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The Intradisciplinary Influence of Composition and WAC, 1967–1986

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MOST HISTORICAL ACCOUNTS of the Writing-Across-the-Curriculum (WAC) movement assign its agency to scholars or teachers of writing. For McLeod, it can be traced to Central College in Pella, Iowa, where Barbara Walvoord held the first cross-curricular writing workshops in 1970 (see also Walvoord). Bazerman, et al., and Russell offer more complex historical trajectories that nonetheless point to writing researchers as likely progenitors, even amidst broader national educational trends. Both, for example, acknowledge the impact of *The Development of Writing Abilities 11–17*, a work in which authors James Britton and colleagues report on an extensive study of British secondary school literacy practices that paved the way for an interest in language across the curriculum in the UK. The new emphasis was subsequently imported, with a more dominant focus on writing, to small liberal arts colleges in the United States (see also Fulwiler). Both also credit the emergence of composition studies as a likely intellectual source of the closely aligned WAC movement in secondary and post-secondary education. No histories of WAC suggest that this cross-curricular movement was generated from within the various disciplines that are the principle targets of its advocacy and the sites of its consultation, faculty development, and research. The singular disciplinary origin of this multiple-disciplined, and now, highly recognized and practiced educational movement (Thaiss) allow us to ask how WAC was influenced by work in composition. Did the movement get a jump-start from a few innovators and then develop on its own, within and across various disciplines? Or did the field of composition studies, itself emerging from its own beginnings in the 1960s, "grow" the movement from its persistent attention to writing in various courses and curricula?

Although charting the growth of the beliefs and practices that characterize WAC will always be difficult (Ackerman 339), a number of methodologically diverse studies could begin answering these questions. For example, we could examine the curricula

of 10 colleges and universities in each Carnegie classification over a 30-year period to map changes in how writing has been incorporated, and then mine the historical documents within each department to locate the specific sources of curricular change in the area of writing. We could study the top two or three best-selling textbooks across a range of content areas over the past several decades to discern patterns in their treatment of writing—although it would be unlikely that many of them would disclose the sources of their authors' own thinking about writing pedagogy or scholarship. We could administer a national survey to a random sample of longtime faculty in colleges and universities representing a cross-section of institutional types to collect data on how and from whom they learned about WAC. Or we could research publishing houses, examining their records of trends and influences on the development and marketing of books in a range of disciplines to try to locate the sources of influences that led them to urge more coverage of writing or expand the marketing of books to include supplements that offer advice on writing. Given the problems these studies would face and the great amount of work they would require, they present rather unattractive options for finding out what influence, if any, the field of composition has exerted on the development of WAC within the disciplines themselves, that is, as a function of their own activities and sharing of new knowledge in the area of instruction.

However, one interesting and relatively unobtrusive alternative exists, and it involves collecting data on what scholar-teachers have written among themselves about writing, over time, within various disciplinary areas. This information is perhaps best gathered from the most permanent source of a discipline's own pedagogical history— its teaching journals. In virtually all fields, there is at least one journal that is devoted primarily to curricular matters, classroom methods, student learning, and other issues associated with teaching, or one that publishes pedagogical material alongside more scholarly work. If writing has played a role in the national discussions of teaching and learning within these fields, we should expect to find in their journals some treatment of writing as an activity of central importance to students' learning, intellectual development, and career trajectories.

With this research perspective in mind, I studied articles published in 14 discipline-based teaching-oriented journals between January 1967 and December 1986. The 141 writing-focused articles published in these journals provide an interesting profile not only of the development of WAC as a movement in U.S. higher education, but also of the extent to which the field of composition studies—its activity in the areas of research and instruction—influenced the thinking of scholars and teachers, in a range of fields, who were interested in how their subject matter was taught in college courses.

Selecting the Corpus

To choose a suitable range of journals across the curriculum, I began by scanning ULRICH's periodical directory, making a list of eligible candidates, and then consulting them individually to see whether they would be appropriate to study in depth. I rejected from consideration all newsletters; all journals that had lapsed before the end of 1986; journals that, in spite of their titles, still focused on field-specific research rather than teaching or the scholarship thereof; and journals published less frequently than twice per year. I also rejected several journals in fields with affinities to composition studies, such as speech communication, education, reading, and business communication, because the overlapping nature of the scholarly communities in those fields could make it appear that composition had a more widespread influence than is really the case.

I began at 1967 for several reasons. First, it became clear that including earlier issues would yield little of interest because articles on writing published before then were very scarce. Second, receding further would have resulted in the elimination of some journals that had not yet been established. Third, historians of composition generally agree that the field of composition studies began in earnest following the publication of Braddock, Lloyd-Jones, and Schoer's *Written Composition* in 1963 (the first major synthesis of research on writing; see Babin and Harrison 13). However, it took several years for a collective interest in writing, as a subfield of English studies, to begin to coalesce, especially around landmark studies such as Emig's *The Composing Processes of Twelfth-Graders* (the first extensive study of what novice writers do when they write, published in 1971); the previously mentioned study by Britton et al.; and the work of scholar/ practitioners writing in the late 1960s and early 1970s, such as McCrorie, Elbow, and Murray. In addition, a 1966 Anglo-American conference at Dartmouth is widely credited with starting a transatlantic dialogue about the teaching of writing that brought attention to the work of James Britton and colleagues and spurred considerable interest in WAC (see Bazerman and Russell). Finally, there is little documented evidence of collective activity in the subfield of WAC until the early 1970s. At that time, the WAC movement was a distant speck on the horizon of organized cross-curricular instructional activity concerning student writing, but the lack of such a movement does not preclude at least some discussion of writing and its role in discipline-based learning. Examining possible changes in the ways that each field engaged in those discussions provides some basis for charting the influence of composition studies, and its nascent WAC efforts, on other disciplines. Twenty years (from 1967 to 1986 inclusive) represented a reasonable period to study the early influences on the development of

WAC; Part 2 of this article, to appear in a future issue, will continue to trace the development of WAC from the start of 1987.

Eventually, I settled on the following 14 teaching-focused journals in a variety of disciplines:

- *Teaching of Psychology*
- *Teaching Sociology*
- *Teaching Philosophy*
- *History Teacher*
- *Engineering Education*
- *Mathematics Teacher*
- *Journal of College Science Teaching*
- *Teaching Political Science*
- *Journal of Economic Education*
- *Journal of Architectural Education*
- *Physics Teacher*
- *Journal of Chemical Education*
- *Journal of Aesthetics Education*
- *Music Educator's Journal*

These journals represent a wide spectrum of disciplines, including the arts and humanities, social sciences, and hard and applied sciences.

I obtained bound volumes or online archives of all the journals published between January 1967 and December 1986, and then made a copy of every article that focused on writing. To be considered for inclusion in the study, articles had to focus overtly and predominantly on writing, with attention to the instructional uses of writing within the field. Articles that mentioned writing only in passing were not included. A publication tip for scholars, for example, would not meet this pedagogical criterion. The study is based, therefore, on articles and essays dealing primarily with the incorporation of writing in classroom instruction and in the development of students' writing abilities. Over the 20-year period, 141 articles meeting these criteria appeared in the 14 selected journals. Hereafter I will refer to them collectively as the "corpus." The corpus represents a small percentage of the thousands of pages published during the two decades of the journals' issues, and range from brief, single-page descriptions of classroom activities or opinions about student writing to longer pieces that include substantive discussions of theory, research, or application in the field (many of these are listed and annotated in Anson, Schwiebert, and Williamson). Some, especially in earlier issues, appear

in "practical" sections following major, full-length scholarly articles. Others are given full billing, sometimes sandwiched between research articles with titles like "Selective Oxidation and Ammoxidation of Olefins by Heterogeneous Catalysis."

For each article that met the criteria for inclusion, I listed all references to scholars and teachers contributing to the field of composition studies, based largely on my own knowledge of those populating the field. If I was unsure about the scholarly orientation of someone referenced in the article, I conducted searches for their work (using Comp-Pile and, as needed, Google Scholar, Lexis Nexis, and Academic Search Premier) and/or for the person's academic affiliation or c.v. As explained below, I later conducted a content analysis of each article's dominant instructional ideology of writing to study trends in the intra-disciplinary treatment of writing.

Charting the General Results

Between 1967 and 1972, seven articles focusing on writing appeared in the journals (see Fig. 1).[1] In each of the next five-year periods, the number of articles more than doubled from the previous period, first to 19, then to 39, and finally to 75. The increase in attention to writing in the corpus closely parallels the development of composition studies as a field of scholarly and pedagogical inquiry as measured by the volume of its publications, the size of the program at its main national convention (the Conference on College Composition and Communication), the number of doctoral programs emerging at major universities, and other indices.
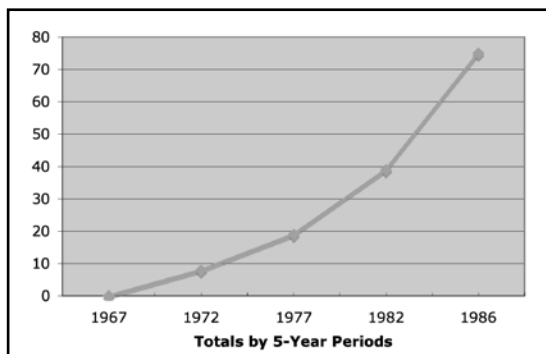
Fig. 1
ALL ARTICLES FOCUSING ON WRITING

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[1] Two journals began publication in 1970 and 1972, respectively, but based on the first few years of their issues it is highly unlikely that their absence from the corpus in the prior years would change the results in any significant way.

Two explanations suggest themselves for this parallel: either composition exerted a strong enough influence on other disciplines, partly through its work in WAC and the reach of its publications, to inspire readers, authors, and editors toward fuller treatment of the subject of writing in the pages of their discipline-based journals, or else certain social and educational factors (such as attention in the media to students' declining skills) rippled their way through all of higher education, boosting attention to writing. Figure 1, that is, tells us nothing about whether the rise in attention to writing is the result of composition's advocacy and the efforts and outreach of the WAC movement on behalf of compositionists. For signs of such influence, we need to examine the articles themselves, noting which authorities were cited to support various theories or methods.

As shown in Table 1, the several dozen compositionists referenced in the corpus represent a wide range of scholarly interests and present a cross-section of the field in terms of focus, methodology, and theory.

Barnes, D.	Freedman	Maimon	Rosen
Bean	Freisinger	Martin, N.	Scanlon
Braddock, et al.	Fulwiler	McNamara	Schwalm
Britton, et al.	Fulwiler/Young	Mellon	Seigel
Christenbury	George, D.	Mischel	Selfe, C.
Christensen	Goswami	Moffett	Shaughnessy
Coles	Graves	Myers	Sommers, N.
Cooper, C.	Gray, J.	Newell	Strong
Cooper/Odell	Griffin	Newkirk	Tate/Corbett
Cowan, G.	Gregg/Steinberg	Ney	Thaiss
Daiker	Gunning	Nodine	Tierney
Diederich	Guth	Odell	Van Nostrand
Elbow	Haynes	O'Hare	Weiss/Peich
Emig	Herrington	Ohmann	Winterowd
Flower/Hayes	Irmscher	Peterson, B.	Young, A.
Faigley/Miller	Lamb, C.	Petrosky	Zoellner

Table 1
Compositionists Cited In The Corpus

Some, such as John Bean, James Britton, Toby Fulwiler, Elaine Maimon, Chris Thaiss, and Art Young, are pioneers of the WAC movement and clearly exerted their influence on authors in the corpus. However, various strands of composition studies also found their way into the corpus through references to other experts, including cognitively-oriented and writing-process scholars such as Flower and Hayes, Charles Cooper, Rob Tierney, and Janet Emig; practitioner-theorists such as Peter Elbow and Mina Shaughnessy; and broadly-based researchers such as Odell.[2] Their presence in the corpus suggests that the articles authors consulted while formulating their views and WAC-oriented methods offer research on writing as well as specific pedagogical approaches. To the extent that teacher-authors in other fields were familiar with composition studies, their knowledge seems evenly spread out over the field during the period examined, with the principles of WAC exerting a somewhat stronger influence than other areas. This general result is further supported by rank-ordering the seven most often cited authorities across the corpus.

1	Janet Emig
2	James Britton, et al.
3	Peter Elbow
4	Linda Flower (alone or with John Hayes)
5	Toby Fulwiler
6	Elaine Maimon
7	Lee Odell

Table 2

Most Often Cited Compositionists, Rank Ordered

The frequency with which these scholars were cited in the journals during the 20-year period of the corpus is also of interest. Figure 2 shows the number of articles published in the corpus (by five-year intervals) that cite professionals in the field of composition who were conducting research on writing, administering writing programs, running WAC workshops, or publishing works in the major composition journals.

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[2] These characterizations are relevant to the published work of scholars during the period of the study, not necessarily to their current or career-spanning scholarly records and focus.
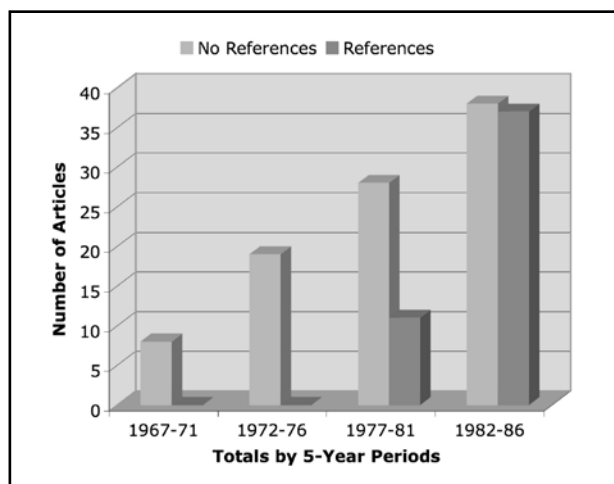
Fig. 2

NUMBER OF ARTICLES REFERENCING COMPOSITION SCHOLARS

References to such scholars increased dramatically between 1977 and 1987. Articles between 1977 and 1982 that referenced composition scholars were about half as frequent as those that included no such references, but the ratio evens out in the years between 1982 and 1986.

Mapping Instructional Orientations

To this point, it has been possible to document some degree of influence from the field of composition studies on the scholarly sharing of writing pedagogy within the fields represented by the corpus. But the data alone tells us little about how discipline-based authors of the corpus conceived of writing and urged their colleagues to pay attention to it in their instruction. To explore these questions, we need to turn to the articles' contents.

