

The Role of Writing in Student Engagement and Learning

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Agenda

1. What we don't know about the role of writing in student engagement and learning
2. National Survey of Student Engagement
3. Developing the writing questions
4. Methods and results
5. Implications
6. Discussion with you

Research Questions

- Is there an association between students' learning and engagement and:
 - The kinds of writing students do?
 - Students' participation in interactive writing activities during the writing process (e.g., interaction with peers, WC tutor, or instructor)?
 - Instructors making their expectations clear?

WHAT WE DON'T KNOW ABOUT THE ROLE OF WRITING IN STUDENT ENGAGEMENT

What We Don't Know about Writing and Learning

- Strength of testimonial literature
- Typical Assumption: "Writing allows for examination and reexamination, debate and decision making, choice and revision, cognitive activities which require more higher-order thinking skills than . . . when one takes on the role of speaker, listener, or reader."

Eric H. Hobson and Kenneth W. Schafermeyer, "Writing and Critical Thinking: Writing-to-Learn in Large Classes" (1994)

Meta-Analyses of Writing to Learn

- "It is hard to arrive at precise conclusions about the relationship between writing and learning." (Bangert-Drowns, Hurley, and Wilkinson, 2004)
- "Noting the complexities of affirming student achievement, specifically when success is attributed without qualification to WAC/WID initiatives, the authors question evidence cited in support of WAC/WID goals and pedagogies." (Ochsner and Fowler, 2004)

Weaknesses of Research

- Localized
- Small scale
- Challenges conducting research across multiple educational contexts
- Variety of ways “learning” is defined
- Complexities of measuring the outcome of learning

A New Kind of Study

- Large scale (many institutions, thousands of students)
- Based not on specific, individual cases but on a large aggregate of practices
- Located not in specific disciplines but across the entire range of students’ experience as freshmen and seniors
- Focused on the nature of practices use for writing and the relationship of these practices to other measures of student learning and development

NATIONAL SURVEY OF STUDENT ENGAGEMENT

Conceptual framework

Student engagement

A domain of constructs that measures both the time and energy students devote to educationally purposeful activities, and how students perceive different facets of the institutional environment that facilitate and support their learning.

Kuh, G. D. (2001). Assessing what really matters to student learning. *Change*.

What is Student Engagement?

- What **students do** – time and energy devoted to educationally purposeful activities
- What **institutions do** – using effective educational practices to induce students to do the right things
- Educationally effective institutions channel student energy toward the right activities

Seven Principles of Good Practice in Undergraduate Education

(Chickering & Gamson, 1987; Pascarella & Terenzini, 2005)

- ✓ Student-faculty contact
- ✓ Active learning
- ✓ Prompt feedback
- ✓ Time on task
- ✓ High expectations
- ✓ Experiences with diversity
- ✓ Cooperation among students



Why a National Survey?

- Refocus conversations about undergraduate quality to what matters most
- Enhance institutional improvement efforts
- Foster comparative and consortia activity
- Inform accountability efforts
- Provide systematic national data on “good educational practices”



NSSE Project Scope

- Over 1,300 different colleges and universities
- 50 states, Puerto Rico, and Canada
- Data from more than 2,030,000 students
- Historically Black Colleges and Universities, Hispanic-Serving Institutions, Tribal Colleges, and single-gender colleges

Year	Institutions
2001	321
2002	367
2003	437
2004	473
2005	529
2006	557
2007	610
2008	769
2009	656

DEVELOPING THE WRITING QUESTIONS

Developing the Writing Questions

- Goals
 - Content validity
 - Capturing a selection of expert-defined best practices in writing to learn
- Collaboration between more than 80 members of the Council of Writing Program Administrators and NSSE
- Writing, refining, and reducing the number of questions

Research Questions

- Is there an association between students' learning and engagement and:
 - The kinds of writing students do?
 - Students' participation in interactive writing activities during the writing process (e.g., interaction with peers, WC tutor, or instructor)?
 - Instructors making their expectations clear?

