## Look What I Can Do: General Education and Assessment that Is Useful

Terrel L. Rhodes
Vice president, Association of American
Colleges and Universities
Wichita State University
November 8, 2013





#### A degree should...

...provide a broad, well-rounded education that enables discovery of interests and abilities to help students realize their full potential in life

"I'm thinking that if I realize my full potential, and discover that here, and have a broad range of appreciating who people are and cultures outside my own, then I will be okay. [The] second will come from the first."

Student, California State University

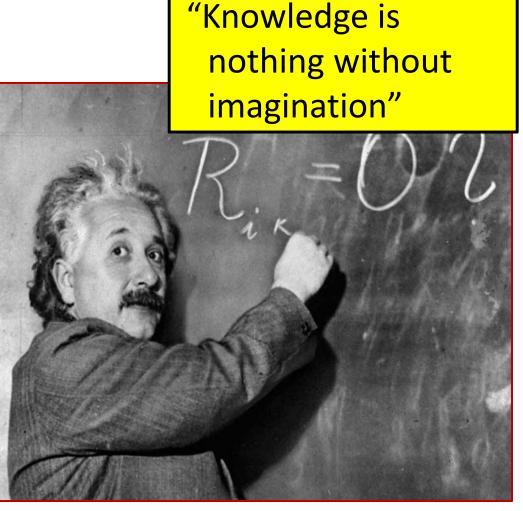
Student, California State University System ...provide students with specific career knowledge and skills to help them realize their full potential in the workforce

"I worry that if I go through this great diverse education, but I can't go out and find a decent paying wage at the end of it, then, while I may be a better person for it, I'm still basically [out of luck]."

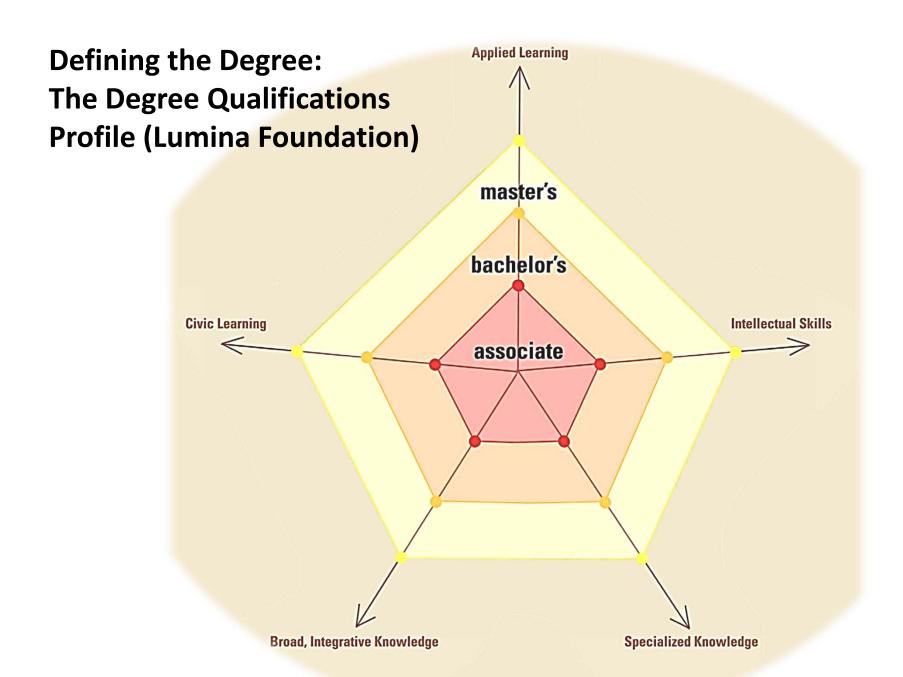
Student, Oregon University System

#### What is a Liberal Education?

- Liberal Education = A
   philosophy of learning that
   empowers & prepares
   individuals to deal with
   complexity, diversity, &
   change.
- Broad knowledge <u>combined</u>
   w/ in-depth study
- To help students develop a sense of social responsibility strong & transferable intellectual and practical skills & a demonstrated ability to apply knowledge.



# What is Happening Nationally?



## The 21<sup>st</sup> Century Curriculum: Liberal Education & America's Promise (LEAP) Essential Learning Outcomes

#### Knowledge of Human Cultures & the Physical & Natural Worlds

Content & professional skills

## Intellectual and Practical Skills

- Inquiry & Analysis
- Critical & Creative Thinking
  - Written & Oral Communication
- Quantitative Literacy
- Information Literacy
  - Problem-solving &

**Teamwork** 

## Personal & Social Responsibility

- Civic Knowledge & Engagement
- Intercultural Knowledge & Competence
  - Ethical Reasoning
  - Foundations & Skills for Lifelong Learning
    - Global Learning

## Integrative & Applied Learning

- Synthesis across general and specialized studies
- Application of knowledge, skills in new settings

## What are the necessary skills for the 21st Century?

"My company lives and dies on our ability to innovate and to create the new products and processes that give us an edge in this very competitive global economy. ESCO needs people who have both a command of certain specific skills and robust problem-solving and communication skills."

Steven Pratt, CEO, ESCO Corp. and Chair of the Oregon Business Council



## "The complexity that we're dealing with today requires us to be reskilling and re-tooling all the time."

(Julie Anding, Senior Director of Employee Learning at Harley-Davidson Motor Company, WI)

- Every year, more than 30 million Americans are working in jobs that <u>did not exist</u> in the previous quarter.
- Every year, more than 1/3 of the entire US labor force changes jobs.
- Today's students will have 10-14 jobs by the time they are 38.
- By 2018, 22 million new and replacement jobs will require some college.

Sources: DOL-BLS; Georgetown University Center on Education and the Workforce; AAC&U, *College Learning for the New Global Century* (2007); Lumina Foundation for Education.



