



# Promoting Essential Learning Outcomes in General Education Courses

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# Overview

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- Essential learning outcomes and the college curriculum
- Findings from a study comparing faculty teaching general education courses (GECs) and those teaching non-GECs
- Resulting questions
- Addressing these questions on campus
  - Gustavus Adolphus College
  - St. Lawrence University





# A National Imperative

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- While there is a clamoring about access to, affordability of, and accountability for U.S. higher education...
  - Example: Secretary Spelling's Commission on the Future of Higher Education



**“...there has been a near-total  
public silence about what  
contemporary college  
graduates need to know and be  
able to do”**

*AAC&U, College Learning for the New Global Century, p. 7*

**“This public silence about what matters in college is dangerous”**

*AAC&U, College Learning for the New Global Century, p. 8*



# Essential Learning Outcomes

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- Fortunately, consensus is emerging within higher education as to the essential learning outcomes for the 21st century
- See the following AAC&U reports
  - *College Learning for the New Global Century* (2007)
  - *Liberal Education Outcomes: A Preliminary Report on Achievement in College* (2005)
  - *Taking Responsibility for the Quality of the Baccalaureate Degree* (2004)
  - *Greater Expectations: A New Vision for Learning as a Nation Goes to College* (2002)





# Knowledge...

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- ...of human cultures and the physical and natural world
  - Through study in the sciences and mathematics, social sciences, humanities, histories, languages and the arts

Focused by engagement with big questions, both contemporary and enduring





# Intellectual & Practical Skills

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- Including
  - Inquiry & analysis
  - Critical & creative thinking
  - Written & oral communication
  - Quantitative literacy
  - Information literacy
  - Teamwork & problem solving

Practiced extensively, across the curriculum, in the context of progressively more challenging problems, projects, and standards for performance





# Personal & Social Responsibility

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- Including
  - Civic knowledge & engagement--local & global
  - Intercultural knowledge & competence
  - Ethical reasoning & action
  - Foundations & skills for lifelong learning

Anchored through active involvement with diverse communities and real-world challenges





# Integrative Learning

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- Including
  - Synthesis and advanced accomplishment across general and specialized studies

Demonstrated through the application of knowledge, skills, and responsibilities to new settings and complex problems





# Organizing the Curriculum

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- American curricular models
  - **No choice** – all students takes the same courses
  - **Free choice** – course selection is dictated by a student's preferences
  - **Mixed choice** – choices limited by categories and rules





# Implications for Liberal Ed

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- **No choice** – the curriculum was set and assumed to produce liberal learning
- **Free choice** – student control leads to concern for the complete loss of liberal education
- **Mixed choice** – general education is seen as the part of the curriculum responsible for liberal learning, but does liberal learning then take a back seat in the major?





# Curricular Shift

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## 20th Century

## 21st Century

**Liberal  
education**

**A set of courses**

**A set of outcomes**

**What to  
worry  
about**

**Taking the  
right courses**

**Promoting the  
right outcomes**

**Registration**

**Teaching &  
Learning**



# Findings from the Faculty Survey of Student Engagement



# Study Purpose

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- To examine whether faculty who teach GECs structure their courses differently than their counterparts who teach non-GECs
- Specifically, to determine whether GECs are structured to emphasize essential learning outcomes and effective educational practices to a different degree than non-GECs





# Data & Sample

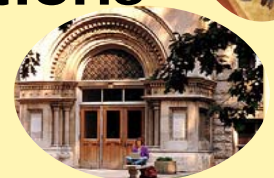
- Data from the 109 institutions that participated in the 2005 administration of FSSE
- Faculty pick a course taught in the past year and answer survey items in the context of that course--items include course level & GEC status
- After deletion for missing data the sample consisted of about 11,000 faculty
- **Faculty teaching a GEC**
  - 3,111 lower division
  - 2,120 upper division
- **Faculty teaching a non-GEC**
  - 1,214 lower division
  - 4,452 upper division





