Letter from the Editors

Sharon Quiroz
Michael Pemberton

Dear Subscribers,

Things have changed a bit at *LLAD* this summer. Most important, Michael and Sharon will be joined by Rebecca Stephens, our new managing editor from Washington State University. Susan McLeod has kindly provided funding for this new position, and Becky, a new Ph.D. with lots of computer expertise and general abilities that Michael and Sharon are thrilled about!! This means you will be seeing *LLAD* all over the place now. Becky will be hunting you down for manuscripts, and subscriptions. You'll like her.

So, the lineup looks like this: Sharon is mostly responsible for the manuscript process, Michael for production, and Rebecca for soliciting manuscripts and subscriptions. But we all do some of everything.

Also, Sharon has moved to the Illinois Institute of Technology, taking the journal with her. Maybe that means we'll see more from engineering and technical writing as time goes on. Send your manuscripts to Chicago, not Ann Arbor.

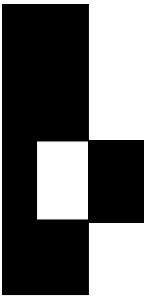
And Michael and J. Marie and little Elizabeth have a new baby, Kara. Keep sending your subscriptions to Urbana.

We hope your summer brought about exciting new changes. Or perhaps held in a steady state you like.

This special issue of *Language and Learning across the Disciplines* celebrates 27 years of Writing Across the Curriculum by focusing on the WAC Retrospective, the Third National Writing Across the Curriculum Conference which took place in Charleston in February of 1997. NWAC is intended, as is this journal, to bring together professionals trained in writing instruction and professionals primarily concerned with other kinds of instruction. It seeks to foster conversations among the

members of these two groups, and others. We like to seek out a variety of venues where writing is experienced and practiced: in addition to classrooms of diverse sorts, *LLAD* and NWAC are sensitive to the presence beyond our ivy-clad walls to the demands business and industry increasingly make on colleges and universities. The issue opens with David Russell's plenary address on "Writing to Learn to Do," which takes writing out into the workplace, and beyond that, into the world: Writing Across the Workplace and Writing Across the World. WAW!!

LLAD and NWAC differ a little in that *LLAD* is often more interested in rhetoric and discourse analysis, in the differences in interpretive communities, while NWAC places more emphasis on pedagogy and administration, on the values interpretive communities share. Thus, this special issue celebrating NWAC gives us the opportunity to focus on classroom practices of instructors in other fields-here, most noticeably, professors who teach physics (Roland Stout), astronomy (Tom English), geology (Jack Drake), and economics (Shirley Gedeon). (The geologist and the economist appear in "The Odd Couples," on team teaching.) Judith Hunter and Jean Ketter write about tensions between writing specialists and a general faculty that takes responsibility for writing instruction in a small liberal arts college, and Yvonne Merrill suggests innovative structures for a community advisory board. We include Tom Angelo's plenary address-all of it. In the full form, it is an argument for allying WAC with the movement to learning communities. And finally, you will find Anne Herrington's review essay, in which she interprets the conference as she did in her plenary presentation.



Writing To Learn To Do: WAC, WAW, WAW — Wow!

David R. Russell
Iowa State University

I've heard lots of reasons offered for the surprising success of WAC over the last 27 years. But you know, the I think it's the acronym. WAC. Have you ever had colleagues good naturedly kid about the acronym. "This is WACy!" There is something a little crazy about this whole thing.

In 1984, when the WAC movement was 14 years old, I first started researching the history of attempts to improve students' writing across the curriculum, dating back to the beginnings of mass education in the waning years of the nineteenth century (Russell). What struck me most often and most forcefully then was that the WAC movement had lasted longer—and involved far more students and teachers—than any previous attempt to improve writing across the curriculum—and there had been many, I found.

Now in 1997, as we celebrate the 27th anniversary of WAC, and we look at mass education in the waning years of the twentieth century, what still strikes me most often and most forcefully is that the WAC movement has lasted longer—and involved far more students and teachers—than any previous attempt to improve writing across the curriculum. And unlike so many other educational reform movements, it's still growing, as this conference attests—dramatically. WACy!

So I think the big question for the future of WAC is "In what directions shall we expand?" Expand where, how—and with whom? Because there's every indication that WAC will expand, as it has for 27 years now, since Barbara Walvoord began what was, as far as we can tell, the first faculty writing workshop at Central College, in Iowa, just down the road from where I teach in Ames.