## It Takes More Than A Major:

## Employer Priorities for College Learning and Student Success

Key findings from survey among 318 employers Conducted January 9 – 13, 2013 for

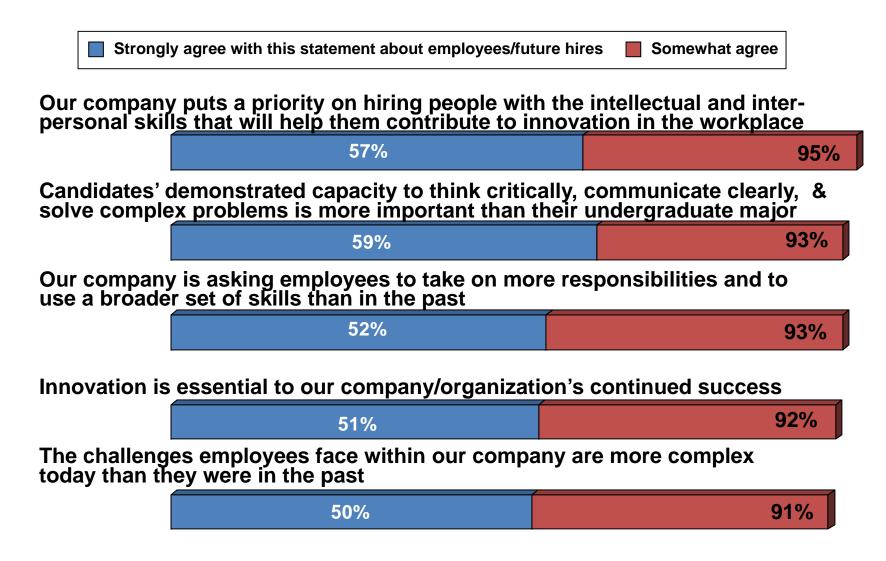


## Key Findings

- ♦ Innovation is a priority for employers, and they report that the challenges their employees face today are more complex and require a broader skill set than in the past.
- ◆ Employers recognize capacities that cut across majors as critical to a candidate's potential for career success, and they view these skills as more important than a student's choice of undergraduate major.
- ◆ Employers recognize the **importance of a liberal education** and the liberal arts. The majority agree that having both field-specific knowledge and skills <u>and</u> a broad range of skills and knowledge is most important for long-term career success.
- ◆ Employers endorse education practices that involve students in active, effortful work and the **application of skills**.
- ◆ Employers express **interest in e-portfolios** and **partnerships** with colleges to ensure college graduates' successful transition to the workplace.

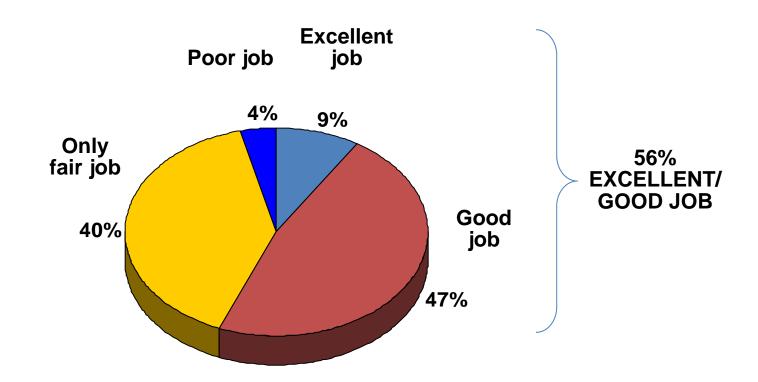


Consensus among employers is that innovation, critical thinking, and a broad skill set are important for taking on complex challenges in the workplace.



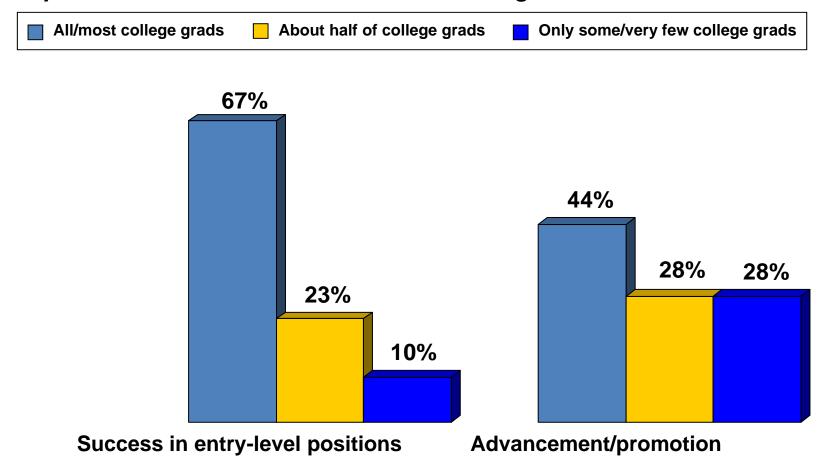
The majority of employers think that higher education is doing at least a good job in preparing students for success.

Thinking about the economy overall, and not just about your own company or organization, how good a job do you think higher education is doing in preparing graduates to succeed and contribute in this economy?

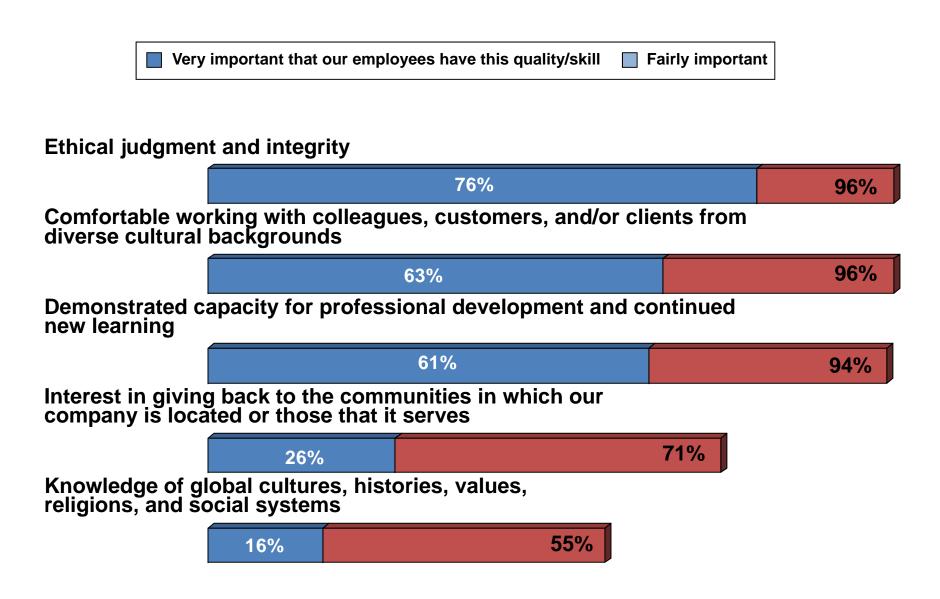


Two in three employers believe most college graduates have the skills/knowledge to succeed in entry-level positions; they feel fewer graduates have what it takes to advance.

What proportion of applicants for positions at your company in the past few years possess the full set of skills and knowledge needed for this?



