"Taking a Look Under the Hood"

Research Findings on General Education Learning

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Pacific Lutheran University
Director: Pacific Northwest Learning Consortium

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Parkland, WA
What are Employers Looking For?
General Education Learning

How well do students in higher education develop General Education....

Skills

Attitudes

Habits of Mind

A Great Deal

Somewhat

A little

None
Critical Thinking

CAAP Critical Thinking Test measures students' skills in clarifying, analyzing, evaluating, and extending arguments.

A Great Deal  Somewhat  A little  None
Psychological Well Being

*Ryff Scales of Psychological Well-Being: Self-acceptance, environmental mastery, positive relations with others, personal growth, purpose in life, and autonomy*

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Diversity Awareness

Miville-Guzman Universality-Diversity Scale: Assesses student awareness and acceptance of both similarities and differences among people.

- A Great Deal
- Somewhat
- A little
- None
Positive Attitude Towards Literacy

*Measures students’ enjoyment of reading and writing*

- A Great Deal
- Somewhat
- A little
- None
Academic Motivation

Measures students' interest in working hard, getting good grades, and engaging challenging intellectual material

A Great Deal | Somewhat | A little | None
Political & Social Involvement

Measures the importance students place on volunteering, promoting racial understanding, and influencing political structures

A Great Deal  Somewhat  A little  None
### Arts & Science Interest

Measures the importance students place on making a contribution to the arts, humanities and science

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Radical Change

“...although there is considerable number of virtuous and studious youth in the College, yet there has been a practice of several immoralities; particularly stealing, lying, swearing, idleness, picking of locks, and too frequent use of strong drink....”


October 9, 1723
Higher Education & Change

United States Higher Education has always been “Market Driven”

Failed effort to found the University of the United States

Ruled in favor of Dartmouth (1819) to prevent state interference in operations of the college – led to the American corporation and the free enterprise system
Change

- Religious doctrine
- Moral character
- Education for white male elite only
- Modern disciplines – Social and Natural Sciences
- Practical disciplines – Agriculture and the Mechanic Arts
- Research
- Racial and gender equality
- Mass education
- Convenient education
“Many new subjects have been added but the length of college remains the same. Colleges must choose contraction in the number of subjects or, extend college education over a longer period of time – which the American public is unwilling to accept.”

Francis Wayland – President Brown University 1827 - 1856
General Education

“Present college programs are not contributing adequately to the quality of students’ adult lives either as workers or as citizens. This is true in large part because the unity of liberal education has been splintered by overspecialization.”

Report of the President’s Commission on Higher Education, 1947
“At a time when we need to be increasing the quality of learning outcomes and the economic value of a college education, there are disturbing signs that suggest we are moving in the opposite direction.”

A Test of Leadership – Charting the Future of Higher Education Sept. 2006
Educational Goals

Find a Life Worth Living

Survive

Prosper

“Fit between character of student and institution”

Can we put authentic objective outcome criteria on such subjective outcomes with vastly unique institutions AND variables well out of our control?

Christopher Nelson  President, St. John’s College in Annapolis
Learning is Iterative & Variable

College Control of Student Experience

Before College

Parent Involvement

College

Classes
Co-Curricular
Studying

After College
NSPE
National Standardized Parent Exam
Rankings

• Peer Reputation
• Graduation Rate

• Tuition & Fees
• Alumni Giving

• Yield %
• Pell %
• Endowment Size
• Student Load Default

• Industry Income
• Jobs & Income of Graduates
Can dogs talk?
Longitudinal Study of 49 institutions & 17,000 students Evaluating Liberal Arts Outcomes
Outcome Measures

CAAP Critical Thinking Test

Need for Cognition Scale

Miville-Guzman Universality-Diversity Scale (M-GUDS)

Socially Responsible Leadership Scale (SRLS-R2)

Defining Issues Test (DIT-2)

Ryff Scales of Psychological Well-Being

Experience Surveys

Contribution to the Arts

Contribution to the Sciences

Political and Social Involvement

Professional Success

Openness to Diversity and Challenge

Academic Motivation

Positive Attitude toward Literacy

NSSE

Student Experiences Survey
Timeline

Enter college

- Gather student background information
- Give students outcome measures

End 1st year

- Ask students about their college experiences
- Give students outcome measures

2nd year

3rd year

- Ask students about their college experiences
- Give students outcome measures

4th year
Are Student Self Report Data Valid?

Pedagogies

Supportive Practices

Assignments

WABASH NATIONAL STUDY OF Liberal Arts Education
Student Self Report?

Longitudinal sample of over 3,000 first-year college students:

“Across several cognitive and non-cognitive outcomes, the correlations between self-reported and longitudinal gains are small or virtually zero”
Liberal Arts Outcomes?
Figure 4. Proportion of students who showed moderate to high growth, small growth, or no growth/decline on Wabash National Study outcome measures over four years of college.

