



Jul 27th, 9:00 AM - Jul 26th, 10:00 AM

Higher Education in the New Digital Ecosystem

Randy Bass
Georgetown University

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Higher Education in the New Digital Ecosystem

**Randy Bass
(Georgetown University)**

**Minnesota eLearning Summit
July 27, 2016**

2030

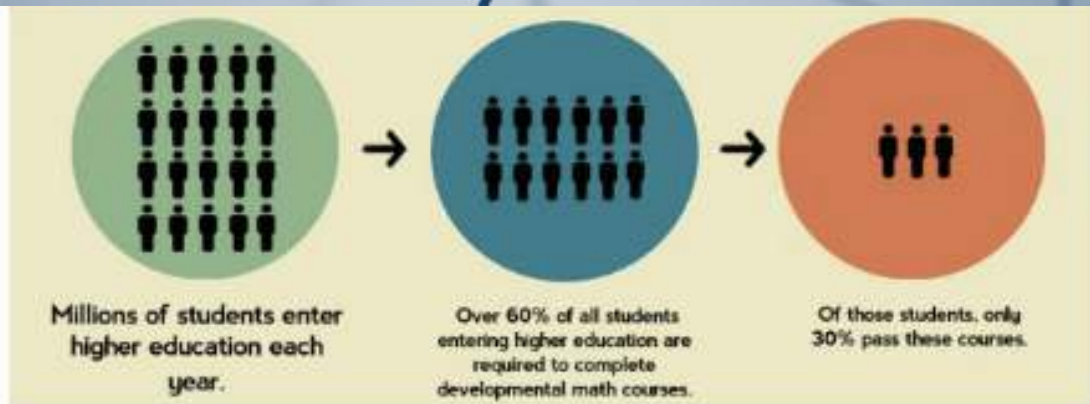
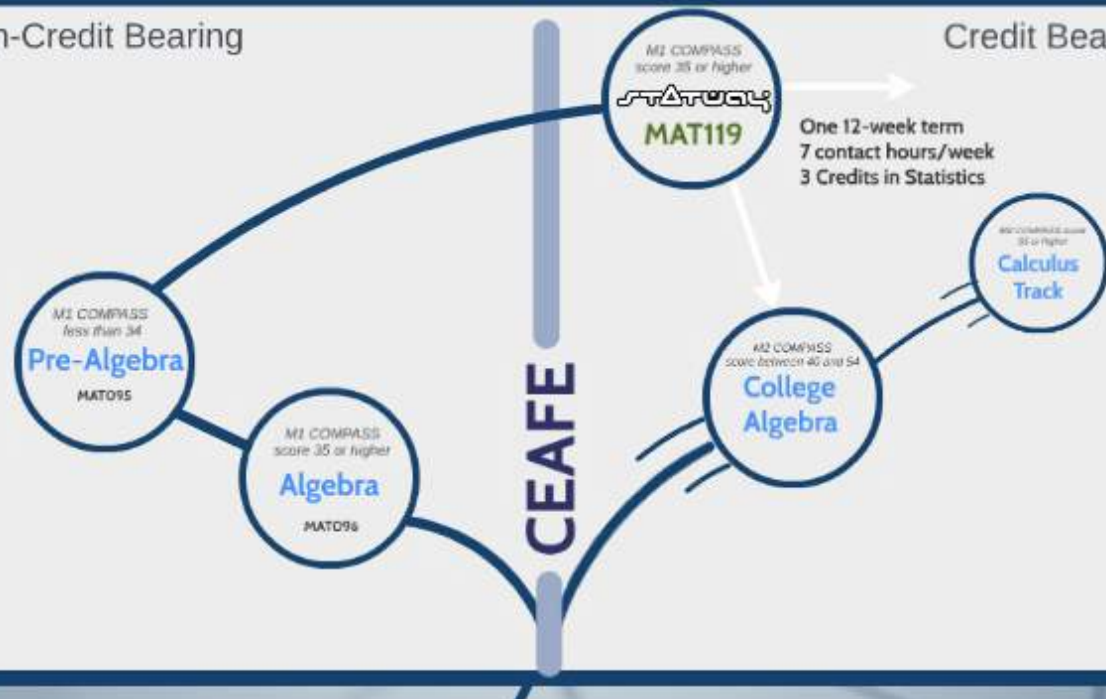
“The future is already here – it's just not evenly distributed.”

William Gibson

MAT 119: *STATUOLY* @ LaGuardia

Non-Credit Bearing

Credit Bearing



Over 60 percent of all students entering community colleges in the United States are required to complete developmental courses and a staggering 70 percent of these students never complete the required mathematics courses, blocking their way to higher education credentials and with them, a wide array of technical and related careers. Traditionally, only 5 percent of students earn college math credit within a year of continuous enrollment. In its first two years, over 50% students enrolled Carnegie's Pathways have achieved college math credit within a year.

Newsroom | FAQs | Contact Us

aching Search

ES CLASSIFICATIONS PREVIOUS WORK

CE

Developmental Math

- Instructional System
- Contact Information
- Pathways Resources

Reports & Findings

 **Year 2 Results**
Community College Pathways: 2012-2013 Descriptive Report
December, 2013

Spotlight

The Carnegie Foundation and NERCHE Announce National Advisory Panel Membership

Carnegie Workshops: Tools to Tackle Tough Problems in Education

[View Spotlight Archive](#)



StatWay implemented at LaGuardia CC

Dev. Math + College-level Stats (complex problems, such as Food Justice and Climate Change)

MAT119 - STATWAY Spring 2014
12-week term
8h/w (6 lecture hours +
Complete Math Requ

“We are giving them a bridge to successfully finish their degree through contextualized math content and exposure to psychological interventions that improve their attitudes towards math and learning.”

Revised their institution-wide core competencies:

- Inquiry
- Global Learning
- Integration

Web-based, artificially intelligent assessment and learning system

Milena Cuellar, **Statway in one term**
National Forum Pathways Program. Carnegie Foundation. SF 2014

What is this case a case of?

Data analytics >
adaptive learning

Alignment with
ambitious larger
outcomes

As much about
the affective as
cognitive

Statway implemented at LaGuardia CC

Dev. Math + College-level Stats (complex problems)

MAT119 - STATWAY Spring 2014
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Complete Math Requ

“We are giving them a bridge to successfully finish their degree through contextualized math content and exposure to psychological interventions that improve their attitudes towards math and learning.”

Revised their institution-wide core competencies:

- Inquiry
- Global Learning
- Integration

Web-based, adaptive learning assessment and learning system

Focused on inquiry
and integration,
not merely skills
and completion

Milena Cuellar, Statway In one te
National Forum Pathways Program

“REBUNDLING”

Three ways to reframe the conversation

Shift from digital tools to learning ecosystem.

Shift from unbundling to rebundling.

In a rebundled higher education, the concept of the whole person is key.

Open and Integrative

*Designing Liberal Education
for the New Digital Ecosystem*



BY RANDY BASS AND BRET EYNON



With Bret Eynon,
LaGuardia
Community
College



The Design Question

If we were designing higher education for this moment in history what would it look like?

From Disruption to Design

If we were designing higher education for this moment in history what would it look like?

Design for the big things first.



A Truly Devastating Graph on State Higher Education Spending

Some states have slashed per-student spending by as much as half.