I agree completely with Barbara Walvoord, when she says in her recent *College English* article on the future of WAC, that we must not focus too much of our attention on the enemies of WAC, present and potential, but instead focus on our allies, present and potential. We've got to be open to new and more powerful ways to expand our connections, our network of influence. Influence for good.

This doesn't mean that we have to play Pollyanna and ignore the serious challenges that face us, in our classrooms, our departments, our campuses, our legislatures. Because we all know that those challenges are there. And it's at meetings like this that we can learn from others and expand our professional and personal networks to help us meet those challenges.

But we mainly need to celebrate our accomplishments, our amazing history, not for pointless self-congratulation, but to realize the enormous possibilities in WAC. I just want to point out two directions for expanding that our history suggests, realizing that each one of us here in this room could also point to possibilities for expanding. (And also realizing that for those of us who do WAC, burnout from overwork is never more than a semester away.)

Writing Across Workplaces

The first direction is expanding into those workplaces that our students will enter and, eventually, in this fast-changing culture—transform. That's why we're doing this work in the first place, isn't it? To help students learn by expanding, as Yrjö Engeström puts it, to empower students to enter and transform those workplaces—to change those students and those workplaces for the good. So studying the ways writing is used in workplaces, consulting with people in workplaces about how to use writing more effectively and ethically, can expand our usefulness, our social credit as experts in writing and learning—and our social credit as an educational reform movement. (It can also teach us a very great deal about how to construct our assignments and our courses and our day-to-day interactions with students.) Because WAC is not only about writing to learn, it is also about writing to learn *to do*—with others. Active learning means expanding our students' and our own involvement with other people, with powerful social practices—disciplines, professions, institutions, communities, organizations of all kinds where writing can be transformed and transformative.

Research into workplace writing is well under way—as it was not fifteen years ago, when we knew very little about writing in academic research, in government, business, industry, and non-profit advocacy and community organizations (Peck). From the pioneering research by Lee Odell and others on writing in "non-academic settings," as it was called, to the pioneering work of Bazerman and others on writing in academic research (which is of course another workplace), this research has become a major direction, increasingly acknowledged as valuable in other fields. It is, I think, a milestone that there is a wonderful new series of books, published by Erlbaum, reporting research on how writ-

ing works in worlds of work, and how students come to enter and transform them. The first in the series, by Dorothy Winsor, is a superb longitudinal study of five engineering interns as they moved into the workplace. And another milestone, I think, is that Susan Peck MacDonald's study of professional academic writing in the humanities and social sciences won the CCCC best book award last year.

Research has opened doors for the expansion of WAC programs into workplaces, and this is already going on, through service learning, consulting, and a host of other ways. It's terribly exciting. People in business, government, and non-profit organizations are often eager to invite in people with expertise in written communication (and they often have grant funding money, I might note in passing). We need to recognize and celebrate the fact that we have expertise that is real and valuable—and real valuable.

I am thinking of the work in finance at Clemson, or the work with a range of businesses at Robert Morris, or the work with community activist groups at Carnegie Mellon (Peck). And there are a many others. At Iowa State, for example, we're funded for two years from the US Department of Agriculture to research writing in typical government, business, and non-profit workplaces, and construct a Web site of materials to help students and teachers *and* workplace professionals understand the functions—and importance—of writing and other communications media in their work.

Through research, consulting, internships, practicums, service learning, distance learning, on-line writing centers, and myriad other kinds of involvement with worlds of work, WAC can expand its influence for good (Adler-Kassner). We must remember that learning to write and writing to learn are valuable in so far as they help us and our students *to do* important things with others, not only in school but beyond school, to make a difference in the worlds students will enter—and eventually remake. That is the progressive vision of active learning that is ultimately what WAC is about.

So that's one direction for WAC. And by the way, writing across workplaces also gives us a great new acronym. WAW. Which I suggest we pronounce WOW.

Writing Across the World

A second fascinating direction WAC is expanding is into other nations. Really. Now in one sense, nations outside North America already have writing across the curriculum, because students are assessed on the basis of their extended writing in the disciplines. And they have virtually no composition courses, as we do, that try to teach writing in general. But as the pressure in other nations mounts to admit students

from previously excluded groups—working class students, students of color, and women—educators are finding that they need structures for supporting those students, and the faculty who work with them. They are finding they need something like WAC—in our sense of it.