My preliminary reading of articles in the corpus revealed some noticeable differences in approach that are supported by foundational and well-regarded theories of instructional ideology in composition (e.g., Diamond; Gere, Schussler, and Abbott; Kroll; Mosenthall; King and Kitchener). These theories suggest that teachers act on sets of beliefs about what writing is and how it should be taught. When fully enacted in classroom instruction, instructional ideology translates into the sorts of things teachers do and ask students to do, the roles and behaviors they establish, and the methods they use to structure activities, assign, support, and grade work.

Initially, two broad orientations emerged from the corpus. In one orientation, the author focuses mainly on the improvement of students' writing *skills*. Typically, articles in this category begin by bemoaning the sorry state of students' writing abilities, often noting their decline over some period of time as reflected in the quality of students' papers in disciplinary courses. They then describe a method for helping students to improve their skills of composition without placing undue burdens on teachers—for example, a checklist for students to evaluate their papers with before turning their papers in. The articles assume that students need to learn the various conventions of genres in their field, such as how to write a good lab report, or how to write like a proper historian or philosopher. For the most part, writing provides an outcome to be evaluated, either on the basis of its inherent quality or on the basis of the facts, interpretation, and other knowledge the student has gained. Some articles in this vein toward the end of the 20-year period include references to the processes of writing, and a few acknowledge work in composition.

The following excerpt from this group of articles (from *Teaching of Psychology*) represents writing from the perspective of skills, proficiency, final texts, and standards for evaluation:

> The poor writing of present-day college students is a pervasive phenomenon, one that extends nationwide and to which many college and university instructors could indeed attest. Undergraduate courses in English composition usually lay the foundation for improvement and visible enhancement of student performance. But, all too often, inadequate writing crops up again when students write for other courses. We believe [in] the reinforcement of effective writing skills. (Camplese and Mayo, 122)

In the second orientation, the author sees writing as a way for students to learn and explore the subject matter of the course or discipline. Standards and criteria are secondary to problem-solving, the free expression of ideas, and the articulation of new knowledge. During the period covered by the corpus, much scholarship in composition studies paved the way for what would become formally known as the "writing-to-learn" branch of WAC. Herrington, for example, explicitly tied writing to learn in chemical engineering courses to Britton's "expressive" function of language; the teacher doesn't play the role of examiner, but the role of participant in a teacher-learner dialogue. The goal is not to improve students' writing per se, but to enrich their thinking and learning through the sorts of inquiry that writing affords. Better skills may be an outcome, but they are not the main reason for incorporating writing experiences into

coursework. From this perspective, writing activities are often informal and dialogic. The following excerpt from *History Teacher* is typical.

> We can use writing as a method for teaching and learning in history rather than simply as an evaluative device ... Writing is thinking. The effort employs such analytical skills as inference making, classifying, separating relevant from irrelevant data, and identifying part-whole relationships. It also involves skills of synthesis and evaluation ... When students engage in writing they are thinking. (Beyer 167-8)

Using a relatively informal mode of content analysis (Neuendorf; Krippendorff), I developed a set of global characteristics for categorizing each article into one or the other orientation. While this dichotomy admittedly oversimplifies the complexities of writing and the possibility that an author could argue from both orientations simultaneously—that is, that writing to learn and the development of skills are not mutually exclusive and reside along a continuum (see McLeod, "Writing"; see also McLeod and Maimon)—it also provided a way to judge the presence or absence of a major trend in the development of WAC: the emphasis on writing as a medium for learning, i.e., more thorough reading of course material, stronger analysis and synthesis, better problem solving, increased exploration and discovery, and more effective memory of information. That the two orientations (see Table 3) have long existed in WAC is also thoroughly acknowledged in the literature (Bamberg).

Writing for Skills Development	Writing for Learning
• Transactional	• Expressive
• Output-focused (assessment)	• Input-focused (learning)
• Writing to communicate	• Writing to discover
• Often formal and higher-stakes	• Often informal and lower-stakes
• Goals of improved ability	• Goals of improved learning
• Discipline-based genres	• Flexible genres
• Formally assessed	• Informally assessed

Table 3: Features Defining Two Orientations of Writing

Many of the articles in the corpus could be placed easily into one or the other of these orientations. In somewhat less distinct cases, I made a judgment based on a third

or fourth reading, considering the predominant focus of the piece. If the lines between the orientations were blurred, or if the article seemed unrelated to either focus, it was excluded from the tallies.

An example of an article with a blurred focus is Field, Wachner, and Catanese's "Alternative Ways to Teach and Learn Economics: Writing, Quantitative Reasoning, and Oral Communication." This essay describes attempts in DePauw University's economics department to take responsibility for students' oral and written communication abilities and quantitative reasoning skills. Yet in the discussion of writing, the authors appear to rely on DePauw's first-year English composition course for the necessary skills development. There, students learn how to brainstorm ideas, which "can be put into practice in the context of economic analysis" (214). Nothing is said either about how brainstorming actually bolsters students' learning of economics, nor how it "demonstrates a competence in writing" within the economics major (213). While the authors echo the WAC movement's championing of cross-curricular support for writing, the essay lacks a clear focus on either the development of writing skills or the use of writing to learn (though it leans in the direction of the latter).

Figure 3 shows the trends in publication of those articles with a clear skills or learning orientation (excluded articles are not represented). The results show that the learning orientation begins to increase after 1977, with a strong development occurring after 1982, when it outpaces the skills orientation, with fewer than half as many articles focusing on the development of skills than the use of writing to encourage deeper learning.
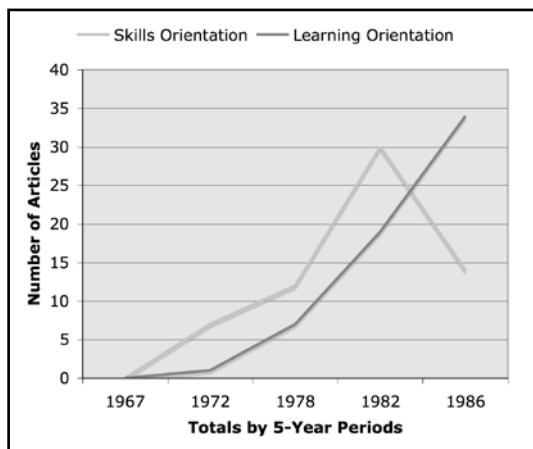
Fig. 3
DISCERNED ORIENTATION OF ARTICLES

To interpret the reversal of focus in the corpus, we can once again turn to data from the articles' referencing of composition scholars. Figure 4 compares the number of articles in the learning-oriented group that made no reference to teachers or scholars of composition or WAC and the number that made at least one such reference (many made several).
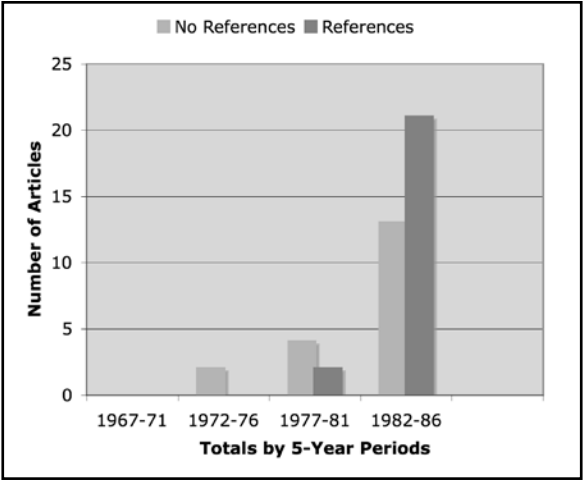
Fig. 4
REFERENCES TO COMPOSITION OR WAC SCHOLARS
IN LEARNING-ORIENTED ARTICLES

Articles in the corpus that were published between 1982 and 1986 experienced a strong surge of references to composition or WAC scholars. The number of articles with no references increased as a percentage of the greater number of articles published on writing, but they are outnumbered two to one by articles that cited composition or WAC scholars. Not only did the number of articles expressing a learning orientation increase starting around 1982 but the authors of those articles were more often referencing important theories, research, and pedagogical strategies developed in the field of composition and WAC.

Conclusion: Possible Causes, Desired Effects
By scouring teaching-oriented journals in various academic disciplines, we can learn much about the sorts of pedagogical and curricular issues that members of those disciplines find important enough to include in their professional literature. This study

assumed that interest in or concern about writing would be reflected in an important forum for the exchange of knowledge in these disciplines—their journals. My tallies show an increase in the number of articles published in 14 teaching journals over a 20-year period, increasing significantly during each half-decade of the study. Furthermore, analyses of the articles' references point to an almost certain influence of composition scholars and, eventually, WAC scholars and practitioners on both the theorizing and implementation of writing practices in these disciplines as reflected in their publications. An orientation toward writing as a medium for enhanced learning of subject matter gets a foothold in the 1980s and increases in popularity, while a skills-based orientation seems to decline in interest.

In addition to the influence of composition and WAC during this period, we might also speculate about broader shifts in educational philosophy and methodology that took place in parallel with the increase in attention to writing as a medium for learning. Although they have not taken hold even in contemporary higher education with nearly the force that their advocates hoped for, constructivist approaches to teaching and learning enjoyed considerable support starting in the early 1980s, and new work on active and problem-based learning, inquiry-guided instruction, and collaborative learning filled the pages of higher-education journals and were frequent topics at conferences of the American Association of Higher Education, The Professional and Organizational Development Network, the American Association of Colleges and Universities, and other cross-disciplinary organizations focusing on educational theory and methodology.

At the same time, the learning-based orientations toward writing that gradually emerged in the 1980s did not push out a focus on skills; rather, more sophisticated theories about students' enculturation into disciplinary discourse communities and their need to learn the expectations and conventions of disciplinary genres in situ established themselves in what is now generally known as an emphasis on "writing in the disciplines," while "writing to learn" continued to experience extensions and refinements in both scholarship and pedagogy.

A second installment of this essay will continue to trace the influence of WAC and composition studies starting in 1987, a time of increasing programmatic activity, a stronger interest in factors such as social context, student development, and diversity, and the influence of computer technology on writing and learning to write.

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Exploring Response Cultures
in the World of WAC

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AS LONGTIME WRITING ACROSS THE CURRICULUM advocates, we have often benefitted from working with colleagues across and within disciplinary settings. The rewards have usually accrued for us in the form of shared insights about rhetorical values for specific genres of writing and unique approaches to teaching students to improve as writers. Like most WAC consultants, we have reciprocated by assisting faculty with assignment design and offering tips on responding to student work. This latter area has been a particular concern for us because of the ambivalence many of our colleagues feel when giving feedback to students and when facilitating peer response activities. In our respective administrative roles as WAC Director and Associate Dean of the School of Liberal Arts, we recognize the potential for quality faculty and peer feedback to promote student learning, but we also understand the frustration that instructors experience regarding their efforts to respond to student work. As a means of addressing these widely-shared concerns, we recently set out to expand our understanding of the dynamics of response, both by learning more from the existing literature on the topic and through an enhanced focus on response as it occurred within our own institutional settings. After carrying out a year-long research project on student perceptions of faculty and peer feedback to student work in the areas of writing and design, we have begun to develop a focus on "response cultures" across the curriculum that has produced not only a stronger collaborative network for WAC initiatives, but also several interesting initial reflections about feedback. We hope our study and these resulting reflections will encourage other WAC consultants and faculty to explore—and learn from—the response cultures within their own institutions.

In her essay, "Opening Dialogue: Students Respond to Teacher Comments in a Psychology Classroom," Lynne Ticke explains why student perceptions on feedback should be the concern of faculty integrating writing in their courses: "thinking about

and reflecting on their writing in response to teacher commentary encourages students to slow down their cognitive process, making their thinking an object of contemplation. When students are asked to reflect on their writing processes or encouraged to be more aware of them, their understanding improves." The relationship between response and learning is necessarily complex, however, because of all the variables surrounding the people, settings, and assignments that help to make up a response culture. In "The Complexities of Responding to Student Writing," Richard Haswell indirectly reinforces this point by reminding faculty and others who read and respond to student writing that they would do well on behalf of their students if they were to resist oversimplifying their approaches. Citing a number of studies on response to writing that were executed within a variety of disciplinary contexts, Haswell asserts that "the even gaze of research has observed pretty much the same curiosity in every field, that the ecology of response—its full human, social, and institutional context—is more complex than the customary practice of response seems to warrant." As Haswell's metaphor of "ecology" so aptly suggests, feedback practices and their effectiveness are shaped by a wide array of environmental factors and often change to adapt to specific ecological niches.[i] With this observation in mind, we were determined to explore the local ecosystems of response at our campus and to add our findings to the teeming literature of response and feedback.

The Research Project

Indirectly, our research on response began in 2004, when Philadelphia University (where we worked together at the time) was accepted for participation in the three-year Integrative Learning Project (ILP) grant sponsored jointly by the Association of American Colleges and Universities and the Carnegie Foundation for the Advancement of Teaching.[ii] As representatives from one of just 10 U.S. institutions chosen for the ILP grant, our Philadelphia University team of faculty and administrators initiated a project aimed at strengthening the student learning connections between the university's general education core curriculum and selected majors. After the three-year grant period concluded in 2007, the two of us agreed to continue working to strengthen the student learning connections between the university's general education core curriculum and selected majors. We did so, in part, because Philadelphia University's mission is focused on professional education, and one of the university's strengths is its design majors, with programs in fields such as architecture, fashion design, and industrial design. It therefore seemed appropriate to collaborate with design faculty and students to learn more about response practices in design courses and general educa-

tion writing courses. We wondered whether we would find anything that could be transferable from the university's professional majors to the writing-intensive learning environments. Put another way, as faculty could we model integrative learning ourselves by examining the dynamics of response together and then attempting to replicate, transform, or blend the best features and practices we discovered?

One of our overarching questions concerned the emotional dynamics of the design critique experience, in which students and faculty respond in a live studio setting to design work presented by the student designer. As outside observers, we had occasionally experienced the dynamic pedagogies of our university's design programs firsthand, as guest "jurors" for final critiques of student work. Attending these critiques (or "crits") provided an opportunity to observe how our colleagues and students in the design fields offer feedback to students presenting their projects. Regardless of which design discipline was involved, the critique procedure was generally the same: students present a collection or sample of their designs for review by faculty members and sometimes outside professionals who are practicing in that specific design field. The presenting students' classmates and friends stand or sit behind the faculty and guests. One by one, students explain their projects and address questions, challenges, and other types of feedback offered by the crit audience. Another element related to feedback in the design disciplines is the preliminary critique (sometimes called a desk crit), which occurs before the final critique. In a preliminary or desk crit, the faculty member, sometimes alone but frequently accompanied by other students, visits each designer's work station in the studio and facilitates an informal discussion about the student's designs-in-progress.[iii]

We were frequently impressed by the level of faculty and student engagement during preliminary and final critiques and came to understand that the sessions function for design faculty as a "signature pedagogy." This term, coined by Lee Shulman, past-president of the Carnegie Foundation, applies to "types of teaching that organize the fundamental ways in which future practitioners are educated for their new professions." For Shulman, the test for determining such a pedagogy lies in whether novices "are instructed in critical aspects of the three fundamental dimensions of professional work—to *think*, to *perform*, and to *act with integrity*." According to our design colleagues and our reading about design pedagogy, the studio space and its attendant social and intellectual milieu seem to pass this test, as the crit simulates or approximates how designs are developed and presented in professional times and spaces. In other words, the crit is a signature pedagogy, in part because it presents opportunities for modeling actual professional practices.

