Reimagining the Purposes of Higher Education in a Dis-integrative Age:

Implications for Researching Classroom Practice

Randy Bass

(Georgetown University)

CUNY Community College Research Grant Workshop
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Dis-integrative

Exclusive Excellence

Integrative

Inclusive Excellence
The great tension of our time in education is between integration and dis-integration.
How do we make a robust and meaningful education equitably available to everyone?

From unbundling to rebundling

Randy Bass, Georgetown
Bret Eynon, LaGuardia Community College
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 as part of a whole
- Knowledge, skills & dispositions
- Connections & integration
- Design of learning experiences for whole person development
Two paradigms of education

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Integrative (bundled, holistic, coherent):

The Onrushing Digital Revolution

Data Analytics / Adaptive Learning

Skill-based Learning

Open Online Courses

Scale

Automate

Reduce instructional costs
Two paradigms of education

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Educating the whole person?

Knowledge + Skills + Dispositions (+ Values)

Dispositions:
- Learning to learn
- Critical thinking
- Creativity
- Curiosity
- Resilience
- Empathy
- Humility
- Ethical Judgment

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

“HARD SKILLS”

- Design environments where they are more likely to be cultivated.
- Unscripted contexts, guided inquiry and experience.
- “High-impact practices.”
Levy and Murnane, *Dancing with Robots.*
Purdue-Gallop Poll on Engaged Work and Flourishing

Two most important predictors of success:

1) Adult mentor who cared about you
2) Sustained project
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Rebundling: Toward a New Synthesis

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Disintegrative in service to the integrative
Examples of Rebundling

Habitable Worlds at Arizona State

Statway at LaGuardia Community College
Examples of Rebundling

Cafeteria College to Guided Pathway College
Examples of Rebundling

Four Key Elements of Guided Pathway Colleges:

- Mapping pathways
- Student Goals and Strengths
- Monitoring Progress
- Quality learning

Cafeteria College to Guided Pathway College
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Disintegrative in service to the integrative
Inclusive Excellence

Inclusion, Diversity, Equity (access but experience and outcomes)

- Startup, disruptors
- Open access and public institutions
- Liberal arts colleges and universities
- Minerva University

“REBUNDLING”

Exclusive Excellence
Qualified and Prepared students
Rich holistic environments
What might it mean **to design** for the first quadrant?

*Design always begins with tensions*

- Access v. Rigor, Excellence
- Remediation v. integrated support
- Acceleration v. Outcomes
- Career skills v. Broader lifelong outcomes

Community Colleges
What might it mean to design for the first quadrant?

Connect what has typically not been connected.

Advising (IPASS)
Curriculum
First Year Experience
Student Affairs
Financial Aid
Career Services
What might it mean to design for the first quadrant?

Provide students the tools and scaffolding for integrating their learning.
ePortfolio Initiatives
Make Student Learning Visible

ePortfolio initiatives support reflection, social pedagogy, and deep learning.

ePortfolios help students reflect on and connect their learning across experiences. Advancing higher order thinking and integrative learning, the connective ePortfolio helps students construct purposeful identities as learners.
Addressing the Whole Student

Purposeful Self-Authorship

Formal Academic Curriculum

Connecting w/ Faculty & Students

Learning Across Disciplines

Advisement & Academic Planning

Learning Across Semesters

External Audiences

Co-Curricular & Lived Experiences

Students’ Integrative ePortfolio Practice
ePortfolio as a high-impact practice
What might it mean to design for the first quadrant?

Ensure that assessment and analytics empower everyone.
Assessment and Analytics that empowers everyone

- Student level (empowerment)
- Faculty & Designers (interpretive)
- Institutional (empirical)

Ruth Deakin Crick and Simon Buckingham Shum
What might it mean **to design** for the first quadrant?

Design and measure for the greater purposes of higher education.
Conscientiousness
Growth mindset
Belonging
Well-being
What might it mean to design for the first quadrant?

✓ Connect what has typically not been connected.

✓ Provide students the tools and scaffolding for integrating their learning.

✓ Ensure that assessment and analytics empower everyone.

✓ Design and measure for the greater purposes of higher education.
What might it mean to research learning and practice in the first quadrant?
What might it mean to research learning and practice in the first quadrant?

- What are the effective practices for embedding academic support into coursework?
MAT 119: statway @ LaGuardia

Non-Credit Bearing

- M1 COMPASS score less than 34
  - Pre-Algebra
  - MATH95

- M1 COMPASS score 35 or higher
  - Algebra
  - MATH96

Credit Bearing

- M1 COMPASS score 35 or higher
  - MAT 119
- M2 COMPASS score between 40 and 54
  - College Algebra
- M2 COMPASS score 55 or higher
  - Calculus Track

CEAFE

One 12-week term
7 contact hours/week
3 Credits in Statistics
“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.”

StatWay implemented at LaGuardia CC

Dev. Math + College-level Stats
✓ ALEKS (adaptive tools)
✓ Whole learner
✓ Complex problems, such as Food Justice and Climate Change

Connected to revised core competencies:
○ Inquiry
○ Global Learning
○ Integration

Milena Cuellar, Statway in one term
What is this case a case of?

Data analytics > adaptive learning

Alignment with ambitious larger outcomes

As much about the affective as cognitive

"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."

Milena Cuellar, Statway in one term at LaGuardia CC: Spring 2014

“REBUNDLING”

Focused on inquiry and integration, not merely skills and completion
What might it mean to research learning and practice in the first quadrant?