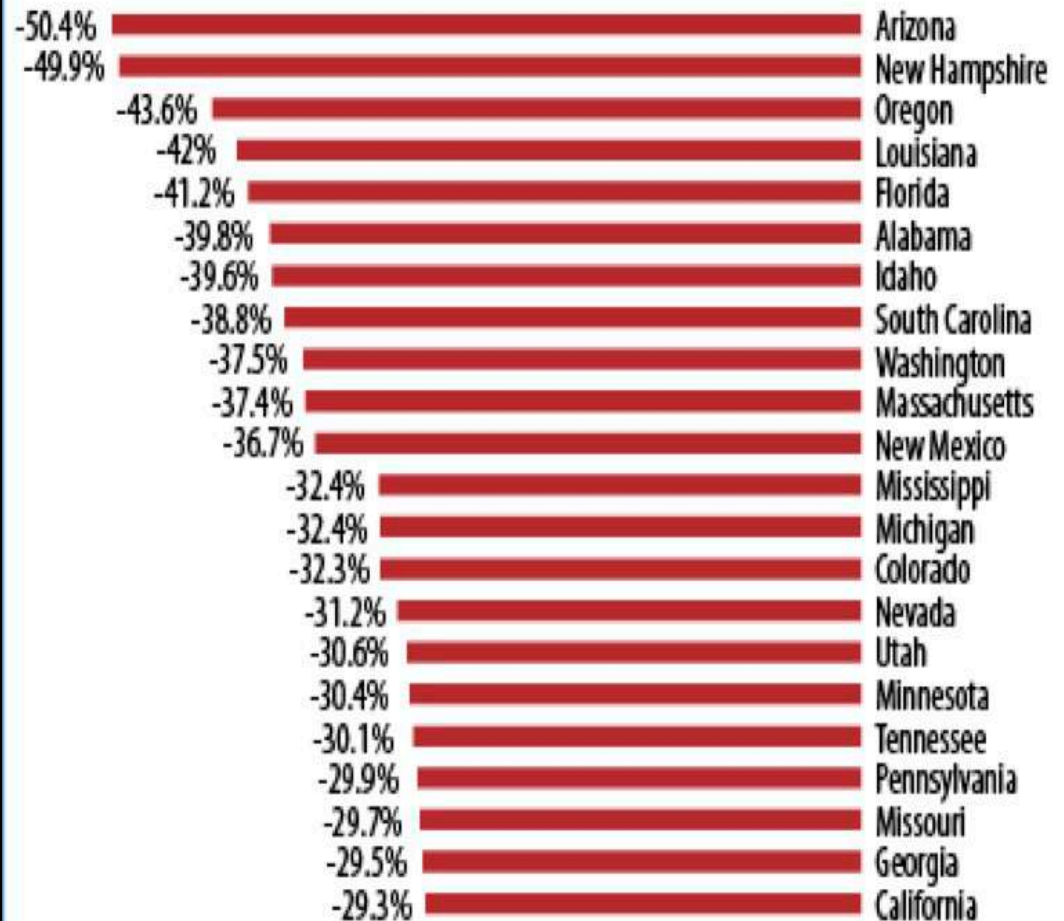
Crisis in public funding

Skyrocketing Tuition and Student Debt

New Narrative: Higher Ed is "Broken"

States Have Cut Higher Education Funding Deeply in Recent Years

Percent change in state spending per student, inflation adjusted, FY08 - FY13



Public Accountability

Keeping Score: New Iteration and Limitations of the College Scorecard

Posted: 10/07/2015 10:46 am EDT | Updated: 10/07/2015 10:59 am EDT



Return on Investment
Completion
Employability
Learning?

Competing Visions & Definitions
of the Purpose of Higher Education

Changing Student Demographics: An Emerging New Majority



Percent change in state spending per student, inflation adjusted, FY08 - FY13



Public Funding

Take the world's best courses, online, for free.

What would you like to learn about?

Join 3,632,591 Courserians. Learn from 374 courses, from our 70 partners. [How it works >](#)



Codecademy

lynda.com You can learn it.™

External Forces of Potential Disruption

Skill-based Learning
Open Online Courses

Data Analytics /
Adaptive Learning

Keeping Score: New Iteration and Limitations of the College Scorecard



Accountability

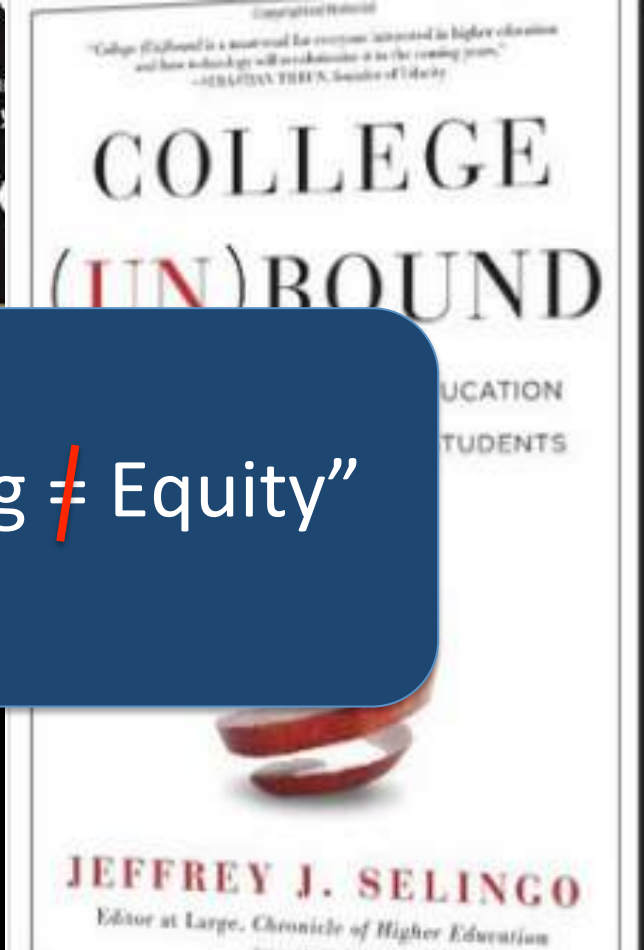
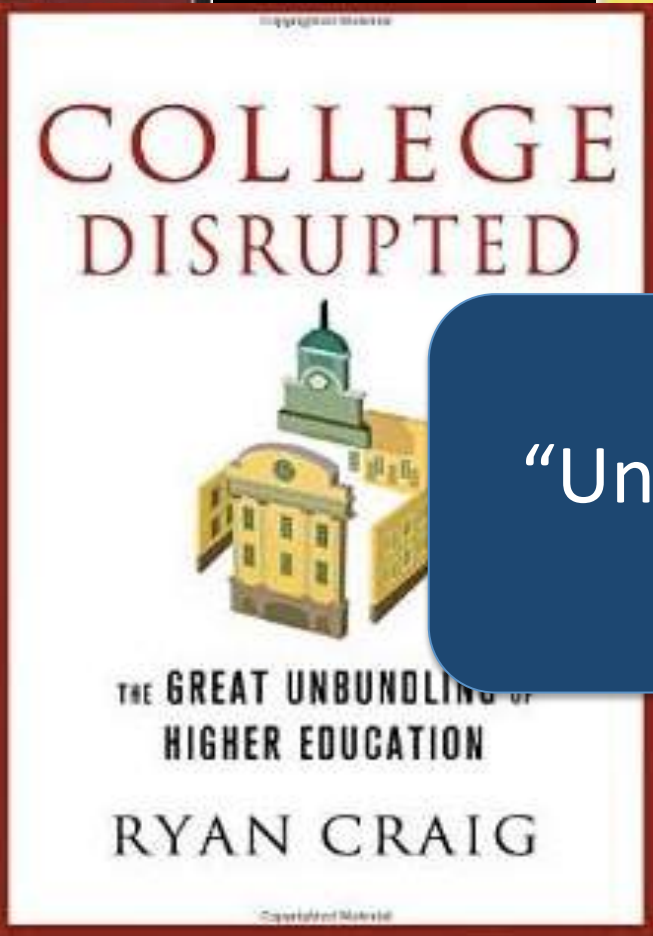