In England, for example, at Lancaster University, a support center originally designed to help international students learn English began a very effective program to involve faculty in the disciplines in helping them. The faculty got together and talked over the needs of the students, then held workshops for them. The tutors in the support center began offering help on writing the specific discourse of the various disciplines. Then a very interesting thing happened. When English working class students saw how effective it was for international students, they began attending the sessions. In essence, the faculty employed the idea of WAC to make a difference for non-traditional students (Ivanic).

In South Africa, academic support units, emphasizing writing, are springing up in universities and secondary schools, which have enrolled vast numbers of new students with the fall of apartheid. At the University of Cape Town, I understand they even have a kind of writing-mobile, like a book-mobile, to offer tutoring and consulting services to students and faculty across the curriculum and across the city. Students can get help with writing—and essential materials that are often unavailable in schools sorely in need of them.

Similar movements to understand and use writing for learning in the disciplines are springing up around the world. Australia and New Zealand are becoming pioneers in WAC research and program development (Radloff and Samson). There is a growing movement toward writing centers in nations that have traditionally been highly selective in admission to higher education and have now begun admitting non-traditional students. I understand there are even writing centers in France.

Innovators around the world are beginning to look to North American writing research and practice for ideas, for inspiration, in their search to build more effective and more inclusive education. So I think we need a new acronym for writing across the world! WAW—which we might also pronounce WOW!

Conclusion: First Principles First and Last

Educators in other nations look to us because what we have built in 27 years is certainly inspiring. WAC has expanded because it meets a deep need of people in modern societies, to connect with each other. That's what writing does, isn't it? It connects us to one another in powerful ways. And by learning to write in new ways, students are expanding their involvement with different worlds that make up our world. We're finding

ways to help students enter and eventually transform powerful organizations of people, lives linked by the written word, in ways so pervasive and daily that we forget sometimes how powerful writing is to our futures—and the futures of our students. So if students learn by expanding their involvements, so too must the WAC movement learn by expanding, as it has for a quarter century now. The future of WAC, like its past, is about forging alliances, expanding with new connections. And I'm terribly optimistic about its future.

As Barbara Walvoord pointed out, WAC—like so many other movements—may be transformed through its alliances and involvements into something that looks very different than the movement looks today. It might not even be called WAC. But the deep principles on which the WAC movement was founded, and to which it has persistently held, should continue to undergird whatever new transformations we create. These principles were articulated beautifully on Thursday by Elaine Maimon, who has done as much as—perhaps more than—anyone to make the modern WAC movement what it is. Here they are:

- Writing is a complex process integrally related to thinking.
- WAC means active learning across the curriculum.
- Curriculum change depends on scholarly exchange among faculty members.
- Writing helps students make connections.
- WAC helps faculty members make connections, with students and with each other.
- WAC leads to other reforms in pedagogy, curriculum, and administration.

The first is a truism (and we have the WAC movement to thank for making it so). The second emphasizes *active learning.* The third, fourth, and fifth are about *connecting,* expanding. And the last is about the change for good that can come when we actively learn by expanding, connecting. Whatever changes—transformations—we and WAC will experience, in the next 27—or 54—years, whether across the curriculum, across workplaces, or around the world, I hope we will hold to these principles and continue to actively learn by expanding our connections with others. Then we can always be a little amazed at the movement, at ourselves. And say it's wacky. Wow!

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Good Writing Assignments = Good Thinking: A Proven WID Philosophy[1]

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The University of North Carolina at Pembroke

In his remarks about the future of WAC at the conclusion of the Writing Across the Curriculum 3rd National Conference, David Russell observed that WAC has historically been about writing to learn. He sees WAC's future as "writing to learn to do." This is exactly the nature of the Writing In the Discipline (WID) philosophy I have developed over the past decade. This philosophy allows me to easily construct questions that ask students to write in order to learn how to think like a chemist, that is, to learn to do chemistry.

Nothing about my philosophy of writing assignments limits its use to chemistry. It would work in any discipline helping students learn how to focus their thinking along the lines of that discipline. That is the spirit in which I present these models, appropriate, I believe, for any discipline. The examples presented below are drawn from the chemistry courses I teach.

Some years ago I was a member of a Task Force charged to develop a WAC program at a different institution. The short version is that the effort failed for a variety of reasons, one being the broadly based skepticism of the faculty. Their comments are probably all too familiar to many of you: "My teaching load is already too high; I don't have time to teach writing too," "I'm not trained as a writing teacher," or "How can I use writing to teach . . . (insert their discipline here)."