– How can we bridge the traditional divide between workforce skills and broader, liberal education outcomes?

Liberal Education (broad, critical, creative, integrative)

Professional/workforce (skills-based, vocational, technical)
Career Readiness

Critical Thinking/Problem Solving
Oral/Written Communications
Teamwork/Collaboration
Digital Technology

Leadership
Professionalism/Work Ethic
Career Management
Global/Intercultural Fluency

National Association of Colleges and Employers (NACE)
Matthew Hora, *Beyond the Skills Gap*

Employers survey of competencies

“These competencies can be summed up as a combination of a strong work ethic; rigorous technical training; the ability to solve complex technical problems and interpersonal dilemmas, engage in teamwork, and communicate effectively; and the ability and desire to continually learn.”
Matthew Hora, *Beyond the Skills Gap*

“These are the habits of mind that are necessary for innovative and competent workers that the business community craves; for citizens who can contribute to a healthy democracy; for thinkers who can creatively solve the environmental, social, and economic challenges of the twenty-first century; and for students to have the best opportunities for securing employment throughout their working lives.”
“high-impact practices”

Formal undergraduate curriculum

Experiential co-curriculum

Study abroad

Internships

Undergraduate research

Experiential co-curriculum

Experiential co-curriculum

Experiential co-curriculum

Student Affairs Advising

First-year Seminars

Collaborative Assignments

Writing-intensive

Capstone courses

Community-based learning

Experiential co-curriculum
What makes High Impact Practices high impact?

Experiential co-curriculum

Invest time and effort (time on task)
Accountable talk and thinking
Get (and give) frequent and meaningful feedback
Make daily decisions – judgment in uncertainty

Formal undergraduate curriculum

NEW ECOLOGY FOR LEARNING

Meet challenges to perspectives and belief, take risks, operate outside comfort zone
Opportunity to integrate, synthesize, make meaning
Integrative learning is an understanding and a disposition that a student builds across the curriculum and co-curriculum, from making simple connections among ideas and experiences to synthesizing and transferring learning to new, complex situations within and beyond the campus.
What might it mean to research learning and practice in the first quadrant?

- What forms of authentic experiential learning can deepen learning and serve your population of students well?
Launched in 2016, the Regents Science Scholars Program provides support for first-generation college students majoring in biomedical fields.
Regents Science Scholars

Summer before the first year:
Students enroll in a rigorous residential summer bridge program.

Summer between first and second year and second and third year:
Students take specially designed online modules to reinforce knowledge, while allowing students to work and be home with their families.
Regents Science Scholars

In three years, the number of first gen/low income students in biomedical majors has increased 5x.

>20% of the matriculating class of Biology majors are first-gen, low-income students
Glen Manor Feral Wine Project

Wines with a sense of place
Glen Manor Vineyards Case Club Event Announcement

For a few years I have wanted to try un-inoculated fermentations. Called Feral fermentations because yeast come from a multitude of sources, the vineyard, the cellar, in the air and different yeast strains get together to create new yeast strains, all of which can impact a wine in very complex and interesting ways. After a few years of small and successful trials, in 2016 I finally had the right conditions and enough nerve to explore this on a much larger scale in our red wine program. To better learn, we also performed our normal commercial yeast fermentations and now have wines of the same grape variety and planting fermented using both methods.

I would like you to taste these wines.

You are cordially invited into our cellar for our Spring Barrel Tasting, to taste and learn about these yeast trials that we conducted with our 2016 red wines. We will lead you through stations where at each stop you will taste and compare two wines exhibiting how yeast can affect a wines aroma, flavor, structure and style.
Professor Heidi Elmendorf, Biology
Director, Regents Science Scholars Program
Summer Bridge course on foundations of biology and chemistry.

“We covered everything we would have covered just in the context of this project.”

“They were surprised and daunted that they were the research team. But within one day the most common phrase was, “what would help Jeff?”
Good Morning,
I have been thinking about the design of the lab all night. And I think I have an understanding now after reading the material all over again.

My suggestion is to create an experiment with like 20 control groups and tests. I would number the different locations that the microbes are found (on grape, leave, soil, etc.) then organize them into hypothetical dishes. This way hypothetically speaking I will create multiple juices using different combinations of the microbes...This would help me keep track of them, and allow me to distinguish one group from another.

Does this seem possible? Can this lead me to understanding its flavor profile, giving Jeff the best possible taste?

All the best,
Nohad W
1-4: Purcellville-Tankerville Complex, 15-25% slope
5-8: Tankerville-Purcellville Complex, 15-25% slope
9-10: Myersville Silt Loam, 2-7% slope
11-12: Philomont-Tankerville Complex, 7-15% slope
13-14: Purcellville-Tankerville Complex, 15-25% slope
15-16: Purcellville Loam, 15-25% slope
Identification Procedures

Gram Staining
Culture Morphology
Gel Electrophoresis
Polymerase Chain Reaction
Embedding Undergraduate Research in the Community College Curriculum

By: Nancy H. Hensel and Brent D. Cejda

Several years ago, one of the authors (Nancy Hensel) became aware that students transferring from community colleges to four-year colleges or universities often needed an extra year to complete their science degree because they had missed having an undergraduate research experience. To address this issue, the Council on Undergraduate Research (CUR) and the National Council of Instructional Administrators (NCIA), an affiliate of the American Association of Community Colleges, agreed to collaborate on a project to increase undergraduate research in community colleges.
What might it mean to design and research for the first quadrant?
<table>
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<th>DESIGN</th>
<th>RESEARCH</th>
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Thank You!

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