Employers value cross-cutting skills and qualities when hiring.

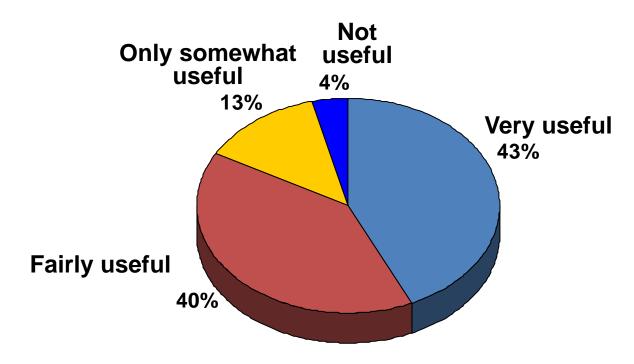


Employers believe a variety of emerging educational practices have the potential to help graduates succeed.

Will help a fair amount Will help a lot to prepare college students for success after graduation Expecting students to develop the skills to research questions in their field and develop evidence-based analyses 83% 45% Students complete significant project before graduation, demonstrating knowledge in major & analytical, problem-solving, communication skills **79%** 42% Students complete internship or community-based field project to connect classroom learning with real-world experiences **78%** 47% **Expecting students to develop the skills to conduct research** collaboratively with their peer's 74% 33% Students acquire hands-on experience with the methods of science to understand how scientific knowledge is developed 39% Expecting students to work through ethical issues and debates to form their own judgments about the issues at stake 66% 34%

Employers say that an electronic portfolio of students' work and knowledge areas would be useful in evaluating candidates for hire.

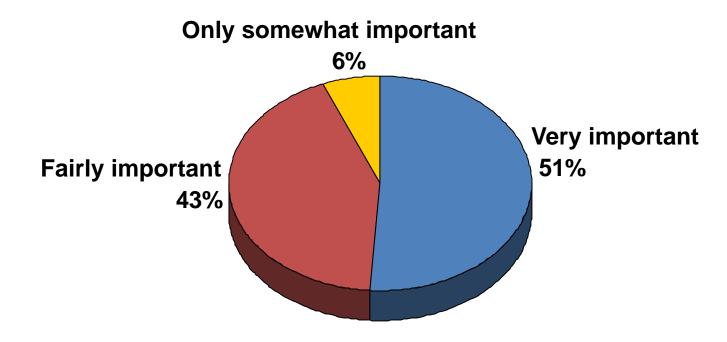
In addition to a recent college graduate's résumé and college transcript . . . how useful would it be to see an electronic portfolio of student work that demonstrates accomplishment in key skill and knowledge areas (effective communication, knowledge in their field, evidence-based reasoning, ethical decision-making)?



## Employers endorse the concept of a liberal education.

#### How important is it for today's colleges to provide this type of education?

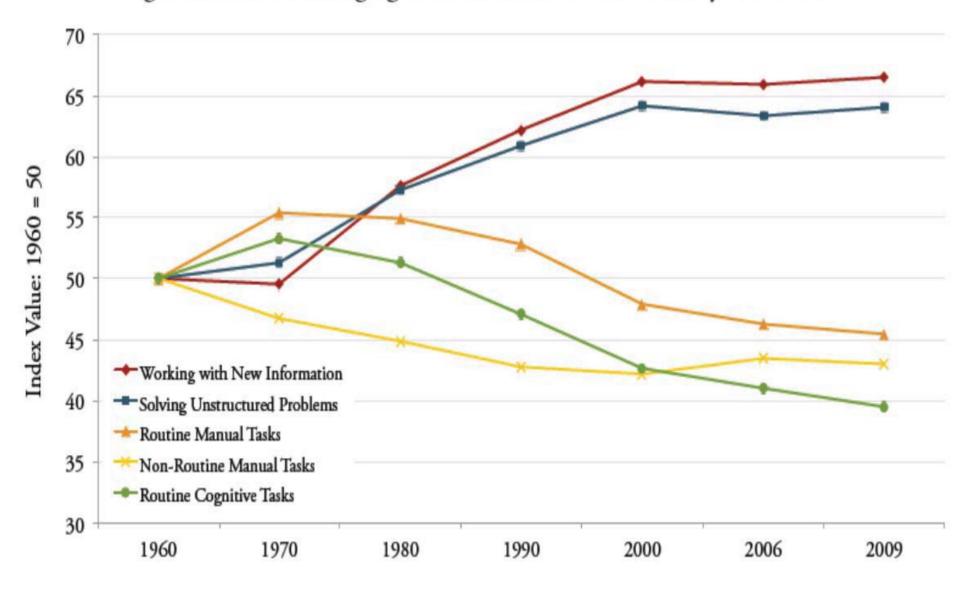
"This approach to a college education provides both broad knowledge in a variety of areas of study and knowledge in a specific major or field of interest. It also helps students develop a sense of social responsibility, as well as intellectual and practical skills that span all areas of study, such as communication, analytical, and problem-solving skills, and a demonstrated ability to apply knowledge and skills in real-world settings."



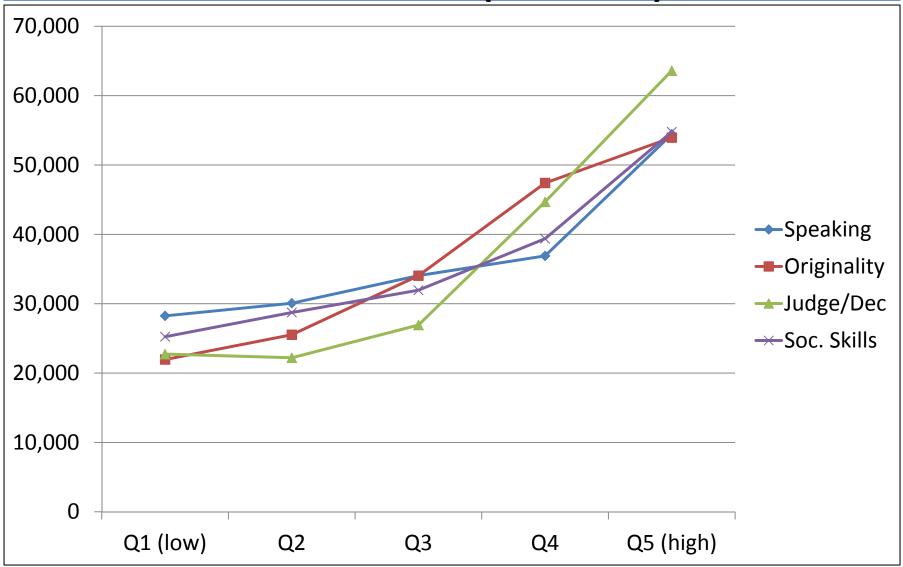
	Rules Based Logic	Pattern Recognition	Problem Solving
Variety	Computer Processing Using Deductive Rules	Computer Processing Using Inductive Rules	Problem is Unscripted and Rules for Solution Cannot be Routinized
Examples	Calculate Basic Income Taxes Issuing a Boarding Pass	Speech Recognition  Predicting a  Mortgage  Default	Writing a Convincing Legal Brief  Adapting or Developing a New Product or Service
Computer Role	Execute Tasks, Except in Non-Routine Cases	Support Human Problem Solving	Assist Human Problem Solving

