

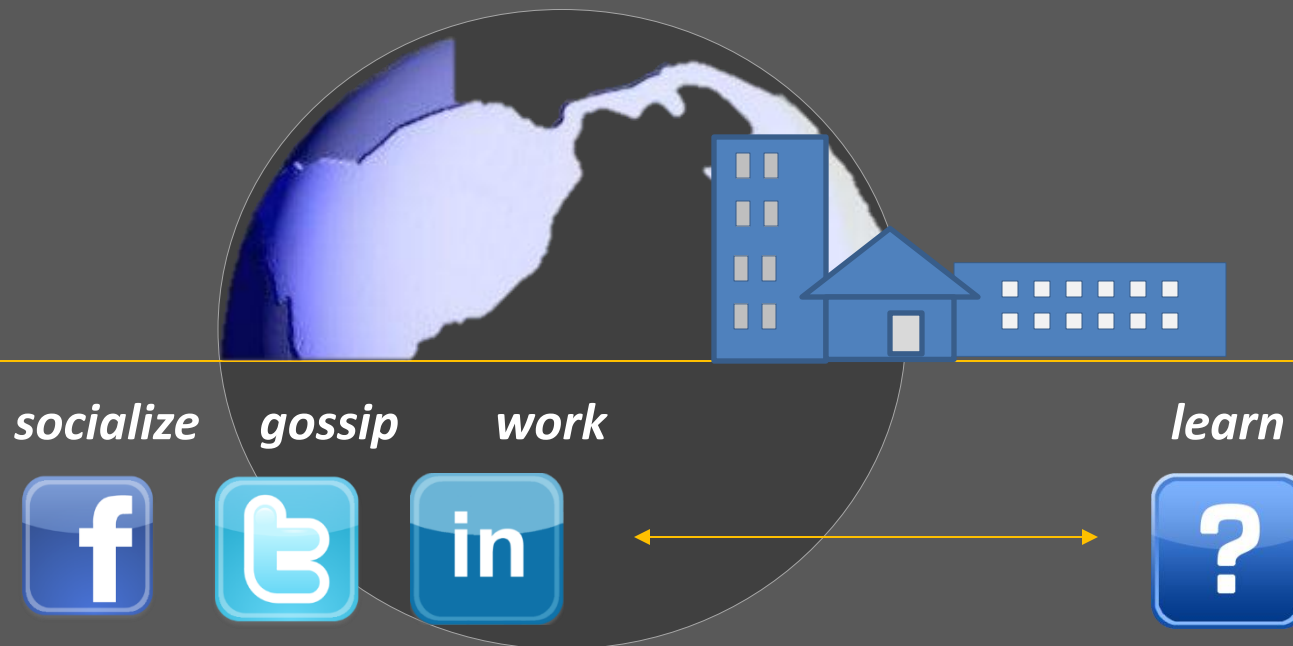


NATIONAL LABORATORY FOR EDUCATION TRANSFORMATION

THE FUTURE OF EDUCATION & TECHNOLOGY

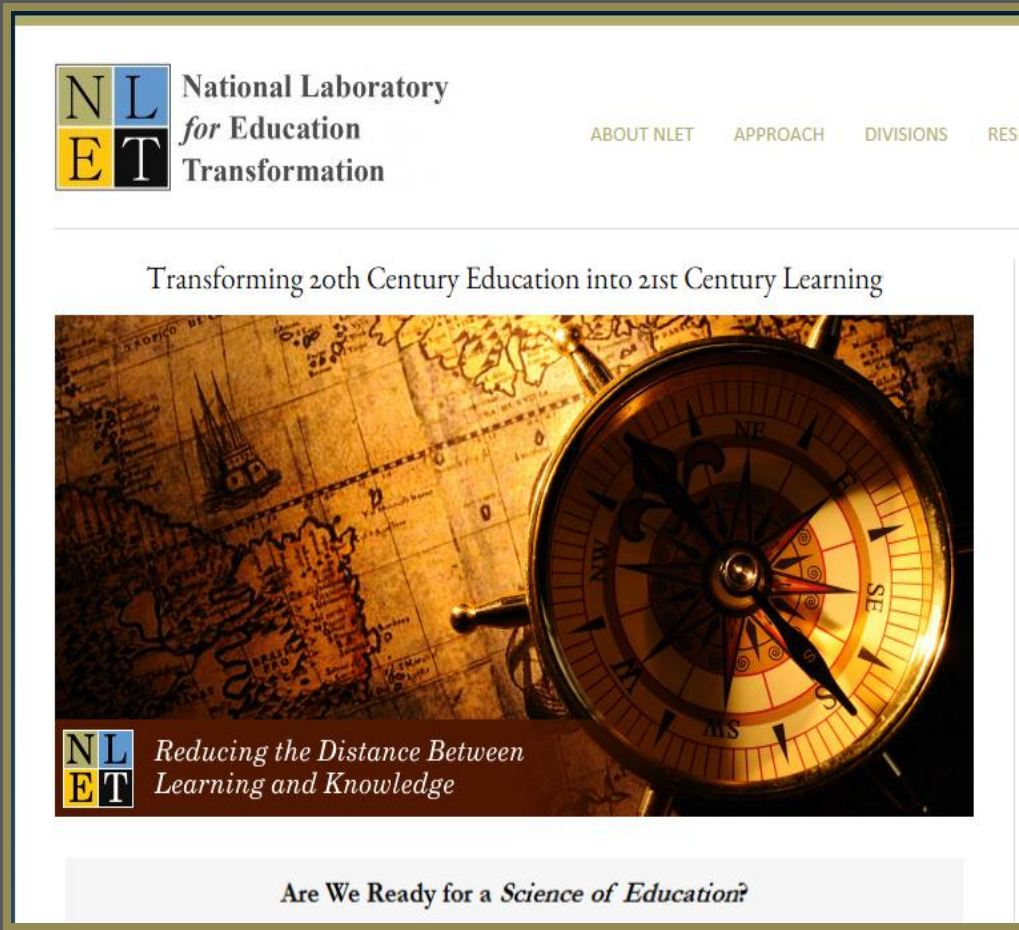
Social Disruption in Higher Education

Gordon Freedman





Gordon Freedman, President, NLET



2011 - Founded “NLET”

