Despite the agreed-upon success of writing across the curriculum (WAC) programs among those who administer and teach them, there remains a paucity of hard evidence proving that they work. Most published articles touting the success of writing across the curriculum programs cite only anecdotal or soft evidence—not the kind of evidence that would win over a professor in economics or the sciences. A pilot program, supported by an internal grant from Southern Illinois University at Edwardsville's Excellence in Undergraduate Education Fund, attempted to evaluate the writing across the curriculum program there using procedures that would yield, at least in part, hard evidence. While the assessment yielded some soft evidence, such as summaries of student interviews, at least two components yielded evidence of the sort that would be respected university-wide. In one of these procedures, an economics professor taught a regular section of introductory economics at the same time that he taught a writing-intensive program. Test scores suggest strongly that the writing-intensive program benefited the students in it; test scores, while initially lower in the writing section, ended up higher than those in the other group. The second procedure yielded somewhat similar results. Judges experienced in reading essays in a number of disciplines examined 183 papers from both regular and writing intensive sections of many courses; results showed that more students from the writing intensive classes received "C or above." Contains seven references. (TB)
"Assessment of Writing-Across-the-Curriculum Projects"

STATEMENT OF THE PROBLEM

I believe that those of us in English studies who are committed to writing across the curriculum (WAC) have done respectable work in at least three areas during the past two decades. (1) Through faculty development workshops, panel presentations, and article and book publications, we have successfully explained the rationale for WAC. We have argued clearly that history, biology, and economics courses emphasizing writing as a means of learning are (a) preferable to history, biology, and economics courses that include little writing and (b) preferable to traditional freshman writing courses disconnected from the rest of the curriculum. (2) We have also successfully developed dozens of sample WAC syllabi, sample WAC assignments, and WAC teaching techniques that are, first, presented in WAC workshops and, then, used by teachers in dozens of nonEnglish disciplines as they use writing as a means of teaching their subjects. Many teachers throughout the disciplines have received sound preparation in syllabus revision, assignment design, collaborative learning, revision techniques, paper evaluation, and other pedagogical strategies. (3) Finally, through experience at hundreds of campuses, we have developed several models for WAC programs--from writing intensive courses taught by nonEnglish faculty in nonEnglish disciplines, to linked writing and discipline-specific courses taught by English faculty and faculty from other disciplines, to team-taught discipline-specific courses, to discipline-specific courses that integrate
writing center tutors into the core of the students' experience. Faculty and administrators interested in WAC can choose from these and other models, depending on the values and needs of their respective colleges and universities.

However, although we have clearly stated the rationale for WAC, offered hundreds of WAC faculty development workshops (as well as hundreds of workshops on how to conduct WAC workshops), and defined several WAC models, we have not actually proved that WAC works. We have not proved that students who participate in WAC programs actually write better or comprehend subjects better than students who take a traditional, stand-alone freshman writing class and then take a series of history, biology, and economics classes that include little writing. Certainly those of us in English studies and in nonEnglish disciplines who continue to use WAC techniques are convinced that students write and learn better through WAC experiences. However, to offer WAC rationales, teaching methods, and models, and to marshall many professors who are committed to WAC, are not the same as proving that WAC works.