Adapted from Dancing with Robots: Human Skills for Computerized Work, Frank Levy and Richard J. Murnane, available at <a href="http://content.thirdway.org/publications/714/Dancing With Robots.pdf">http://content.thirdway.org/publications/714/Dancing With Robots.pdf</a>.

Figure 3: Index of Changing Work Tasks in the U.S. Economy 1960-2009<sup>21</sup>



## What does a Liberal Education Pay?: Salary by Skill Demand (Quintiles)



Source: Georgetown Center for Education and the Workforce (Anthony Carnavale)

"More big-picture thinking in the professions and more real-world application in the liberal arts and sciences."

Stephen H. Weiss (1935-2008) Former Managing Director, Neuberger Berman LLC

"I don't know too many jobs that the job is being well-rounded. You know, it's not like you're going to work at 'Well-Rounded, Inc.' or something."

Student, University of Wisconsin System



# It's More than the First Job

## How do we help students "see" Learning?



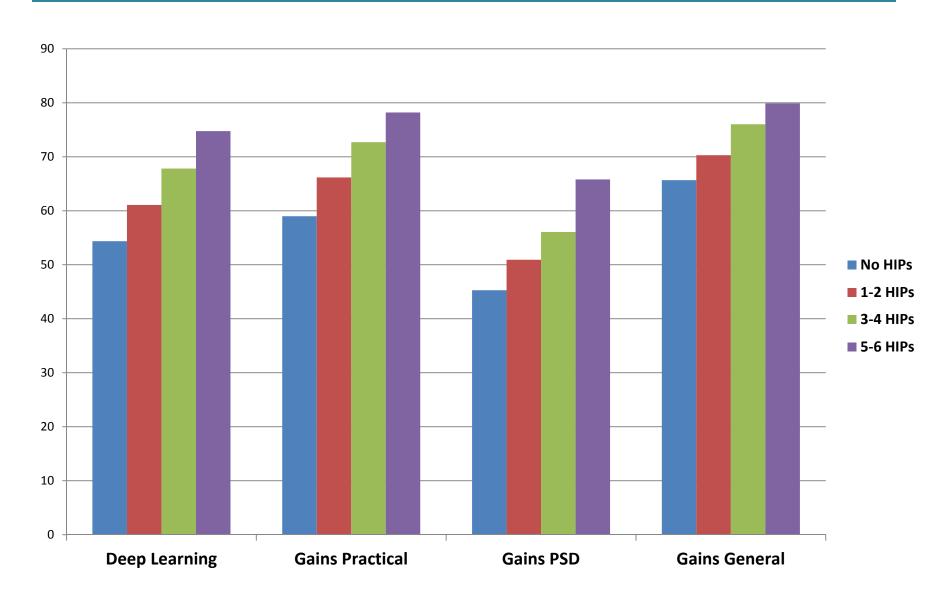
#### **High-Impact Practices**

- **★** First-Year Seminars and Experiences
- **★** Common Intellectual Experiences
- **★** Learning Communities
- **★** Writing-Intensive Courses
- **★** Collaborative Assignments and Projects
- **★** Undergraduate Research
- **★** Diversity/Global Learning
- **★** Service Learning, Community-Based Learning
- **★** Internships
- **★** Capstone Courses and Projects
- **★ePortfolios**

#### Why Are They Called "High-Impact" Practices?

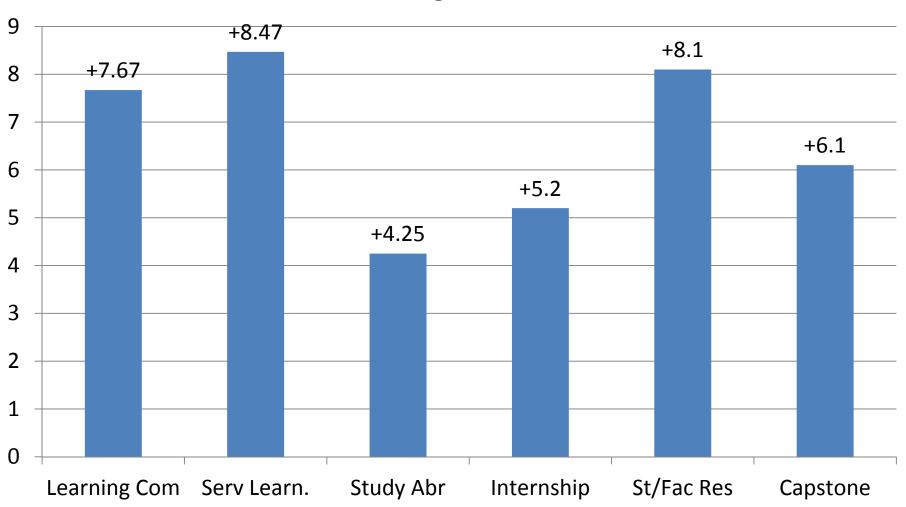
- Analyses by NSSE (Source: Kuh, 2008. "High Impact Practices: What are They, Who has access to them, & Why They Matter." AAC&U)
  - Connect participation in high impact experiences with positive gains in:
    - Deep Learning
    - Practical Competence
    - Personal and Social Development
    - General Education
- Literature Review (Source: Brownell & Swaner. 2010. "Five High Impact Practices." AAC&U)
  - Higher GPA/grades
  - Gains in writing, critical thinking, reading, integrative thinking, research skills,
  - Higher rate of civic engagement, gains in commitment to social justice, multicultural awareness
  - In addition to...
    - Increased retention and persistence
    - Ease of college transition
    - Higher rate of graduate school enrollment
- High impact for whom?