The professional design studio approach is markedly different from the feedback practices faculty often employ in writing-specific and writing-intensive courses in general education.[iv] For example, the central space for formative assessment in a writing course might take place in peer review sessions or in the oral or written ungraded assessment of a first draft by the instructor. The final evaluative response in such courses might be offered solely through writing, and the final versions of student writing may end up being reviewed just by the instructors. Typical approaches to responding to writing might be along the lines of commenting in the margins and/or providing end commentary to accompany letter grades and scores. Boiled down to their primary characteristics, we could describe the feedback practices in our institution's design courses as oral and public and the feedback in the writing-specific and writing-enriched general education courses as written and private.

Our inquiry into these response cultures entailed conducting a site-based study at our own institution that took place over the span of one academic year and included the collection of both quantitative and qualitative data. Upon receiving expedited human subjects research approval from the chair of the university's Institutional Review Board, we created an online survey in consultation with selected design faculty.[v] Helpful colleagues in our university's Office of Information Technology used a site-licensed instrument to host our survey, which was then administered to all second- to fourth-year students in 10 different design fields at our institution. Responses were anonymous. Out of the approximately 700 prospective respondents in this group of design majors, 373 completed the questionnaire. The survey questions asked students to reflect on the feedback practices both in their design courses and their general education writing courses. For the design courses, we asked about preliminary critiques and final critiques; for the writing classes, we inquired about peer reviews, one-on-one consultations with a writing instructor, and receiving graded papers with written comments. For each of these five different feedback settings, the student respondents answered questions about their perceptions of their comfort level, the quality of their learning experience, and whether the setting created any emotional effects that interfered with their learning.

Once we had collected the results of our online survey, we arranged group interviews with student volunteers from three specific majors: fashion design, architecture, and industrial design. These group interviews, lasting about 45–50 minutes each and involving two to five students, were organized around the questions in the online survey, with the aim of getting a clearer sense of the student thinking behind their written responses. The group interviews were videotaped, as were some additional interviews

with faculty members from the same design fields and with a writing faculty member who teaches a design-focused writing class in our general education core curriculum. Prior to all sessions with students and faculty, we obtained signed consent forms.

Student Perceptions of Response in Design and Writing Courses
Our surveys and interviews revealed several key findings (see appendix for detailed results). First, we discovered that the students reported that the emotional dynamics of feedback, even in high-stakes, public settings like final critiques, did not significantly detract from their learning. (Only 28.1 percent indicated that they agreed or strongly agreed that the emotions that occur during a final critique interfere with their learning, which was the highest response for the five feedback settings covered in our study.) Next, we found that students scored one of the formative feedback settings, the desk or working critique, both as the most emotionally "comfortable" and as the most effective learning experience of the five settings in the study. A final key finding was the strong disparity in student perceptions of the value of a different type of formative assessment: peer review. Students valued peer review in their design classes very highly, even higher than feedback from their design instructors (92.5 percent of student respondents classified peer feedback in design as "helpful" or "very helpful," versus a 90 percent response for feedback from their design instructors), while their responses for peer feedback in writing classes were much less positive (only 39.7 percent found it "helpful" or "very helpful").

This last statistic, while not necessarily surprising, certainly alarmed us, given that we and many of our colleagues teaching general education courses that involve writing had struggled to implement effective peer review activities. In particular, we were struck by the results from the second question on the survey, which asked students to rate the effectiveness of each feedback setting in terms of their learning experience. Students perceived the preliminary critique setting to be the most effective learning experience, with 92.8 percent of students rating it as "Helpful" or "Very Helpful." They gave a lower rating to final critiques, with 83.1 percent calling them "Helpful" or "Very Helpful." Peer reviews in writing classes received the lowest ratings, with only 43.7 percent rating them as helpful. In fact, students rated the educational effectiveness of peer reviews in general education writing classes significantly lower than any other feedback type in the study. Without prompting, some students addressed the learning gap between critiques in design and peer reviews in writing classes:

> Critiques are a very important part of design (both from peers and instructors). I feel like I learn a lot in design from people whose opinion I value. But in writ-

ing classes I tend to only take the opinion of the professor seriously because I just don't get to know the students very well and some of them just seem like idiots whose opinion I couldn't care less about, that is if they even offer up an opinion at all (student survey response).

In this sample response, the student is identifying several issues that seem to undermine the perceived helpfulness of peer reviews in writing courses. In reading and listening to such student comments, we began to see the following topics emerging that might help explain some of the perceptions many students have regarding peer review.

Student Engagement: Many student designers see themselves as designers and make a clear commitment to their pursuit of that profession. Though faculty in design and general education settings strongly encourage students to see writing as an integral part of design, the fact remains that many students often do not put much time and effort into their writing. One student interviewed explained, "When we are gearing everything toward our design projects, sometimes our writing in other classes can slip behind, in importance, so there's definitely been many times while going into a peer review and I'm, like, 'I can't believe I wrote this.'" Such comments came up frequently, and even beyond the context of our study, students often admit to relatively low levels of engagement as writers and as peer responders to writing. In such instances, the expectations of the usefulness of the peer review exercise are low. Everyone in our discussions also acknowledged what could be called the degrees of separation between a student's investment in her own work and the relative level of investment in the response offered by her faculty and peers. One interviewee, for example, offered:

> The other student who reads your work, they give you like a little bit of criticism to it, or tell you how you should improve it, but, really, I think they're more worried about their own paper than yours, so, they're looking more towards, you know, 'I'm really not going to help you out,' sort of, so ... you kind of like, take it with a grain of salt.

Students' assessments about their own writing abilities seemed to have some influence on how seriously they would take response, including response from peers. For example, one student interviewed said, "I guess I don't really get that stressed about them, or feel uncomfortable. I'm very private with my work. When I write, it's hard for me to let it go and have somebody criticize it, but peer reviews are never really that hard." In many cases, however, the degree of seriousness seemed to depend more on

poor experiences with peer responders, as illustrated in this example from an intervie-wee who strongly voiced her perspective on peer feedback:

> I think it's unhelpful, to the very most extreme. I cannot stand peer reviews for writing. It just bothers me so much ... I feel that the students do not know your writing style ... they're kind of just skimming through your paper and not really reading what you're trying to portray in your writing and so they don't really care what's going on and they're giving you feedback that's not really helping you towards the final stage of it.

It is worth noting that many of these students had experienced carefully structured peer writing activities by conscientious faculty familiar with literature on integrating peer review activities into their writing pedagogy. The resistance to peer review in writing, it seems, may have little to do with faculty preparedness or student misunderstanding of the intended purposes of the peer review. In some instances, we even learned that students become annoyed by student responders who are "overly" engaged because the response embarrasses the writer who did not put that much work into the writing to warrant such careful reading and commentary. We also had instances where students complained that their peers cared too much or were excessive in their attention to detail.

Experience/expertise of peers: We learned from students that they valued peer response and other forms of feedback in design settings, in part, because their faculty and peers were experienced both with design and the discourse of design critiques. In writing courses, on the other hand, they could not identify or claim a similar level of experience, either in composing their own work or in responding to others' writing. One survey respondent opined, "Peer editing is usually unhelpful because I either already know what needs to be changed or the person editing lacks the ability to write well and therefore cannot edit my paper well." Other students commented on concerns about the competency of their peers. One person interviewed explained, "Where I have friends [in design] who are competent enough to analyze and evaluate my work, peers in my writing classes tend to be apathetic and ancillary to my needs." Another student stated that peer reviews provide no help "unless the reviewer is a genius."

Familiarity, comfort, and trust in others: If those offering feedback were not interested in the topic and/or demonstrating an ethic of care for the student presenting her work, it seemed difficult for that student to take the feedback seriously. Investment in all its permutations can have much to do with students' comfort levels with one another. Our

work with those in the design crits confirmed that investment and comfort can be mutually exclusive or integrally connected, especially depending on whether students feel insulted or complimented by the feedback and whether they perceive they are receiving an honest or sugar-coated response. To most students we interviewed, emotions matter and respect is required. Similarly, the degrees of comfort in a current feedback setting often have much to do with historical precedents established by and among the people giving and receiving response. In addition, students don't have the same level of familiarity and comfort with the peers in their general education writing classes that they do with the peers in their design studios. The design response culture simply has much more time to develop because of the long hours students spend working together on projects in design studios.

Depth and disciplinary arena of response: Peer review troubled many students because they had not received feedback that they perceived to be substantive. For example, in one of the interviews, a student asserted that peer review in writing is helpful for errors in mechanics and usage and other grammatical features, but not for "the substance of the paper." She continued: "I feel like the other students are just as confused and worried about their paper as yours, and I feel, when I grade someone's paper ... I don't know all the facts about what they're doing ... I don't feel confident in grading it myself, so I usually don't say as much as I'd like to say." The terminology students used, such as "grading" or "editing," suggests the multiple ways they interpreted the role of peer responder. The writing faculty we interviewed, and others with whom we spoke informally, all insist that they teach a vocabulary of response that intentionally resists such language, preferring labels such as "peer reviewer" or "reader" or "responder." Regardless of the terms employed, though, we learned that students are very often concerned that the level of feedback on written work is superficial or low. They want more critical (but humane) feedback; they don't want their time wasted. Feedback should be sensitive to context as well as to content, and according to several students interviewed, comprehensive response is the ideal. Some students, though, just prefer feedback from their professors when it comes to writing. For instance, one student claimed that design is "a completely different thing than writing," and that though peers are "very helpful" in the design process, "my professor is more helpful in the writing process."

Comparisons and strength in community: Not all of the students were uniformly negative about or disinterested in peer review in writing courses. One student noted:

> I think that peer review is interesting, though, because you get to see ... how other people write, and then I have something that I'm comparing myself to

rather than just like a shot-in-the-dark, 'Am I getting better?' I can be, like, 'Oh, well look at how this person opened the paper up, rather than 'I have no idea how to open this paper up,' so it's kind of like helps set a standard and then also just opening up to what else is there.

Another student remarked that though the response from peers is "not helpful," he appreciated "just being able to see other people's work." A third student commented, "I don't like feeling isolated when I do work, so other people's feedback goes miles and miles in telling me that what I'm doing is right at least for one person."

Time—and time together: Despite the occasionally positive commentary from students, however, we believe that the themes emerging from the categories above help explain why peer reviews in writing received the lowest emotional interference rating, 6.2 percent. It was profound to see that when students were asked to consider the helpfulness of feedback from peers and instructors in design courses and writing courses, the results for peer review in writing were again relatively low, as only 39.7 percent of students found such activities helpful or very helpful as opposed to 92.5 percent of students finding peer review in design courses helpful or very helpful. The question of time for students to think and to respond together seems an important one, as well. Addressing this theme directly, one student hints at the possible benefits of peer review in writing even while presenting a significant caveat: "If you have enough time … and if you're able to ask, you know, a specific question like, 'Help me on this problem that I'm having with my paper,' and the person's able to help you because the teacher gives you enough time, then, yes, I think it can be helpful. But in general, you don't care that much, and you don't have enough time."

Our particular attention to peer review raised a variety of questions about practices common among faculty (including us) who teach writing across the curriculum. We learned that, in addition to the sub-categories listed above and exemplified through student comments, a host of other variables exist within a single class activity such as peer review. We had known about the importance of setting the stage for response activities, but through this research project, we became acutely aware of the potential value of continuing to consider student perceptions, to promote conversations about the amount of time it can take to not only write but also respond. So much revolves around how seriously the faculty, peers, and writers take the activity, and how well they can offer rhetorically sensitive, but constructive criticism that is intentional as opposed to scattered or irrelevant. Further, though we certainly still see the value in having students read resources on effective peer reviewing,[vi] we have become more skepti-

cal about the prospects that such readings will have much positive effect for writer or reviewer if the response culture does not engage students and if faculty do not provide a setting that affords adequate time on task. And while we see great potential in the use of digital learning spaces to promote effective peer review, our conversations with students suggest that the same general questions of engagement remain.

Response Cultures Inquiry as Strategy for WAC Consulting

In general, the student responses to our study gave us some insights into the factors that might account for the perceived greater effectiveness of the response cultures in their design classes, which in turn suggest the potential value of developing strategies to apply the power of these practices to WAC, WID, and other contexts across the curriculum in which response to writing plays a significant role. As we learn more from our faculty as well as student colleagues, we will continue to refine our WAC consulting with faculty, especially since this study has caused us to seriously reconsider prior assumptions about students' perceptions of peer review involving writing. In addition to what we learned about feedback practices and response cultures at our university, there were other benefits to this project that we hadn't fully expected. Since we began our comparative project with a genuine curiosity about how feedback worked in different academic settings, we were able to have an open and mutually respectful dialogue with students and our faculty colleagues about a topic that is central to all of our professional lives and to the mission of WAC itself: student learning. Not only did the process of collecting our data strengthen WAC relationships across campus, but when the study was completed, we had a vehicle for extending the dialogue about feedback even further. As noted above, we were particularly influenced by the student perceptions about peer review in writing courses, and so we will continue to address that topic with our colleagues in general education courses, but also in other WAC and WID contexts. But really, we are interested in response in all its permutations because, as Nancy Sommers aptly notes in "Across the Drafts," faculty "feel a weighty responsibility when we respond to our students' words, knowing that we, too, have received comments that have given us hope—and sometimes made us despair—in our abilities as writers" (248). Such a sentiment resonates with us and accounts to some degree for our motivation to continue collaborating with our faculty and student colleagues.

Because we had filmed our interviews with students and faculty members, we were able to assemble some of the key moments into a 20-minute clip that we showed as part of a faculty research colloquium series. The turnout for this event was quite large, since the presentation focused on design critiques and so many of our faculty

work in design disciplines; as a result, we had a large audience and the video stimulated a lively discussion of feedback practices. This combination of factors created one of the most inclusive discussions of teaching and learning that our university had seen in quite some time. Though much of the data from our research project was interesting to us in the context of our own institution, the cross-disciplinary faculty dialogue about response that resulted when we shared our findings seemed even more valuable. The faculty response to this event, and the similar experience we had at another local university when we were invited to present our findings at a faculty workshop there, convinced us that the interdisciplinary examination of response cultures can serve as a fruitful strategy for strengthening WAC work. Almost any college or university hosts a diverse ecosystem of response cultures, so the possibilities for learning about and from different response processes seem virtually endless. Examples could include the social dynamics of a Fine Arts studio where students are critiquing a senior's pottery collection, or the potential advantages and disadvantages of a final jury in which Music faculty are providing criticism from behind a curtain to members of a student jazz combo on stage.