Expanded access



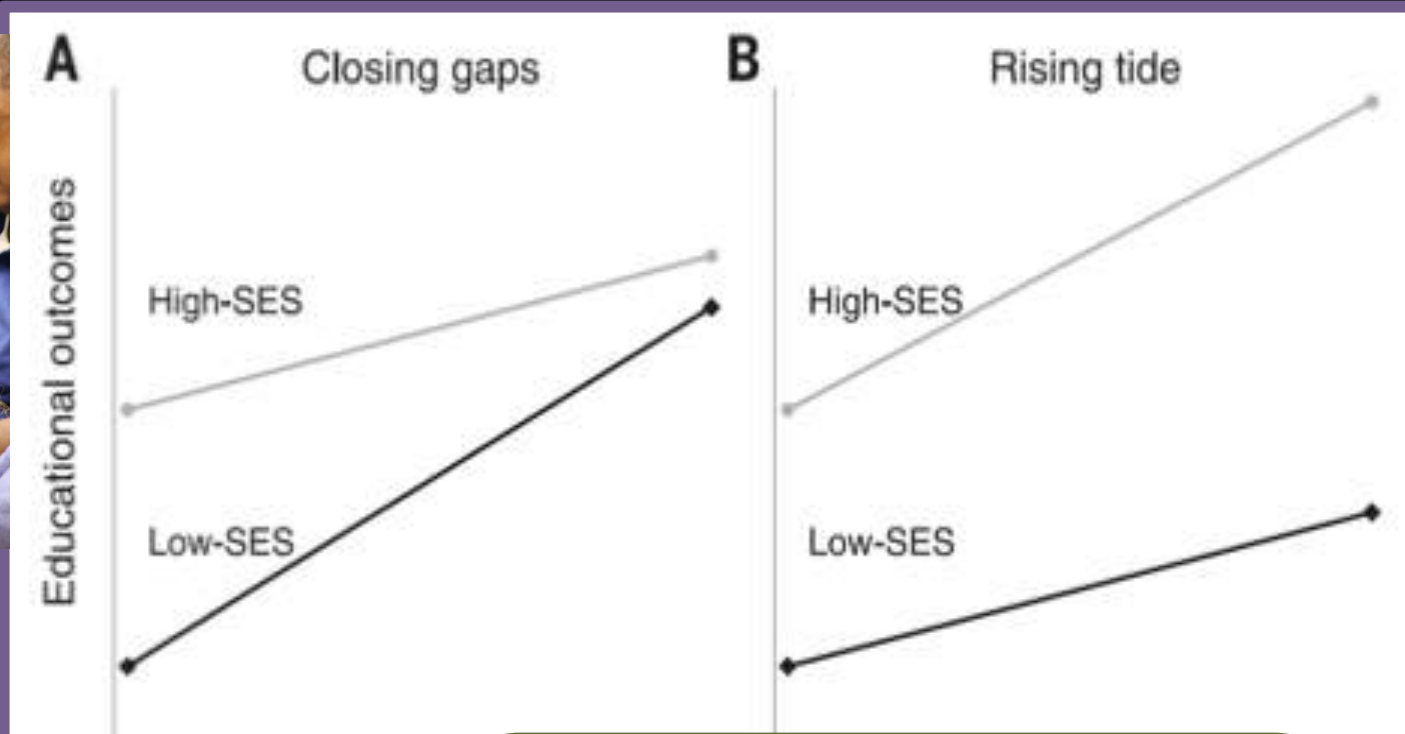


**AMERICAN
HIGHER EDUCATION
IN CRISIS**
WHAT EVERYONE NEEDS
GOLDIE BLUMEN



“Unbundling ≠ Equity”

Technology, Integration, Learning & Success



CUNY's ASAP program

The power of “high touch” guided pathways for new majority students

Gallup-Purdue

Vital role of mentorship, signature work, high impact practices in life-long engagement and thriving.

Purdue-Gallop Poll on Engaged Work and Flourishing



Life in College Matters for Life After College

New Gallup-Purdue study looks at links among college, work, and well-being

by Julie Ray and Stephanie Kafka



WASHINGTON, D.C. -- When it comes to being engaged at work and experiencing high well-being after graduation, a new Gallup-Purdue University study of college graduates shows that the type of institution they attended matters less than what they experienced there. Yet, just 3% of all the graduates studied had the types of experiences in college that Gallup finds strongly relate to great jobs and great lives afterward.

Two most important predictors of success:

- 1) Adult mentor who cared about you
- 2) Sustained project

Purdue-Gallup Poll on Engaged Work and Flourishing



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14% had all three

64% I had a professor who made me excited about learning.

27% Professor cared about me as a person.

22% A mentor who encouraged my goals and dreams.

Purdue-Gallop Poll on Engaged Work and Flourishing



Life in College Matters for Life After College

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6% of all graduates

32% A long term project that took a semester or more to complete.

30% Internship or job where applied learning.

20% Extremely involved in extracurricular activities or organizations.

Three ways to reframe the conversation

Shift from digital tools to learning ecosystem.

Shift from unbundling to rebundling.

In a rebundled higher education, the concept of the whole person is key.



Formation by Design

Project Progress Report
2014-2015

DESIGNING THE FUTURE(s) *of* the university

<https://futures.georgetown.edu/formation>



GEORGETOWN UNIVERSITY

“whole person”

Educating the whole person?

Formation by Design

Project Progress Report
2014-2015

DESIGNING THE FUTURE(s) of the university
<https://future.georgetown.edu/formation>



GEORGETOWN UNIVERSITY

Knowledge + Skills + Dispositions (+ Values)

Dispositions:

Learning to learn

Critical thinking

Creativity

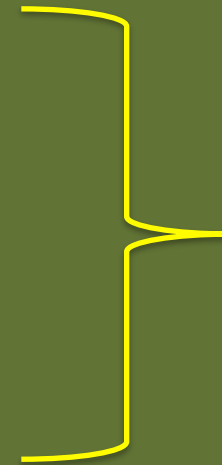
Curiosity

Resilience

Empathy

Humility

Ethical Judgment



“HARD SKILLS”

Striving to cultivate a balanced person, with intellectual, affective, imaginative and reflective capacities.



The great tension of our time in education is between **integration** and **dis-integration**

of
Networks

Digital Ecosystem

and open
resources

Data &
Algorithms

Participatory
Social
Creative

Two paradigms of education

Disintegrative (unbundled):

Design of discrete or granular learning experiences

Elementary and discrete competency-based learning

Learning decoupled from formal boundaries

Analytics that track narrow or micro learning

Integrative (bundled, holistic, coherent):

Curricular & co-curricular conceived as part of a whole

Knowledge, skills & dispositions

Connections & integration

Design of learning experiences for whole person development



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Rebundling: Toward a New Synthesis

Disintegrative (unbundled):

Design of discrete or granular learning experiences


Elementary competencies

Learning design formal

Analytics through or micro learning

Integrative (bundled, holistic, coherent):

Curricular & co-curricular conceived as part of a whole



If we were designing higher education for this moment in history what would it look like?

Disintegrative in service to the integrative

Design Principles: a Vision worth Working Toward

Learner-centered

Networked

Integrative

Adaptive

Design Principles for a Rebundled Institution

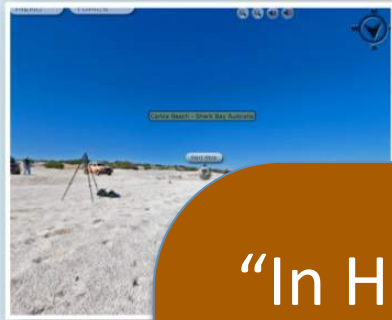
Learner-centered

Do your learning environments support engagement in the context of empowerment and ownership of learning?

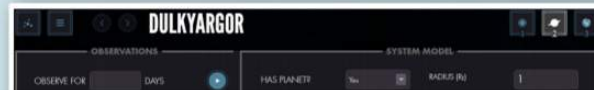


Engagement and inquiry at scale.

Habitable Worlds – Online Course at Arizona State University



Virtual F
allow exp
exotic se
science a



“In Habitable Worlds, you won’t just learn a bunch of facts. You’ll have to learn how to think like a scientist, confronting what we don’t know, learning how to use logic and reason to cope with uncertainty....”