In the 1990s, at most colleges and universities some English and nonEnglish faculty participate in WAC programs. However, at these same institutions, many faculty--probably, the majority at most schools--are not involved in WAC. Many of these faculty have been trained in sciences, social sciences, and professional and technical fields. For good reasons, they have been trained to seek and are accustomed to seeking "hard" data to guide their
decisions. These professionals will not necessarily be convinced by clearly-stated rationales and sincere testimonials from their colleagues. Yet, how often, as we read through journals like *College Composition and Communication, College English, Journal of Advanced Composition*, and *ADE Bulletin* do we find short-term or long-term assessments of WAC programs that yield data recognizable by a professor in agronomy or engineering? There are some WAC texts that are so useful that they have deservedly become well-known among those of us working in WAC, for example, C. William Griffin's *Teaching Writing in All Disciplines*; Barbara E. Fassler Walvoord's *Helping Students Write Well: A Guide for Teachers in all Disciplines*; Art Young and Toby Fulwiler's *Writing Across the Disciplines: Research into Practice*; Fulwiler and Young's *Programs That Work: Models and Methods for Writing Across the Curriculum*; and Anne Herrington and Charles Moran's *Writing, Teaching, and Learning in the Disciplines*. These texts were published in the 1982-1992 decade. As valuable as they are for stating the WAC rationale and offering guidance in WAC workshops and WAC classrooms, only one of them—*Writing Across the Disciplines*—includes a section on assessment (consisting of five essays). *Programs That Work*, in spite of its title and in spite of featuring fourteen WAC programs, contains only one program description that includes an attempt to prove that the WAC program in question actually does "work" (Robert Morris College); the book’s editors acknowledge that "[a]ttempts to measure the effect of cross-disciplinary writing programs don’t
seem to have been very successful" (5). I am not critical of these sources for generally lacking assessment studies; their editors and authors did not set out to create books that include assessment. I mention these titles only to illustrate that WAC publications seldom emphasize or even include attempts to generate assessment data, even "soft" data.

The majority of the campus audience for WAC is not arts and humanities faculty; the audience consists primarily of faculty and administrators trained in scientific, professional, and technical disciplines. These professionals have to be convinced of the effectiveness of WAC if WAC is to expand. Administrators asked to find funds for the smaller class sizes and teacher training workshops required by WAC, and faculty asked to reconceptualize their classes, revise their syllabi, and change their teaching strategies--most of this audience, I believe, is not going to be swayed until those of us committed to WAC can develop compelling "hard" data. Since my own assessments of WAC projects are as vacant with respect to "hard" data as are the journals and books mentioned above, I can easily provide a firsthand illustration of WAC assessment that includes too little of what I term "hard" data.

ILLUSTRATION OF THE PROBLEM

Southern Illinois University at Edwardsville (SIUE) offers a series of what are called "111" courses, General Education courses that are intended as introductions to the methodologies of different disciplines. In 1993-94, a colleague and I oversaw
a WAC pilot program involving "111" courses in eleven departments: Anthropology, Biology, Economics, English, Foreign Languages, Geography, History, Math & Statistics, Music, Philosophy, and Political Science. (Galen Pletcher, then SIUE's Associate Provost, co-authored the grant proposal, co-facilitated the WAC workshops, and participated in assessment of the project.) The objective of the pilot program, in addition to increasing the quantity and quality of writing in selected "111" sections, was to gain information from a small-scale WAC experiment that would be helpful if SIUE were to attempt WAC on a large scale. (The experiment was supported by an $80,457 internal grant from SIUE's Excellence in Undergraduate Education Fund.)

During fall 1993, eleven faculty and six graduate students attended twelve WAC workshops. The workshops emphasized audience awareness exercises, prewriting and revision methods, enhanced assignment design, collaborative learning, writing-to-learn devices such as micro themes and five-minute writings, gender and writing, conference editing, reading skills exercises, and improved paper evaluation. The workshops included guest presentations by SIUE faculty who had attended previous WAC workshops and who were teaching WAC classes in fields such as accounting, biology, and political science.

During spring 1994, the workshop participants continued to meet in WAC workshops. However, they also taught eleven writing-intensive "111" classes, relying on information gained and syllabi revised in the fall workshops. Eight of the classes had
maximum class sizes of 20 students, and three had maximum class sizes of 60. Each 60-student section was taught by one professor and two graduate teaching assistants. The project included both the 20-student and 60-student models, since WAC done on a large scale at SIUE would necessarily include classes with and without graduate assistants. If WAC were to be attempted on a larger scale, information would be needed with respect to both models.

During fall 1993 and spring 1994, my colleagues and I planned the projects' assessment, most parts of which were to be carried out in the spring and summer of 1994. (Dwight Smith, Special Assistant for Academic Programs at SIUE, designed some of the assessment procedures, critiqued others, analyzed much of the data elicited by the procedures, and created several student profiles.) It was during this period, as we searched the WAC literature for assessment models, that I became aware of the paucity of research done in this area and that I began to develop the thesis I am presenting in this paper. In spite of the relative lack of resources, we settled on several assessment devices. In addition to having faculty fill out an evaluative questionnaire on the WAC workshops, we used the following six assessment procedures:

1. Administration of student survey to assess student attitudes and academic behavior.

2. Evaluation of writing samples from regular and writing-intensive "111" classes to determine differences in writing skills.
3. Evaluation of regular and writing-intensive "111" class syllabi and assignments to determine the likelihood of their fostering active learning and effective writing.