Founded advanced education non-profit working with U.S. universities and top research agencies.

Exploring what education will become 3 to 5 years from now.

www.NLET.org



Formerly VP Global Education Strategy, Blackboard

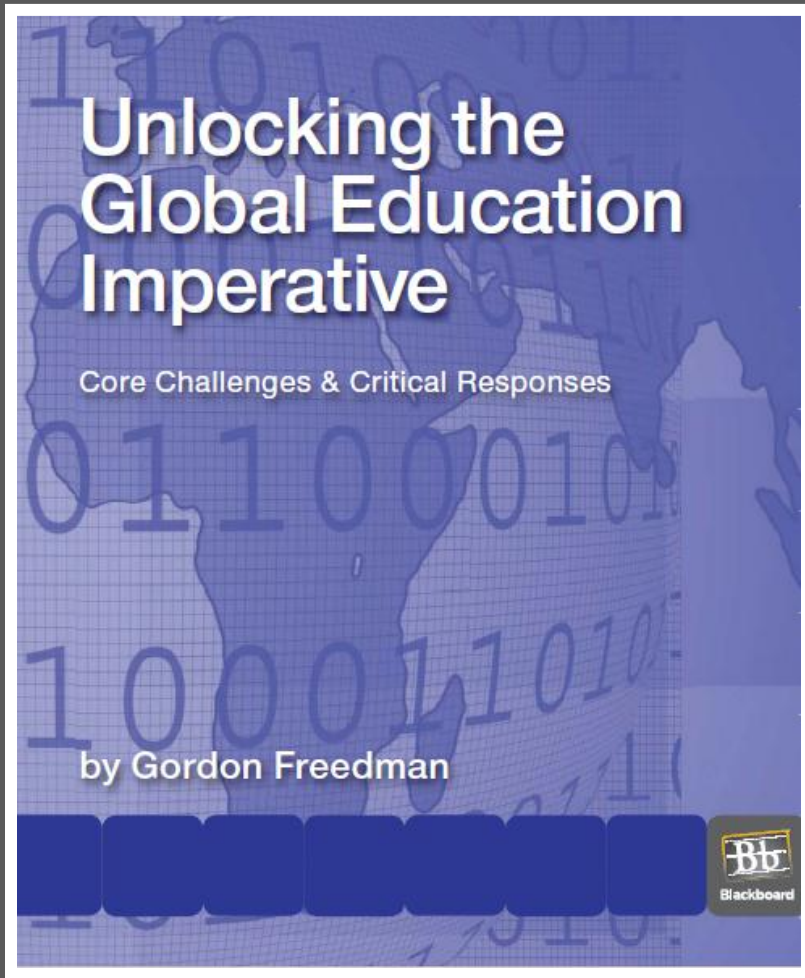
2005 – 2011

Vice President Global Education Strategy for Blackboard, Inc.

