University of Houston

Undergraduate Writing Assessment

Spring 2006 Report

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OVERVIEW

The Undergraduate Writing Assessment project began with a request from the Undergraduate Council Core Curriculum Subcommittee in the spring of 2004, chaired at the time by Sarah Fishman-Boyd. Stemming from a general faculty concern about the quality of undergraduate student writing, the request was to provide data that:

- described problem areas in student writing,

- identified students in need of assistance, and

- suggested how resources could be targeted to address identified needs effectively.

A working group was formed to develop and implement an assessment plan. Members include:

> *Libby Barlow, Executive Director, Institutional Research and Institutional Effectiveness*
>
> *Marjorie Chadwick, Executive Director, Writing Center*
>
> *Sarah Fishman-Boyd, Assoc. Dean, CLASS; Professor, History; member, Undergraduate Council*
>
> *Wyman Herendeen, Chair and Professor, English*
>
> *Steve Liparulo, Program Director, Writing Center*
>
> *Dudley Reynolds, Associate Professor, English; Coordinator, Research and Assessment, Writing Center; Coordinator of Institutional Effectiveness, CLASS*

Plans were developed in the fall of 2004, data were collected spring 2005, and analyses were conducted summer and fall of 2005. Preliminary results were shared in December, 2005 with faculty and department chairs representing the courses from which data were collected.

Design Principles

A number of considerations, briefly described below, drove the design of the assessment plan.

- The definition of "good" writing is a controversial topic even among experts in the field. While there are useful discussions of best practices among writing professionals that should inform our study, our operating assumption was that the wisdom or diagnosis of experts is meaningful only in tandem with UH faculty perceptions and concerns about student writing. A University of Houston study would be useful in so far as it provides information about what UH faculty value in student writing.

- The design must allow for the multiple ways in which UH students are diverse, the multiple disciplines within which writing takes place, and the multiple influences on student writing. Writing itself is a complex task requiring a range of skills, attitudes, and behaviors to be successful in the academic context. The complexity of writing warrants a multidimensional model of inquiry to maximize the likelihood of identifying strengths and weaknesses in student writing products, and what impacts each.

- Understanding undergraduate student writing is too large an inquiry to complete definitively in one study. Not all dimensions of writing can be defined and measured without preliminary studies, and mature writing in every discipline cannot be measured against the same standards. A meaningful assessment plan must begin as an exploratory process. It would be considered successful if it could provide baseline data for more targeted inquiry. Our goal was to examine the most basic elements of writing that would be common to most or all forms of undergraduate writing at UH, and to begin to measure some of the factors influencing how students write.

- The assessment plan must be executable with minimal strain on faculty resources. Since it is neither reasonable nor necessary to examine writing samples from every student, student writing would be sampled, and the committee would take responsibility for all analyses.

Assessment Plan

Details about the assessment design can be found in the appendix. Data were collected from four sources, briefly outlined below.

- **Faculty Perceptions**. All undergraduate faculty were asked to complete a brief questionnaire asking for information about what they expect in student writing and what they see.

- **Student Writing**. Each academic department with undergraduate courses was asked to submit samples of student writing from existing assignments in a 3000-level course.

- **Faculty Descriptions of Assignments**. Faculty who provided writing samples from their classes were asked to provide assignment materials and/or instructions they gave to students about the assignment.

- **Student Expectations and Perceptions**. Students whose papers were submitted as samples were asked to complete a survey on writing-related attitudes and behaviors.

WHAT VISION OF ACADEMIC WRITING DO WE SHARE AT UH?

The study began by exploring the vision of academic writing explicit or implicit in the culture of the institution and its people. Could we articulate what the University of Houston believes about academic writing, and from there move ahead to explore whether our students are realizing that vision?

Writing is human action undertaken in specific situations for distinct purposes. In the university context, faculty perceptions and expectations define the purpose for the student action. What are the relationships between what UH faculty want and what UH students produce?

What Faculty Expect From and See in Student Writing

> *Faculty responses to student writing tend to emphasize **accurate content**, **topic development**, and achieving the **purpose**.*
>
> *Faculty want students to be able to write **intelligently** and **purposefully**, using appropriate **sources** in **clear, concise, well-organized** compositions.*

The first piece of data, the faculty survey, was intended to guide us toward "locally responsible" criteria for evaluating student writing by identifying the values we share for it. In addition to confirming that our faculty share a common vision for academic writing, the analysis clearly pointed the way for developing a rubric to evaluate the student writing samples.