Prof. Ariel Anbar

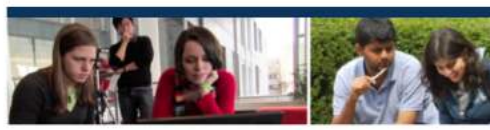
Developers:

Professor Ariel Anbar: anbar@asu.edu
Dr. Lev Horodyskyj: LevH@asu.edu
<http://www.habworlds.org>

design, structure, and analyze
"smart" lessons

Developed jointly with ASU Online, Mary Lou Fulton Teacher's College, College of Liberal Arts and Sciences, and the NASA Astrobiology Institute.

Course Features



OPENNESS + ANALYTICS
The infinite variety that OERs provide

ENACTING LEARNING

Our courses proactively engage students to put new knowledge to their own progress. Activities and assessments embedded throughout ensure that students understand concepts rather than only memorize them.

Features for Students

In addition to high-quality text, our courses also include practice activities, self-assessments. All course content is included and structured to support the student-defined learning objectives.

Module 2
Examining Relationships

View data for: All Students [+ Hide Options...]

All Students | Individual Student

ESTIMATED LEARNING LEVEL **Learning Objectives**

Classify a data analysis situation (involving two variables) according to the "role-type classification," and state the appropriate display and/or numerical measures that should be used in order to summarize the data. [+ Hide Details...]

Estimated Learning by Student

43 students
1 dot = 2 students

Class Accuracy by Sub-Objective

Sub-Objective	% Correct
Categorical vs...	27
Explanatory vs...	27
Identifying cause & effect...	31
Select appropriate...	13
Select appropriate...	13

Compare and contrast distributions (of quantitative data) from two or more groups, and produce a brief summary, interpreting your findings in context. [+ Show Details...]

Produce a two-way table, and interpret the information stored in it about the association between two categorical variables by comparing conditional percentages. [+ Show Details...]

Graphically display the relationship between two quantitative variables and describe: a) the overall pattern, and b) striking deviations from the pattern. [+ Show Details...]

Interpret the value of the correlation coefficient, and be aware of its limitations as a numerical

Open Learning Initiative (OLI)

Intelligent tutors

Reinventing Introduction to Statistics



The screenshot shows the Carnegie Mellon University Open Learning Initiative website. The header includes the university name and logo, and the tagline 'Transforming higher education through the science of learning'. There are navigation buttons for 'Learn with OLI', 'Teach with OLI', and 'Get to Know OLI'. Below this is a section titled 'Our Proven Results' with a video player showing students in a classroom. The video is titled 'EVIDENCE-BASED DESIGN' and has a description: 'The Open Learning Initiative (OLI) creates courses based on the findings of learning science and then evaluates those courses based on actual student performance in real classrooms.' There are also links for 'News, Events + Media', 'Publications', 'FAQs', and 'Contact Us'.

15-week Traditional Statistics Course

8-9 weeks with OLI materials + Professor

Remaining 5-6 weeks

Applied projects on student Interests

Advanced topics and problem-solving

Design Principles for a Rebundled Institution

Learner-centered

Do your learning environments support engagement in the context of empowerment and ownership of learning?

Engagement and Inquiry at scale.

Networked

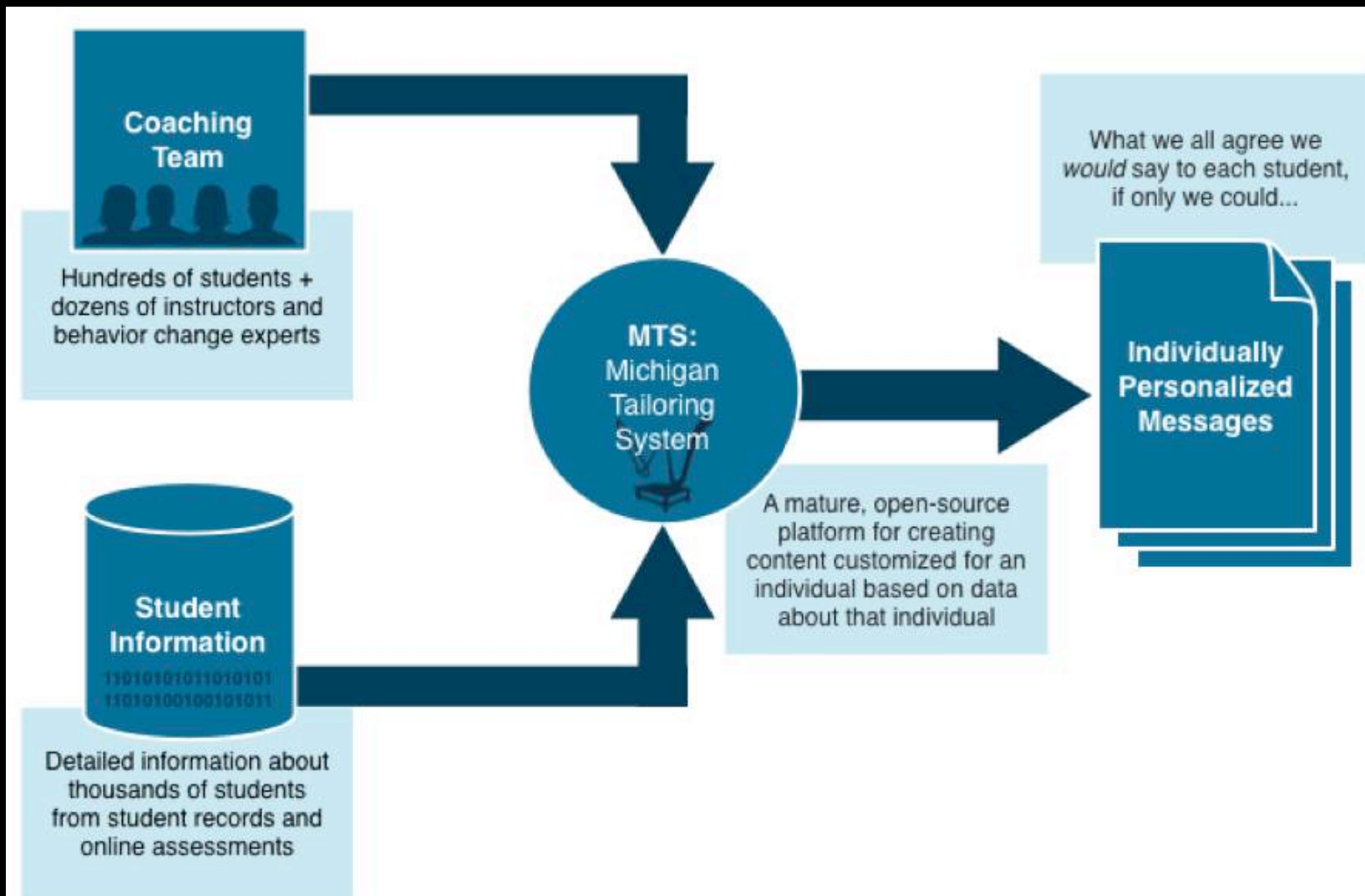
Do your systems and practices maximize community, social learning, and a broad concept of mentorship?

CONNECTED LEARNING

an agenda for
**RESEARCH AND
DESIGN**
A research synthesis
report of the
Connected Learning
Research Network



Community & Mentorship



Century America

Campus, Community, and the Great War

HOME

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TIMELINE

CREDITS

Century America: The Course

COPLAC Distance Mentoring Course

Home

About

Preliminary Readings & Sites

How's your research going?

Syllabus

Scholarly Sources on Era



Project Contracts 2014

Tech How-To

Project Contracts — 2015

How's your research going? And what do you think of the 1st Century America Sites?

Use the comment section here to talk about what you've found so far, or to pose questions about your sources, or just to share what you're working on.