## What is the cumulative impact of participation in HIPs experiences on learning outcomes?

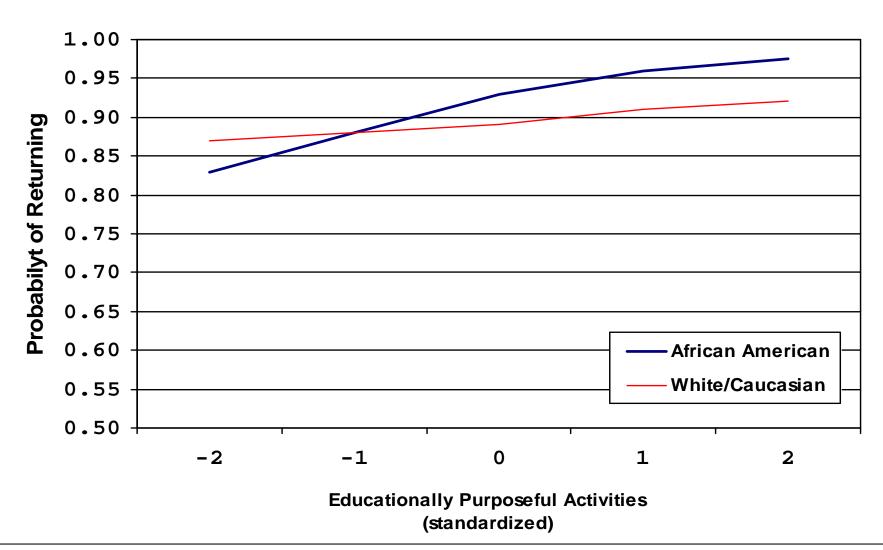


## Average Difference in Learning Outcomes from Participating in HIPs vs Non-participation



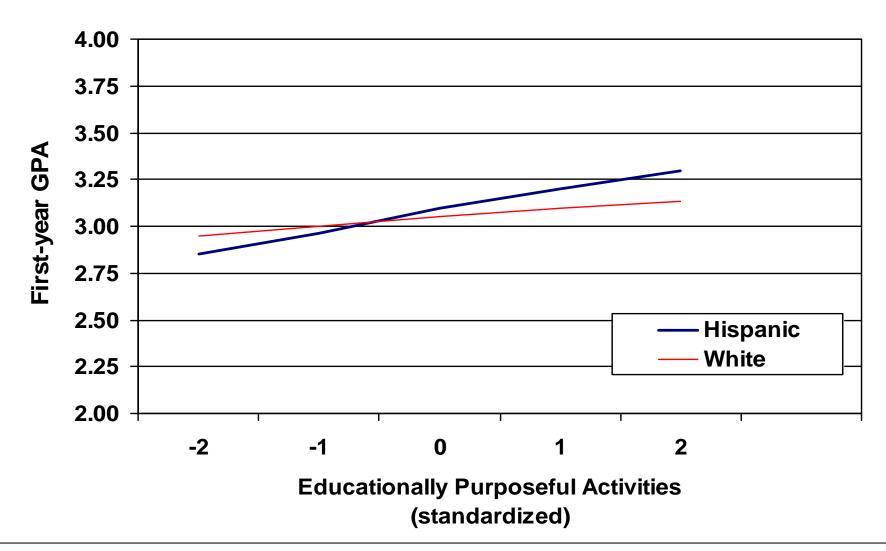


### Impact of Educationally Purposeful Practices on the <u>PROBABILITY OF</u> <u>RETURNING</u> for Second Year of College by Race



Source: Kuh, High Impact Practices: What They Are, Who Has Access to Them, and Why They Matter (AAC&U, 2008)

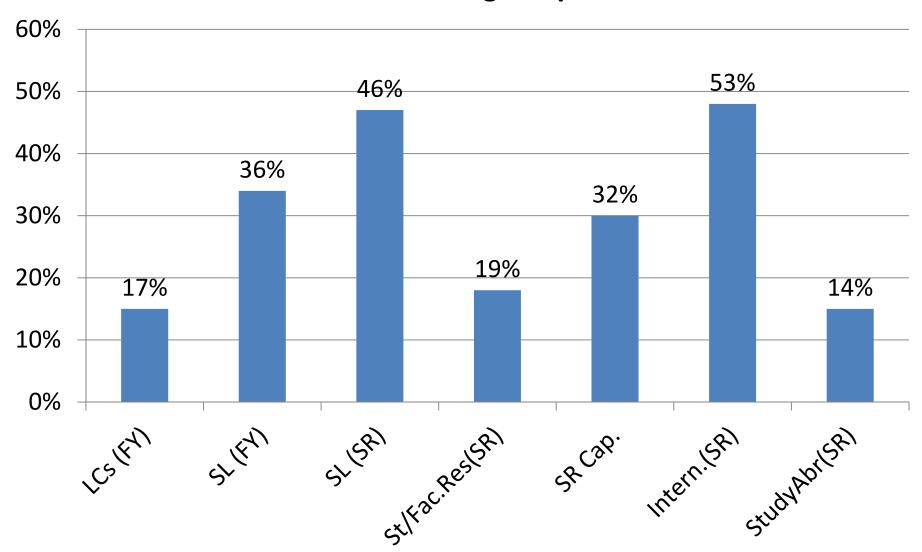
## Impact of Educationally Purposeful Practices on First Academic Year GPA by Race/Ethnicity



Source: Kuh, High Impact Practices: What They Are, Who Has Access to Them, and Why They Matter (AAC&U, 2008)

#### Two Issues with HIPs: Access and Quality

#### % of All Students in High Impact Practices



## High Impact Practices & The Quality Control Issue

"...there is growing evidence that - when done well - some programs and activities appear to engage participants at levels that elevate their performance across multiple engagement and desired outcomes measures..." -George Kuh

Significant amount of time on task Significant engagement with peers, faculty, educational professionals Frequent feedback Engagement with difference Engage higher order thinking skills (analysis, synthesis, evaluation, application) Source: Alex McCormick, NSSE Director, Center for Postsecondary Research, Indiana University

What do students care about when it comes to high impact practices and learning outcomes?

"Tell me why this is important or at least tell me what your end goal is. 'When you learn this, you're going to become [a] better adult because blah-blah.' Tell me why this matters."

