power to program specific networks according to the interests and values of the programmers, and the power to switch different networks following the strategic alliances between the dominant actors of various networks.

Five Values to Preserve

5. Advancing knowledge and research

Interdisciplinary

“Teaching science as the rational exploration of the unknown, not just mastery of what is known.”

The Future

It is not a pre-ordained 'thing' that will be handed to us

It is a network of inter-related factors that will connect/disconnect based on our values and related techno-socio-economic trends

Changing
Becoming

The 5th International
Learning Analytics & Knowledge Conference
Scaling Up: Big Data to Big Impact
Marist College, Poughkeepsie, NY, USA March 16 - 20, 2015



Or

Digital Learning Research Network (dLRN)

Or

PowerPoint slides

gsiemens@gmail.com

