

Increasingly, institutions are dedicating resources to help faculty infuse writing throughout their courses. This curricular movement has been inspired by the age-old adage that "writing is thinking," which suggests that writing activities increase students' engagement and learning, and that becoming proficient in writing prepares students to meet the complex demands for effective communication in the 21st century global economy (AAC&U, 2008).

How much do students write?

NSSE asks how many papers of varying lengths a student wrote, understanding that high expectations and promoting writing throughout the curriculum produce more writing. NSSE estimated the number of pages written by each student using the midpoints of three items that ask how many short (1–4 pages), medium (5–19 pages) and long (20+ pages) papers were written during the current academic year. For an individual student this calculation is imprecise, but in the aggregate it approximates the amount of student writing within and across institutions fairly well. Results indicated:

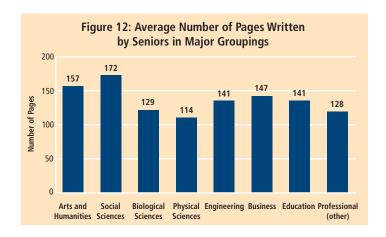
- First-year students wrote 92 pages and seniors wrote 146 pages on average during the academic year.
- Among seniors, the amount of writing varied considerably by major (Figure 12). Those majoring in the social sciences and arts and humanities wrote considerably more than many of their peers. Students studying the physical and biological sciences wrote less.
- The amount of writing was positively correlated with engagement, i.e., the more students wrote, the more they engaged in active and collaborative learning, student-faculty interaction, enriching experiences, and deep learning.

Enough about quantity, how do students learn to write well?

NSSE and The Council of Writing Program Administrators (WPA) developed 27 questions about teaching writing. In 2008 these were given as additional NSSE questions to 23,000 students attending 82 U.S. colleges and universities. Selected results show that while a majority of students usually talked with instructors to develop ideas and received feedback about drafts from faculty and others, less than a third of first-year students and only one in five seniors regularly sought help from writing centers (Table 9). The most common writing tasks were to analyze something or argue a position, while writing about numerical data was less common. Finally, most students said their instructors explained their learning objectives and grading criteria in advance, but fewer reported short writing assignments that were not graded or the use of peer review, particularly in the senior year.

"I have absolutely loved my experience at Amherst. I have developed my writing, speaking, and analytical skills in very stimulating and engaging classes. Professors have been very helpful and willing to donate time and extra help. My athletic experience has been a great source of satisfaction and happiness. I have also been privileged to get involved in various community engagement projects and other extracurricular activities that have been very special and gratifying."

— Senior student, Amherst College



Teaching Practices and Student Writing

The amount of writing students do depends on the degree to which faculty members set high expectations for student performance and assign challenging work. FSSE 2008 results show:

- Over half of faculty assigned more than 25 pages of writing in their senior course sections.
- Faculty teaching smaller classes assigned more writing than their peers.
- About 47% of faculty members teaching lower division courses and 54% of those teaching upper courses thought it was important or very important for their students to write more than one draft of a paper.
- The more importance a faculty member placed on preparing multiple drafts of a paper, the more likely they were to emphasize deep approaches to learning.

Senior
50.1101
67%
63%
64%
19%
91%
73%
50%
68%

84%

82%

91%

36%

Table 9: Percent Responding "Some," "Most," or "All"

Assignments to Selected Writing Items^a

	about a draft	03 70	36 76
,	^a Response options included 1 = no assignments, 2 = few a assignments, 4 = most assignments, and 5 = all assignments		
	and their exact wording visit www asse jub edu/pdf/Writi	na Questions 200	18 ndf

Explained in advance what he or she wanted you TO LEARN

Explained in advance the grading criteria he

Asked you to do short pieces of writing that

Asked you to give feedback to a classmate

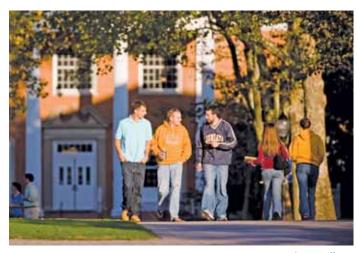
or she would use

were not graded

NSSE grouped the additional writing items into five scales that help describe the quality of undergraduate writing:

- Pre-Writing Activities: How much students got feedback from faculty and others about their writing ideas and drafts
- Clear Expectations: How much instructors provided clear explanations of the goals and criteria of the writing assignments
- Higher-Order Writing: How much students wrote assignments involving summarization, analysis, and argument
- Good Instructor Practices: How much students collaborated with classmates, reviewed sample writing, and assigned practice writing tasks
- Integrated Media: How much students included numerical data, multimedia, and visual content in their writing

Controlling for student characteristics, these good writing practices were substantially related to NSSE's deep learning subscales, especially higher-order thinking and integrative learning, and to



Juniata College

the three self-reported gains scales (Table 10). Results affirmed that when institutions provided students with extensive, intellectually challenging writing activities, the students engaged in more deep learning activities such as analysis, synthesis, integration of ideas from various sources, and grappled more with course ideas both in and out of the classroom. In turn, students whose faculty assigned projects with these same characteristics reported greater personal, social, practical, and academic learning and development. Taken together, these findings provide further support for the movement to infuse quality writing experiences throughout the curriculum.

Table 10: Effects of Good Practices in Writing on Deep Learning and Gains for Seniors ^a									
		Prein	riting Clear	txpectation	order W	niting Nite	y Practice		
Deep	Higher Order Thinking	+++	++	+++	++	+++			
Learning Scales	Intergrative Learning	++++	++	+++	+++	+++			
	Reflective Learning	++	+	++	+	++			
	Personal and Social	++++	+++	+++	+++	+++			
Gains Scales	Practical Competence	++++	+++	++	+++	+++			
	General Education	+++	+++	+++	++	++			

Table reports results from six multiple regression models (one per row). Controls included gender, transfer status, first-generation status, living on campus, age, race, and major. All variables were standardized before being entered into the models. + p < .001 and unstandardized B > .1, ++ p < .001 and unstandardized B > .2, +++ p < .001 and unstandardized B > .3, ++++ p < .001 and unstandardized B > .4