<table>
<thead>
<tr>
<th>Category</th>
<th>Moderate Growth</th>
<th>Small Growth</th>
<th>Decline/Decline</th>
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<tbody>
<tr>
<td>Moral Reasoning</td>
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Figure 4. Proportion of students who showed moderate to high growth, small growth, or no growth/decline on Wabash National Study outcome measures over four years of college.
1. Students did not learn/grow in many areas

2. Variability within institutions is greater than between institutions
Figure 5. Box plots of the within-institution variation for small colleges (S) and large universities (L) in four-year student change (in standard deviations) in academic motivation.
Figure 6. Box plots of the within-institution variation for small colleges (S) and large universities (L) in the level of good teaching and high-quality interactions with faculty (scores from 0-100).
What Works?
Good practices from the Wabash Study

- Students who report higher levels of the following are more likely to grow on most of the 12 learning outcomes in the Wabash Study
  - Good Teaching and High-Quality Interactions with “Faculty”
    - Faculty/staff interest in teaching and student development
    - Out-of-class student/staff & student/faculty interactions
    - Organization, preparation, clarity, prompt feedback
  - Academic Challenge and High Expectations
    - Hard work, challenging assignments and interactions
    - Synthesis, judgment, integration, and reflection
  - Interactional Diversity
    - Meaningful interactions
  - Deep Learning
    - Higher-order, integrative, and reflective learning
Chickering & Gamson (1987)
Good Teaching Practice

1. Interaction between students and faculty.
2. Interaction and collaboration between students.
3. Active learning techniques.
4. Prompt feedback.
5. Emphasizes time on task.
6. Communicates high expectations.
7. Respects diversity --- talents, experience, and ways of learning.
“Learning begins with student engagement, which in turn leads to knowledge and understanding. Once someone understands, he or she becomes capable of performance or action. Critical reflection on one’s practice and understanding leads to higher-order thinking in the form of a capacity to exercise judgment in the face of uncertainty and to create designs in the presence of constraints and unpredictability. Ultimately, the exercise of judgment makes possible the development of commitment. In commitment, we become capable of professing our understandings and our values, our faith and our love, our skepticism and our doubts, internalizing those attributes and making them integral to our identities.”

Schulman, 2002
Academic Reach?

Higher Education may need to be honest about what it REALLY provides to the majority of students

Mission, Educational Values, Espoused Outcomes Are High Ideals....

Not something we can control or even measure in most cases
Academic Reach?

Internally agree upon these outcomes and define standards

Avoid excessive standardization

But

Have Standards
Academic Reach?

Develop a means to constructively communicate these outcomes to the public in order to change the national conversation.
If outcomes are often WORSE at the end for students in residential 4 year institutions....

What does this say about outcomes for students that swirl in and out of multiple institutions and transfer credit based on words in a syllabus?
Well Established Institutions Have Inertia Difficult to Change

Tax System

Health Care Delivery
Higher Education

Is learning and competency used in applying credit to student transfers?

Do students gain the skills, attitudes and habits of mind they need to succeed?
### Educational Attainment in the U.S.*

<table>
<thead>
<tr>
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<th>1910</th>
<th>2012</th>
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<tbody>
<tr>
<td>25 or older with a High School Diploma</td>
<td>13%</td>
<td>87.6%</td>
</tr>
<tr>
<td>25 or older with a Bachelor’s Degree</td>
<td>2.7%</td>
<td>31%</td>
</tr>
<tr>
<td>College Enrollment</td>
<td>350,000</td>
<td>21,000,000</td>
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*National Center for Education Statistics*
Thank You!

One Day Student Learning Workshops in October:

October 22 – Spokane, WA      Developing and Implementing Assessment Plans
October 24 – Portland, OR      Understanding Student Learning in General Education

www.plu.edu/pnlc
Tips

1. Be COMMITTED to improvement – Incremental, Long-Term, Sustainable
2. Education goals & process MUST stem from mission & culture
3. Value the notion of openly QUESTIONING long standing institutional practices
4. EMBRACE the fuzzy world of program level learning – it is not research!
5. The first “understanding student learning experience” NEEDS to be a good one

6. Pilot, pilot again, AND again
   a. Be willing to EXPERIMENT before data is “conclusive”
   b. Develop rubrics/methods of evaluation – get close enough – observable,
   c. Create 4 levels ONLY in the rubric (2 above, 2 below)
   d. Develop the rubric and analyze student evidence TOGETHER with those that teach the courses
   e. Use student evidence to support and drive faculty development, curricular/pedagogical change
   f. Return to a.