Site links

About

[How's your research going? And what do you think of the 1st Century America Sites?](#)

Preliminary Readings & Sites

Project Contracts

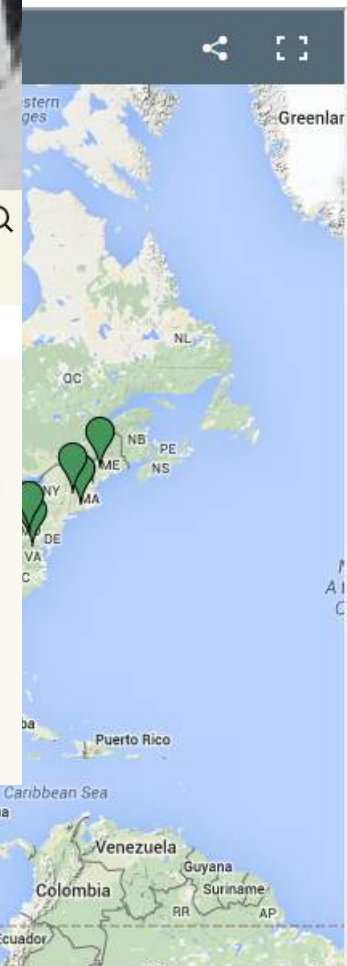
[ECSU-Christos Stravoravdis](#)

[MCLA-Alisia True](#)

[Midwestern State-Galbraith & Hadwal](#)

[Montevallo-Chris Hightower](#)

[MCF-Ennes & Hummel](#)



CONNECTED LEARNING

an agenda for
RESEARCH AND
DESIGN

A research synthesis
report of the
Connected Learning
Research Network

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● LEARNING PRINCIPLES
● DESIGN PRINCIPLES



Design Principles for a Rebundled Institution

Learner-centered

Do your learning environments support engagement in the context of empowerment and ownership of learning?

Networked

Do your systems and practices maximize community, social learning, and a broad concept of mentorship?

Integrative

Are your systems and practices serving to maximize connections and coherence?

How can we help students put their signature work in a larger and more integrative context?

ePortfolio as a vital, longitudinal and integrative learning process





Overview

Designed for educational innovators, the Catalyst site showcases field-tested ePortfolio resources for building student success, supporting outcomes assessment, and sparking institutional change.

Site Overview

Catalyst for Learning offers resources and analysis that spotlight the effective use of ePortfolio to advance student, faculty, and institutional learning. Drawing on the work of skilled leadership teams on 24 diverse campuses, Catalyst makes the case for ePortfolio with a distinctive collection of linked model practices, data on impact, and original research on

The C2L Hypothesis

Why ePortfolio?

The Catalyst Framework

Inquiry,
Reflection

Campus Stories & Profiles

- [Outcomes Assessment Stories](#)
- [Professional Development Stories](#)
- [Scaling Up Stories](#)
- [Technology Stories](#)
- [Campus Profiles](#)

What Difference does ePortfolio Make?

C2L evidence supports 3 preliminary claims

Sophisticated ePortfolio initiatives:

1. Advance Student Learning & Success
2. Make Student Learning Visible
3. Catalyze Institutional Change



Catalyst for Learning
ePortfolio Resources and Research

Home

Overview

The Catalyst

Partners

About C2L

Pedagogy

Professional Development

Outcomes Assessment

Technology

Scaling Up

Why ePortfolio?