Traveled to 18 countries, interviewed leaders in Government and Higher Education.

Executive Director of the Blackboard Institute.

Blackboard Institute





1. Information Age Versus Classical Education
2. New Forms Challenge Old Structure
3. Transformation Perspectives (NLET)
4. Converting Theory into Practical Application
5. The Future Directions for Higher Education

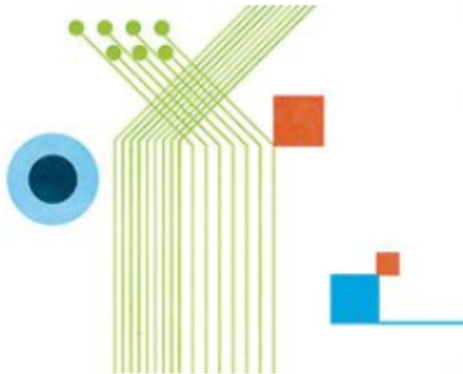


The “Cloud” versus the “Fog” in Higher Education



April 29, 2012

Cloud Technology Can Lift the Fog Over Higher Education



[Enlarge Image](#)

By Gordon Freedman

We are now more than a decade into the 21st century. Much has changed in terms of how we use online and mobile technology to interact with one another, learn about world events, look up facts, or share who we are with everyone else online. However, for all the innovations that new technologies have brought to consumer affairs, business, entertainment, and government, one sector of society—education—remains stubbornly planted in the 20th century.

April 2012

Article in the
“Chronicle of Higher Education,” the
leading trade
publication for higher
education in the U.S.



Does Higher Education Change in the Future?

Higher Education has been challenged in the past and survived.

The question is what forms will prevail now?

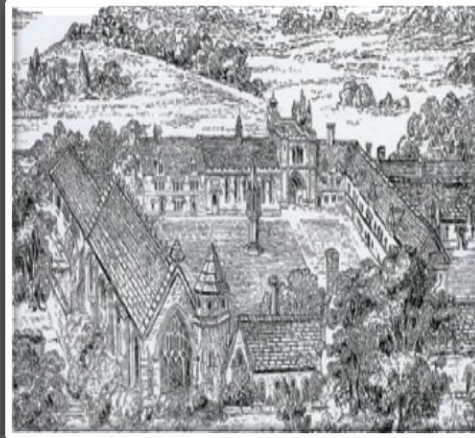
And will the students keep attending?



Historically, Education Has Evolved with the Times



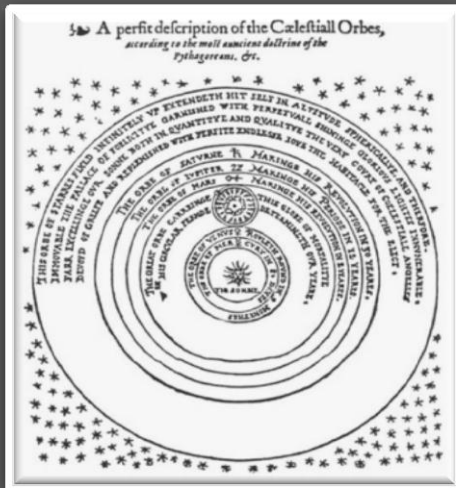
LIBRARY 300 BCE-500



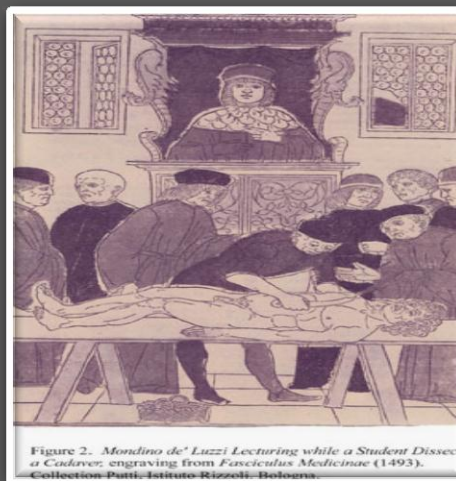
MONASTERY 500-1100



UNIVERSITY 1100-1500



LETTERS 1500-1750



DISCIPLINES 1750-1900

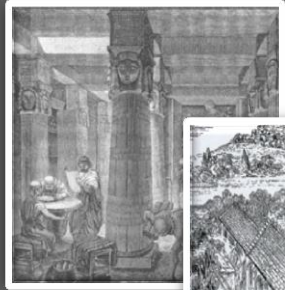


LABORATORY 1900-2000



How to Balance the Social Web & Higher Education?