Once the WAC director or other facilitator has identified or recruited faculty with an interest in exploring these settings, they could begin collaborating on a procedure for comparing, contrasting, and synthesizing their findings about the feedback practices in their respective disciplines. Faculty could also develop an inquiry process to help them compare, for example, the response cultures of a creative writing workshop, a mock court class, and a physics lab. As in our initial study, the resulting inquiry could involve the collection of data from the relevant students and faculty through surveys, observations, and/or focus group interviews. Possible avenues of research could include the emotional effects of the given response cultures; the timing, format, sources and effectiveness of formative feedback versus summative assessment; and the perceived pedagogical effectiveness of various response practices. Another fruitful component of a response cultures inquiry might be a focus on the concept of signature pedagogies as a framework for understanding the role of a given set of feedback practices.

Our experiences have convinced us that the study of local practices, and sharing the results of those studies, is highly effective for engaging faculty from across the institution in meaningful examinations of the roles of feedback in student learning. During the period of our study, we bolstered our WAC library with helpful publications such as Richard Straub's *The Practice of Response: Strategies for Commenting on Student Writing* and Edward White's *Assigning, Responding, Evaluating: A Writing Teacher's Guide*. Selected faculty learned of the interesting longitudinal work on

response led by Nancy Sommers at Harvard and viewed clips from *Across the Drafts: Students and Teachers Talk about Feedback*. We also compiled articles on response from a wide variety of scholars interested in a vast range of issues concerning feedback. As noted earlier, reading and recommending such research from WAC and writing studies assisted us in realizing the complexities of responding to writing. Despite the fact that an immense and extremely helpful body of literature on feedback exists, we still see the need for additional means that will welcome faculty into discussions about the topic. The response cultures inquiry, in other words, qualifies for us as a low-threshold approach in the service of that goal. It is, at base level, simply a procedure co-designed by faculty to generate ideas and questions regarding feedback settings. For example, we anticipate continuing to follow up with faculty in design, to learn more about their approaches to giving—and to facilitating—response in their respective settings. In that process, we will refine our questions, but the following list provides us with a starting point:

- What are some of your primary goals for giving feedback?
- In what other settings do you give feedback (e.g., digital settings, office hours, the phone)?
- To what degree, if any, does your approach to giving feedback depend on the student?
- What are the roles of the student (i.e., peer feedback) in the formative and summative settings for response?
- How did you come to give feedback as you do (e.g., through formal training, assimilation in your response culture, from another discipline, etc.)?
- Do you discuss how to give feedback with your students and/or colleagues? If so, how?
- How, if at all, does awareness of your own emotions affect the feedback you give and the ways in which you give it?

Based on experiences through the Integrative Learning Project and our later project with design students and faculty, we firmly believe that WAC and writing studies scholarship could be enriched if WAC consultants and their colleagues directed even more attention to understanding the dynamics and complexity of feedback. Scholars with an interest in exploring response cultures—including and perhaps even particularly those settings that do not involve writing—could expand WAC's field of vision. New ideas for promoting healthy, productive, intellectually stimulating response cultures could come from unanticipated corners of campus and the spaces of digital

learning environments.[vii] Throughout WAC's history, faculty from across the disciplines have benefitted from the contributions of WAC consultants sharing insights about writing and genre studies.[viii] What reciprocal gains might be awaiting those consultants willing to study response through an even broader lens, using a collaborative approach and the idea of a response culture inquiry? In our case, thinking about response cultures has helped us learn more about response, a topic we have all too often witnessed as a source of frustration for faculty and students. Response matters, and continuing to develop our initial inquiry has opened our minds to the array of variables in play when people give, receive, and study feedback across the curriculum.

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Survey question 1: "During a [feedback setting], I usually feel...." (responses in percentages, 373 total replies)
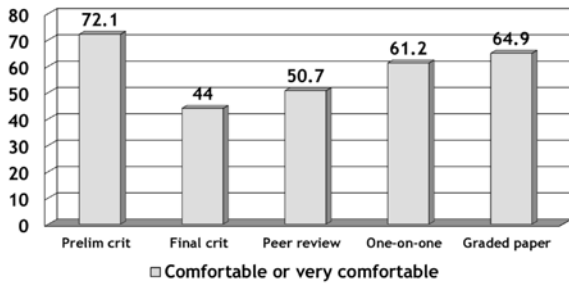
Survey question 2: "As a learning experience, a [feedback setting] is usually ..." (responses in percentages, 373 total replies)
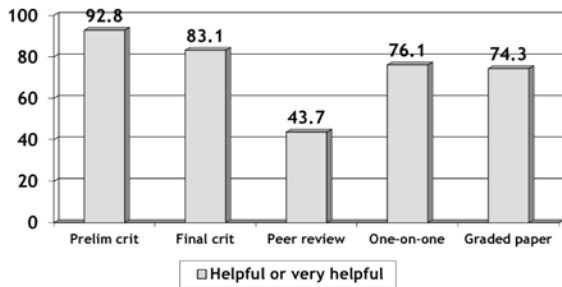
Survey question 3: "The emotional effects of a [feedback setting] sometimes interfere with my learning." (responses in percentages, 373 total replies)
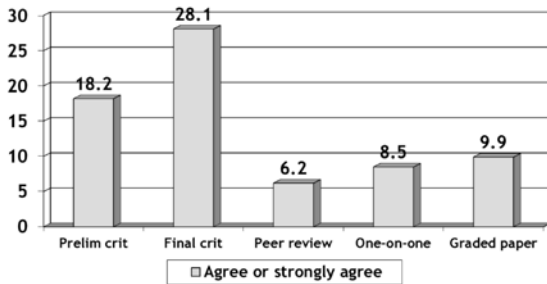
[i] Just drawing from titles of publications alone can result in a daunting but exciting list of sub-topics that can be applied to any consideration of "feedback" or "response." Consider the following list of topics taken from the extensive References section of Haswell's essay: ways of knowing, writing across the curriculum, rubrics and other evaluative criteria, the politics of response, self and peer review, TESOL, the ecology of response, studies of error and its gravity, automated text checkers and scorers, amounts and kinds of marking, protocol analysis, writing centers and tutor feedback, unconventional readings of student writing, judgmental and nonjudgmental responses, encountering and interpreting student texts, writing and relative familiarity with audience, hedging strategies, reliability and validity of ratings on student writing, how students read, responding to feedback, listening to students, negotiating meanings, writing and human dignity, writing in the disciplines, technical communication, writing to learn, response groups, educating teaching assistants to respond, cross-curricular writing instruction, hidden agendas in commenting, response as an academic conversation, the "WPA Outcomes Statement for First-Year Composition," and even repetitive strain.

[ii] For information on the Opportunities to Connect grant, visit gallery.carnegiefoundation. org/ilp.

[iii] For more discussion of critiques in design, consult Deanna Dannels et al.'s "Beyond Content, Deeper than Delivery …" and Dannels's "Performing Tribal Rituals."

[iv] We discussed at length how to refer to the writing and to the design settings addressed in this article. Referencing them as just two disciplines is problematic because the writing course is a general education selection, not a discipline in the way design could be construed as one, or even as some scholars would categorize, say, composition courses, or writing-in-the-disciplines offerings. Design is often construed as a discipline with sub-fields, but since we worked with architecture, fashion design, and industrial design, specifically, for the purposes of our research project and this article, we decided to group all three design professions (but not others) and refer to them as a singular discipline. This decision was made with the understanding that our divisions and nomenclature are to some degree arbitrary and that alternative approaches could have worked as well or better. For future work on response cultures, we would turn more attention to the challenges and opportunities associated with such conflations of terminology.

[v] Several faculty colleagues particularly helpful throughout this project were promised that we would mention them by name: Clara Henry, Tod Corlett, Valerie Hanson, and Susan Frostèn.

[vi] Faculty might wish to provide students with access to resources such as Richard Straub's "Responding—Really Responding—to Other Students' Writing," but if our experience with students is any indication, it could be quite illuminating to ask students to articulate their preferences for giving and receiving response in peer response activities within writing courses.

[vii] We see a rich depth and breadth of WAC collaborations and thus an increase in resources for those seeking thoughtful approaches to response. One notable example is the Research Exchange on the WAC Clearinghouse Web site wac.colostate.edu/research. Within the developing dialogue across institutions, organizations, communities, and countries, the study of response will continue to grow in size and complexity. We find this an extremely encouraging prospect for WAC advocates and students.

[viii] The *Perspectives in Writing* series on the WAC Clearinghouse wac.colostate.edu includes detailed treatment of activity studies and genre studies as applied to a range of scenes for writing and pedagogy.

By the Numbers

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The mathematics learned in college will include concepts which cannot be expressed using just equations and formulas. Putting *mathemas* on paper will require writing sentences and paragraphs in addition to the equations and formulas. —Kevin Lee, author of *A Guide to Writing Mathematics*

Introduction

At Wittenberg University, as at many schools, students are required to take several writing-intensive courses. Such courses are taught in all the disciplines and, according to the Faculty Manual, include "writing as an integral part of teaching and learning, with class time devoted to the discussion of the writing process and assignments designed to reinforce and develop writing skills." Ideally, students in these courses should enhance their writing ability as they enhance their knowledge of the course content; the question, though, is how to handle these overlapping goals. In this article we describe a writing project that requires students to create textbook chapters for their peers—an assignment in which students must demonstrate their knowledge of the course content by sharing it in writing with their classmates. This textbook-writing assignment, or a modified version of it, might be applicable to other writing intensive courses across the curriculum.

One of the courses designated as writing intensive at Wittenberg is Math 210: Fundamentals of Analysis, a sophomore-level mathematics course that concentrates on the "study of functions, set theory, sequences, the real number line, logic and methods of mathematical proofs." To integrate writing into such a course, a teacher can rely upon a good number of published suggestions. Students might be asked to write about a mathematician (Crisman) or to write letters to friends or relatives explaining what they've learned in the class (Goodman). Benadette Russek catalogs several different assignments that her department uses, assignments she places in "the category of writing

about mathematics learning" (36). There are also excellent collections of assignments such as Annalisa Crannell et al.'s *Writing Projects for Mathematics Courses: Crushed Clowns, Cars, and Coffee to Go* that offer students a chance to use their mathematical knowledge "by presenting them with a reason for responding with a clear written solution" (2). For example, they might need to respond to a letter from a greenhouse worker and help him "find an equation for the curve of a leaf" (13).

In 2006, when teaching Math 210 for the first time, Adam Parker allowed the students to choose to write about either a mathematician or a mathematical theory not covered in the class text. These writing projects were 10–20 pages long, and students were required to draft and revise based on comments from Parker and their classmates. On the one hand, Adam found these projects valuable. The writing was appropriate for sophomores who had taken introductory English writing classes as freshmen, and he usually saw an improvement from first drafts to final versions. However, there were also serious problems. Topics proposed by the students were often too broad and unwieldy in presented forms, and the topics had to be pared to such an extent that the students lost interest. Also, when students chose a "famous" problem, they immediately found that these problems were usually not just hard to solve, but also to explain. Adam attempted (with varying success) to overcome these issues by scheduling multiple early meetings to make sure students were on an appropriate track.

Yet, he was unable to overcome the students' perception that these projects were not well integrated into the course. The content of the course consisted primarily of mathematics—writing, editing, and revising proofs—but then the writing project consisted of no proofs and little mathematics. As a student mentioned in the final evaluation, "[T]he 'writing intensive' qualification seemed tacked on and dumb—this is supposed to be a math class right?"

Mike Mattison has also had experience with such assignments—in his role as a writing center director—and he has heard similar complaints from students. They claim the assignments are busywork and do not really relate to the class material. Their eyes roll when they talk about the writing; the students have not always made the connection between the assignment and the course work, or they simply are not interested in what they are writing about. The paper is something they had to do in order to receive "writing credit" for a course. It's a game and everyone is playing along. Even the literature cited above mentions similar difficulties with such work. For Goodman's letter-writing exercise in a calculus class, "[m]any students were ambivalent" about the assignment, finding it "merely another assignment to complete" (4).

We feel ambivalent, too. At the core of the ambivalence is the knowledge that these projects do not, in general, balance writing mathematics and prose. To return to our epigraph from Lee, the emphasis in many of these assignments is on the paragraphs and sentences, but those are composed separately from the equations and formulas. The assignments are asking students to write *about* mathematics; they are not asking them to *write math*. As much as the assignments appear to give students a way to apply mathematics to the real world, they still do not necessarily ask them to enhance their mathematical skills. The students are not engaging with the symbolic language that mathematicians use; they are not writing math.

Writing Math

Mathematics professors face challenges when constructing discipline-specific writing projects that are unified with the flow of a course. Perhaps the most obvious is that writing mathematics doesn't just involve using English words to write in the subject (as perhaps might be done in the humanities or social sciences.) Rather, mathematics involves learning an entirely new symbolic language that has evolved over hundreds of years to be concise, precise, and extremely dense. Teaching this language is essential to any writing course in mathematics. As noted by Flesher, "[T]he concept of writing to learn in mathematics should be learning the new language of the new discipline" (37).

From the start of mathematics until the early 1400s, mathematicians wrote out all of their work in sentence form. This was an extremely cumbersome process that inhibited advances in the field (Kline). Mathematicians realized the limitations of the rhetorical nature of this communication and started (initially in an "incidental" or "accidental" way) to symbolize the subject.

A systematic symbolization started with Vieta (b. 1540, d 1603), Descartes (b 1596, d. 1650), and Leibniz (b. 1646, d. 1716). By the end of the 17th century, mathematicians had embraced the power of notation, an embrace that led to the expansion of algebra, number theory, calculus, geometry, etc. As Flesher notes, "All formulas have verbal meanings that are analogous to the translation from one language to another and work as a glossary" (38), and the savings in clarity and space are often dramatic.

Burger and Starbird, in *The Heart of Mathematics—An Invitation to Effective Thinking*, illustrate the power of mathematical notation. This text is designed for non-mathematics majors and touts itself (accurately) as a guide to "some of the greatest and most interesting ideas in mathematics" (ix). One such idea is Cantor's celebrated Power Set Theorem. To describe the theorem and its proof takes the authors seven pages (175–181). At the end they write:

Just for fun, we will now write down the exact same proof using the extremely abbreviated, cryptic notation that makes mathematics succinct but difficult to read. To unravel and understand this one-line proof, a reader would have to produce the preceding explanation. We write it only for your amusement, so we will not bother to clearly define the terms or explain the notation.