4. Evaluation of papers and exams from regular and writing-intensive Economics 111 classes to determine whether students comprehend the subject better in writing-intensive "111" sections.

5. Anecdotal evaluations by writing-intensive "111" teachers focusing on student comprehension.

6. Interviews evaluating graduate assistant participation.

My objective in this paper is not to report the results of our assessment, but to distinguish between what I term "hard" and "soft" data and, thereby, to illustrate the scarcity of information likely to be compelling to colleagues whose training is in the scientific, professional, and technical fields. To make these points, I will refer briefly to only three of the six procedures.

The student survey was administered to all students in the eleven writing-intensive "111" classes and to students in a sample of nonwriting-intensive "111" classes during the final week of the spring term (the instrument had been tested in classes not related to the writing-intensive "111" project). The survey was designed to explore some of the issues investigated in the Harvard Assessment Seminars: Second Report, 1992, as well as other topics. In addition to gathering information about matters such as students' study habits and hours per week devoted to
working or "parenting," the survey seeks students' opinions on matters such as how "intellectually challenging" and "personally engaging" students found the "111" classes to be; the degree of improvement students made in writing skills such as "clarifying my topic through writing" and "editing and rewriting drafts"; the quality and usefulness of teachers' responses to student papers; and the effectiveness of writing in helping students comprehend material. Information gained through the survey was broken into percentages, and much of the information was displayed on a series of bar charts.

In my view, the information gained from this survey is interesting, but qualifies as "soft" data only. For example, it is interesting that the bar charts show, in most cases, a positive relationship between mean hours of writing per week and student perception of the course as "intellectually challenging" and "personally engaging." It is also interesting that the bar charts show that, when writing-intensive English, Philosophy, Music, and Biology 111 sections were contrasted with nonwriting-intensive English, Philosophy, Music, and Biology 111 sections, the writing-intensive sections were perceived as more "intellectually challenging" in all cases and were perceived as more "personally engaging" in two cases. Responses to the student survey also indicate that high percentages of students felt they improved substantially in "thinking through my ideas before writing," "outlining," "clarifying my topic through writing," "directing my writing to the appropriate audience," and
"editing and rewriting drafts"; responses indicate that "thinking through my ideas" and "editing and rewriting drafts" are writing behaviors in which students felt they had made the "most improvement as a result of" the writing-intensive courses. Finally, it is interesting that, according to the students, very few teachers assigned split grades (one for content and another for writing skills): almost all of the teachers in the WAC workshop evidently grasped that how one writes and what one writes are not readily separable.

As "interesting" as these results are, their worth is questionable, in my estimation. In spite of the precise bars on the charts, how can any investigator know how students were defining terms such as "intellectually challenging" and "personally engaging" as they responded to the survey? As for students who rated their improvement in "using correct grammar & punctuation," how many of them would actually be able to judge their performance in this area accurately? A scale of one to five (with one representing "Not at all successful" and five representing "Very successful") was used to gauge responses to the question, "How successful was this course in using writing to help you learn the subject?" Although 20.4 percent and 22 percent of the students chose "five" and "four," respectively, how dependable are the students' estimations of this complex question? This is "soft" data, neither reliable nor valid, interesting primarily to English teachers and useful in assessment only when combined with plenty of "hard" data. I do
not believe it is the type of data likely to impress faculty outside of the arts and humanities.¹