I struck out on my own, taking what I had learned about WAC. This included the long standing premise that writing is a form of thinking. A nice concept, but rather vague, I thought, and of little practical use in designing writing assignments. After a few years I had developed or borrowed several writing assignments that worked for me in teaching chemistry. When again prompted to think in a WAC-y way, I discovered that all of my writing assignments asked students to think carefully about something and to describe to me their thoughts. The light dawned. I was not giving writing assignments; I was really giving thinking assignments.

The vague concept was really not so vague at all. It was just a matter of learning how to apply it.

WID Philosophy

My WID philosophy is quite simple and drawn directly from the premise that writing is a form of thinking. I no longer think of my writing assignments as writing assignments, but rather as *thinking* assignments. I decide what thought process, concept or factual material I would like my students to understand and then devise a writing assignment focusing specifically on what I want them to think about. The more focussed the assignment the better. Some of my assignments are sharply focused on a single idea. For example, "In . . . the key step is . . . Explain why." It is my experience that thinking about writing assignments in this way allows me to create far better assignments much more quickly than I had in years past.

While assignments based on this philosophy work well to teach chemistry, do they also work to teach writing? Not necessarily, but they can if structured appropriately. In order to write better it is necessary to think critically about your writing. One way to accomplish this with students is to have (force?) them to rewrite their work, not merely revise it. If they take it seriously, this almost always causes students to sharpen their writing. There is something circular occurring here. If writing is a form of thinking, and if students write better, they think better too. Better writing requires better thinking which generates deeper understanding—what I really wanted in the first place.

My course syllabi tell students at the beginning of my courses that I expect clear, concise writing and will help them learn how to write better if they will put in the effort, but that I can't learn it for them. I use two basic tools to teach writing. The first is that even though I'm not trained as a writing teacher, I *can* recognize poor writing, awkward phrasing, improper grammar, illogical word choices and the like when I see them. Being ill-equipped to teach writing, I use my second tool, referring students to our writing center for more expert help than I can give them. To make the referral stick, I do not accept a revised paper until I have the confirmation from the writing center that the student was there. I also expect a higher standard of writing on a revised paper than on the original. In fall term classes with mostly new freshmen, I will often refer every student to the writing center, after warning the writing center to expect an influx, to make sure the students know where it is and how it can help them.

Proven Writing Assignments

Space prevents me from giving many detailed assignments here. I will present the basic outline of four types of assignments, give a few examples, and allude to others. If you want futher information on any of these, feel free to contact me directly.

A bit of my teaching philosophy is in order here. I have two primary objectives in any course. The first is to teach chemistry, the second to ground that chemistry firmly in students' experiences and in our culture and society.

The Issue Paper

For a number of years I have assigned a term paper centered not on a topic but on an issue related to the course. The assignment is to give a balanced discussion of all the opinions (political, moral, ethical, economic, medical, etc.) on that issue, and then to state and defend (as if to a person of the opposing view) their own opinions. The over-all goal is to develop an informed opinion. The assignment is in a process writing framework with an outline and one or two drafts required, all peer reviewed by two other students. In the last peer review, I ask the reviewer to play the role of an opposing opinion and press the author for a rational defense of their opinion. We then spend some time discussing the sometimes vocal debate that ensues. One important question I want students to consider is whether there is a single right answer or valid opinon. I propose that they may need to be able to agree to disagree while remaining respectful of the other's opinion.

This assignment works extremely well, causing students to think deeply and critically about the relationships between the chemistry we are studying and issues that often swirl around its technological applications. Numerous students have told me that it has caused them, some for the first time, to recognize the distinction between an informed opinion and one adopted from another without much thought.

Two-Part Writing Assignments with a Twist

I have a number of two-part writing assignments. The first may be an essay answer on homework or an exam, or may be a short paper. Then I twist the assignment, forcing the students to rewrite (rather than merely revise), taking the writing to a higher level. A number of scenarios will get the process started: A letter to grandma, friend, or middle school student they are the mentoring, an essay question on an exam, a brief (1-3 page) paper, and others.

One such assignment begins either in homework or on an exam with an essay question asking students to write a letter explaining a concept to another person with far less background knowledge. In other words, they must explain a complex concept in clear, simple language, a task requiring considerable understanding to do well.