The one-page questionnaire (included as Appendix A) asked for scaled responses regarding areas that faculty respond to in student writing and then open responses about the faculty member's general perceptions of student writing. Respondents identified themselves in terms of their college affiliations. The questionnaire was administered online, and we received 187 responses, with fairly representative response levels from the nine colleges (See Appendix E for a description of respondents).

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How Faculty Respond to Student Writing

What was measured: Faculty were asked: "When you assign and grade written work in undergraduate courses, which of the following do you mark up, comment on, and count for grading?" This question was followed by nine items to rate according to the following scale:

1 None   2 Very Little   3 Some   4 A Lot

What was found: The faculty's responses are ranked below in descending order of the frequency with which they report on commenting on the area in student writing. The mean response is included in parentheses.[1]

- *Accurate factual content (2.8)*

- *Developing the topic adequately (2.6)*

- *Achieving the appropriate purpose (2.6)*

- *Effective sentences (2.4)*

- *Organizing paragraphs to support a main idea statement (2.4)*

- *Synthesizing, citing, and documenting sources (2.4)*

- *Grammar and mechanics (2.4)*

- *Productive and appropriate research process (2.3)*

- *Addressing the right audience (2.0)*

What it means: The mean responses range only slightly, from a little less than "some" for factual content (2.8) to "very little" for audience (2.0), indicating that faculty have fairly similar priorities when responding to student work.

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[1] The survey also offered an open-ended "Other:" response to this question.

How Faculty Describe Student Writing

What was measured: Faculty were asked, "What words [*qualities, characteristics, traits, etc.*] come to mind to describe typical undergraduate writing in your discipline?"

What was found: Key word analysis found the following terms most-commonly used to describe student writing:

- *Source(s) [87+ occurrences]*

- *Information, inform(ed) [81]*

- *Grammar, grammatical [52]*

- *Organize (and various forms of the word) [50]*

- *Clear, clearly [47]*

What it means: Even reduced to only the five most-commonly used terms, the data show that faculty describe student writing in several dimensions—content, organization, mechanics, and quality.

Faculty Expectations for Student Writing

What was measured: Faculty were asked, "What kind of writing should undergraduate degree candidates in your majors be able to do on a routine basis? [*e.g., synthesize several sources of information, write detailed instructions, explain a decision concisely, etc.*]"

What was found: The responses were scored for the traits they described. By a considerable margin (81 and 54 instances, compared to 20 or fewer for any other trait), the two traits below (with the subordinate terms also identified) were most prevalent:

- *Accomplish a conceptual purpose: synthesize, analyze, argue, explain, summarize, support (at least 81 instances)*

- *Achieve a level of formal/stylistic quality: clear, concise, well-organized (at least 54 instances)*

What it means: The overwhelming prevalence of conceptual objectives indicate that faculty see student writing mainly in terms of learning outcomes, and only secondarily in terms traditionally associated with "composition."

Rating the Student Writing

> *UH students tend to succeed in achieving specific **purposes** and addressing appropriate **audiences** in their writing,*
>
> *Students have more difficulty in using **evidence**, managing the **flow** of the writing, and controlling the quality of the **language**.*

Integrating Our Criteria with National and Local Best Practices

The diversity of the writing assignments—each class a different world for writing—required an evaluation rubric that was broad enough to include the majority of the writing, and still specific enough to measure quality and performance.

The Writing Program Administrators' (WPA) Outcomes Statements for First-Year Composition Programs,[2] and more locally the Texas Higher Education Coordinating Board Exemplary Educational Objectives for Composition, provided highly useful and pertinent frameworks for completing our rubric designs. In both these resources, as in the faculty perceptions and expectations, criteria descriptive of the writer in rhetorical situations (purpose, audience, level of formality, etc.) combined with expectations related to genre and correctness (format, style, documentation, mechanics, etc.).

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[2] http://www.english.ilstu.edu/Hesse/outcomes.html

Evaluating Student Writing

Writing samples from 419 students written in response to assignments in 23 departments (approximately 20 per class) were evaluated.[3] Graduate students with experience teaching composition served as raters,[4] and each sample was rated twice. A third rating by a tenured faculty member reconciled any substantial differences between the first two raters.