Student, University of Wisconsin System

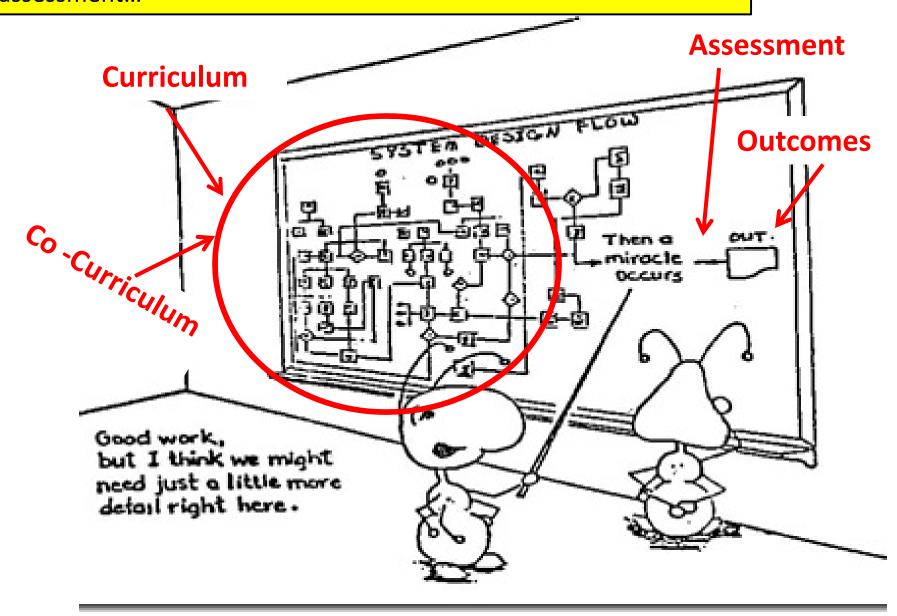


#### **ORGANIZING THE VISION:**

Using Logic and Evidence to Connect the Pieces & Create a Meaningful Whole



The problem with high impact learning and learning outcomes assessment...



Resources needed to start or keep going:



#### Actions needed to produce outputs:

#### **INPUTS**

- •GERTA
- Depts.
- Faculty
- Advising
- •Stud. Affairs
- •Alumni

Center

- CareerServices
- •Inst. Res.
- •Multi-cultural programs

#### **ACTIVITIES**

- High-impact practices
- Co-curricular opportunities
- Internships
- Serv-Learning
- •Undergrad. Res.
- Engage in big questions
- •Engagement w/ difference
- Interaction
- Feedback
- Engagement of higher order thinking skills

#### **OUTPUTS**

- •Signature assignments
- •Reflection papers
- Groupprojects
- Communitybased projects
- Multimedia
- Art

Products to assess outcomes, "countables":

#### **OUTCOMES**

**Learning Outcomes** 

- Knowledge
- CriticalCapacities andSkills
- Personal and Social Responsibility
- Interconnecting Perspectives

Expected Changes: short, intermediate, long-term:

# What Counts as Good (ENOUGH) EVIDENCE?: Gathering meaningful, useful, and sustainable assessment



# FROM CREATION TO CAPTURE: MEASURING LEARNING & IMPROVEMENT

- Balancing Summative and Formative
  - Summative = Assessment at the end of a program/year/college career to measure total learning gains
  - Formative = Assessment done at intervals within the process
- Balancing Direct and Indirect
  - Indirect = Assessment student's perceived learning based questions asked of them
    - National Surveys: NSSE, CIRP
    - Local Surveys, Course evaluations
    - Focus groups
  - Direct = Assessment of student's demonstration of learning based upon student developed artifacts
    - Writing samples, reflections papers, journals,
    - Policy papers, information booklets, non-text products of student work (videos, art projects, tutorials)
    - CLA, VALUE Rubrics, Portfolios

# Example of Process

From: Carroll Community
College

Flow chart of sequential steps in the request, submission, and scoring of student artifacts for Learning Goal 4: Information and technology literacy.

**Step 1:** All Gen Ed Courses reported as addressing and assessing Info. Tech. Literacy identified as potential courses from which to request artifacts. (54 courses)

**Step 2:** Of courses identified, approx. 20% were randomly selected for sample (10 courses, 36 total sections)

**Step 3:** Within each selected course, 2 students randomly selected by roster # to submit artifacts (74 artifacts)

**Step 4:** Start of semester, department chairs notified of courses in from which artifacts were to be requested. Chairs worked with individual faculty to fulfill request.

**Step 5:** Artifacts submitted to Director of Learning Outcomes for scoring. (66 artifacts)

**Step 6:** Faculty scoring team met at the close of spring semester for a norming session and scoring. (62 artifacts)

# The Power of Rubrics as Tools for Both Assessment and High-Impact Learning

- Rubrics to help **guide** students and faculty
- Places individual **faculty judgment** within national shared experience; national benchmarks
- Encourages students' best work, encourages selfassessment, and allows for mining of samples for assessment purposes
- Allows learning to be seen as **portable**, for **cumulative learning** and assessment, to complement other high-impact practices
- Can **build up** from course level to institutional reporting needs AND down from general to specific program/course context



# Campuses Use VALUE Rubrics

### INTEGRATIVE LEARNING VALUE RUBRIC

for more information, please contact value@aacu.org



The VALUE rubrics were developed by teams of faculty experts representing colleges and universities across the United States through a process that examined many existing campus rubrics and related documents for each learning outcome and incorporated additional feedback from faculty. The rubrics articulate fundamental criteria for each learning outcome, with performance descriptors demonstrating progressively more sophisticated levels of attainment. The rubrics are intended for institutional-level use in evaluating and discussing student learning, not for grading. The core expectations articulated in all 15 of the VALUE rubrics can and should be translated into the language of individual campuses, disciplines, and even courses. The utility of the VALUE rubrics is to position learning at all undergraduate levels within a basic framework of expectations such that evidence of learning can by shared nationally through a common dialog and understanding of student success.

#### Definition

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.

#### Framing Language

Fostering students' abilities to integrate learning—across courses, over time, and between campus and community life—is one of the most important goals and challenges for higher education. Initially, students connect previous learning to new classroom learning. Later, significant knowledge within individual disciplines serves as the foundation, but integrative learning goes beyond academic boundaries. Indeed, integrative experiences often occur as learners address real-world problems, unscripted and sufficiently broad, to require multiple areas of knowledge and multiple modes of inquiry, offering multiple solutions and benefiting from multiple perspectives. Integrative learning also involves internal changes in the learner. These internal changes, which indicate growth as a confident, lifelong learner, include the ability to adapt one's intellectual skills, to contribute in a wide variety of situations, and to understand and develop individual purpose, values and ethics. Developing students' capacities for integrative learning is central to personal success, social responsibility, and civic engagement in todays global society. Students face a rapidly changing and increasingly connected world where integrative learning becomes not just a benefit...but a necessity.