I then inform them that their letter was shown to someone (an uncle perhaps) who works for an encyclopedia company. You explained the concept so well, I tell them, that they want you to write an entry for their next CD encyclopedia. It should be presented with complete background (some students will have to add more supporting background) information. We usually discuss what this might be in class. Students rewrite or expand as necessary and submit their entries to the encyclopedia company. The review comes back: "It's too long. Don't cut any of the necessary background, content, or explanation, but trim your encyclopedia entry to about half its original length. Can you explain the concept clearly with fewer words?" In effect, students are being asked to try to develop a clear understanding of the concept that they can present cleanly and concisely. The second version is usually far better than the first. The best encyclopedia entries are "published" to the class.

In a sense this is actually a three-part writing assignment. As I think of it, and as it seems to function, the first two parts are actually sub-parts of the first portion of the assignment. Having to cut the entry to half its length represents the second step in which students are forced to critically evaluate what they have written and consider how they can express their ideas clearly and succinctly.

Another two-step assignment begins with the railroad line just south of our building. Many railroad tank cars are printed with the name of the substance the car contains. Students pick one, go to the library, and find something about it. In 2-3 pages, they tell me about it, where (chemically) it comes from, and what it may be used for. In the second step I ask them to write a short story with this substance as the main character. Where does it come from, where is it going and what will it do when it gets there? I ask them to consider this substance's journey both literally and figuratively, as well as be creative.

As you can see, the second step of these assignments has students rewrite, often in a different style or voice, which forces them to rethink what they want to say and sharpens and focuses the resulting product. I find that by the third or fourth such assignment in a term, my students are writing better at the beginning of an assignment, because they know I expect it, and they generally write more clearly on almost every assignment. There are essentially an infinite number of potential scenarios for two-part writing assignment as described here. The only limit is your imagination.

Writing in Bloom's Taxonomy

Bloom's taxonomy of cognitive educational objectives provides a useful way to construct questions to determine how thoroughly a student understands a concept (Bloom 201). The taxonomy is a 6-level, hierarchical set of education objectives or thinking skills.[2] Rosenthal (996) has published a similar set of skills, based on the work of Kiniry and Strenski (191), as a hierarchical set of expository writing tasks. The striking similarity of Bloom's thinking and Rosenthal's writing skills further suggests the intimate relationship between writing and thinking.

I often construct a series of homework or exam questions based on the same material but requiring successively higher thinking skills. It is not necessary to hit all six, but at the college level the questions should cover both lower and higher level thinking skills. Writing good questions that probe a specific cognitive level requires careful thought and practice. A complete set of learning objectives helps.

The first example comes from freshman chemistry and has three parts. The first uses level 1 and 2 skills, the second level 3 skills and the last level 5 skills. The last part involves two opposing influences. The key it to recognize which is more significant and why.

> A. List four factors that affect the rate of a chemical reaction and explain briefly how each functions.
>
> B. For the two cases described below, determine whether the chemical reaction would speed up or slow down and explain why.
>
> C. Suppose for the same reaction the $CaCO_3$ was crushed to many small particles and the acid concentration was cut in half. Would the reaction speed up or slow down? Explain your reasoning.

The next question is taken from a take home final examination for a course in chemical instrumentation, a senior level course. It has three specific questions. The first is worded as a level 1 question, but really requires understanding of the concepts, a level 2 skill. The second question requires thinking skills from levels 3 and 4. The results of the second question are ambiguous, leading to a third question requiring both level 4 and 6 skills. The questions on this exam were based on the (fictitious) analytical company for which the student works.

> H. I. Analytical needs to purchase a new visible spectrophotometer. You have been asked to make a recommendation to the boss. You ask your colleagues how

they are using the current instrument and what future uses they anticipate.

[A set of comments from several persons on the current and planned use of this instrument and its potential future use are given, along with comments from the boss regarding possible future expansion and budget matters.]

A. Develop a list of instrument specification criteria needed to meet the requirements you have been given.

B. Attached you will find a copy of the specifications for a number of different instruments. Determine whether and to what extent each of these meets the criteria developed in A.

C. Select the instrument(s) best suited to the company's needs and prepare and justify a recommendation for your boss on which to purchase.