What was measured: An evaluation rubric was developed measuring five criteria for university writing (see Appendix B). The criteria selected for the rubric reflect both the influence of the Texas and national outcome documents as well as the faculty expectations identified from the survey described above. The five criteria are:

- Purpose

- Evidence-Based Reasoning

- Management of Flow

- Audience Awareness

- Language Control

The rubric identified three levels of student performance:

1. Criterion not present

2. Criterion inconsistently present

3. Criterion consistently present

What was found: The table below shows the mean performance level for each area. The writing performance scores arrayed as three tiers, with the highest mean scores being purpose and audience awareness, followed by the pairing of evidence-based reasoning and flow management, with language control alone as the lowest mean score.

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[3] If fewer than 20 essays were submitted for a class, then the total number submitted were rated.

[4] The raters were given a thorough introduction to the evaluation criteria, reviewed benchmark essays, and practiced rating samples. The raters began actual ratings after practice rounds produced consistent results in line with the benchmark standards.

	N		Purpose	Evidence-Based Reasoning	Flow Management	Audience Awareness	Language Control
University Total	419	Mean	2.54	2.41	2.35	2.59	2.07
		S.D.	0.54	0.53	0.56	0.50	0.46

What it means: In these samples, students appeared to consistently meet expectations when it comes to doing what the assignment required and within the framework of addressing an appropriate audience. The students were also generally successful in terms of putting the writing together, both conceptually and formally, but not to the extent that they were with purpose and audience. In contrast, the students were less consistent in controlling the style and mechanics of their written language.

Note

The first stage of our assessment produced coherent results in which faculty expectations, areas to rate in the student writing samples, and the objective picture of student writing that emerged corresponded reasonably well with the general perception that faculty had reported.

WHAT INFLUENCES STUDENT WRITING PERFORMANCE?

The data from faculty and writing scores from students provided an indication of the desired state of student writing at UH as well as preliminary information about our progress toward that goal. The next stage of the study was designed to go even further than description, however, exploring "how" and "why," inquiring into potential causes and interrelationships between contributing factors.

> *Past **academic performance**, **audience awareness**, and explicitness of writing guidance in the **assignments** show definite influences on the writing performance scores*
>
> ***Language proficiency** shows a marginal influence on writing performance scores*
>
> *Whether students are **transfer students** shows no influence*

Working from the hypothesis that performance is shaped by a multidimensional array of forces, five potential influences representing distinct aspects of a student's preparation and task engagement were identified:

- the student's past academic performance (GPA),

- the explicitness of the guidance for writing in the assignment they were given,

- the strength of their individual attitudes and beliefs about writing,

- the age at which they started learning English, and

- whether or not they were transfer students.

Roughly 18% of the variance in the mean writing performance scores was predicted by a regression model combining these five factors.[5] The following discussion focuses on each of the factors in turn and the significance of their contribution to the model's predictive ability.

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[6] Adjusted R^2=17.6 , F=9.26, p=.000

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Past Academic Performance

What was measured: Learning to write is a lifelong process, and the quality of any single piece of writing relates not only to the conditions under which it was produced but also to previous practice, and more importantly, previous success. Past success was represented by the student's cumulative GPA for coursework taken at UH.

What was found: GPA was highly significant in predicting the average of the five writing performance scores.[6]

What it means: Since writing is integral to the calculation of many course grades, this factor in a sense measures the influence of the writing ability and critical thinking skills developed prior to working on the sample evaluated for the study. Thus, the influence of GPA on writing performance indicates that any efforts aimed at improving student performance must target the continuous development of writing abilities across the university experience.

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[6] $t=5.52$, $p=.000$, $?^2=.10$

The Writing Assignment

What was measured: The assignment descriptions and materials provided by faculty (N=18) were coded for whether they provided guidance for:

- stating a purpose,

- demonstrating evidence-based reasoning,

- considering an audience,

- controlling conventions for format, structure, and/or flow,

- controlling conventions for voice, tone, and/or formality,

- a process for completing the assignment, and

- evaluation criteria. (See Appendix C)[7]

Most of the assignments identified the purpose of the assignment, the expected format or structure, and the need for evidence-based reasoning or critical thinking. Audience, voice, and writing process were less-often specified. As a score for each assignment, the number of categories for which explicit information was provided was summed.