METHODS

NSSE Administration

- Random sampling
- First-year and senior students
- Spring term
- Web-only administration
- Multiple follow-ups
- Writing items were appended to the end of the NSSE questionnaire

Two Samples

First-Year Students

- 40 institutions
- 5,683 students
 - 66% female
 - 39% first-generation
 - 5% African American
 - 4% Asian
 - 7% Latino/a
 - 74% White

Seniors

- 82 institutions
- 12,015 students
 - 66% female
 - 39% first-generation
 - 6% African American
 - 4% Asian
 - 6% Latino/a
 - 77% White

Samples

<i>Major Category</i>	<i>FY</i>	<i>SR</i>
Arts and Humanities	13%	15%
Biological Sciences	13%	9%
Business	11%	17%
Education	8%	9%
Engineering	6%	5%
Physical Science	3%	4%
Professional	16%	10%
Social Science	12%	15%
Other	14%	16%
Undecided	3%	0%

Variables

Writing Practices

- Assign Meaning-Constructing Writing Tasks
- Explain Writing Expectations Clearly
- Encourage Interactive Writing Activities

Scale reliabilities range from .75 to .82

Variables

Approaches to Deep Learning

- Higher-Order Learning Activities
- Integrative Learning Activities
- Reflective Learning Activities

Scale reliabilities range from .71 to .83

Variables

Self-Reported Gains

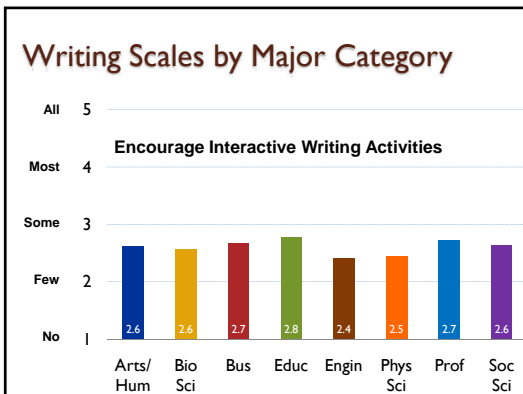
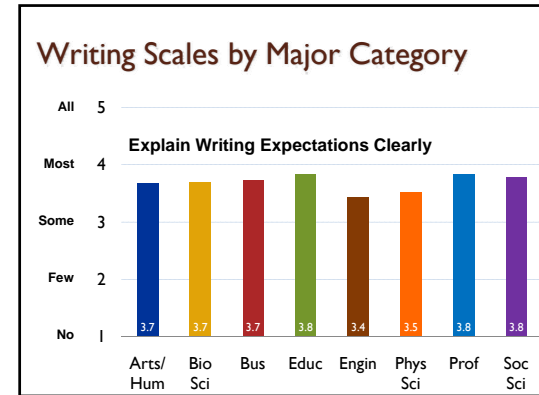
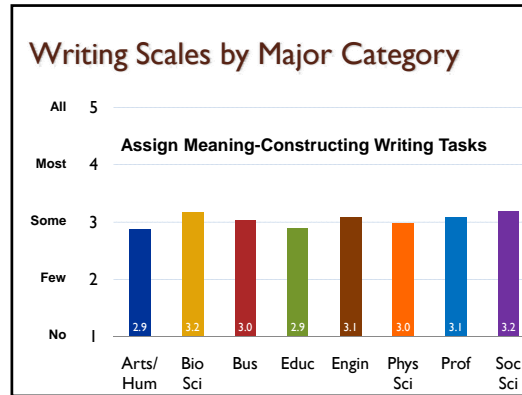
- Practical Competence
- Personal and Social Development
- General Education

Scale reliabilities range from .81 to .87

Variables

Control Variables

- gender
- transfer status
- living on campus
- age
- international student
- parental education
- race
- grades
- major
- number of written pages
- amount of assigned reading
- deep learning (gains models only)



RESULTS

Step I: Basic Correlations

Writing scales are positively correlated with deep learning activities

Approaches to Deep Learning

Writing Practices		Higher-Order Learning Activities		
		Integrated Learning Activities	Integrated Learning Activities	Reflective Learning Activities
Encourage Interactive Writing Processes	FY	.36	.41	.28
Assign Meaning-Const. Writing Tasks	SR	.38	.41	.29
Explain Writing Expectations Clearly	FY	.27	.29	.23
	SR	.29	.29	.20
	FY	.30	.41	.24
	SR	.29	.39	.22

* All correlations significant at p<.001

Step 1: Basic Correlations
Writing scales are positively correlated with self-reported gains of learning and growth.