Because integrative learning is about making connections, this learning may not be as evident in traditional academic artifacts such as research papers and academic projects unless the student, for example, is prompted to draw implications for practice. These connections often surface, however, in reflective work, self assessment, or creative endeavors of all kinds. Integrative assignments foster learning between courses or by connecting courses to experientially-based work. Work samples or collections of work that include such artifacts give evidence of integrative learning. Faculty are encouraged to look for evidence that the student connects the learning gained in classroom study to learning gained in real life situations that are related to other learning experiences, extra-curricular activities, or work. Through integrative learning, students pull together their entire experience inside and outside of the formal classroom; thus, artificial barriers between formal study and informal or tacit learning become permeable. Integrative learning, whatever the context or source, builds upon connecting both theory and practice toward a deepened understanding.

Assignments to foster such connections and understanding could include, for example, composition papers that focus on topics from biology, economics, or history, mathematics assignments that apply mathematical tools to important issues and require written analysis to explain the implications and limitations of the mathematical treatment, or art history presentations that demonstrate aesthetic connections between selected paintings and novels. In this regard, some majors (e.g., interdisciplinary majors or problem-based field studies) seem to inherently evoke characteristics of integrative learning and result in work samples or collections of work that significantly demonstrate this outcome. However, fields of study that require accumulation of extensive and high-consensus content knowledge (such as accounting, engineering, or chemistry) also involve the kinds of complex and integrative constructions (e.g., ethical dilemmas and social consciousness) that seem to be highlighted so extensively in self reflection in arts and humanities, but they may be embedded in individual performances and less evident. The key in the development of such work samples or collections of work will be in designing structures that include artifacts and reflective writing or feedback that support students' examination of their learning and give evidence that, as graduates, they will extend their integrative abilities into the challenges of personal, professional, and civic life.

#### Glossary

#### The definitions that follow were developed to clarify terms and concepts used in this rubric only.

- Academic knowledge: Disciplinary learning; learning from academic study, texts, etc.
- O Content: The information conveyed in the work samples or collections of work.
- Ontexts: Actual or simulated situations in which a student demonstrates learning outcomes. New and challenging contexts encourage students to stretch beyond their current frames of reference.
- Co-curriculum: A parallel component of the academic curriculum that is in addition to formal classroom (student government, community service, residence hall activities, student organizations, etc.).
- Experience: Learning that takes place in a setting outside of the formal classroom, such as workplace, service learning site, internship site or another.
- The external frameworks in which information and evidence are presented, ranging from choices for particular work sample or collection of works (such as a research paper, PowerPoint, video recording, etc.) to choices in make-up of the eportfolio.
- Performance: A dynamic and sustained act that brings together knowing and doing (creating a painting, solving an experimental design problem, developing a public relations strategy for a business, etc.); performance makes learning observable.
- Reflection: A meta-cognitive act of examining a performance in order to explore its significance and consequences.
- Self Assessment: Describing, interpreting, and judging a performance based on stated or implied expectations followed by planning for further learning.

# The Anatomy of a VALUE Rubric

## Criteria

#### INTEGRATIVE LEARNING VALUE RUBRIC

for more information, please contact value@aacu.org



#### Definition

Integrat and is an understanding and a disposition that a student builds across the curriculum and cocurriculum, from making simple connections among ideas and experiences to synthesizing and transferring learn evy complex situations within and beyond the campus.

Evaluators are encouraged to assign a zero to any work sample or collection of work that does not meet benchmark (cell one) level performance.

Connections to Experience Connects relevant experience and academic knowledge	Capstone  4  Meaningfully synthesizes connections among experiences outside of the formal classroom (including life experiences and academic experiences such as internships and travel abroadh to deepen understanding of fields of study and to broaden own points of view.	Milestones 3		Benchmark 1
		Effectively selects and develops examples of life experiences, drawn from a variety of contexts (e.g., family life, artistic participation, civic involvement, work experience), to illuminate concepts/theories/frameworks of fields of study.	Compares life experiences and academic knowledge to infer differences, as well as similarities, and acknowledge perspectives other than own.	Identifies connections between life experiences and those academic texts and ideas perceived as similar and related to own interests.
Connections to Discipline Sees (makes) connections across disciplines, perspectives	Independently creates wholes out of multiple parts (synthesizes) or draws conclusions by combining examples, facts, or theories from more than one field of study or perspective.	Independently connects examples, facts, or theories from more than one field of study or perspective.	When prompted, connects examples, facts, or theories from more than one field of study or perspective.	When prompted, presents examples, facts, or theories from more than one field of study or perspective.
Transfer Adapts and applies skills, abilities, theories, or methodologies gained in one situation to new situations	Adapts and applies, independently, skills, abilities, theories, or methodologies gained in one situation to new situations to solve difficult problems or explore complex issues in original ways.	Adapts and applies skills, abilities, theories, or methodologies gained in one situation ations to solve problems or ues.	Uses skills, abilities, theories, or methodologies gained in one situation in a new situation to contribute to understanding of problems or issues.	Uses, in a basic way, skills, abilities, theories, or methodologies gained in one situation in a new situation.
Integrated Communication	Fulfills the assignment(s) by choosing format, language, or graph (or otherpresentation) in ways that meaning, making clear the interdependence of language.	as the assignment(s) by choosing a frmat, language, or graph (or other visual representation) to explicitly connect content and form, demonstrating awareness of purpose and audience	Fulfills the assignment(s) by choosing a format, language, or graph (or other visual representation) that connects in a basic way what is being communicated (content) with how it is said (form).	Fulfills the assignment(s) (i.e. to produce an essay, a poster, a video, a PowerPoint presentation, etc.) in an appropriate form.
Reflection and Self-Assessment Demonstrates a developing sense of self as a learner, building on prior experiences to respond to new and challenging contexts (may be evident in self-assessment, reflective, or creative work)	Envisions a fundamental possibly makes pland on past experied across multi-make control across multi-make a fundamental possibly and possibly makes possibly and possibly makes possibly and possibly makes possibly and possibly makes plant and poss	Evaluates changes in own learning over time, recognizing complex contextual factors (e.g., works with ambiguity and risk, deals with frustration, considers ethical frameworks).	Articulates strengths and challenges (within specific performances or events) to increase effectiveness in different contexts (through increased self- awareness).	Describes own performances with general descriptors of success and failure.