What was found: The number of categories for which explicit information was provided proved to be significant in predicting the average of the writing performance scores, with the greater the number of categories the higher the writing score.[8]

What it means: While it is questionable whether all of these areas should be addressed in every assignment, these findings imply a relationship between explicit expectations for writing in the assignment and the quality of what students wrote. Students benefit from clear instructions about expectations for how to write as well as what to write about.

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[7] Note that the first five areas match the five performance criteria rated in the student samples. It should be noted, also, that faculty were not asked to provide the assignment materials according to a standardized format. Thus, the codings were based on a consensus reached by three of the study team members.

[8] $t=2.40$, $p=.017$, $?^2=.02$

Student Attitudes and Beliefs

What was measured: Analysis of the student questionnaires yielded three distinct, affective constructs, each composed of mult iple survey items:

- feelings of confidence in writing ability,

- appreciation of academic writing as difficult, and

- consideration of audience when writing.

The mean response of each student to the items associated with each affective construct was calculated, with higher means signifying greater self-confidence, a perception of academic writing as more difficult, and more attention to audience when writing. (See Appendix D for a summary of responses to individual items, Appendix G for a list of items associated with the three constructs and trait reliability, and Appendix H for mean responses to each construct.)

What was found: Of the three constructs, only awareness of a reader significantly predicted the average of the writing performance scores, with students who reported more audience awareness scoring higher.[9]

What it means: If students who report thinking about a specific audience when they write perform better, then teaching students how to consider audiences for writing should help students to write better.

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[9] t=3.28, p=.001, $?^2$=.04

Language Proficiency

What was measured: Students were asked for the age group when they began speaking English:

- 0-4 years old

- 5-6 years old

- 7-11 years old

- 12-16 years old

- 17 or older

Roughly 1 in 5 (22%) reported that they began learning English after the age of 5, with over 10% reporting that they began learning after age 12.[10] Although all of these students either graduated from a US high school or passed a test of English language proficiency such as the TOEFL, it is still possible that their limited schooling in English may influence the quality of their writing.

What was found: The age when the student began speaking English was nearly significant in predicting the average of the writing performance scores.[11] The results indicated that students who started speaking English later tend to score lower.

What it means: The students who began speaking English sometime during their elementary school years or later are a minority within the student population. They nevertheless comprise a subgroup within the UH student population who would appear to need specialized writing support programs.

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[10] Exact percentages are provided in Appendix D, item 25.
[11] $t=1.86$, $p=.063$, $?^2=.01$

Transfer Students

What was measured: Throughout this project, faculty wondered whether students who completed significant portions of their coursework at other institutions were as prepared as students who had completed their core requirements at UH. Because of the difficulty of coding which core courses were completed on campus, the sample was divided instead based on whether they were admitted from high school (44%) or as transfer students from either junior colleges or four-year institutions (56%).

What was found: Whether students had transferred into UH from another institution was not significant in predicting the average of the writing performance scores.[12]

What it means: This lack of significance may result in part because the variable itself is a gross oversimplification of the students' academic histories. Students transferring in from other institutions in all likelihood come from a wide range of institutions of varying quality; moreover, many student who are admitted to UH from high school may still transfer in credits from other institutions. In short, these results indicate the difficulties inherent in any efforts to track students based on previous institutional experiences.

Caveats

- The statistical procedure used here evaluates the effect of the identified factors as a group to predict variation in the writing scores. By examining their collective value, the procedure underscores that what a student produces is influenced by a combination of forces; no single factor is sufficient for predicting how a student will perform.

- The factors discussed here collectively predicted only about 18% of the variation in the writing performance scores' average, which indicates that much of what shapes a student's performance has not been addressed. Other potential influences might be how well a student knows the subject they are writing about and simply how much effort they put in, neither of which was measured by the study.

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[12] t=.988, p=.324

GENERAL FINDINGS

Writing Quality / Grammar and Mechanics

As a whole, the quality of student writing is acceptable. The mean scores for all traits ranged from 2.07 to 2.59 on a scale of one to three. Faculty value facts, topic development, and purpose most highly, and students' scores were acceptable in these areas. Students scored lowest in the area of language control. While the mean for language control (2.07) indicates inconsistent control, it does not mean that the raters perceived a total lack of control. Nevertheless, this may be an area that should be targeted for additional support.