Short Writings

I use a number of short writing assignments combined with another type of problem in much the same way as Yakali has shown works in chemistry and Mower in algebra in their presentations at the recent WAC conference. Typically these ask students to explain how they approached or solved the accompanying problem. For example, I might ask my freshman chemistry class to solve the following limiting reagent problem:

> Determine the mass of phosphoric acid that can be produced by the reaction of 1.00 metric ton of phosphate rock ($Ca_3(PO_4)_2$) and one metric ton of sulfuric acid in the commercial process below. Explain briefly the step-by-step procedure you followed in solving this problem.
>
> (Chemical reaction omitted)

In many cases asking for a step-by-step process reminds students to think of the problem in a stepwise way rather then being overwhelmed by the entire problem. Thinking about how they solve a problem also helps them understand better how to solve it, rather than just memorizing and following a "cookbook" procedure. Sometimes I merely ask for an explanation of how to solve the problem and not the solution itself.

Another short writing assignment I have found useful is to have students begin to devise a procedure to solve ... (some particular type of problem). I usually use this in a cooperative learning setting, not giving groups enough time to work out an entire procedure but enough to begin

thinking about it. We then pool approaches and devise a complete process.

Cooperative learning situations afford a number of writing opportunities, too many to describe here. For a good introduction to the theory and practice of cooperative learning at the college level see Johnson et al.

One more cooperative learning assignment that I find useful is based on structured controversies (Smith 309). It works well for an issue-laden topic. I last used it on the spur of the moment when several students had questions about a hot, local environmental issue. It was a digression from freshman chemistry, but was nevertheless one of the most worthwhile assignments I used that term. I was able to draw the issue back into chemistry at several subsequent points and discuss the relevant chemistry involved. The assignment takes all or most of a period and begins when I give each student in a group a different position on an issue.

> A. Individually, write several short (1-3 sentence) reasons for supporting this position.
>
> B. You are all members of the Anytown City Council. You must come to a consensus on this issue at tonight's meeting, to present to the County Commissioners next week.
>
> In your coop. group, consider all the members' positions and come to a consensus. Do not vote; persuade. Turn in each student's position statements, your group consensus, and the justification for it that you will present to the County Commissioners.

In a variation of this assignment you could have different groups develop positions on opposing sides of an issue and then stage a debate.

Conclusion

I have found that using the philosophy of ~~writing~~ thinking assignments presented here, I am able to use writing as a teaching tool alongside the other, more typical teaching tools of chemistry. It bears repeating that though I use it in chemistry, nothing about this philosophy limits it to chemistry. I believe that if you can clearly articulate what it is that you want students to think about, it is possible to create a tightly focused thinking assignment by asking students to write about that subject. Furthermore, creating assignments that cause students to think critically about what they have written causes them to think critically about their own thinking as well, generally resulting in clearer thinking and richer understanding.

To those of you from disciplines where writing has long been the primary tool for thinking and communicating, this is probably old news. But for persons in disciplines where the primary thinking tools are symbols, equations, graphs, pictures, or mathematics, it may offer a new way to translate thinking done in those more abstract dimensions into the written word, and more importantly, show our students how to make this translation too, improving their thinking and learning in the process.

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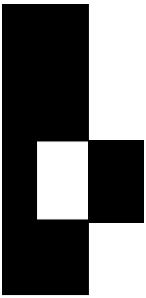
Notes

[1] Presented in part at the Writing Across the Curriculum, 3rd National Conference, Charleston, S.C., Feb. 6-8, 1997.

[2] The six levels in the cognitive domain are shown below, given with several learning objectives appropriate for each level. Levels 4-6 are generally considered higher level thinking skills.

1. Knowledge - recognize or recall information
   List, recite

2. Comprehension - understand the meaning of information
   Explain, paraphrase
3. Application - use the information appropriately
   Calculate, solve, determine, apply
4. Analysis - break information into component parts and see relationships
   Compare, contrast, classify, categorize, model
5. Synthesis - put components back together to form new products or ideas
   Create, invent, predict, design, imagine, improve, propose
6. Evaluation - judge the worth of an idea, theory, opinion, etc., based on criteria
   Judge, select, decide, critique, justify, verify, debate, recommend



Writing to Learn and Journal Applications in the Introductory Astronomy Course

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The Introductory Astronomy Course is offered at Gardner-Webb University as an option for fulfilling the core physical science requirement. For several years the course was taught as a basic introduction to astronomy, with assignments limited to laboratory exercises and the option of a research paper or observing project. After several semesters of reading papers on the same old topics (Saturn and Venus seemed to be quite popular, as well as black holes, where many students found themselves over their heads), and chasing down potential plagiarism cases, a variation on the traditional research paper was sought. In particular, research and writing assignments were needed that would be more specifically suited to the semester at hand, and that would allow for individual expression.