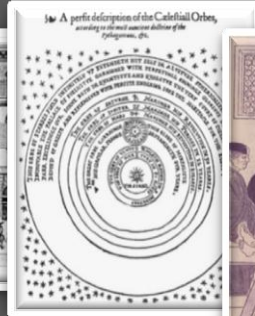
University



Library



Monastery



Letters



Disciplines



Laboratory

Attempts to change higher education, to open it up, have not succeeded in the past.



The large Web portals, for all their reach, have not yet changed education.

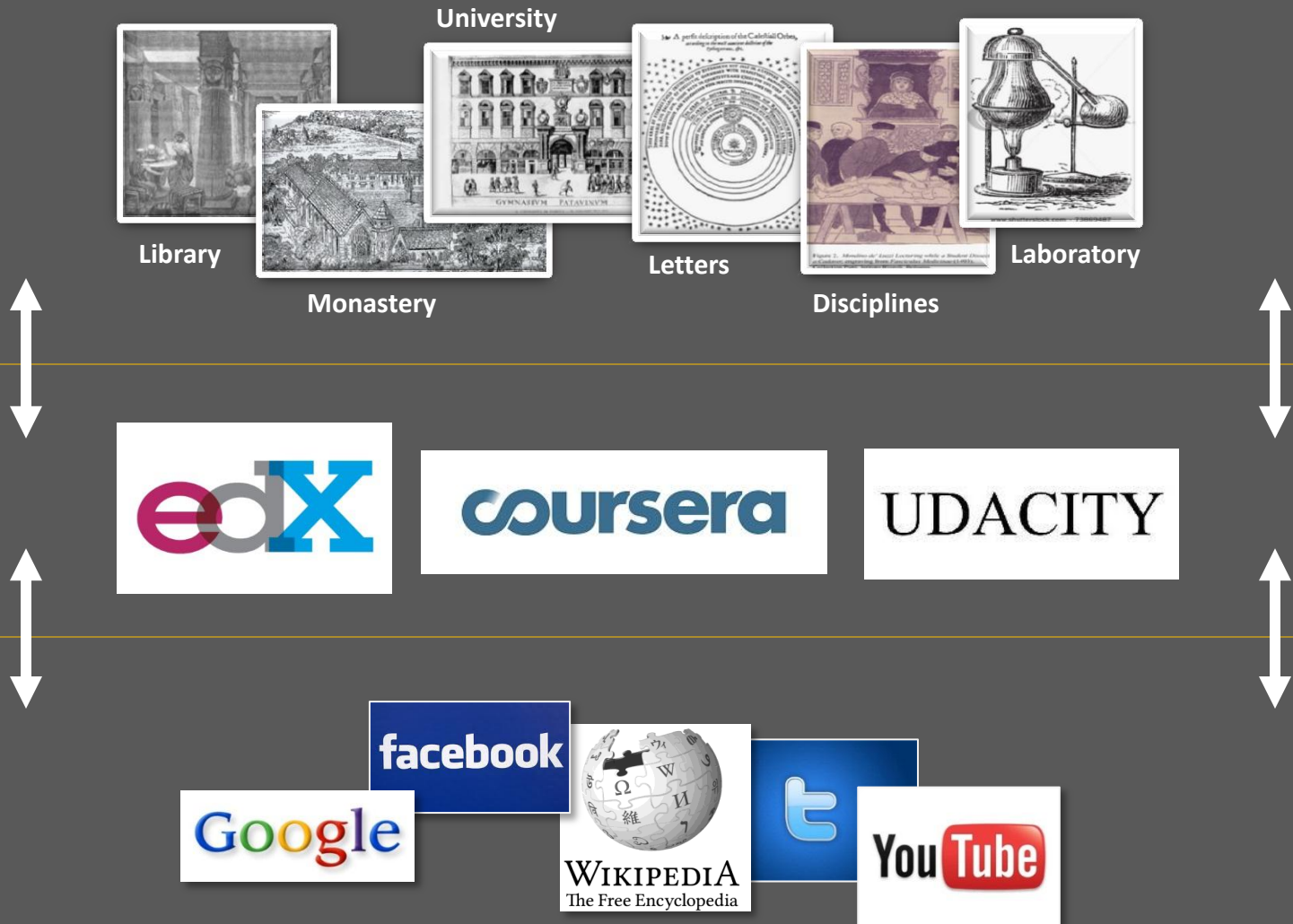


QUESTIONS

1. **Information Age Versus Classical Education**
2. New Forms Challenge Old Structure
3. Transformation Perspectives (NLET)
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MOOCs: Massive Open Online Courses Blur the Lines