- QUALITY TEACHING IS WHAT MATTERS!
Lower level course outcomes
### Advanced Course / Program outcomes

#### Comprehension
- Cite
- Count
- Define
- Draw
- Identify
- List
- Name
- Point
- Quote
- Read
- Recite
- Record
- Repeat
- Select
- State
- Tabulate
- Tell
- Trace
- Underline

#### Application
- Associate
- Classify
- Compare
- Compute
- Contrast
- Differentiate
- Discuss
- Distinguish
- Estimate
- Explain
- Express
- Extrapolate
- Interpolate
- Locate
- Operate
- Order
- Practice
- Report
- Restructure
- Schedule
- Sketch
- Solve
- Translate
- Use
- Write

#### Analysis
- Apply
- Calculate
- Classify
- Demonstrate
- Determine
- Dramatize
- Employ
- Examine
- Illustrate
- Interpret
- Locate
- Operate
- Order
- Practice
- Report
- Restructure
- Schedule
- Sketch
- Solve
- Translate
- Use
- Write

#### Synthesis
- Arrange
- Assemble
- Collect
- Compose
- Construct
- Create
- Design
- Formulate
- Integrate
- Manage
- Organize
- Plan
- Prepare
- Prescribe
- Produce
- Propose
- Specify
- Standardize
- Test
- Write

#### Evaluation
- Appraise
- Assess
- Choose
- Compare
- Criticize
- Determine
- Estimate
- Evaluate
- Grade
- Judge
- Measure
- Rank
- Rate
- Recommend
- Revise
- Score
- Select
- Standardize
- Test
- Validate
“Assessment practices, and data-gathering, vary widely across different disciplines. How can administrators aggregate data from different departments and programs to arrive at meaningful comparisons with regard to student learning outcomes?”

• Understanding student learning is **engaged community action**, not research. Enforcing standardized reporting methods may or may not be the most helpful course of action.

• Don’t let methodological imperfection deter incremental improvement.

• Think about these questions:
  
  *What is most useful?*
  *What is politically viable?*

  *What “comparisons” would aid our understanding of student learning?*
“What are the best practices for integrating assessment without it becoming burdensome for faculty?”

Most faculty are already making efforts to understand student learning – however, changes based on what faculty already know are sometimes supported by anecdote and made in an ad-hoc manner...if changes are made at all.

- Find out what area of learning people are interested in

- If you have a senior experience/capstone, often faculty will describe the deficiencies students bring to this culminating experience – START THERE.

- Keep it simple and focused:  
  Pick one outcome, and one only as a start – let people’s interests guide the focus  
  Pick one assignment/project in a course to use as evidence as a start  
  Spend one day agreeing upon a rubric and evaluating student work  
  Write a few paragraphs about what you learned and what you will do next  
  You are done until next time!
“Generally, seeing it {general education} as more than just hoops to jump through (both the student and faculty perspective). Why exactly are students required to take these classes? It would be good to better explicate that.”

**Be authentic and transparent about reality:**

“The current state of affairs in our departments, curricular structures, and programs is usually a compromise carefully negotiated among numerous parties over the course of years. Unless the findings are truly devastating, assessment data has little impact on this tightly constrained arrangement.”

*Blaich & Wise, NILOA 2011*

Politically – What is the motivation for change?
“Does our current structure of General Education requirements lend itself to assessment, or do we need to better articulate our learning objectives? How can learning objectives be more consistent without imposing undue restraints on faculty regarding course content?”

Start with mission & core educational values where faculty share a passion:

Consider these questions:

Is our current general education system serving students optimally?

How would we know or find out?

What would student behavior/performance look like if the goal is met?

Are we being realistic about what our students learn?
"We don’t have a good way of assessing learning outcomes except in a VERY general way through the CLA. What is the solution to these curricular and assessment issues?"

Realize CLA is for accountability – not understanding student learning

CLA: Critical Thinking, Analytic Reasoning, Problem Solving

Problems:

81% of the variance in institution scores is due to students’ prior learning

“Value Added”, while appealing, is not a valid means to measure changes in student learning (it can work in a laboratory with random sampling and controlling of variables). Reliability score is 0.1 for student learning.

Not tied to what faculty do in the classroom and curriculum
“The challenge in many Gen Ed classes that have mixed populations of students is to teach the non-majors something without boring the majors. In some cases the majors don’t even bother to buy the book since they have already covered much of the material in HS. Kind of sad, in my opinion.”

Down the road – as faculty embrace the idea of change....

**Leave Fiefdom Gen Ed and embrace Core Learning tied to mission:**

Requires collaborative discussions across departments/units in which faculty wrestle with what general education means at the institution.

- Communication
- Information Literacy
- Critical Thinking
- Global and Civic Leadership
- Ethical Reasoning
- Quantitative and Scientific Reasoning
- Creative Expression