The Catalyst Framework

Inquiry, Reflection, and Integration

Addressing the Whole Student

Purposeful Self-Authorship

Formal Academic Curriculum

Learning Across Semesters

Connecting w/ Faculty & Students

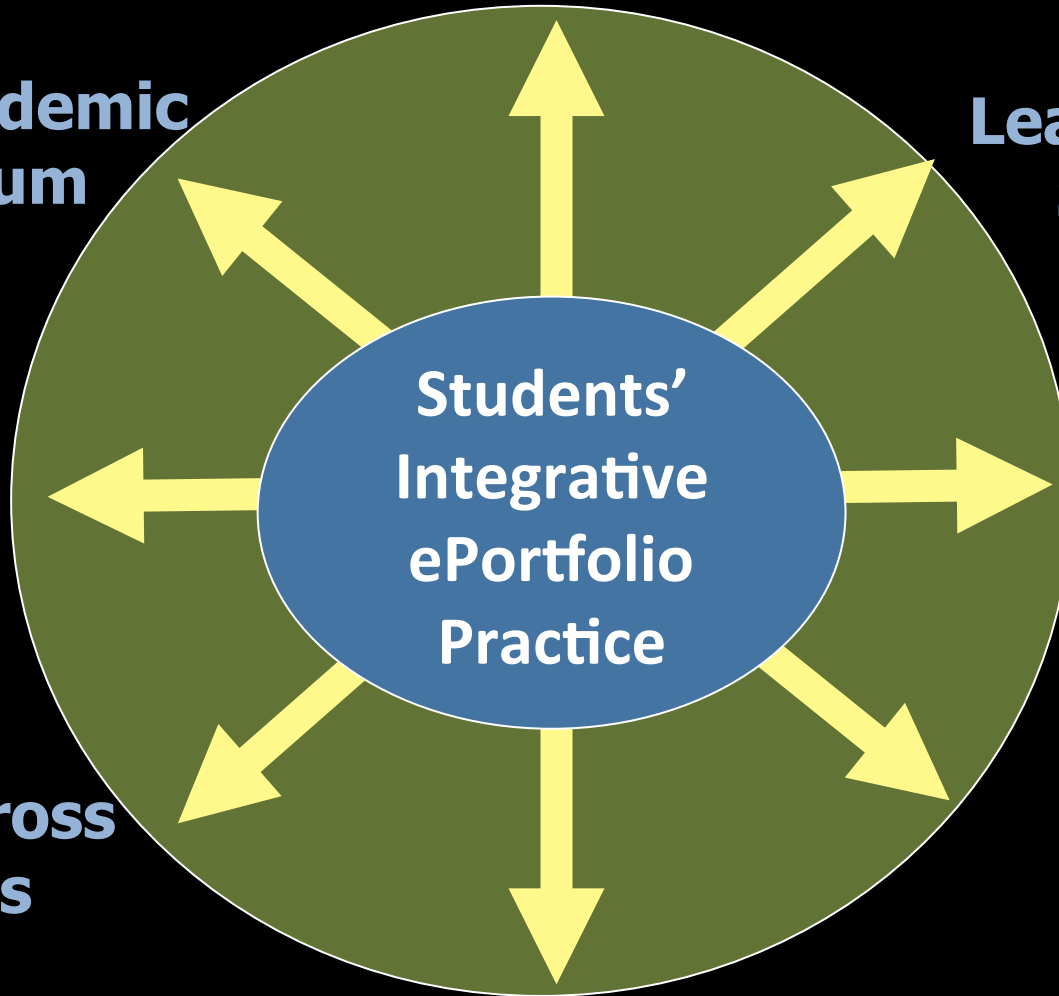
External Audiences

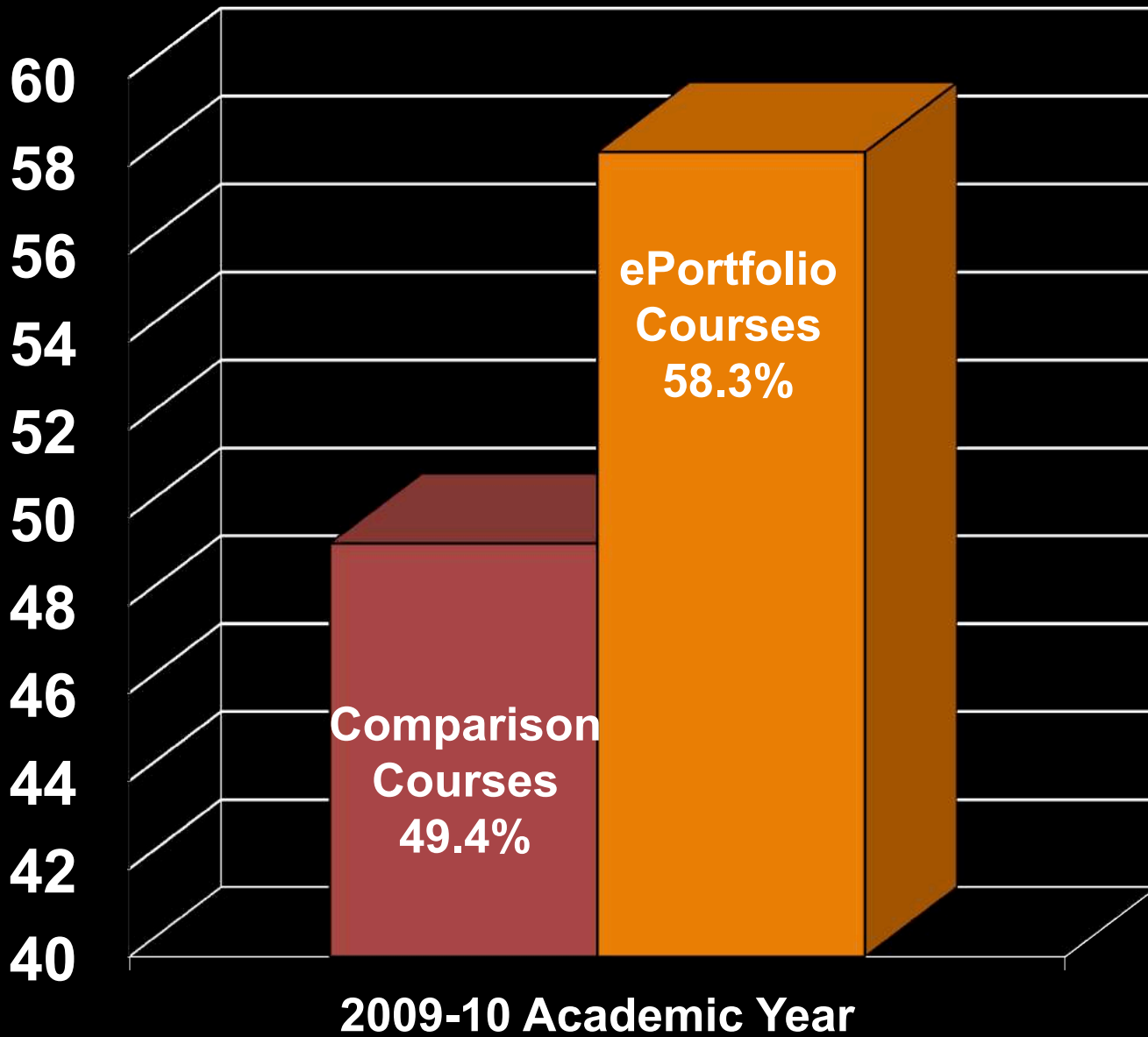
Students' Integrative ePortfolio Practice

Learning Across Disciplines

Co-Curricular & Lived Experiences

Advisement & Academic Planning





LaGuardia CC
High Pass Rates
(C & up)



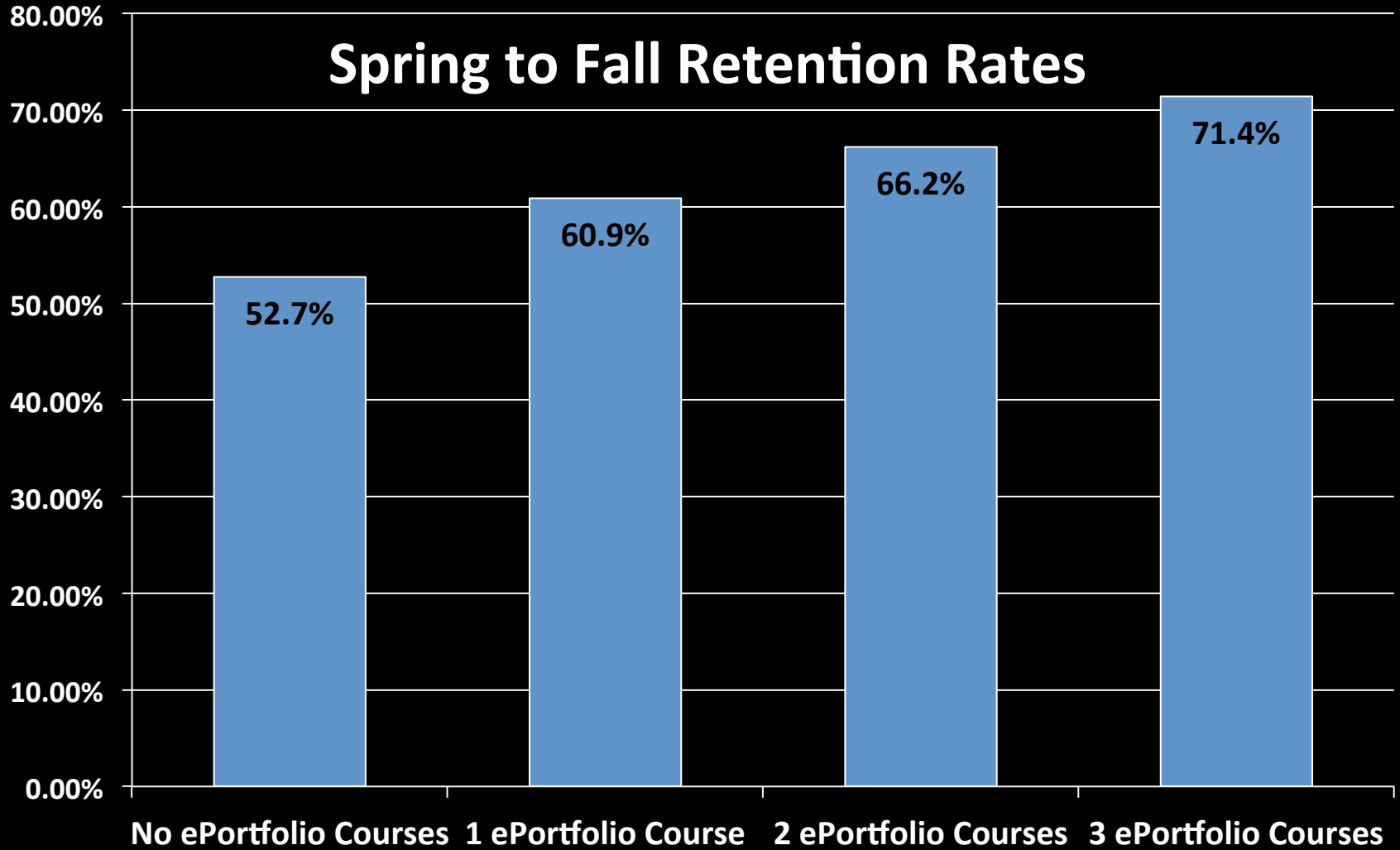
Community College



ePortfolio integrated into Metro Health Academies, an SFSU learning community project for high-risk students

	Metro Academy, First Year/First Time Students	All SFSU First Year/ First Time Students
1 Yr Retention Rate	90.0%	79.3%
3 Yr Retention Rate	79.0%	60.0%
4 Yr Grad'n Rate	24.6%	14.9%

Tunxis Community College





Catalyst for Learning

ePortfolio Resources and Research

Home Evidence Framework Partners About Connect to Learning

Pedagogy Professional Development Outcomes Assessment Technology Scaling Up

IUPUI – Reflection in the First Year: A Foundation for Identity and Meaning Making

Updated as of 1/16/14

The electronic Personal Development Plan (ePDP) is scaffolded into the curriculum of the first-year seminar at IUPUI so as to allow students to build a solid foundation for meaningful college experiences. The seven sections of the portfolio lead students through guided reflection prompts that ask them to consider who they are, why they are in college, and how the college experience support and enhance their future goals. This initial portfolio is intended to be updated throughout college experience so that the student is engaged in recursive planning, documenting, and reflection on their personal and intellectual growth throughout college.