Consider $f : S \to P(S)$. Then $\{x \in S : x \notin f(S)\} \notin f(S)$. Q.E.D.

This one line encompasses several thousand words of deep and important reasoning, leading the authors to warn that in mathematics, "Length is not a good measure of depth" (183).

An important goal for a mathematics professor is to have students understand what lines such as the one above mean, as well as how to construct meaningful proofs from this "extremely abbreviated, cryptic notation." A professor should require students to use this language, develop it in every single mathematics course, espouse the power of this language, and utilize many writing techniques (editing/revision/drafts) in order to make sure that students can express themselves using it.

So, how can we create an assignment that is integrated into the course in a meaningful way and that helps students *write math* instead of only *writing about math*? One possible avenue is to have students write in a genre that requires both: a textbook. Textbook authors need to write the proofs and formulas required of mathematicians, but they also need to write about the process, explaining the concepts to their audience.

Assignment

For the spring 2009 semester, Adam taught Math 210 for the second time. The course is required of all math majors and minors, and each section has between 15–20 students, half of whom are majors and half minors. This is a "bridge" course that is designed to prepare students for the rigors and abstraction of upper-level courses.

The assignment began after the sixth week of class. At that point, the class had covered roughly six sections of the text and had taken a first exam. After the exam, Adam gave the students a chance to evaluate aspects of the course, specifically asking for feedback on the textbook. Based on those responses, the students and Adam discussed what made a good or a bad textbook; they talked about textbook pedagogy (this conversation appealed to the students wanting to be math teachers). As a mathematics professor, Adam could predict the student comments. The students desired extremely clear proofs with absolutely no jumps in logic, and they certainly didn't want any proofs that were "left to the reader." Students wanted many examples and exercises of varying

difficulties, with solutions to the exercises presented. They wanted pictures, a review section, and prose that gave the ideas of the theorems in "everyman terms."

The class agreed that these qualities should be present in any good textbook, and Adam used this discussion to motivate the assignment: students would write a textbook. Or, more precisely, each student, working either individually or in a group of up to four, would rewrite a section of the course text. (See Appendix A for the assignment sheet.) Beyond that general guideline, there were few limitations. Adam intentionally left the assignment vague as he wanted the students to really think about what they would want out of a textbook. The requirements:

- Smaller sections are reserved for those working individually, larger ones for larger groups.

- Every section must include at least three clear and complete proofs, with more if the students feel it makes a better textbook.

- Most mathematics textbooks have questions at the end of each section to give students practice in applying concepts from the chapter. Each group must create five such problems for the section, along with complete and detailed solutions.

- If the group decides to diverge significantly from the "good practices" that were discussed in class, they should provide justification (as to why they didn't include examples, for example).

The choice of whether to work together or alone was left to individual students. Those deciding to work alone cited a variety of reasons, from difficulty in finding free meeting times because of work or athletics to a preference to have complete control over their final grades. (The individual projects were of a bit higher quality than the group work, a point to consider for future versions of the assignment.)

The students worked on the project for the remainder of the semester. While the class continued covering chapters seven through fourteen in the textbook, the students were also drafting and revising one of the first six chapters. So, each homework assignment from a subsequent chapter also had some aspect of the project due at the same time: outlines, division descriptions of group responsibilities, individual rough drafts, group rough drafts, edited drafts, and final versions. (See Appendix B for a more detailed timeline.) These writing assignments were graded and turned back quickly so that students could incorporate comments and suggestions into the next part of the project. The final version was due two weeks before the course ended. After the projects were turned in, students filled out two evaluations of the course. One was an anonymous

assessment of the writing project itself (see Appendix C). The other evaluation was signed and was designed to ascertain how evenly work was distributed in the groups (see Appendix D).

After being turned in, the projects were immediately graded for accuracy on the mathematics, and then Adam made copies of all of them in order to distribute them to the class. Students thus had alternate versions of the first six chapters of the text, as well as a set of practice problems (with solutions); they were encouraged to use these materials to study for the final. During final exams, Adam graded the writing content of the projects. In total, the assignment was equal in weight to a midterm exam, which amounted to 13–18 percent of the course grade. The grade was based on the intermediate assignments, group participation, and the mathematical and English prose writing in the final version.

Results

As we've tried to make clear, the hope for this assignment was that it balanced an emphasis on the writing process with an emphasis on writing the content of the course—writing math. According to both the students and Adam, such a balance seems to have been achieved, at least to some degree. In the anonymous survey, every student believed this project was a positive writing experience for a math class. Adam found that the project allowed students to display their knowledge in a more coherent fashion, and the results also offered him some additional teaching strategies.

The assignment was unquestionably a writing project. Significant time was spent discussing good writing practices such as brainstorming ideas, creating outlines, writing and revising rough drafts, and editing. Students were encouraged to revise and edit within their group; they were also encouraged to exchange drafts of their projects with another group and to visit the Wittenberg Writing Center in order to obtain additional feedback from readers. From their comments after the class, it appears that students appreciated having deadlines to keep them on track, and they appreciated getting feedback from Adam throughout the semester. In fact, one student suggested starting the project earlier so that there would be time for more revisions and feedback. The students also began to consider the constraints of the textbook genre and how writers must work to communicate with their readers in this form. Said one, "Writing this project made me think about how people actually learn and [about] the difficulties in being concise yet understandable." Another said that the project made her "think about the importance of phrasing and word choice when trying to make a concept clear." And Adam saw an improvement in the writing from the start of the project—students were making strong revision choices.

Furthermore, the students themselves believed that the writing they were doing was helping them understand the course content. They were not only considering their rhetorical choices; they were learning the material. Of the 13 people in the class, every single one felt that the project helped with understanding the topic of the chapter. It was a matter of learning the material well enough to be able to share it with another: "I had a much better grasp of some topics after doing this project. Having to look deep enough into the subject to feel that I could teach it helped a lot." Many students mentioned how helpful it was to have to design problems and create questions: "I definitely have a more thorough understanding of the topic and I think simply having more practice problems and considering how to re-word information for clarity was most helpful."

But, did the students' work align with their beliefs? Adam found that the students did seem to display a better understanding of the mathematical concepts in their writing. For example, one subtlety that can be difficult to grasp is that mathematics isn't necessarily absolute, but rather that the truth or falseness of a statement depends on the context of the problem. Multiple groups tackled this topic in their chapters, and their descriptions were clear and straightforward:

> For the time being, if no system is indicated, you should assume you are working with the real numbers. This assumption will be necessary when working with quantifiers because if you are trying to prove something for all arbitrary numbers in some system, you need to know what that system is.

> For instance, the statement:

> There is only one value of x such that $x^2 = 1$ is true for the natural numbers (the positive integers not including 0), but is false for the real numbers because both 1 and –1 squared would equal 1.

> Or consider this example:

> You may think that this definition of complement is overly complicated. Why didn't we just define "$\widetilde{B}$" to be the set $\{x : x \notin B\}$? The problem is that $\{x : x \notin B\}$ is too large. For example, suppose that $B = \{2,4,6,8\}$. Then $\{x : x \notin B\}$ would contain all of the following things (and more!):

> > The integers 1, 3, 5, 7, 9, 11
> > The real numbers greater than 25
> > The function $f(x) = x^2 + 3$
> > The circle of radius 1 centered at the origin
> > The Empire State Building
> > The state of Minnesota

It is quite reasonable that the integers 1, 3, 5, and 7 should be included in $\widetilde{B}$, and depending on the context we might want to include the real numbers greater than 25 as well. But it is quite unlikely that we would want to include any of the other items. Certainly, knowing that the state of Minnesota is not a member of the set B would contribute little to nothing to any discussion of B.

What strikes us about these examples is that the students are not just presenting the definition or notation, but rather that they are explaining why these are the correct concepts. Both of these examples use a rather subtle logic technique where they "suppose" we were to use a more naive definition, and then they construct some absurdity from that supposition, hence concluding that the more naive concept cannot be correct. In the first case, if we didn't provide a context for our problems, we would end up with ambiguity in the validity of certain concepts. In the second case, the authors hypothesize a different definition of *complement* and show that it leads to absurdly large and unhelpful sets. These examples show not only an understanding of the definitions but also a grasp of why these are reasonable definitions; and the students are making strong, logical arguments.

This student work represents for us a good balance between sentences and paragraphs and equations and formulas. An additional benefit of the assignment was that creating proofs and explaining them helped students write better proofs on homework, quizzes, and exams. Although Adam did not do a systematic study of the performances on the final to determine if students did better on the material from their rewritten chapters, he did note that overall performance on the final was better than in the previous year. Of course this could be for many reasons, but we do feel this project contributed at least in some way to the improvement.

One of the reasons we believe the assignment worked well was that the students knew they were writing not only for Adam, but for each other. As the assignment sheet read, "I'll grade the papers for mathematical correctness, make copies of all projects, and distribute them to the class. That way you have other people's chapters and questions to use to study for the final." The students had a well-defined, real audience for which they were writing. As we noted earlier, projects can have a wide range of audiences—a family member, the teacher, the local greenhouse worker. However, as Kiefer and Leff argue, "Even those assignments with specific rhetorical contexts or designated publication guidelines get interpreted by students as merely academic exercises" (para. 1). It is difficult to convince students that they have an audience other than the teacher. Here, though, the assignment did not aim for an outside audience or a specific publication.

It was geared towards helping students study for the course itself. The students knew exactly how much mathematics the audience knew and therefore exactly what level to write at. All students were familiar with textbooks and so could intelligently create a chapter for another student. Most importantly, they knew that their peers were going to be reading, studying, and using their projects. The students had become the teachers, and they seemed invested in this project.

At the same time, not every student believed that using the rewritten chapters was beneficial. In contrast to the unanimous agreement that working on their own chapter contributed to their learning, only eight of the 13 students said they found it valuable to use other groups' projects to study. We think a contributing factor to this response was that the survey was taken on the last day of class, and some students hadn't yet started studying for the final. Regardless, it will be a goal in the future to stress this opportunity to the students because we feel this is a genuine benefit of the assignment. For those students who did report a benefit, the comments concentrated on the advantage of having more examples and hearing an explanation from another perspective: "More practice problems and seeing proofs worked out was very helpful" and "Seeing the proofs worked out again and more practice problems with solutions is always helpful." The authors agree, especially when the instructors don't have to make up the problems and solutions.

Adam's teaching also benefitted from the projects. Some of the students really thought deeply about how they learn and therefore incorporated wonderful pedagogy into their projects. Some of the ideas were easy, simple, and obvious ways to improve the classroom experience for a student. For example, one group listed times next to every example and problem in their chapter. These times gave the other students an idea of how fast they should be able to do the problems for a test. This made so much sense! Often students take their time doing homework, and then feel rushed on an exam. By providing something as simple as a goal time, a textbook can better prepare students for tests. Another student, when creating problems for the end of her chapter, decided to include exercises that drew from various sections of the book. She noted, "It's easy to do problems when you know what techniques to use. But you mix things up on a test and don't tell us how to do them. So I wanted to give practice at that." She noticed that learning is cumulative, and incorporated that idea into her sample chapter. There were multiple improvements to Adam's teaching gleaned from what the students felt was valuable to their learning. It was particularly pleasant to see these suggestions coming not from the literature on teaching, but from the students themselves. We predict students will continue to generate these teaching ideas as this assignment is given to future classes.

Challenges and Changes

Given the results from the first attempt, as well as the student responses, Adam will definitely use this project again, both for Math 210 and other writing-intensive courses he teaches. However, the project will be changed slightly based on his own observations and on suggestions from students.

There was one consistent comment from the evaluations. Since the choice of chapters was left up to the groups, the projects were not uniformly distributed; some chapters were not rewritten and others were rewritten by several groups. Even worse, the rewritten chapters tended to be the easier sections. Students thus wanted the chapters assigned to groups, and Adam will be doing just that in future years. A few students also requested a more detailed grading rubric at the beginning of the project, and such a rubric will be provided for future classes.

The project has two other items to watch for as an instructor. First, there will be the standard group dynamics that must be dealt with. These dynamics are endemic to any group project—people may not get along and some people may not pull their weight. This lack of participation may be because they aren't willing, or because someone else is dominating the group. It's up to the professor to determine how to deal with this. Adam provided a feedback sheet that gave people the opportunity to comment on the workload distribution, and these comments were taken into account for the grades (see Appendix D). At the end of this evaluation, he asked if the students would prefer to have him assign the groups and/or assign topics to the groups. Of the 13 students, only three wanted assigned groups. Very few wanted assigned topics, although, again, they did want Parker to make sure there was no "doubling up" of the chapters.

Typesetting the symbolic language of mathematics can also be a challenge. Microsoft Word has an equation editor that can be used. It is easy to figure out, though it has limited symbols and can take a long time to input formulas. Adam encouraged some of his students to learn and use the mathematical typesetting program LaTeX. This program is the way that almost all papers in mathematics, physics, and computer science are typeset—it is the "industry standard." Some students were familiar with the computer algebra system Mathematica, for which Wittenberg has a site license. It is possible to write papers, presentations, posters, etc. within this program, and inputting mathematics is easy, so Adam allowed use of that program. While each of these options will easily produce typeset formulas and text, the inclusion of graphics, shapes, diagrams, etc. is not as easy. The solution that Adam came up with was to let the students type all of the prose using whatever program they wished, but they left space for diagrams or complex mathematical notation and wrote those in by hand. The

handwritten sections did give the final projects a certain late-1800s feel, but the students didn't seem to mind.

Conclusion

Again, a major concern with writing projects in mathematics (and other courses as well) is that they often feel tacked on and artificial. This feeling can result in unhappy students and ineffective projects. We are encouraged that students felt that Adam's project integrated naturally with the course. It appeared that some students came into the Math 210 with a preconception of what the writing project would be like: one of the standard "writing about math" projects described in the introduction. Two students commented that the textbook project was "better than writing about a single proof" and "much better than a history paper." Considering these were exactly the alternative projects Adam was contemplating, he was happy that he chose to give the students this new assignment instead.

And we believe that this type of assignment can be adapted to other courses and disciplines. Students could just as easily be asked to write a section of a textbook for an art history class or a chemistry class or a psychology class or a geology class. In each of those cases, students will need to wrestle with the material and with ways to communicate that material effectively to others. If the textbook sections are given to the class members for study guides, then the students have an engaged, interested audience that has a stake in the material.