# Measures

- Amount courses structured to emphasize ELOs
  - **Intellectual skills**  
( $\alpha = 0.63$ )
  - **Practical skills**  
( $\alpha = 0.65$ )
  - **Individual & social responsibility**  
( $\alpha = 0.80$ )
- Emphasis on effective educational practices
  - **Deep learning**  
( $\alpha = 0.85$ )
  - **Active classroom practices**  
( $\alpha = 0.73$ )
  - **Student-faculty interaction**  
( $\alpha = 0.76$ )
  - **Diverse interactions**  
( $\alpha = 0.87$ )





# Analyses

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- Standardized mean differences (i.e., effect sizes) calculated between GECs and non-GECs by course level for each of the seven measures
- Differences calculated both with and without controls (gender, race, employment status, years teaching, teaching load, discipline, and course size)





# Results

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## Faculty place

- greatest emphasis on promoting intellectual skills (quite a bit),
- less emphasis on practical skills (between some and quite a bit), and
- even less emphasis on individual and social responsibility (some)

across course level and GEC status





# Results

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- GECs place greater emphasis on:
  - Intellectual skills
  - Individual and social responsibility
  - Deep learning
  - Diverse interactions
  - Active classroom practices (only slightly)
- Non-GECs place greater emphasis on:
  - Practical skills
  - Student-faculty interaction





# Implications

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- Room for greater emphasis on all outcomes across course levels and GEC status
- Results can help feed campus conversations about what outcomes should be emphasized in each part of the curriculum
- This largely exploratory study raises questions about how and whether to approach promoting essential learning outcomes across the curriculum





# Questions for Campuses

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- How are essential learning outcomes (ELOs) defined on your campus?
- How is the curriculum structured on your campus to achieve these outcomes? Does responsibility for ELOs fall largely on GECs?
- How are faculty involved in conversations about promoting ELOs? How are faculty changing their teaching to promote ELOs?
- How are assessment initiatives informing dialogue about ELOs?



**Gustavus Adolphus College**



# Gustavus

## Distribution Requirements

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- **General Education Core focused on the Liberal Arts Perspective** - Each course teaches the principles of a particular domain of study, provides its context, questions the values of that domain, and builds bridges towards other disciplines.
- **The Arts** - Develop a more comprehensive understanding of the creative process and foster a lifetime involvement with the arts.
- **Biblical and Theological Studies** - Develop a critical understanding and appreciation of the Christian tradition as an important entity in itself, and as an important element in world cultures.
- **Historical and Philosophical Studies** - Promote understanding of human thought in the context of historical developments, and historical developments in the context of their relation to questions of meaning and value.
- **Human Behavior and Social Institutions** - Enable students to acquire the knowledge and skills necessary to understand fundamental social institutions and social characteristics of human beings.





# Gustavus

## Distribution Requirements

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- **Lifelong Fitness** - Encourage exploration of personal values and enable students to recognize and appreciate the importance of lifelong fitness.
- **Literary and Rhetorical Studies** - Help students revel in the beauty and power of the word; understand and enjoy the life of the mind as embodied in books and formal oral communication; and place themselves within the human community of story-tellers, poets, orators, essayists, playwrights, satirists, and critics.
- **Mathematical and Logical Reasoning** - Introduce the methods and applications of deductive reasoning. As such, they focus on underlying axioms, theorems, and methods of proof.
- **Natural Science Perspective** - Introduce the mechanics of natural and life processes, and the quantitative basis for understanding these processes.
- **Non-Western Cultures** - Enable recognition of difference in a pluralistic way while encouraging an appreciation of the importance of difference in common and cultural life.





# Gustavus

## Additional Requirements

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- **Completion of a non-English language requirement**, typically the first two courses in a language sequence.
- **Writing Requirement** assures that students take three designated writing requirement courses from at least two different departments in order to graduate. One of these courses must be taken in the first year (normally in the First Term Seminar). At least one designated writing course must be taken as part of a student's major, and at least one must be an upper level course. First Term Seminar is a small, discussion-based course that introduces students to skills and habits central to the liberal arts: critical thinking, writing, speaking, and recognizing and exploring questions of values. The FTS professor will serve as the first year academic advisor. Each FTS carries a WRIT (writing) designation; FTS courses do not carry a general education core area designation.