[Click here for the full practice in IUPUI's Campus Project ePortfolio](#)

ePortfolios for the new ecology



Doing Things Differently: Scaling Up at Guttman Community College



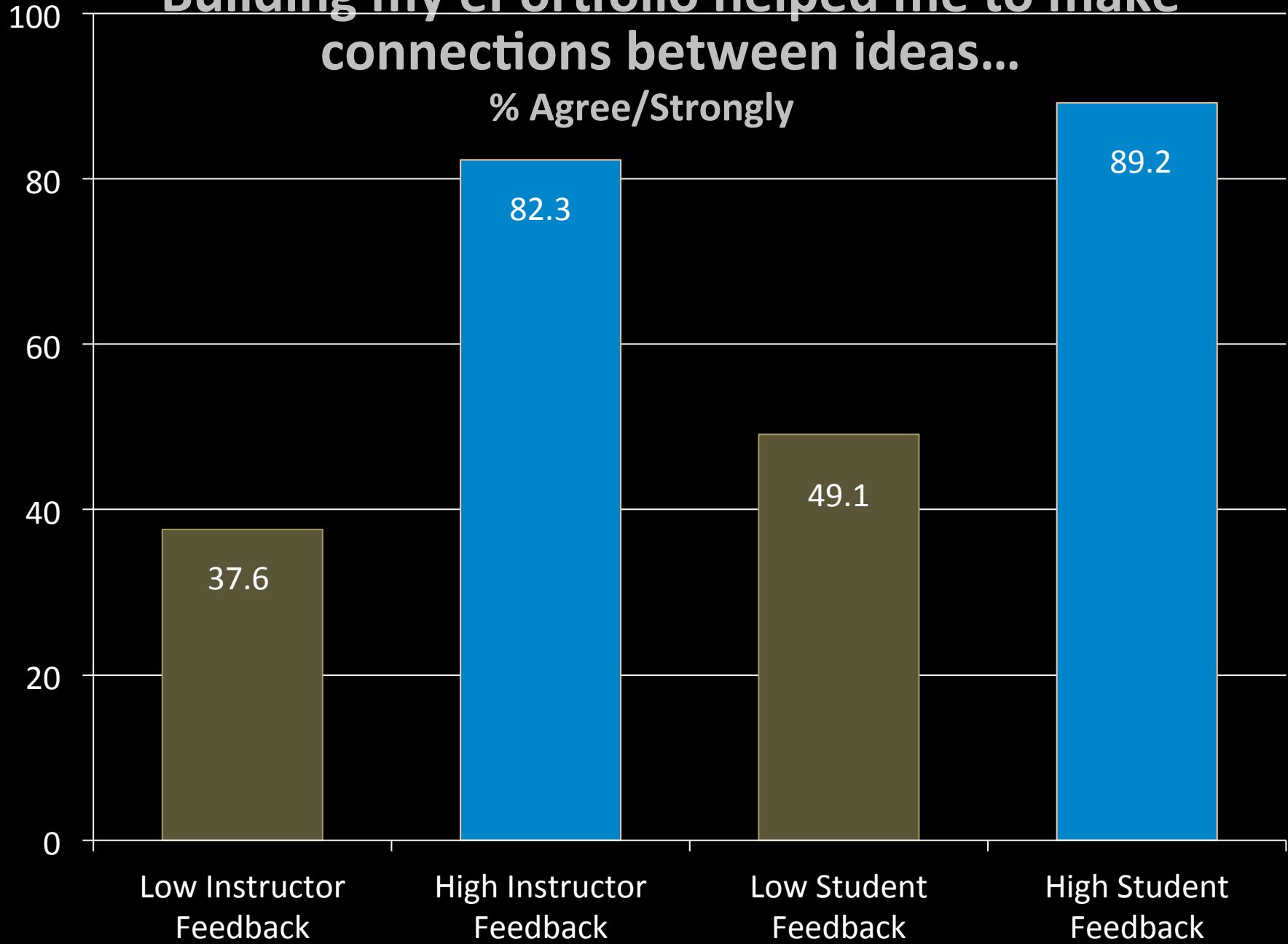
Guttman Community College opened its doors to its inaugural class of students in August 2012, with ePortfolio as the centerpiece for student and institutional learning.

Building my ePortfolio	Agree/ Strongly Agree
Helped me make connections between ideas	75.6%
Helped me think more deeply about course content	64.4%
Allowed me to be more aware of my growth & development as a learner	69.3%

My (ePortfolio-enhanced) course engaged me in...	Quite a Bit/ Very Much
Synthesizing & organizing ideas, information or experiences in new ways	83.1%
Applying theories or concepts to practical problems or in new situations	77.2%
My course contributed to my knowledge, skills and personal development in understanding myself	78.6%

Building my ePortfolio helped me to make connections between ideas...

% Agree/Strongly



Design Principles for a Rebundled Institution

Learner-centered

Do your learning environments support engagement in the context of empowerment and ownership of learning?

Networked


Do your systems and practices maximize community, social learning, and a broad concept of mentorship?

Integrative

Are your systems and practices serving to maximize connections and coherence? Connect what has typically not been connected.

Adaptive

Are your systems and practices supporting the critical capacities of institutions for improvement and agile innovation?



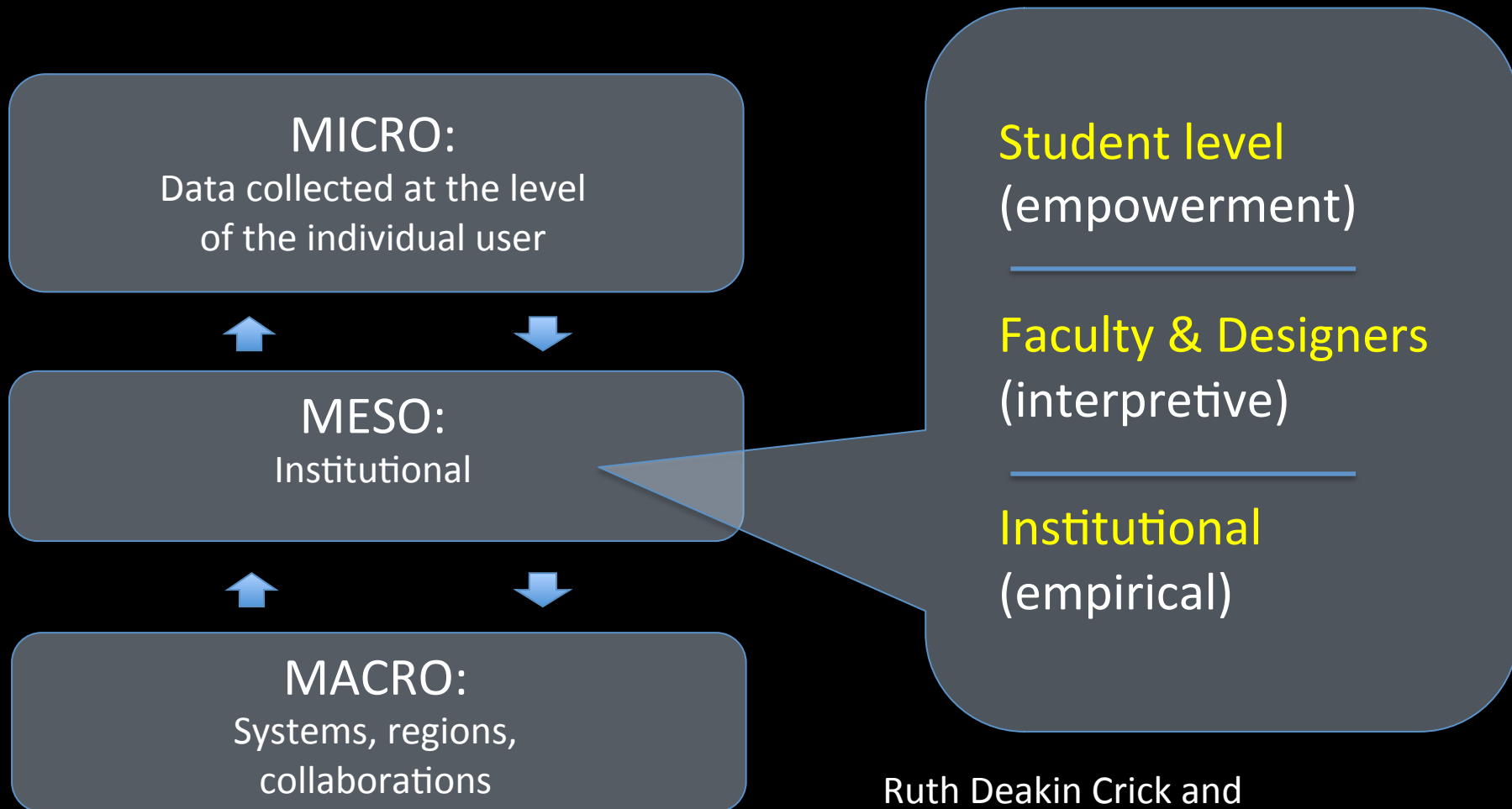
Assessment FOR Student, Faculty & Institutional Learning

Ground assessment in
the authentic work of
faculty & students.