Granted, this assignment has been offered only one time. It is, certainly, a work in progress, as most writing assignments are—we should revise our work just as students should revise theirs—but the promise is clear. The assignment balances "writing about math" with "writing math," and, for the students, this balance comes in a project that they find relevant and useful: "[I]t's difficult to come up with a good writing project (I know, I'm going to be a math teacher too!) but I think this was very valuable, creative, and a great review technique."

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APPENDIX A

Math 210- Fundamentals of Analysis

Writing Project – Spring 2009

Working individually or in groups, you will be re-working a section of the text that we've already covered (Sections 1¬–7 and the Pigeonhole principle). Your job will be to improve the chapter, by incorporating things that you find valuable in a textbook. You should think about the discussion we had after the first exam for some examples of good practices. I would think most of you would have many good examples, pictures, proofs worked out in complete detail etc. Think deeply about how you learn and what you would want from a good text.

Requirements: I am intentionally leaving this assignment open ended because I want you to be very creative in how you design your chapter. The few requirements are:

- The smaller sections (such as Pigeonhole principle, Section 2) will be reserved for smaller groups.
- Every section must include at least three complete proofs. There should be more if you feel it makes a better textbook.
- Each group must create at least five new questions, and write up complete and clear solutions to them.
- If you chose to do something very different from what we talked about in class (for example, if you decide you like textbooks with no examples) you should provide justification, so I know you're not just being lazy.

There is no page requirement, though I think you should easily triple the length of the chapter in the text by adding sufficient details to their arguments.

Grades: This assignment is both a mathematics assignment and a writing assignment. This means you'll be assessed both for mathematical accuracy and on both your math and English writing. To get a good grade, you'll have to do both well.

Grades will be broken down using the following rubric.
- Group memberships with chapter choices   2%
- Description of labor with detailed outline, bibliography   6%
- Individual Rough Drafts   20%
- Group (Unified) Rough Drafts   20%
- Final Project   40%
- Group Participation   12%

The project will count either 18 percent or 13 percent of your final grade, depending on which grading scheme we use to calculate your final grade. This is the same as a midterm exam.

Due Dates: Intermediate assignments will be due concurrently with homework as we move through the semester. The final project will be due on **April 29**. At this point, I'll grade the papers for mathematical correctness, make copies of all projects, and distribute them to the class. That way you have other peoples' chapters and questions to use to study for the final.

APPENDIX B

Timeline for Writing Project

This is a timeline for the progression of the project. Those entries marked with an * indicate a graded portion of the project.

Week 6	Assignment given
Week 7	Group members and chapter choices due*
Week 8	Rough outlines due
Week 9	Detailed outlines w/ bibliographies due*
Week 10	Nothing due—working on drafts
Week 11	Rough draft due*
Week 12	Rough draft due*
Week 13	Final version due*
Week 14	Graded for mathematical correctness
Week 15	Distributed chapters to class to study for final
Finals Week	Graded for writing

Writing Project Evaluation

GENERAL QUESTIONS ON PROJECT—These questions are just meant to give me feedback about this type of project (writing a chapter of a text). Oftentimes writing projects in math classes can seem artificial, and I'm constantly search for ways to make them more natural. This part is anonymous.

1. Did this project help you appreciate the work that goes into writing an actual textbook?

2. Did this project help in understanding the topic of your chapter? What was the most helpful part (seeing the proofs worked out, different presentation of the information, having more practice problems to work on etc.)

3. Did using the other projects help in your studying for the final? What was the most helpful part (seeing the proofs worked out, different presentation of the information, having more practice problems to work on etc.)

4. I intentionally left much of the interpretation of the project up to you. Would you have appreciated more formality and direction?

5. Overall, was this a valuable writing experience for a math class?

6. How should this project be changed, scrapped, or tweaked?

SPECIFIC QUESTIONS ON PROJECTS—These questions are meant to give me feedback on how your group worked together on the project. These questions can't be anonymous, but they won't be shared among other members of your group or the class.

Name:

1. Do you feel that the work done on your project was evenly distributed through the group?

2. Were all ideas taken into consideration when the group was deciding what to include or how to proceed?

3. Please distribute 10 points (total) among your group based on how much you felt each member contributed. Feel free assign non-integer points as long as they add up to 10.

Name: **number of points**

_____

_____

_____

_____

_____

4. In the future, should I assign groups and topics?

Unsettling a Metaphor We Teach By: A Hybrid Essay on WAC Students as "Immigrants"

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"[W]hen a man appears and names a thing, when he says this is water
and water is cool, something unprecedented takes place. What the third term,
man, does is not merely enter into interaction with the others— though he does this
too— but stand apart from two of the terms and say that one 'is' the other. …
A is clearly not B. But were it not for this cosmic blunder, man would not be man;
he would never be capable of folly and he would never be capable of truth.
Unless he says that A is B, he will never *know* A or B; he will only respond to them."
—Walker Percy, *The Message in the Bottle* 157 (my emphasis)

"It is often possible to examine the implications of one's own statements
by taking all the metaphors and turning them into the 'X is Y' form,
and quite often writers gain a much better grip on their writing
when they practice doing this."
—Roger Sale, *On Writing* 156

THE LANGUAGE WE USE TO DESCRIBE our teaching, ourselves, and our students is not exempt from the fortunate "cosmic blunder" that Walker Percy describes in my first epigraph. We understand one thing not only in terms of another, but also by renaming it; our acts of metaphorical renaming are, as Percy puts it, "mistakes" (65) that nevertheless allow us to understand. If we take Roger Sale's sound old piece of advice (in my second epigraph) and examine how some of our more pervasive metaphors about writing instruction work, we might indeed make the implications of our language available for closer scrutiny and better control.

Some of the most ingrained metaphors for writing instruction—developmental, medical, economic, and religious among them—have in fact been examined in recent decades. For instance, several scholars have paid attention to how metaphors define literacy (Scribner), shape our understanding of texts (Bowden), give us insight into acts of composing (Tobin), and structure our experience of composition textbooks (Kail) as well the field of writing instruction (Reynolds). Although Strenski has examined military and monastic metaphors for teaching that indirectly shape how we see students, less attention has been paid to the more direct metaphorical construction of students. This is particularly true of WAC students. In one of the more conscious attempts to conceptualize a productive identity for WAC students, Michelle Sidler has argued for a notion of students as "citizen-experts" (49). Sidler's metaphor profitably hearkens to the classical tradition of the citizen as public rhetor, but because it is a *metaphor* it immediately reminds me (as all metaphors do) of its limitations, e.g., of how some students—despite being "citizens" in one sense—are literally not U.S. citizens in another sense.

In addition, Sidler's metaphor brings to mind a larger constellation of immigration metaphors that I see at work in recent and current writing pedagogy, particularly in the subtle construction of WAC students as immigrants. Although these immigration metaphors are often much less visible than the one Sidler offers, they are nevertheless powerful ways of imagining identities for our students, identities that are simultaneously enabling and disabling. Concomitantly, they construct roles for teachers and shape our conceptions of what writing instruction might be. Part of their power is drawn precisely from the fact that they are less visible and so ingrained in our professional discourse that we sometimes use them tacitly and unawares.

My goal in this essay is to bring them to light in the way suggested by Roger Sale, so that I can "unsettle" them (to use another metaphor sometimes associated with immigration). My aim is not to offer an exhaustive survey of where and how these metaphors operate, and I do not argue that they should be abandoned—even if that were possible. Instead, I return to some of the earlier, "landmark" essays on WAC (so designated by Bazerman and Russell) in order to illuminate how a few of these immigration metaphors entered WAC discourse and then got consolidated in later essays through a double-sided process of conscious citation and tacit tradition. I then weigh some of the enabling and disabling implications of the metaphors.

I am speaking, here, of students as figures who are constructed as "other" in our professional discourse. And I am using the word "figure" in ways that are broadly informed by postcolonial theory. In this sense, the metaphorized figure of the student is what Edward Said might call a "system for producing certain kinds of statements"

(274). In other words, when students get named as immigrants, the metaphor inevitably draws a cluster of attributes around itself. These attributes enable us to make statements so that we can control (or, in Sale's terms, get a "grip" on) some ideas about whom it is we are teaching. And, as Percy might remind us, this act of naming leads us not only to truth but also to folly. As we will see, the metaphor of student-as-immigrant "others" and distances students even as it welcomes, assimilates, or incorporates their ways of knowing and writing.

It is important to note that two current trends give particular urgency to this cluster of immigration metaphors: the increasingly polarized public debates about U.S. immigration, and a much-needed move to "internationalize" rhetoric and writing pedagogy in the US. (For recent examples of work that sees rhetoric and writing instruction from international perspectives, see Canagarajah, Foster and Russell, Dubino, and the "Special Topic" issues of *College English* on transnational feminist rhetorics [May 2008] and on Chinese rhetoric [March 2010].) Christiane Donahue argues that this "internationalizing" trend needs to be understood more precisely, and she further notes that some of this work makes the mistake of "equating language and identity in a seamless relationship" (224). One way to unsettle that seamless relationship is, I believe, to investigate some of the international metaphors that shape our teaching, particularly the metaphor that configures students as immigrants.

To pursue this investigation, I use a hybrid academic-personal style that is intended to enact a journey of sorts, at times deliberately withholding topic sentences in order to illustrate how immigration is a disorienting experience of difference that is gradually negotiated and never fully resolved. I will move from a discussion of immigration metaphors in some early WAC scholarship, to a more general analysis of how metaphors operate. I then shift genres to a set of personal anecdotes about my own experience as an immigrant, before returning to my analysis. The personal narrative is intended to disrupt the scholarly parts of this essay, but I will attempt to draw some direct conclusions from it even as I deliberately leave other conclusions to my readers. The insights I will offer are what Kenneth Burke might call "poetically true" (144), rather than semantically true. In other words, they are not pragmatic true-or-false claims, but insights that have what he calls a "resonance" (160) that can enable perspective.

In my conclusion I will suggest some specific areas of teacher research and practice; however, my primary goal is not to recommend teaching methods or programmatic action, but to urge a heightened critical awareness of how our professional discourse works in relation to our teaching. This critical awareness can inform several

aspects of our work in WAC, especially the following: the way we imagine and write about our students; the manner in which we teach citation; an understanding of how teaching students to assimilate new knowledge into their existing knowledge can also erase important differences; an understanding of how complex a teacher or writer's authority and legitimacy are in the eyes of our students; and an ongoing awareness of the metaphoricity of teaching itself.

Immigration Metaphors in WAC Discourse
In 1987 Lucille McCarthy set out to boldly do what she said no one had done before. She decided to "follow" college students as they "progress[ed]" in what she called their "journey across the curriculum" (127). As she did so, she settled not only on one particular student's journey but also on the "metaphor of a newcomer in a foreign country," which, she decided, was a "powerful way of looking at [an undergraduate student] as he worked to use the new languages in unfamiliar academic territories" (126). When McCarthy published her findings in a highly influential *Research in the Teaching of English* essay, later collected in Bazerman and Russell's *Landmark Essays on Writing Across the Curriculum*, she chose as her title metaphor "A Stranger in Strange Lands: A College Student Writing Across the Curriculum." Her title, of course, riffs on the title of Robert Heinlein's science fiction novel.

Four years later, Berkenkotter, Huckin and Ackerman cited McCarthy's work in their own study of a student's travels and "socialization" (211) as a writer. This time the subject was a graduate student in Rhetoric and Composition, whom they describe as "entering a research community (and by implication, a discourse community)" (211). Significantly, they use travel metaphors very similar to McCarthy's. "Language users," they write, "travel from one community context to another" (212), sometimes having to navigate "a difficult passage from one academic culture to another" (229–30). The student's goal is, in their words, to "master the ways of speaking, reading, and writing which are indigenous to the culture" (230) that he or she enters.

These immigration metaphors seem, if not inevitable, certainly intuitive when we think not only of Writing Across the Curriculum but also of education in general. Indeed, the rhetoric of education, perhaps especially the rhetoric of writing instruction, is saturated with metaphors of travel, acculturation, and immigration. One could cite countless examples. For instance, in an attempt to deploy Paulo Freire's pedagogy, Kyle Fiore and Nan Elsasser, like McCarthy, speak of their students as "strangers in a strange world" (207). In varied contexts, Patricia Bizzell, Vivian Zamel, and Christine Farris have employed similar language. This pervasive and foundational immigration

metaphor is a constellation of terms that often cast students into the role of travelers who undertake a one-way journey to a place in which they are imagined to settle as residents. The students undertake not just any journey, moreover, but one whose path is ascendant and whose destination often promises nothing less than a utopian transformation of the traveler's identity. The teachers, in turn, are often imagined as stable, rather than moving. They are cast into the role of what McCarthy calls "native-speaker guides who are training" the newcomers (133).

This language might not surprise us; it may not even arrest our attention. After all, education, in its broadest sense, is ultimately a process of change—for the better, we hope—and change requires movement. Indeed, the very words "curriculum" and "course" are sedimented by their semantic histories with images of running along a path. And the word "pedagogy," with its legs firmly in ideas of the pedestrian, comes from the name for the slave who led the child to school in antiquity.[1] Moreover, the very genre many of us teach, the "essay," is historically and epistemologically tied to notions of travel and exploration, and the word "educate" is related to the Latin *educere*, to lead out.

We fall so easily into this language that it's difficult to imagine how we might otherwise describe our work as writing teachers. Indeed, Berkenkotter, *et al* argue that teachers in the disciplines are "'native speakers' who may have used the language in their discipline for so long that it is partially invisible to them." They therefore suggest that the teachers' "first challenge will be to appreciate just how foreign and difficult their language is for student newcomers" (153). This, I take it, is one of the pervasive starting assumptions for WAC: to teach the language of a discipline that seems almost invisible to its accustomed users. However, I want to argue that we need to excavate this assumption to a level deeper than the one suggested by Berkenkotter. The language we need to examine, the one that is partially invisible to us, is not just the actual language of the disciplines, but also the language in which we describe both how and why we teach our disciplines in the first place. I am speaking of the rhetoric of pedagogy, the terms in which we cast our assumptions about teaching. In this case, as we see, the assumptions are partly rooted in a powerful constellation of immigration metaphors.

Immigration Metaphors on Two Legs

In the rhetorical view I am adopting, metaphor is of course never simple ornamentation, a mere matter of word choice, but always a use of language that shapes ideas and

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[1] See Mariolina Salvatori's *Pedagogy* for a history of this term.

actions. In their influential book *Metaphors We Live By* Lakoff and Johnson argue that metaphors are not simply tropes in literary discourse, but concepts inherent to all language, concepts that both partially reflect and partially shape the way we conceive of our world. To many of us, particularly in fields like English or Philosophy, this view has become commonplace in the last twenty-five years or so. Lakoff and Johnson's point, in part, is that "in allowing us to focus on one aspect of a concept … a [metaphor] can keep us from focusing on other aspects of the concept that are inconsistent with that metaphor" (10). Since a metaphor is never total (not all of our students are actual immigrants, for instance), "part of a metaphorical concept does not and cannot fit" (13). Furthermore, Lakoff and Johnson argue that metaphors have both a physical and cultural basis (19), and that part of a metaphor's meaning comes from its role within a particular system of metaphors (18). The two parts—or legs—of our metaphor, student and immigrant, are linked by the word "is"; and this linking verb is "a shorthand for some set of experiences on which the metaphor is based" (20).