Although most of the assessment procedures employed in the SIUE WAC project yielded only "soft" data, two of our assessment procedures sought what I would classify as "hard" data. One participant taught both a writing-intensive Economics 111 class and a regular Economics 111 class during the spring term: each class had a maximum of 20 students, used the same text, and covered the same material. When the Economics professor began the spring term, he feared that using writing to teach economics would decrease the time that could be spent on the course "content" and, correspondingly, would decrease the amount of information students learned, resulting in lower exam grades. He volunteered to conduct a small experiment to investigate his suspicion.² Many WAC participants initially share this fear that, although teaching a topic through writing may increase the quality of learning, this same teaching strategy may also decrease the quantity of material covered; so this professor's willingness to conduct even a small experiment was welcomed. Students in both sections were similar with respect to number of hours spent in out-of-school activities and in their course loads. However, the average GPA for students in the regular Economics section was 3.1, while the average GPA for students in the writing-intensive Economics section was only 2.7. The third exam taken by students in both of these Economics 111 sections was identical—an objective text of 40 items. Nevertheless, on
the exam the average score in the writing-intensive section was 28.5, while the average score in the regular class was 28.0. Despite having lower GPAs, students in the writing-intensive Economics class performed better on the objective exam than did those in the nonwriting-intensive class. This study was too small to be reliable. However, it hints at what I take to be "hard" data. Were similar comparison studies conducted in fields additional to Economics, and were the comparisons to involve more students, exams, and classes, data would emerge that, I believe, would be immediately understandable and immediately convincing to most college and university professors and administrators. If the findings that emerged in this restricted study were to emerge in expanded studies, valid and reliable figures showing that students do, indeed, learn better through WAC would be available.

The other assessment procedure that sought "hard" data was broader in scope. SIUE has a cadre of teachers who have been trained in holistic scoring in order to evaluate student essays submitted to fulfill a junior-level writing requirement. These faculty are experienced in reading samples from a variety of disciplines and judging them according to shared criteria (audience awareness, quality of thought, organization, support, and language use). For purposes of the present assessment, the scorers were introduced to a two-tier rating system: "C or Above," and "Below C." They were, then, given a random sample of 183 papers and assignments (with all student and teacher identification removed). The papers came from English 111, Music
111, and Philosophy 111 classes; these disciplines were chosen because their departments offered multiple "111" sections, thus simplifying the problem of creating comparison samples. Thirty-seven of the papers were drawn randomly from three writing-intensive "111" sections, and 146 of the papers were drawn from five regular "111" sections. The results were twofold. Seventy percent of all papers were judged "C or Above" and 30 percent were judged "C or Below." Of the papers from the writing-intensive sections, 78 percent were judged "C or Above," while 68 percent of the papers from regular "111" sections were judged "C or Above." The samples represented students similar with respect to high school English units completed, high school math units completed, and high school percentile rankings; ACT English, Rhetoric, Reading, and Math scores; SIUE admissions testing reading scores; grades in freshman English; grades in other "111" classes; and college GPA. Since the student population was similar, since random samples were carefully chosen, and since the evaluators were experienced and well-trained, I judge these figures to constitute "hard" data. Although I would prefer a larger sample, I believe any university or college professional, upon seeing such figures, would be impressed with the impact of WAC on student performance.

CONCLUSION

Most of the data generated in assessment of the SIUE WAC project is "soft." Like the papers I hear delivered at conferences and like the articles and books on WAC that I read,
the assessment I oversaw lacks sufficient attention to developing what I term "hard" data. I realize that no one assessment procedure is sufficient in itself, that WAC assessment must combine information from several different tools in order to represent the characteristics of a project. I realize that those of us in English studies need to look at both "soft" and "hard" data to evaluate our WAC efforts. However, over the years, I have also learned that my colleagues from the sciences and professional schools are far less interested in the "soft" data than I am. I believe that, if these faculty and administrators are to pay attention to WAC, if WAC is to be affirmed and participated in by large numbers of faculty at SIUE and on other campuses, more "hard" data must be developed.

Isaiah Smithson
English Language & Literature
Southern Illinois University
Edwardsville, IL 62026
WORKS CITED


1. Although I speak disparagingly of this student survey, I admit to having published a survey of student and faculty classroom behaviors and attitudes toward WAC (Smithson and Sorrentino); I believe that the criticisms I direct at the current survey hold for this earlier survey also.

2. Professor Rik Hafer designed the experiment and conducted the calculations; Dwight Smith developed profiles of the students in question.

3. Susan Gabriel, Director of SIUE's Corporate Writing Program, prepared the samples, trained the evaluators, and calculated the results of this assessment procedure.