The Invasion of the MOOCs

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College may never be the same

by Mary Beth

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of online course aimed



Are MOOCs Courses or a New Form of Publishing?

MOOCs

MASSIVE OPEN ONLINE COURSES

Open Courses from top universities, but no assessment.

Moodle

OPEN SOURCE SYSTEMS

OER

OPEN EDUCATION RESOURCES



coursera



**Princeton
University**



HARVARD UNIVERSITY



Open Solutions, Political or Practical?

MOOCs

MASSIVE OPEN ONLINE COURSES

Moodle

OPEN SOURCE SYSTEMS

OER

OPEN EDUCATION RESOURCES

Open Source LMS, widely used,
not associated with full solutions.

The Moodle logo features a black graduation cap icon to the left of the word "moodle" in a bold, orange, lowercase sans-serif font.



moodlerooms™

The Sakai logo features the word "Sakai" in a large, black, serif font. Below the text is a blue graphic of three concentric, slightly offset circles, resembling a ripple in water.



COURSEsites
by Blackboard
EDUCATE. ENGAGE. **FREE.**



Can Open Education Resources be Organized?

MOOCs

MASSIVE OPEN ONLINE COURSES

Open Resources not organized well, nor easily searched, ranked

Moodle

OPEN SOURCE SYSTEMS

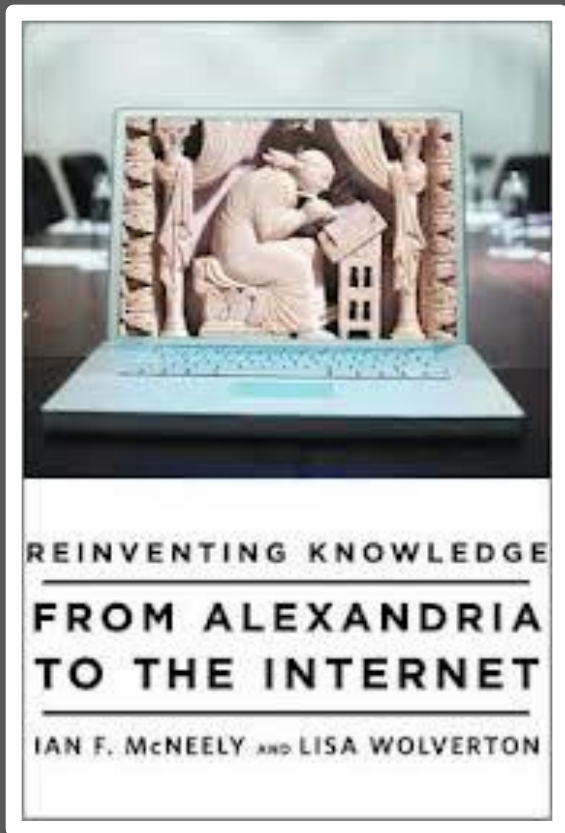
OER

OPEN EDUCATION RESOURCES





Historian Ian McNeely Does Not See Immediate Change



Looking into the future, much depends on how far along we find ourselves on the cycle of institutional reinvention. The length of these cycles has steadily contracted over the last two millennia, and a mechanical extrapolation of this trend suggests that a new institution is just around the corner. But there is no reason to assume this will automatically be the case.

Current Trends in Knowledge Production: An Historical-Institutional Analysis, PROMETHEUS 2009



QUESTIONS

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The NLET Perspective Looks at Transforming Education



*Designing Educational Solutions for National,
Strategic, Innovative and Human Capital Needs*





What are the Most Basic Questions to Ask?