This is to say that we might sometimes actually experience our students as being something like immigrants whose travels have brought them to our native shores, but what interests me is how this particular metaphor works within a larger metaphorical system that is grounded in cultural assumptions. I don't know if immigration to, say, France or Australia would offer the same set of insights into this language, in part because the metaphors are to some extent cultural and not just based in the physicality of movement. When I attend to these immigration metaphors, then, I am seeing the U.S. as the adopted country.

Since I am a real immigrant to the U.S. (as are some of our students), I want to use myself in order to think about how immigration to the U.S. is inflected with all manner of assumptions about culture, language, identity, boundaries, and knowledge—assumptions that are then, via metaphor, carried over into the teaching of writing. As I will suggest, many of these assumptions are utopian in nature. They limit us as much as they enable us. But when we examine them, we might enable new ways of seeing our work. My attention, then, is drawn by these sorts of questions: What does this constellation of metaphors reveal and obscure? How might it shape our thoughts and actions? And what can we learn from the parts that cannot fit? Our answers will, of course, not take us beyond metaphor to a pure language of reflection, but they may lead us to more productive metaphors, to a fuller awareness of the risks inherent in those we already use, or to a deeper exploration of how our metaphors might affect our students.

Despite recent scholarly attention to transnational rhetorics and various global Englishes, one source of difficulty is that when we speak of language, neatly bordered

national and regional notions come to mind too readily. I believe this resonance too often gets mapped tacitly onto academic disciplines in WAC discourse. Hence, if we want not only to teach the particular language—the discourse—of a discipline but also to analyze such instruction, we start to overlay our understanding of the discipline with the map of a country. This metaphorical overlay of country onto discipline can lead us too readily to see the experts in a particular discipline as "citizens" who speak a common language and share a common culture. Accordingly, some theorists have imagined the various disciplines in anthropological terms, as somewhat monolithic, discrete "discourse communities." For instance, Carol Berkenkotter, invoking Bizzell and Porter, asserts that experts in a discipline are "like-minded people" (211).[2] In critiquing and resisting this version of discourse communities, Mary Louise Pratt has drawn upon her research on travel writing in order to pose the term "contact zones" as an alternative, thus attempting to disrupt what she sees as an overly monolithic, apolitical, and tranquil notion of discourse communities.[3] Many have adopted Pratt's term. I would argue, however, that both of these terms preserve the fundamental notions of travel and immigration, rather than calling them into question.

The word "metaphor," of course, means "to carry beyond." In this sense, metaphor is itself grounded in notions of travel, as is the word "discourse." In the next section of this essay, I will anchor this metaphor of immigration in an experiential, anecdotal account of real immigration, my own, in order to follow my journey as a student and teacher in a strange land. The following section is meant to interrupt the flow and tone of this essay by presenting some of the metaphorical ideas I've been examining about teaching writing from the other, more literal side, so to speak. In other words, these fragmentary anecdotes are intended to help me establish—in a different genre—some of the points I have been setting up thus far, points to which I will return.

I am somewhat reluctant to use myself as an example in an academic essay. This is partly a case of diffidence, partly because I am sometimes uncomfortable with the invocation of personal experience as authority in an academic essay, but mostly because my story has neither the pathos of *Angela's Ashes* nor the depth of Willa Cather's fiction. It is tame and middle class. My transposition to the U.S. seems seamless, my anecdotes urbane and even trivial. So they seem. But this is exactly why I wish to use them. I do so not in order to claim some sort of privileged relationship to my subject

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[2] In composition theory we see this anthropological inflection most starkly in Stephen North's *The Making of Knowledge in Composition*.

[3] Similarly, Joseph Harris has aptly critiqued the metaphor of "community."

matter, but to call attention to the complex experiential dimension in which one leg of the immigration metaphor is grounded.

In the following anecdotes—which are meant to be oblique, but also to offer some grounding for the metaphors I'm examining—I hope my readers will hear and *infer* some insights into how the metaphors reveal and hide these aspects of teaching:

- The complex ways in which an immigrant/student might see new knowledge, language, and identity;
- The difficulty of explaining the essence (or truth) of a place, culture, or academic field to an immigrant/student;
- The slippery difference between tacit knowledge and what needs to be taught explicitly to a newcomer/student;
- The ways in which locals/teachers simultaneously translate and domesticate "foreign" ideas by renaming them in familiar terms;
- The kinetic fickleness of authority that is not always visible to the eyes of a newcomer who might see the "native" as spokesperson for a place or body of knowledge.

One Leg of the Metaphor: Anecdotes from My Experience as an Immigrant Student and Teacher

Like many utopian tales, immigration stories usually start with the departure or the arrival. As the travel writer Jonathan Raban observes, one of the most wonderful sentences in English reads: "Having arrived in Liverpool, I took ship for the new world" (1). Yes, this is a wonderful sentence. Like Raban, I cannot read it without being stirred by the promise of utopia, the dream of personal transformation. The neat grammar of two words, "having arrived," simply dispenses with the old life and launches the new. But it's not so simple, of course. A story of immigration really begins long before the departure and arrival. Its grammar is such that one leaves a life in mid-sentence, and is left to parse its anticipated but unfinished structure as though it were a long series of ellipses before a new sentence one writes.

When I came, alone, to this new world from South Africa, where my family has lived for six generations, I came with English as my native language and several years of American film, television, and music in my head. Yet on the flight from New York to Boston my first day here, I could understand hardly a word anyone said. Later, I amused people at parties by speaking about the "boot" and the "cubby hole" of a car. I inadvertently offended people by calling them "homely," by which I meant "hospitable." I was often not understood by waiters because my pauses and inflection were

different enough to be useless. At times I am still not understood, after all these years, and I am smitten. Sometimes I am reluctant to speak in a group because my accent calls attention to me, marks me. I speak and people ask, "Do I detect an accent? You have an accent." My reply often surprises them: "So do you." I've tried to speak with an American accent. The South African actress Charlize Theron got it right (apparently by watching endless reruns of *The Love Boat*); when I try, however, all I can manage is a grotesque parody of Billy Bob Thornton in *Slingblade*. Perhaps I should hire a voice coach for formal instruction, but I doubt it will work.

In the 1980s, when I was new to this country, Americans seemed to me a cohesive group. This was partly because I wanted—and needed—them to be so, and partly because that's how the few that I knew represented themselves. "Americans like their bacon crispy," I was told. "We don't say 'in hospital' but 'in *the* hospital,' "people instructed me. "That's the way we do things in this country, Steve" became a refrain from well-intentioned people seeking to acculturate me. At the time I took their word for it, because they represented for me the culture as a whole. They were natives. Because I had taken a stand against the former South African government and its policy of *Apartheid*, they sometimes wanted to put me on display, especially when South Africa was in the news, as it often was in the 1980s. To maintain my integrity as a person and not a symbol, I shied away. As a "foreign" student I was required to pass a written and oral English proficiency test before I could assume my duties as a Teaching Assistant. As someone who already held a graduate degree in English Education at the time, this requirement astonished me; however, it surprised me less than the course I was asked to teach: Freshman Writing. There had been no such course in my South African undergraduate education. I couldn't imagine Writing as something worthy of course credit at a university. Once I began teaching, my students used phrases like "beefed up" and "the best thing since sliced bread." Since these clichés were new to me, I praised students for their originality.

My old American friends like to tell me I'm losing my accent after all these years. I am now convinced that university writing instruction is imperative, so much so that I did my PhD in Rhetoric and Composition at the University of Pittsburgh in the 1990s. However, I don't quite know when I came to this conviction—or how. When I wrote my dissertation on revision I had no idea it was in some ways autobiographical. While I was a graduate student I was cited in a *College English* article, in which the author had me say, anonymously: "Language is a great, hungry monster that continually eats away at reality" (Welch 399). I wish I *had* said that. What I actually said was: "One person's narrative can eat up another's." Perhaps, however, the author was not even quoting *me*;

she was using pseudonyms in her essay, and I seem to be "James." That's how I first entered the discourse of my field: as James, "a political exile from a country with a long history of repression" (399). It's hard to know if that's really me, though; citation can be tricky. But it's not unusual for immigrants to be renamed upon arrival, so why not call me "James"?

At the University of Pittsburgh I taught a course on Utopian Science Fiction. After completing my PhD, I taught courses titled "The History of the Essay" and "Travel Writing" at Loyola University in Baltimore. I often cite or use what I learned when I taught these classes— I've done so in this very essay—but it's not the type of citation that calls attention to itself. Citation can so often be implicit. By the time Harvard University hired me in 2002, I had seldom used the word "thesis" and didn't really believe in it; yet, there, I used it all the time—and I believed in it because it made sense in the context of that writing program. But now that the University of Massachusetts-Boston has hired me, I've all but discarded this word; it makes less sense in my new context.

Sometimes kind Americans will want to give me an experience or object that is "typically American." But they can't think of anything; and so they will ask me, as though I would know, "What's typically American?" Since the advent of its democracy in 1994, I am hardly ever asked about South Africa anymore. Listeners almost always respond to my occasional anecdotes about a South African food or tree or idiom by translating the anecdote into American terms with the phrase "it's like." Their metaphors and similes sometimes, ironically, rename my experience and make it more familiar to them, but more strange to me. For instance, people assume I like cricket—which actually bores me—and that cricket is "like" baseball, which I actually enjoy. None of this bothers me too much; I would probably do the same if I were they. I'm a New York Yankee fan, even though I've lived in Boston (home city of the rival Red Sox) on and off for thirteen years. Why? Because when I first came to the U.S., the Yankees were the only baseball team I had heard of; and, inscrutably, I thought they were the team for which the immigrants rooted. I cannot trace the origin of this odd idea, but it has caused my neighbors to hurl abuse at me, making me feel distanced from a city I otherwise embrace.

Some Americans have lived here all their lives and understand less English than I understood on that baffling flight from New York to Boston. Not too many can tell me where they're from: "I'm from all over," they say—especially those who come from military families. Some of my best students at Harvard reminded me very much of the Basic Writing students I loved teaching at the University of Pittsburgh. In recent years my students have described each other's work as "dope" and some of the course

materials as "sick." I'm not always sure I know what they mean. I've lived and taught in Boston, Pittsburgh, Baltimore, and Missouri. I have found that in all these places people enjoy those typically American foods, Spam and kielbasa. And some like their bacon chewy.

The Other Leg of the Metaphor: Possible Implications

As the previous section suggests, an immigrant seeking to grasp how a new language reflects the culture of his/her new home country can too easily imagine the new land in monolithic, stable terms and the locals as authorized spokespersons for it. The identities and experiences of an immigrant, in turn, are translated and assimilated in puzzling ways by the locals. As I have been suggesting, these aspects of immigration have possible implications for WAC scholarship and teaching.

For instance, Charles Bazerman describes how the "accumulated knowledge" of a field (represented by its literature) is "incorporated into the language" we teach (164). Of course there is much truth to this. But Bazerman and others sometimes write of this knowledge and this language—and the relationship between the knowledge and its language—as though all were in a fairly stable (though admittedly accumulating) arrangement into which students are initiated. On closer examination, however, the accumulated knowledge of a field might seem more unsettled than stable, and its relation to the language of that field more oblique than direct.

This is especially true if we attend to how the language of a discipline is often built on various forms of citation (citation itself being a form of immigration in which discourse is moved). The travel question here is: What happens when discourse comes from elsewhere, when the very language to which we are acculturating newcomers is, itself, an immigrant of sorts? In some fields, especially in some of the humanities and social sciences, voices from outside the home field continually disrupt the homogeneity on the inside to a considerable degree, making it more difficult to represent and teach discipline-specific discourse to newcomers.

Here I'm building on a point Deborah Brandt makes in *Literacy as Involvement*, where she argues that WAC instruction has sometimes overemphasized discourse. "Understanding language alone," she insists, "cannot be a way in to membership in a social group" (120) because such membership has to do with other matters such as "tacit knowledge," which must be acquired indirectly and never just in the form of explicit instruction. In addition to my own immigrant experience of how tacit knowledge operates, here I would offer the example of Berkenkotter, *et al* citing McCarthy (which I discussed earlier in this essay). We have seen that they cite her work not only explic-

itly by name—a standard academic move one might easily teach a student to make—but also tacitly, by picking up and using a certain kind of rhetoric and its metaphors. The latter is far more difficult to teach as a writerly move.

Yet as teachers and scholars we pick up and use this rhetoric and its metaphors every day. It is part of what we cite, but sometimes unawares, and it can take on an almost dangerous life of its own. Bazerman rightly points out how the established literature in a given field becomes an "object" upon which we can act, something "largely autonomous" (161). Indeed, the cited material of a discipline can sometimes become what Brandt might call an "insular text world" (43) that is visible to students in ways that implicit knowledge is not. Karl Popper has, strikingly, called this new place a "third world" (qtd. in Bazerman 161). Students, like immigrants, might see this text world as more stable than it is, especially if we construct students as immigrants in our professional discourse and pedagogical imaginations.

We might say, then, that the discourses of the disciplines are not just, in David Bartholomae's often quoted but seldom understood phrase, ones that novice students must "appropriate (or be appropriated by)" (624), but also discourses that *themselves* sometimes appropriate the language of other experts and other disciplines. I understand Bartholomae's "or" to mean "in other words," since appropriating is always also a way of being appropriated. As I hope my immigration anecdotes illustrate, I do not see appropriation or assimilation as an "either/or" dichotomy. In fact, even as I write this essay, I feel the shifting tensions between my self-representation as both newcomer and insider in a place that keeps changing.

Experts and teachers in a discipline can be seen by students as settled citizens of Brandt's "insular text world," since, as Berkenkotter *et al* put it, "to publish and to be cited is to enter the community's discourse" (213). Yet an expert's relationship to that world might be as changing and ambiguous as was the relationship of the citizens to the US in my anecdotes from the previous section. In fact, many academics, far from being the resident citizens, are increasingly itinerant and have to acculturate to the various institutions in which we teach. In doing so, we sometimes find our authority as what McCarthy called "native-speaker guides" (133) complicated because we revise the language and methods we use. At times, we are the newcomers and our students guide us—yet teachers in the professional discourse are seldom metaphorized as immigrants.