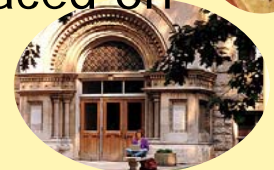


# Gustavus

## Additional Requirements

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- **The January “Interim Experience”** mission is to provide ways for faculty and students to take advantage of the January interim's unique qualities in developing courses and other learning opportunities that enrich and expand upon (but do not duplicate) the College's regular semester curricular offerings. IEX will provide for experiential learning both on campus and off campus through:
  - International study and domestic study travel courses
  - Career exploration and vocational reflection
  - Courses that are experimental, and/or interdisciplinary
  - Independent studies and student/faculty collaborative research and creativity
  - Institutional exchanges with other 4-1-4 colleges
  - Special opportunities for first-year students to continue their transition to college life and the greater expectations placed on adult learners





# Returning to the Questions

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- Does the responsibility for ELOs fall largely on GECs?
  - Curriculum Committee conversations
- How are faculty involved in conversations about promoting ELOs?
  - Faculty responsibility for the curriculum
  - Recent Program Reviews
- How are faculty changing their teaching to promote ELOs?
  - Faculty Development Program
- How are assessment initiatives informing dialogue about ELOs?
  - Teagle Foundation
  - Wabash Study



**St. Lawrence University**



# SLU Aims & Objectives

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- A depth of understanding in at least one field of study;
- The ability to read, write, speak and listen well;
- The ability to conduct research and to think critically;
- An understanding of diverse cultures;
- An understanding of scientific principles and methods;
- An understanding of the natural environment;
- An expansion of aesthetic sensibilities and capacities; and
- A personal ethic of considered values.





# SLU First-Year Program/Seminar

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- Combined academic and residential program that emphasizes critical thinking and active student participation in both the classroom and the residence.
- The program consists of four parts:
  1. An interdisciplinary, team-taught course illustrative of some of the enduring themes of the human experience.
  2. An emphasis on communications skills, in particular, writing, speaking and research.
  3. An advising system that ensures systematic and supportive involvement of faculty with students through coursework and out-of class meetings.
  4. A residential college system wherein each first-year residence houses students enrolled in the same section of the team-taught course, with the goal of developing integrated living and learning communities.





# SLU Distribution & Diversity Requirements

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- **Arts/Expression** - Provides active learning through creative expression.
- **Humanities** - Involving the critical interpretation of traditional and contemporary works of literature, history, political thought, philosophy, religious studies and the arts, both visual and performing.
- **Social Science** - Provides an awareness of how economic, political and social institutions can be organized, evidence about them analyzed and social science knowledge generated.
- **Mathematics or Foreign Language** - Develops either quantitative reasoning and analytical thought or provides knowledge of a foreign language and understanding of a foreign culture.
- **Natural Science/Science Studies (2)** - Providing a foundation in the natural sciences and the interplay between science and society. One of the two courses must include a laboratory.
- **Diversity** - Students must take two courses from two different departments or programs approved as engaging participants in the critical study of sameness and difference, including diverse social and cultural practices and beliefs, either within or outside the U.S.





# SLU Curricular Objectives

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- See matrix at the end of handout
- Outcomes by department/program
- Finding the gaps



# Group Discussion



# Guiding Questions

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- How can general education requirements, majors, and other curricular structures work together to promote ELOs? In other words, what does promoting ELOs *across the curriculum* look like?
- What are the roles faculty members should play in determining what outcomes are important and how to promote them?
- How can assessment initiatives inform campus dialogue about ELOs?