<i>Writing Practices</i>		<i>Self-Reported Gains</i>		
		<i>Practical Comps.</i>	<i>Personal & Social</i>	<i>General Education</i>
Encourage Interactive	FY	.43	.41	.35
Writing Processes	SR	.37	.38	.34
Design Intel. Focused	FY	.38	.34	.41
Writing Assignments	SR	.39	.37	.39
Explain Writing	FY	.45	.46	.40
Expectations Clearly	SR	.37	.43	.33

* All correlations significant at p<.001

Step 2: Multivariate Regression – Deep Learning
Results adjusting for student characteristics and writing amount

✓ Sig. - trivial
 ✓✓ Sig. - small
 ✓✓✓ Sig. - moderate

Step 2: Multivariate Regression – Deep Lrng
Results adjusting for student characteristics and writing amount

<i>First-Year Students</i>	<i>Dependent Variables</i>		
	<i>Higher-Order Learning Activities</i>	<i>Integrative Learning Activities</i>	<i>Reflective Learning Activities</i>
<i>Independent Variables</i>			
Encourage Interactive Writing Activities	✓✓	✓✓✓	✓✓
Assign Meaning-Const. Writing Tasks	✓✓✓	✓✓	✓✓
Explain Writing Expectations Clearly	✓✓	✓✓	✓✓

Step 2: Multivariate Regression – Deep Lrng
Results adjusting for student characteristics and writing amount

<i>Seniors</i>	<i>Dependent Variables</i>		
	<i>Higher-Order Learning Activities</i>	<i>Integrative Learning Activities</i>	<i>Reflective Learning Activities</i>
<i>Independent Variables</i>			
Encourage Interactive Writing Activities	✓	✓✓✓	✓
Assign Meaning-Const. Writing Tasks	✓✓✓	✓✓	✓✓
Explain Writing Expectations Clearly	✓✓	✓✓	✓✓

Step 2: Multivariate Regression – Gains
Results adjusting for student characteristics, writing amount, and deep learning

<i>First-Year Students</i>	<i>Dependent Variables</i>		
	<i>Practical Competence</i>	<i>Personal & Social</i>	<i>General Education</i>
<i>Independent Variables</i>			
Encourage Interactive Writing Activities	✓✓	✓✓✓	✓✓
Assign Meaning-Const. Writing Tasks	✓✓	✓✓	✓
Explain Writing Expectations Clearly	✓✓	✓✓	✓✓✓

Step 2: Multivariate Regression – Gains
Results adjusting for student characteristics, writing amount, and deep learning

<i>Seniors</i>	<i>Dependent Variables</i>		
	<i>Practical Competence</i>	<i>Personal & Social</i>	<i>General Education</i>
<i>Independent Variables</i>			
Encourage Interactive Writing Activities	✓✓	✓✓✓	✓
Assign Meaning-Const. Writing Tasks	✓	✓	✓
Explain Writing Expectations Clearly	✓✓✓	✓✓	✓✓✓

Results Summary

1. The more frequently students work on meaning-constructing assignments, engage in interactive writing activities, and receive clear expectations:
 - A. They engage in more deep learning activities.
 - B. They report greater gains in learning and development.

Results Summary

2. These results persist after controlling for:
 - A. Student characteristics such as gender, parental education, race, grades, and major.
 - B. The amount of reading and writing that students do.

Results Summary

3. Working on meaning-constructing assignments, engaging in interactive writing activities, and receiving clear expectations are each more important than the amount of writing that students do.

IMPLICATIONS

Implications

- Faculty are more likely to achieve important goals of higher education if they do the following;
 - assign well-designed writing projects
 - explain their expectations clearly
 - include interactive activities in the writing process

Implications

- Assigning well-designed writing projects, clearly explaining expectations, and including interactive activities are all highly effective teaching methods.
- They are more effective if used in combination