Digital systems can
help to make student
learning visible



Towards an Integrative Assessment and Analytics



Ruth Deakin Crick and
Simon Buckingham Shum

Design Principles: a Vision worth Working Toward

Learner-centered

Engagement at scale & Empowerment

Networked

Community, social learning and mentorship

Integrative

*Integration from the inside out
Connect what has not been connected*

Adaptive

Institutional learning

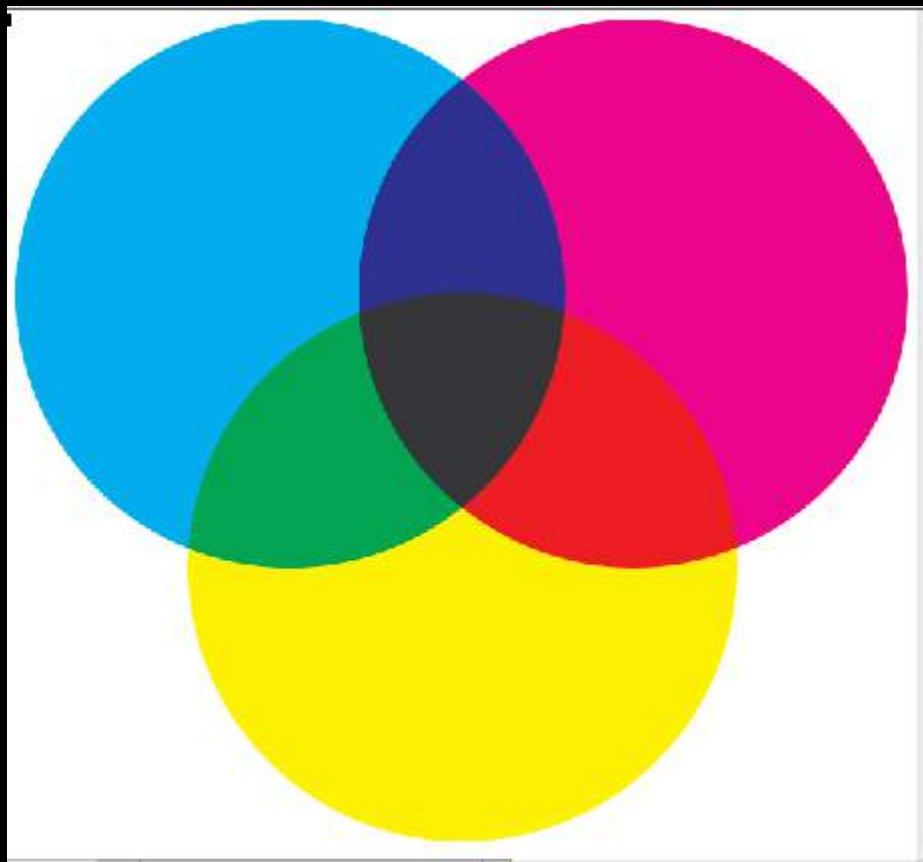
Knowledge of a domain

Knowledge of the world

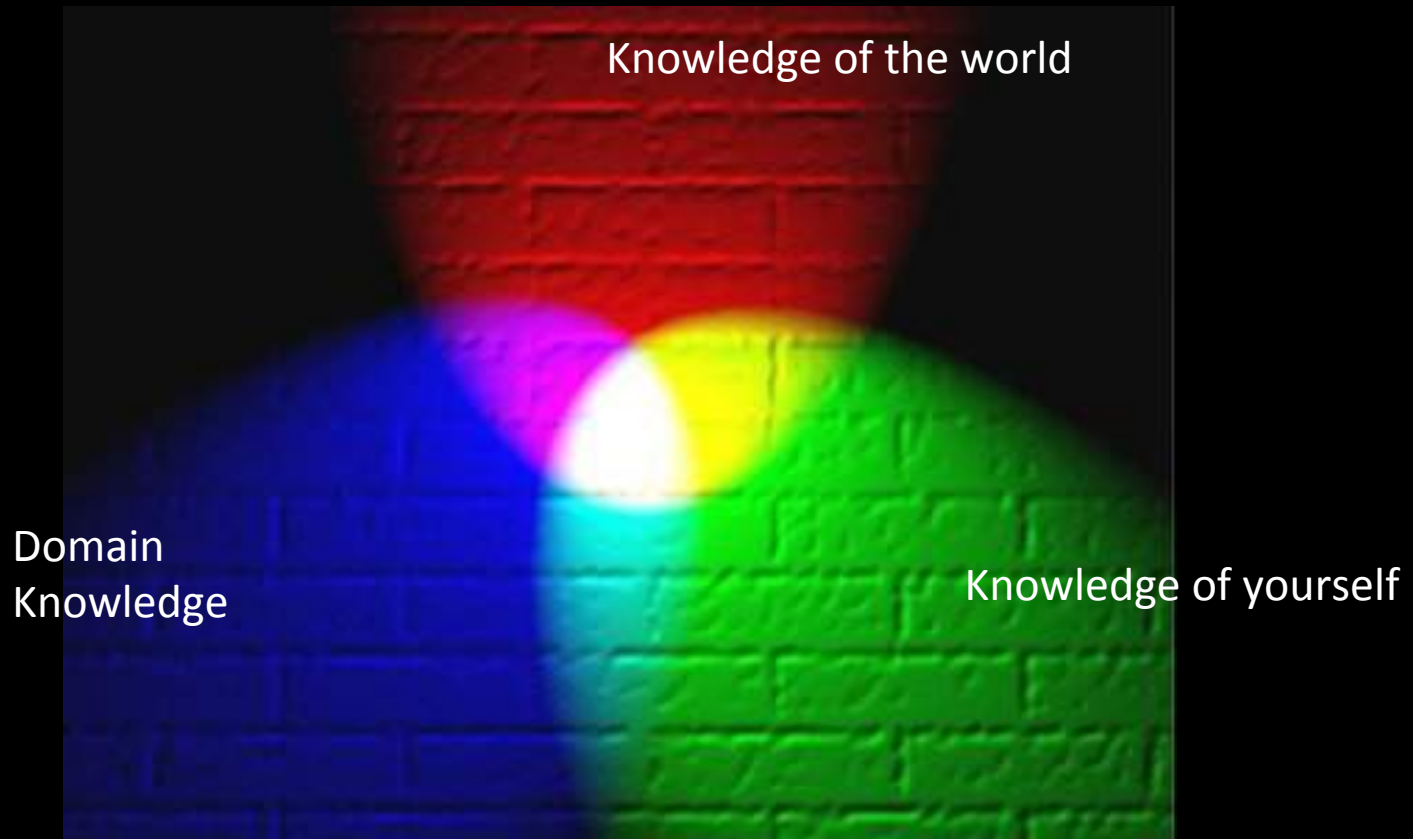
Knowledge of yourself

Heidi Elmendorf, Ph.D.
Biology, Georgetown





Signature paradigm for high-impact learning?



The space of ... formation, transformation
and whole student development



THANK YOU!

QUESTIONS?

bassr@georgetown.edu