Performance Descriptors

## Levels

# Building the Evidentiary Base

## University of Kansas –

• "Interestingly, the patterns that were visible in the VALUE rubric scores were not mirrored in the CLA scores; students in the team-designed and traditional courses performed no differently on the CLA. Students' performance on the CLA, moreover, was generally unrelated to the VALUE rubric ratings of their coursework, as well as the instructors' grading of the same coursework. In contrast, the latter two measures were highly correlated, suggesting that the VALUE rubrics capture qualities of critical thinking and writing that fit well with what faculty members VALUE in their students' work."



# The Assignment



## Assignment #2: Creative Thinking Value Rubric

You have been invited to prepare the introduction to our special speaker who will be here in less than 48 hours. The individual originally assigned to prepare the introduction has been called away on a family emergency. Your introduction is to be interesting, entertaining and concise. To help you prepare you have decided to make two ten minute calls to individuals who know the special speaker.

#### NOTE:

- You are to identify the speaker for the event and why you selected this speaker.
- You are given the option of delivering the Speaker Introduction or if you do not give the address
  you can select someone who you will coach and prepare through the process to make the
  presentation engaging and personable.

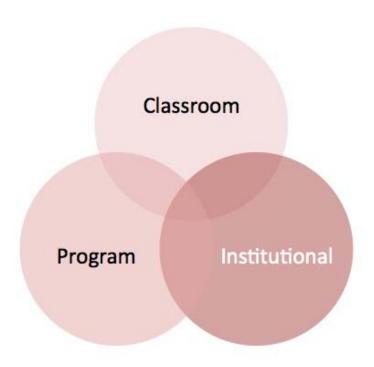
### **Assignment Products:**

- An abstract This is the interesting, entertaining, and concise introduction
- Chronicle A chronicle of your performance including:
- Who you selected as the speaker,
- Which two individuals you call, why and process for engaging and contacting them,
- A reflection on your problem-solving,
- Are you delivering the Speaker Introduction or coaching another, and
- Evaluation of the process

(Idea: another assignment option would be to do a Public Service Announcement)

# **VALUE Rubrics & Assessment**

Types of Assessment



# Aims/Outcomes Addressed Across the Curriculum

- **★**First to Final Year
- ★Integrating Liberal and Professional Learning
- ★Co-Curriculum as Well
- **★**Assessments that Deepen Learning
- **★**Sustained Focus on Underserved Students



# Help Students Understand What They Are Expected to Accomplish

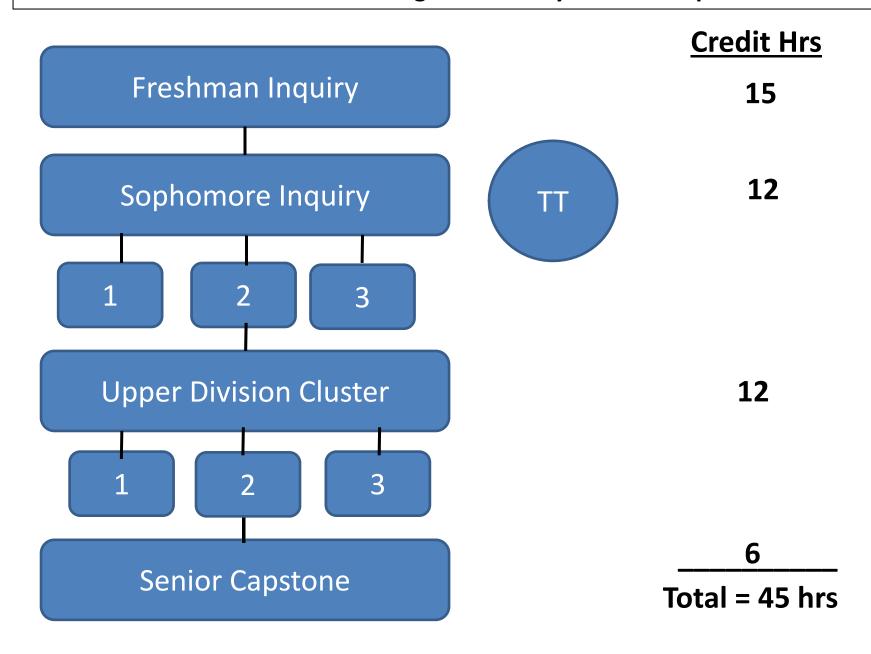


# Curricular and Pedagogical Innovations – Led by Faculty – Already Are Creating a 21<sup>st</sup> Century Vision and Practice for Liberal Education

Directly Connected to the Needs and Experiences of Today's Diverse Students, our Diverse Democracy, and an Interdependent Global Community



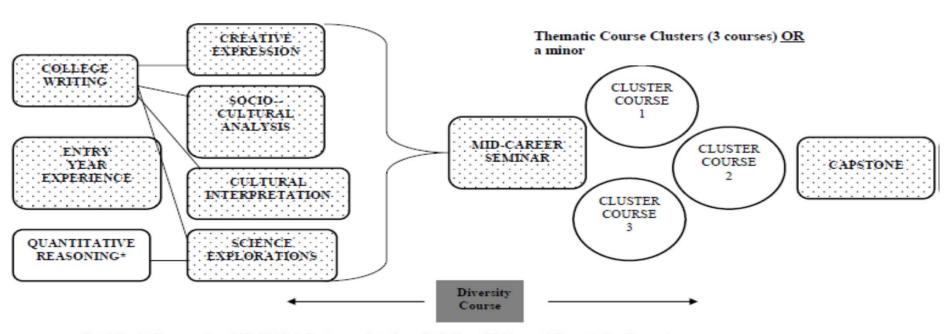
## **Ex. of GE Curriculum Design: University Studies Requirements**



#### The USM Core Curriculum at the University of Southern Maine

#### PROGRESS TOWARD BACHELOR'S DEGREE

#### Development of Intellectual Skills and Knowledge



Total Credit Hours: min. of 37; 39 if students complete 4-credit College Writing and Quantitative Reasoning courses.

Writing intensive

College Writing must be completed before Creative Expression, Socio-cultural Analysis, Cultural Interpretation and Science Explorations.

Students must complete 3 of the 4 second-tier courses before taking the Mid-Career Seminar

<sup>\*</sup>Quantitative Reasoning must be completed before taking Science Explorations

We have had our *why's*, *how's*, and *what's*upside-down,
focusing too much on *what* should be learned, than
on *how*, and
often forgetting the *why* altogether.

In a world of nearly infinite information, we must first address *why*, facilitate *how*, and let the *what* generate naturally from there.

Michael Wesch, "From Knowledgeable to Knowledge-able," Academic Commons, January 2009 (academiccommons.org)



# Questions?

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