Audience

Faculty do not report much attention to audience when grading student writing nor do the assignments provided by faculty show much explicit attention to audience. Additionally, the raters perceived the students as adequately addressing an audience. However, whether or not students think about an audience when writing is significant for predicting their overall writing performance. This indicates that while a student's sense of audience may be something difficult to perceive or comment on, it is nevertheless important and deserves more attention in the ways we teach writing and in particular when writing assignments are designed.

Specific Student Groups

The exploratory nature of the study meant that the opportunity for disaggregation by student group or student type was limited. Of the two groups who were identified, students who began speaking English after they began school may be a higher risk group. Transfer students, on the other hand, were not found to be significantly different from native UH students in terms of writing ability.[13]

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[13] Results have also been disaggregated by student major and contributing class. These results will be communicated directly to department chairs and the instructors who contributed samples of student work to the study.

RECOMMENDATIONS

Based on these data, the working group has identified three areas for development. Targeting institutional efforts in these areas will help strengthen the foundation for higher quality student writing.

- *Help students understand more clearly and address more effectively what is expected of them on writing assignments*. The data suggest that when students understand both the assignment and the larger task of writing, they produce higher quality written work. Interventions designed to improve student knowledge and skills in understanding and addressing expectations will likely yield significant gains in writing quality over time.

- *Help students develop knowledge and strategies for effective editing and improving writing quality*. Quality writing employs mechanical skills in accomplishing the larger task of communicating what the writer knows. Improvement of writing quality requires the effective application of knowledge about grammar, mechanics, disciplinary conventions for form and presentation, and audience expectations in order to foreground content.

- *Help faculty communicate assignment expectations to students clearly*. While students need more highly developed skills for understanding expectations, their chances of success are enhanced when the assignment is suitably explicit about what and how to write. Targeting resources to support faculty in this endeavor will likely reap benefits.

IMPLEMENTATION

There are a number of ways the above recommendations could be addressed. It should be assumed that any recommendation is most effectively addressed in multiple ways rather than by a single activity. Further, it should be assumed that more than one collection of activities would be effective and appropriate. Following are suggestions from the working group.

Help students understand more clearly and address more effectively what is expected of them on writing assignments

Offer students workshops as well as print and web-based resources about deciphering assignment expectations

Encourage independent use by students of peer feedback

Design class writing assignments to incorporate feedback opportunities

Refer students to Writing Center for work with Writing Consultants

Help students develop knowledge and strategies for effective editing and improving writing quality

Refer students to grammar and mechanics workshops offered by the Writing Center.

Develop series of workshops for students addressing style, tone, and editing for different audiences

Offer workshops for faculty on providing effective feedback to students on writing

Develop print and web-based resources for faculty on effective grading practices

Help faculty communicate assignment expectations to students clearly

Develop teacher resource web page and print materials with suggestions for assignment structure and sample assignments

Develop workshops for faculty interested in assignment development

Identify staff available for consultation with faculty on assignment design

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APPENDIX A – Faculty Questionnaire

To help us understand faculty expectations and perceptions of undergraduate student writing, please take a few minutes to provide responses to the following prompts.

To which college do you belong?
- ? Architecture
- ? Business
- ? CLASS
- ? Education
- ? Engineering
- ? HRM
- ? NSM
- ? Pharmacy
- ? Technology

What level students do you teach?
? Undergraduate only   ? Graduate only   ? Both

When you assign and grade written work in undergraduate courses, which of the following do you mark up, comment on, and count for grading?

	1: None 2: Very Little 3: Some 4: A Lot
	Accurate factual content
	Productive and appropriate research process
	Editing effective sentences
	Organizing paragraphs to support a main idea statement
	Synthesizing, citing, and documenting sources
	Grammar and mechanics
	Developing the topic adequately
	Achieving the appropriate purpose
	Addressing the right audience
	Other: [Specify]

What words *[qualities, characteristics, traits, etc.]* come to mind to describe typical undergraduate student writing in your discipline?