*HOW DO WE
LEARN TO
CONSTANTLY
LEARN?*

*HOW DO WE
UTILIZE THE
GLOBAL
NETWORKS ?*

*HOW SHOULD WE
BEST ORGANIZE
EDUCATION ?*

*CAN WE MAKE
PRODUCTIVE &
FAIR SOCIETIES?*

Basic questions need to be asked about education change:

- Teaching & Learning
- Internet & Data
- Institutions & Degrees
- Employment & Health



Can the University Use its Academic Disciplines?

NEUROSCIENCE
OF LEARNING

INFORMATION
SYSTEMS

ORGANIZATIONAL
THEORY

ECONOMICS
& DECISION
SCIENCE

Four disciplines are critical to building a new understanding:

- Neuroscience
- Information Systems
- Organizational Theory
- Economic Analysis



Learning is about the Brain and Identity



*HOW DO WE
UTILIZE THE
GLOBAL
NETWORKS*

*HOW SHOULD WE
ORGANIZE
OURSELVES*

*PRODUCTIVE
& FAIR
SOCIETIES*

We must understand how the brain learns and how it turns into a *mind* capable of constantly learning.



Academic Information Increasing is on the Web



*HOW SHOULD WE
ORGANIZE
OURSELVES*



*PRODUCTIVE
& FAIR
SOCIETIES*

The Internet is everywhere and contains nearly everything, but how can it develop to assist education?



New Forms of Organization are Necessary



***CAN WE MAKE
PRODUCTIVE &
FAIR SOCIETIES?***

Human institutions
are challenged by
the transition to
social and network
technologies.

How do we
balance *both*?



Does Education Produce More than Human Capital?



How can individuals working in concert make a difference in society and the economy – what role does education play in both?



QUESTIONS

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Turning Theory into Practice

Neuroscience
Learning



Information
Networks



Organization
Analytics



Economics
Productivity



Mobile
Social
Access
Management

Cloud
Network
Open

Competency
Analytics
Assessment
Flexible

Skills
Training
Innovation
Growth



In the Future the University Will Not Control all Functions

Discipline

Faculty

Students

Degrees

Employment





The Student Role Must Evolve

*Can Students Have **More Control** and*



More Flexibility and **Earn Credit?**

Students are demanding much greater flexibility, and they want to move more quickly to education degrees and certifications



The Faculty Role Must Evolve

The Industrial Model of Education Required



Education Classrooms to Produce Employees

Higher education faculty have to move from helping to produce all the workers to inspiring analysts, innovators, communicators..