As I mentioned in my introduction, my primary goal in this essay is not to recommend teaching practices or an administrative course of action for WAC programs, but to offer some ideas that have what Burke calls "resonance" (160). However, I would like

to conclude with some suggestions about possible ways to use and pursue research in light of the metaphor that this essay has sought to illuminate and unsettle. In doing so, I believe we can heighten our critical awareness of how our professional discourse about students relates to our teaching.

One course of action would involve examining course materials, especially writing assignments and handouts that offer advice on writing in WAC courses, to see if (and how) the metaphorical constellation of student-as-immigrant surfaces there. This research might be followed by ethnographic or institutional study of how students respond in their performances as readers and writers to our construction of them as immigrants. For instance, do students use the same metaphor—tacitly or overtly—to construct themselves? In addition, we might deliberately test other metaphors to see if they alter our expectations and behavior as teachers, and, in turn, if they alter the responses of our students. These other metaphors—all no less troubling and complex than the immigrant metaphor—could include students as consumers, followers, climbers, laborers, builders, converts, Burke's conversationalists (110), or Canagarajah's international "code mesh[ers]" (598) who bring together various Englishes in their writing. Some of these metaphors are already ingrained in our professional discourse and need further illumination, as do our metaphors for teachers. Moreover, I believe new and existing citation studies can provide important insights into just what Brandt's "insular text world" really looks like, especially if we deliberately ask students to characterize it for us.

Though these forms of teacher research might improve our work in WAC, none will bring us beyond the shaping force of the language we use, sometimes automatically, to account for how we teach, what we teach, and why. And this inescapability of Percy's fortunate "cosmic blunder" is our most compelling reason for attending to the metaphors of our professional discourse.

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Making a Difference through Serendipity and Skill: An Interview with Kathleen Blake Yancey

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THE WAC JOURNAL HAS BEEN GENEROUS in offering print and online space to a series of interviews with WAC professionals. My interview for this issue, the eighth in a series that began in 2003 (all archived at *The WAC Clearinghouse*: wac.colostate.edu) brings Kathleen Blake Yancey to these pages at long last. If there is one *TWJ* reader who is unacquainted with Kathi and her work, it is high time that I help correct that deficit.

A graduate of Virginia Polytechnic Institute and State University, where she also earned her MA in English, Kathi began her career as a teacher of language arts at the middle school level. She earned her doctorate at Purdue University, completing a dissertation on a multivariable model of composing, and staying on to work in a couple of administrative capacities. Since then, she has taught at the University of North Carolina-Charlotte and at Clemson University, and is now the Kellogg W. Hunt Professor of English at Florida State University, where she directs the graduate program in rhetoric and composition and is serving her second stint as interim department chair as well.

A fundamental appreciation of Kathi and her career begins with her broad professional experience. Over the last 30 years, Kathi has made her mark through significant contributions as a teacher, researcher, assessment maven, administrator, technical innovator, adherent of the scholarship of teaching and learning, and literacy activist on the national level.

How do we know this? Let's start with her ubiquitous, tireless presence as a keynote speaker, conference presenter, author, co-author, and editor. Her vita lists 32 keynote addresses since 1994; 55 conference presentations over that same period; 12 books (some co-authored or co-edited with various colleagues); numerous editorial positions, including co-editing *Assessing Writing* with Brian Huot for many years and her

current editorship of the composition/rhetoric flagship journal *College Composition and Communication*. The list of her articles and book chapters runs to several pages, rivaling the list of consulting and faculty development sessions all over the country—and the world. [Disclosure: I have benefited from Kathi's mentorship as an editor, both as an author of a chapter in *Delivering College Composition: The Fifth Canon* and co-author of an article for a special issue on assessment in *Across the Disciplines*.]

Simultaneously, she has been more than fully employed as an influential educator of undergraduate and graduate students (having taught dozens of courses at all levels) as well as local, national and international colleagues, not to mention administrators, legislators, and anyone who pays attention to higher education and issues of teaching and learning. Her service to professional organizations goes well beyond committee and editorial board service to top leadership positions with multi-year commitments.

Ergo, Kathi is everywhere, operating in several spheres, and known to all as iconic, but in the most cheerful, approachable way possible. Her personal presence is characterized by a preference for black—jacket and skirt or jacket and pants—a ready smile, her phenomenal memory for names and biographical details, and an idiosyncratic, irresistible laugh that commands both startled attention and contagious participation.

Kathi's textual presence features emoticons, parenthetical asides, and italics for emphasis, all of which help convey the exuberance of her effervescent, upbeat energy. Because this interview is based in e-mail correspondence, I have preserved those textual elements that speak to Kathi's eloquence mediated by many a wink and a grin designed to engage her audience—in this case, me. And now you.

Simply put, the woman is exhausting. And inspiring. And remarkably productive as a professional while maintaining close ties with family and friends. What follows is a brief taste of the WAC slice of Kathi Yancey as a person and professional. I invite you to do a little online research to supplement this appetizer. Whereas Kathi's modesty insists that many of her contributions have had more to do with luck than intentional planning, the truth is that Kathi's scholarship matters, along with her formidable contributions as a citizen of higher education. The WAC world, among others, is a grateful beneficiary thereof.

Carol Rutz: You have taught in situations ranging from junior high school to doctoral programs. What has that breadth of teaching experience brought to your understanding of WAC's value as a pedagogy?

Kathleen Blake Yancey: One of the lessons from WAC is the value of a vertical, structured curriculum, and when one teaches from middle school to graduate school,

as I have, you see the need for such a curriculum as students develop and as their writing increases in sophistication and as it travels into different communities—which is what WAC offers, in part, those communities—so I think that's one observation. The research on learning and transfer underscores this personal experience, of course; if students are going to transfer what they have learned, they need a place to transfer *into*, hence WAC. A second lesson is the need for a curriculum that includes both writing to learn, which is still a useful strategy for many students, and writing in the disciplines, which is necessary as students move increasingly into disciplinary contexts. I'm glad to see that we don't see them at odds, but as ways of writing that work together.

CR: Can you help us understand how you became interested in writing assessment? Did your WAC experience have a role? Or did it work the other way? In parallel ways? In short, what's the story?

KBY: The story isn't all that interesting, really, but I'll try ;) When I was in graduate school, I took a course in German for my language for the PhD, and the course grade was determined completely by how well you did on the final test. So in my case, the first test grade I received—an F ☹—didn't count against me: I got an A on the final and an A for the course. What the professor was interested in, I understood, was how well we performed at the *end* of the course rather than throughout it, so given that aim, averaging grades was inappropriate. This was a Joycean moment for me: the next term, I introduced what I called a portfolio in my writing classes, where the grade was determined by a collection of work showing how students performed at that moment in time. As this narrative suggests, a good deal of my interest in assessment has been motivated by how assessment can foster learning.

When I completed my graduate work, I stayed on at Purdue and directed a testing center and continued to work in Purdue's Writing Lab, so I acted as tester and coach, my interest especially in helping students pass the test. In this context, I talked to many students who were writing many different kinds of assignments outside of the test environment, and the difference between those assignments and genres and our expectations in English always struck me as a problem given how often we in English generalize about what good writing looks like. And I saw this personally as well: while we touted (and continue to tout) the value of sentence variety, for example, I saw my husband write long texts in engineering with every single sentence in passive voice—and this was what was expected *and* valued. So clearly, there was a disjunction here.

In directing the testing center, I began moving us toward portfolios (and away from timed tests of writing), and then in my first tenure-line job, at UNC Charlotte, I began meeting informally with a group of WAC faculty, just to talk about how we

were teaching. In that group, we began doing some unofficial program assessment, so that's when it all began to come together.

Interesting, to me, is that my experience with WAC has always benefited from official positions and tasks and unofficial, informal ones as well. Fortunately, I like that combination!

CR: You are well known for your tireless promotion of electronic portfolios as a vehicle for writing assessment as well as other purposes that serve students, faculty, and institutions. Tell us what excites you about electronic portfolios as an educational phenomenon. Is there a way to tie WAC to the work that electronic portfolios accomplish?

KBY: Well, as I write this, I'm in the UK at an electronic portfolio "residential seminar," which is basically an institute focused on the e-portfolio developments over here: heacademy.ac.uk/events/detail/2010/26_28_April_CRA_Personal_Development_Planning_and_E-Portfolio. Interestingly, they include writing (!!!), in part because of an emphasis on written reflection, and in part because there is such interest in authentic tasks and assessment. So writing and e-portfolios seem a natural fit.

More generally, I'm here in connection with my work with the Inter/National Coalition for Electronic Portfolio Research ncepr.org, and here too we see increasing interest in and from the WAC community. The Coalition is a cohort model, and right now we have several institutions in our fifth cohort that are looking at WAC through an e-portfolio lens, including the University of Denver and Virginia State University. In our next cohort, the sixth, we anticipate other kinds of WAC projects, particularly those interested in exploring together how we can use the affordances of electronic portfolios to create a new vocabulary for assessment. Given the variety of media we see in WAC texts—from print to posters, from PowerPoints to podcasts—and given the rhetorical situations they respond to, this will be very challenging, but exciting, too—and definitely needed.

CR: In the 10–12 years we have known one another, you have been affiliated with the University of North Carolina at Charlotte, Clemson University, and now Florida State University. To the untrained eye, you seem to have taken on progressively more complicated and responsible positions with a wide variety of expectations. What has been attractive to you in various academic situations?

KBY: I have loved each of them, and you're correct in thinking that each has offered different opportunities, but I hasten to add that the opportunities often developed serendipitously.

At UNC Charlotte, I loved the ability to focus on teaching and to teach so many diverse kinds of classes, from first-year composition, advanced composition, and methods

for pre-service high school teachers to graduate classes in rhetoric, in assessment, in the college teaching of English as well as a team-taught honors class on the technologies of peace and war. What a treat! And through the wonderful colleagues I met, I discovered a number of informal opportunities that were fabulous: a chance to work with faculty to develop WAC-like classes and program portfolios in the honors program, for example, and a chance to co-lead teaching circles. And some of this work has been published as well, so the intersection between teaching and research was generative.

At Clemson, I loved the CAC [Communication Across the Curriculum] efforts, of course, but it was only because Carl Lovitt left that I had the chance to lead the Pearce Center. And what a treat that was, to work with terrific colleagues across the campus; to develop the Class of 1941 Studio for Student Communication and to open it with the help our undergraduate Studio Associates; to learn from the architecture students on whose graduate committees I served. Again, I had many, many opportunities, although in this case, they were more institutionalized is the way I'd put it.

And then here at Florida State, where I signed on to lead our graduate program in rhetoric and composition, which has worked wonderfully well, but where I have also spent 1.5 years serving as interim chair of the department. Whew! Fortunately, I'm just now moving back to directing the program full time, and that's yet another treat. The attraction here was to return to the discipline of rhetoric and composition, and in part, I think, to bring what I had learned at UNC Charlotte and at Clemson to the study of rhetoric and composition with faculty and graduate student colleagues. So we created a Digital Studio, for example, nearly two years ago, Florida State's first, and we are working with several colleagues to open a 17,000 square foot learning center, where we will have a third site of our writing center and a second digital studio. Several doctoral students are studying transfer in college composition, so they are getting a first-hand look at WAC classes here, which is also wonderful because FSU is a very writing-friendly place.

CR: To my knowledge, you are the only person who has held the top elected leadership positions in the National Council of Teachers of English (NCTE), the Conference on College Composition and Communication (CCCC), and the National Council of Writing Program Administrators (WPA). How does the work of those three organizations overlap or provide congruence for WAC professionals?

KBY: Great question! NCTE provides a through line from elementary classrooms where WAC is natural and normal to middle and high schools with literacy coaches working with teachers across the curriculum and then college with all our activities. CCCC focuses on the postsecondary level, linking both practice and research, and *CCC*, the journal, also plays a role, with the Melzer article in the December issue (looking at

assignments across the curriculum) and the Thaiss and Porter WAC program article in the February issue, for example. WPA, it seems to me, focuses more on the administrative angle, as the name of the organization suggests, and it does so more in the context of programs, so it has yet another perspective. Each one, it seems to me, offers a piece of the larger puzzle, so to understand WAC in its contexts, practices, and research, one needs all three.

CR: If you were to design a research agenda for higher education that draws upon the resources of WAC curricula and faculty, what would that agenda look like?

KBY: Right now the national government is very interested in alignment, i.e., in connecting different levels of education. I'd love to see us take that interest seriously. What would that mean? Perhaps taking up a question around how we'd design first-year composition on the basis of what we see in WAC and WID programs. Perhaps mapping the multi-disciplinary universe of composing. I'm thinking here of how writing looks when we work with faculty in new ways; we see an example of that in Pamela Flash's WEC (writing enriched curriculum) work at Minnesota: just go to the web site to see the vast array of writing plans, genres, processes, and outcomes. It's a treasure. I'd love to see more of this work so that we had a working map of what writing across the curriculum actually looks like. Perhaps more research focused on transfer, which underlies all of education: what makes it work, and what impediments can be identified? We do know some about this, but with some research funding, we could know so much more. And study as well of our alums: what have they found useful and what intersections between school and work do they see and how might those inform our own programs?

CR: What question(s) do you wish I had asked?

KBY: Oh gosh, I'm not sure. I think you hit the high points! But perhaps one about the recent WAC conference, since we're finishing the interview as the conference concludes. It was just wonderful, and I'd like to highlight three dimensions of it that I found particularly praiseworthy (if I can put it that way).

- One is that there was such a great mix of experienced WAC teachers and scholars—from the keynoters Art Young and Terry Zawacki to Neal Lerner, Chris Anson, and your own self!—and newer scholars. Such a mix helped us see both past and present not as competition but as a continuum, and it speaks to the health and future of the field.

- Second is that the sessions themselves spoke to newer questions being raised, and for me one of the most intriguing had to do with questions about genre that are being revisited and newly created: do we need to teach it explicitly, for instance, and

what role if any does prior genre knowledge play in new learning? I went to several sessions focused on that. The field itself is becoming more sophisticated, I think, too. Now, we'd expect that, but it was good to see ;)

- Third and not least, I was glad to see how writing continues to capture the attention of higher education; for example, there was a session on the NSSE questions at WAC and a meeting on that as well, both focused on new writing questions that might be permanently added to the NSSE. Again, we believe that writing is critical to intellectual development, but it's great (1) to see that others out of field do; (2) to have such a claim institutionalized; and (3) to be consulted on what those questions might look like, especially from a WAC perspective because then we're more likely to have a fuller and more complex conception of writing.

In closing, let me say thanks for the lovely write-up, Carol. Very generous on your part, and on mine very fun to think with you about some of what all this might mean!

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