What kinds of writing should undergraduate degree candidates in your majors be able to do on a routine basis? *[e.g., synthesize several sources of information, write detailed instructions, explain a decision concisely, etc.]*

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APPENDIX B – Rubric for assessing student writing samples

[NB: Levels within each trait essentially equate to not present, inconsistent, consistent]
- Clarity of purpose (purpose may be argument or exposition and implicitly or explicitly stated)
    1. Fails to establish purpose
    2. Alternates between purposes
    3. Clear purpose
- Demonstrates evidence-based reasoning
    1. Makes generalizations without support or cites irrelevant evidence
    2. Repeats evidence without drawing conclusion
    3. Draws conclusion from evidence
- Manages flow in a manner appropriate to genre
    1. Composed without sense of how sentences relate to each other
    2. Uneven management of flow (i.e., not consistent)
    3. Can be read without awareness of construction
- Demonstrates audience awareness through appropriation of form, specialized language forms, or authoritative voice
    1. Unclear who audience might be
    2. Audience acknowledged in a token way but not consistently
    3. Clear sense of audience whether general academic reader or other audience appropriate for task
- Demonstrates effective control of academic language conventions
    1. Problems with grammar and syntax distract reader and detracts from overall presentation
    2. Occasional problems with grammar and syntax but language does not otherwise stand out
    3. Language usage impresses reader

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APPENDIX C – Trait analysis for assignments

NA: Not enough information to determine; **1**: Does not specify the trait for the assignment; **2**: Specifies the trait in some manner

TRAITS:

1. The assignment specifies **<u>a focus on a purpose</u>**.

2. The assignment specifies the **<u>audience</u>** for the writing.

3. The assignment specifies **<u>conventions for format, structure, and/or flow</u>** in the writing.

4. The assignment specifies **<u>conventions for voice, tone, and/or level of formality</u>**.

5. The assignment provides guidelines for incorporating **<u>evidence-based reasoning or critical thinking.</u>**

6. The assignment specifies or suggests a **<u>process and/or stages for completing the work</u>**.

7. The assignment specifies **<u>expectations and/or grading criteria</u>** for the writing.

APPENDIX D – Percentage Responses to Student Survey Items

(Number of responses per items ranged from 537-546)

Please circle the number that indicates how strongly you agree or disagree with the following statements.	Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
1. I think about how my papers will sound to someone else.	1.5%	2.9%	8.5%	48.7%	38.4%
2. I know how to evaluate and revise my papers.	0.7%	5.9%	17.1%	57.2%	19.1%
3. I prefer courses that don't require much writing.	3.7%	17.1%	35.7%	25.9%	17.6%
4. I am able to organize my ideas well when I write.	0.7%	6.8%	21.4%	53.6%	17.4%
5. I am comfortable letting other people give me feedback on my writing.	2.0%	4.2%	7.0%	45.9%	40.9%
6. I am confident in my knowledge of English grammar.	1.5%	8.6%	17.2%	46.1%	26.6%
7. I will need to be able to write well after college.	1.3%	3.1%	12.7%	33.8%	49.1%
8. I am able to collect and organize information for my writing.	0.5%	2.0%	11.5%	59.2%	26.7%
9. I am able to communicate ideas effectively in writing.	0.9%	4.4%	18.7%	56.4%	19.6%
10. I can write persuasively.	0.7%	5.5%	24.0%	49.3%	20.5%
11. I know how to find resources to help me with my writing.	1.1%	4.0%	11.6%	52.2%	31.1%
12. I find it difficult to understand what writing assignments are asking for.	18.8%	47.8%	19.6%	11.1%	2.8%
13. I seek help on my writing from others.	9.3%	27.8%	24.5%	30.0%	8.2%
14. I am aware of different ways of organizing a paper.	1.5%	8.0%	21.7%	56.5%	12.4%
15. I have a hard time figuring out how to approach a writing assignment.	10.5%	35.0%	26.2%	23.6%	4.8%
16. I am able to identify a clear purpose when I write a paper.	0.4%	5.5%	19.9%	60.5%	13.7%
17. I am confident in my writing ability.	1.3%	7.4%	21.4%	49.0%	21.0%
18. I am able to write papers that professors like.	1.5%	6.1%	27.8%	49.2%	15.5%
19. I am able to express my knowledge clearly through writing.	0.9%	5.4%	20.4%	56.5%	16.9%
20. I am comfortable with the kind of language used in college writing.	0.7%	4.0%	13.2%	59.2%	22.8%
21. My prior education has prepared me for the written work required in my courses.	4.4%	9.9%	17.8%	46.1%	21.8%
22. When I write, I think about who is going to read it.	1.5%	8.1%	15.5%	50.3%	24.7%

23. I could benefit from more writing instruction.	2.4%	7.2%	25.2%	43.0%	22.2%

Please circle the most appropriate response to the following questions.