The Institutional Role Must Evolve

Will Higher Education End up Being



On the Ground

or

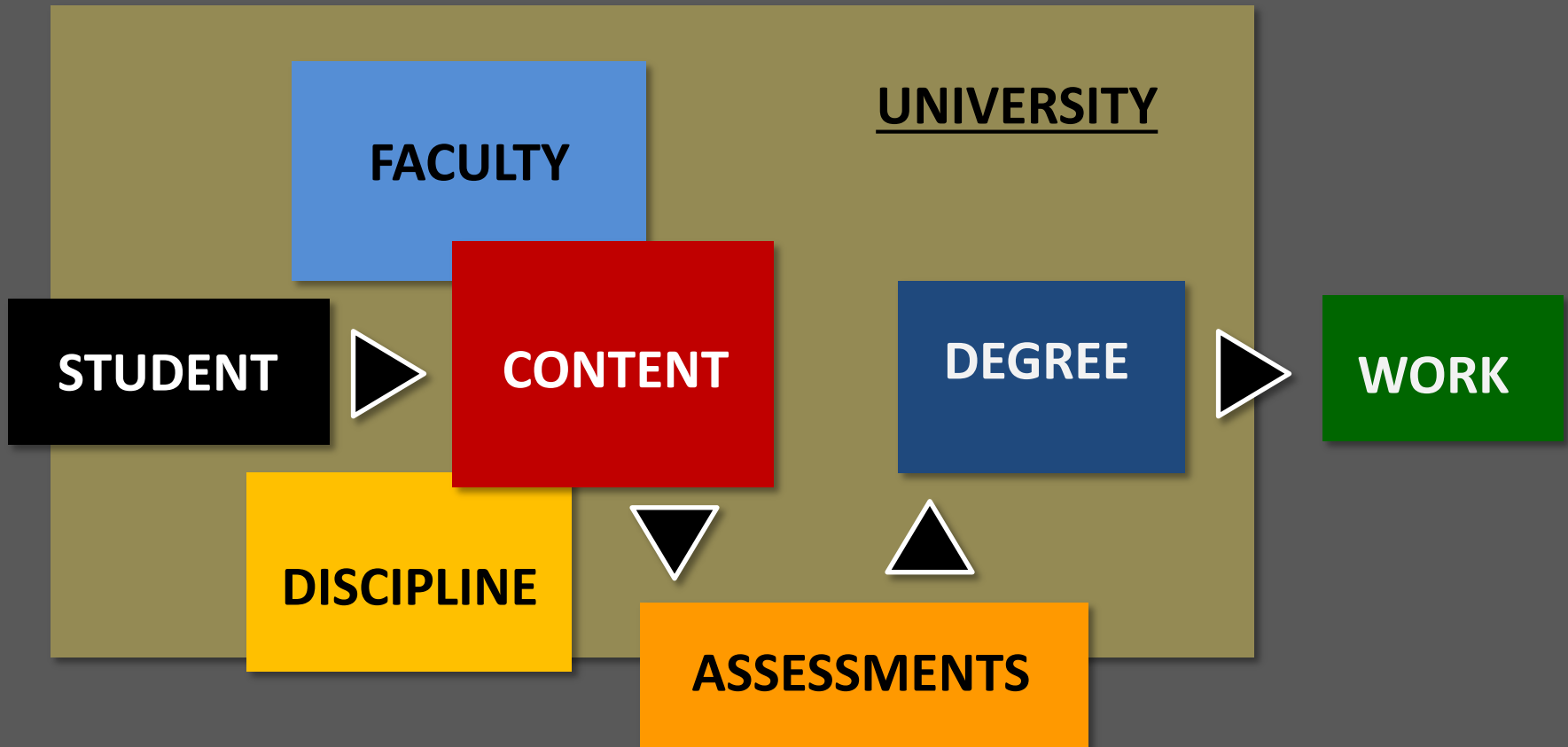


In the Cloud?

Ground based organizations by themselves only are no longer the answer. They are *expensive, limiting, and difficult to run.*