# For More Information

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Copies of this presentation are available at  
<http://nsse.iub.edu/conferences/index.cfm>



Mean Comparisons of the Amount General Education and Non-General Education Courses are Structured to Promote Essential Learning Outcomes by Course Level

Learning Outcome and Course Level	<u>General Education</u>		<u>Non-General Education</u>		Mean Difference	Effect Size <sup>a</sup>	Effect Size with Controls <sup>b</sup>
	Mean	SD	Mean	SD			
<i>Intellectual Skills</i>							
Lower Division	2.97	0.64	2.83	0.61	0.14	0.21***	0.16***
Upper Division	3.16	0.59	3.04	0.58	0.12	0.20***	0.14***
<i>Practical Skills</i>							
Lower Division	2.48	0.70	2.68	0.67	-0.20	-0.30***	-0.09***
Upper Division	2.73	0.74	2.82	0.70	-0.09	-0.12***	-0.04
<i>Individual and Social Responsibility</i>							
Lower Division	2.27	0.83	2.02	0.79	0.25	0.30***	0.28***
Upper Division	2.42	0.83	2.16	0.80	0.26	0.32***	0.27***

\* p<.05 \*\*p<.01 \*\*\*p<.001

Sample sizes: lower division, GEC = 3203, lower division, non-GEC = 1262, upper division, GEC = 2182, and upper division, non-GEC = 4563.

<sup>a</sup> The effect size is the mean difference divided by the pooled standard deviation

<sup>b</sup> Effect size with controls is the unstandardized regression coefficient for general education courses from analyses where all non-dichotomous variables were standardized. Controls include gender, race, employment status, number of years teaching, disciplinary area, and number of courses taught in the current academic year.

Mean Comparisons of the Amount General Education and Non-General Education Courses Use Effective Educational Practices by Course Level

Effective Educational Practice and Course Level	<u>General Education</u>		<u>Non-General Education</u>		Mean Difference	Effect Size <sup>a</sup>	Effect Size with Controls <sup>b</sup>
	Mean	SD	Mean	SD			
<i>Emphasis on deep learning</i>							
Lower Division	2.86	0.61	2.74	0.62	0.12	0.19***	0.16***
Upper Division	3.09	0.55	3.02	0.55	0.07	0.13***	0.11***
<i>Use of active classroom practices</i>							
Lower Division	2.56	1.20	2.50	1.11	0.06	0.06	0.07*
Upper Division	2.76	1.23	2.66	1.14	0.10	0.08**	0.06*
<i>Student-faculty interaction</i>							
Lower Division	2.65	0.77	2.83	0.84	-0.18	-0.23***	-0.15***
Upper Division	2.94	0.87	3.08	0.91	0.14	-0.16***	-0.11***
<i>Diverse interactions</i>							
Lower Division	2.18	0.86	2.06	0.87	0.12	0.14***	0.12**
Upper Division	2.33	0.92	2.21	0.86	0.12	0.14***	0.11***

\* p<.05 \*\*p<.01 \*\*\*p<.001

Sample sizes: lower division, GEC = 3,111, lower division, non-GEC = 1,214, upper division, GEC = 2,120, and upper division, non-GEC = 4,452.

<sup>a</sup> The effect size is the mean difference divided by the pooled standard deviation

<sup>b</sup> Effect size with controls is the unstandardized regression coefficient for general education courses from analyses where all non-dichotomous variables were standardized. Controls include gender, race, employment status, number of years teaching, number of courses taught in the current academic year, course size and disciplinary area.

Middle States Working Group for Standard 1: Mission, Aims & Objectives	St. Lawrence Curricular Objectives (established 1998-1999)							
	Depth of Understand	Read, write, speak, listen	Conduct research and think critically	Understand diverse cultures	Understand scientific principles and methods	Understand natural environment	Aesthetic sensibilities and capacities	Personal ethic of considered values
<b>Departments &amp; Programs</b>								
<b>Arts &amp; Humanities</b>								
English	xx	xx	xx	xx			xx	xx
Fine Arts	xx	x	x	xx			xx	x
History	x	x	x	x				x
Modern Languages & Literatures	xx	xx	xx	xx			x	x
Music	xx	xx	x listening	x critical skillsx			?x	xx
Performance & Communication Arts								
Philosophy	xx	xx	xx	xx			x	xx
Religious Studies	xx	xx	xx	xx			x	x
<b>Social Sciences</b>								
Anthropology	xx	xx	xx	xx	x?			xx
Economics	x	xx	xx		xx			
Education	x	xx		x?	xx			
Government	x	xx	xx	x?				x?
Sociology	xx	xx	xx	xx	xx			x

Round 1 = X  
Round 2 = X