24. Is a language other than English spoken in your home?	Yes (44.9%)	No (55.1%)			
25. How old were you when you began speaking English?	0-4 (77.6%)	5-6 (7.6%)	7-11 (4.3%)	12-16 (5.0%)	17 or older (5.6%)
26. How long have you lived in the USA?	1 year or less (0.2%)	1-2 years (0.9%)	3-6 years (8.3%)	7-10 years (6.3%)	10 years – all my life (84.3%)
27. On average, how many papers per course per semester have you written in college?	0-1 (12.3%)	2-3 (49.0%)	4-5 (22.5%)	6 or more (16.2%)	

APPENDIX E – Faculty survey responses by college, N, % of total respondents

Architecture , 6, 3%
Business, 19, 10%
Liberal Arts & Social Sciences, 69, 37%
Education, 20, 11%
Engineering, 12, 6%
Hotel & Restaurant Management, 4, 2%
Natural Sciences/Mathematics, 21, 11%

Pharmacy, 6, 3%
Technology, 14, 7%
Law, 3, 2%
Optometry, 4, 2%
Social Work , 1, 1%
Honors, 1, 1%
Unspecified, 7, 4%

APPENDIX F – Student Data by Departments Participating in Sample

Departments in Sample	Registered Students	Surveys	Writing Samples	Rated Writing Samples	Rated Sample and Survey
Anthropology	37	29	9	0	0
Architecture	52	51	51	20	20
Art History	32	14	19	19	14
Biology	18	12	12	12	10
Communication Disorders	41	33	33	20	20
Communication	24	19	18	18	18
Computer Science	44	39	41	20	20
Economics	41	31	34	20	20
Electrical-Electronics	29	24	24	20	20
English	45	28	35	20	20
German	46	0	32	20	0
Human Development & Consumer Sciences	124	0	78	20	0
History	33	26	27	20	19
Hotel and Restaurant Management	83	0	70	20	0
Industrial Engineering	41	35	27	23	21
Health and Human Performance	47	6	6	0	0
Mathematics	16	16	16	16	16
Music	88	41	60	20	20
Philosophy	22	15	15	15	13
Political Science	33	18	29	20	14
Psychology	59	40	48	19	19
Sociology	52	37	45	20	20
Information Systems Technology	31	17	23	20	12
Theatre	21	16	17	17	16
Total	1059	547	769	419	332
Percent Total		52%	73%	40%	31%

$$\begin{matrix}\bullet\\\bullet\\\bullet\\\bullet\\\bullet\\\bullet\\\bullet\\\bullet\\\bullet\\\bullet\\\bullet\end{matrix}$$

APPENDIX G – Factor Analysis of Student Survey Responses

Factor 1: Writing Confidence (Cronbach's Alpha = .92)

Item	Load
17. I am confident in my writing ability.	.83
19. I am able to express my knowledge clearly through writing.	.82
9. I am able to communicate ideas effectively in writing.	.81
10. I can write persuasively.	.76
4. I am able to organize my ideas well when I write.	.74
18. I am able to write papers that professors like.	.74
2. I know how to evaluate and revise my papers.	.69
20. I am comfortable with the kind of language used in college writing.	.67
6. I am confident in my knowledge of English grammar.	.61
16. I am able to identify a clear purpose when I write a paper.	.60
21. My prior education has prepared me for the written work required in my courses.	.54
8. I am able to collect and organize information for my writing.	.51

Factor 2: Writing Difficulty (Cronbach's Alpha = .65)

Item	Load
12. I find it difficult to understand what writing assignments are asking for.	.83
15. I have a hard time figuring out how to approach a writing assignment.	.70

Factor 3: Audience Awareness (Cronbach's Alpha = .66)

Item	Load
22. When I write, I think about who is going to read it.	.76
1. I think about how my papers will sound to someone else.	.77

APPENDIX H – Mean Response for Student Survey Factors (N=523)

	Writing Confidence	Writing Difficulty	Audience Awareness
Mean	3.86	2.54	4.06
S.D.	0.60	0.89	0.74