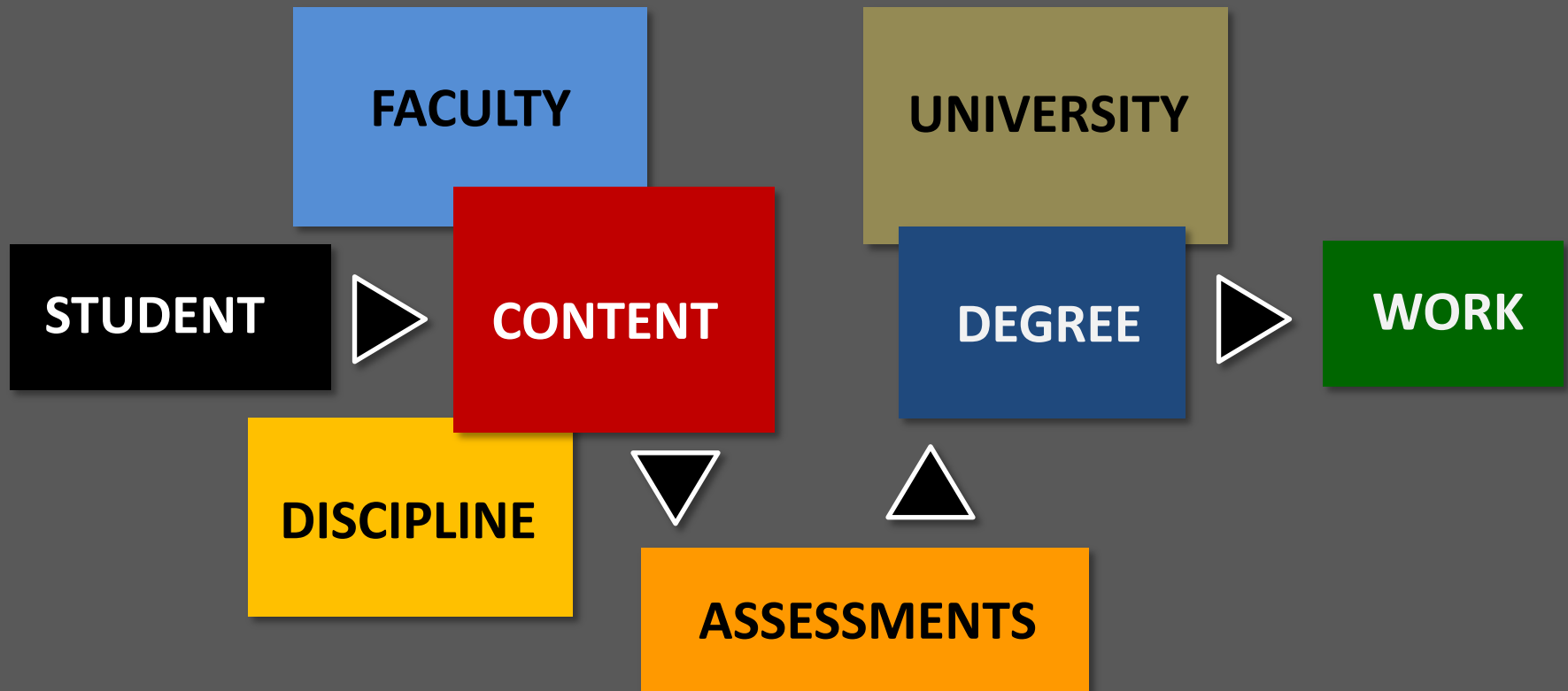


Higher Education Functions Now In One Institution





Higher Education Functions can be Disaggregated





Mapping the Academic Functions to Theory & Practice

Neuroscience
Learning

Information
Networks

Organization
Analytics

Economics
Productivity

STUDENT



CONTENT



DEGREE



WORK

Mobile
Social
Access
Management

Cloud
Network
Open

Competency
Analytics
Assessment
Flexible

Skills
Training
Innovation
Growth

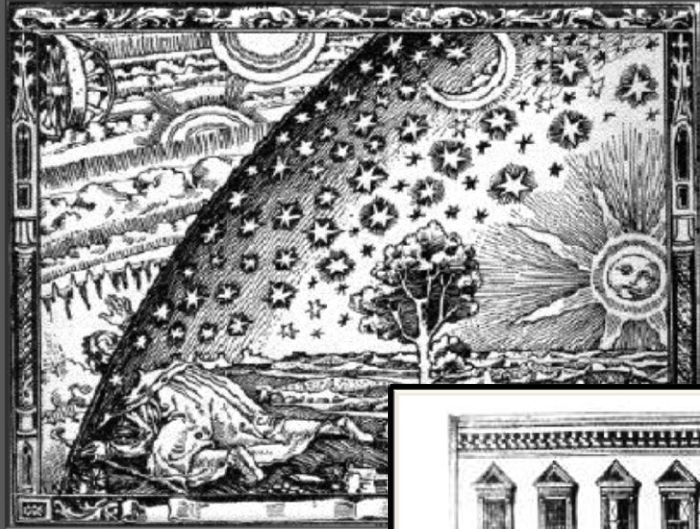


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How Does the University Reconceive Itself?





The Traditional Model

Traditional
Produce Degrees
Inertia

INPUT

GENERAL
EDUCATION

OUTPUT

SPECIFIC
SKILLS

CONSEQUENCE

SOCIAL
ECONOMIC
MAINTENANCE



The Regional Transitional Model

	INPUT	OUTPUT	CONSEQUENCE
Traditional <i>Produce Degrees</i> <u>Inertia</u>	GENERAL EDUCATION	SPECIFIC SKILLS	SOCIAL ECONOMIC MAINTENANCE
Transitional <i>Produce Change</i> <u>Disruption</u>	RESEARCH	INNOVATION	CULTURAL & BUSINESS GROWTH



The Social Transformational Model

INPUT

OUTPUT

CONSEQUENCE

Traditional
Produce Degrees
Inertia

GENERAL
EDUCATION

SPECIFIC
SKILLS

SOCIAL
ECONOMIC
MAINTENANCE

Transitional
Produce Change
Disruption

RESEARCH

INNOVATION

CULTURAL &
BUSINESS
GROWTH

Transformational
Reinvent Society
Social Good

SOCIAL /
TECHNICAL
CONSTRUCTION

GLOBAL
STEWARDSHIP

COLLECTIVE
FITNESS



The Technology Will Evolve at Each Stage

Traditional
Produce Degrees
Inertia

Technology is *Ad Hoc*: Students, Faculty,
and **Administration Not Coordinated**

Transitional
Produce Change
Disruption

Technology is More Standardized, But the
Learner is Not in the Center or in Control

Transformational
Reinvent Society
Social Good

Technology is Standards-Based and
Identity Driven with **Services in the Cloud**



QUESTIONS

Gordon.Freedman@gmail.com