The concept of Writing Across the Curriculum (WAC) presented itself as a vehicle through which such new assignments could be built. WAC, especially the "writing to learn" aspect of it, encourages students to learn about material by presenting situations in which the required writing is not so formal as the standard research paper. After attending two Gardner-Webb WAC workshops led by the Director of the Writing Center, several existing laboratory assignments were re-worked into a student observing journal. This log of observations was designed as an opportunity for students to write about their discoveries and frustrations as they attempt to understand the workings of the sky around them. Subsequent Gardner-Webb WAC Retreats (Price 47) allowed further development of similar writing-to-learn applications for the introductory astronomy course, including a number of simple writing assignments that help students express their frustrations and curiosities concerning the course material. More complicated research-based assignments were also developed at these WAC Retreats, including planet exploration pro-

posals, proposals to use major telescopes for observation of specific astronomical objects, and Internet surveys (English).

Of these varied non-traditional writing exercises, all of which are currently being used in the course, the logs and simple writing assignments have been especially beneficial to the course instructor as indicators of student progress. They also seem to have benefitted the students as well, by requiring them to write about what they are learning in class.

Observing Log

One of the easiest and most effective ways to incorporate writing into the astronomy course is the observing log. The course originally required two separate observing lab exercises in which the students attempted to note the effects of Earth's rotation and revolution through observation of diurnal and long-term shifts of the constellations. After the first Gardner-Webb WAC Workshop these exercises, along with others involving the phases and motion of the moon and telescopic observing were integrated into the observing log assignment. An open-ended general observing component was added to allow for more free writing on personal sky-watching experiences.

Thus constructed, the log is a natural application of journal writing. Good record keeping is important in astronomy, and application of the observing log to the introductory course helps develop student observing and communication skills. For many students this is the first time they have paid close attention to the sky, and the descriptions are often fascinating to read.

In the log, students are asked to record their general impressions of the sky at least twice a week (increased frequency during the condensed summer sessions). They are encouraged to include any sky related observations, including constellations, sunsets, weather, halo phenomena, and of course, the moon. These observations are set up so as not to require too much on-site time at the University's Williams Observatory, allowing students to do most of the work according to their own schedules. A lab session during the first week of the semester is used to clarify the specific and general goals of the assignment and to set a timetable. This session also provides an opportunity for the students to calibrate their hands for use in making angular measurements in the sky. It is often quoted in astronomical guides that the typical outstretched hand held at arm's length subtends an angle of about 20 degrees, but measurements made for this course tend to run in the 15-18 degree range. With knowledge of their angular calibration at hand, students can make rough measurements of positions of objects in the sky at any time, and from any location.

The logs are evaluated three times per semester, the first two serving as feedback, and the last scored for credit. Students are required to turn in the logs each time, as each evaluation covers only a certain window of time. For instance, the 24 March evaluation during the present semester (Spring 1997) covers observations made between that date and the 13 February evaluation. Log entries are noted on a special calendar-format evaluation sheet (Figure 1), with additional comments recorded for future reference. Brief comments are made throughout the student logs, and short summaries are included to guide students in future observations. The final evaluation is based on the accomplishment of the stated goals, with the three evaluation sheets used to compile the final grade. With this method of organization, a semester total of about an hour is spent reading, marking, and recording each log.

Early log entries tend to be sketchy accounts of the weather, and they often show students' frustrations with having to interpret a sky to which they have paid scant attention prior to enrolling in the astronomy course:

> ... the stars are clear and bright - there are so many and I'm having trouble finding the constellations on my star map. I think I see the Little Dipper, but I'm not sure.

Many students eventually develop enough confidence in their observing skills to fill pages with descriptive entries. An excerpt from a later entry by the same student shows this development.

> ...I identified many constellations, and noticed even more stars than usual. I attributed this to the especially dark sky and clear conditions tonight. Most surprising to me was what I saw in the constellation Orion. The "sword" appeared to be linked by a faint line of stars to the "belt." I have never noticed this before.

Poor weather is often as an excuse for not having any meaningful entries. Students are asked to observe approximately twice a week, and during the present semester only about 55% of the nights have been clear enough for extensive observations.

> I am observing the sky from outside my dorm. The sky is cloudy and it has been raining - just like the night before. I can't see any star nor can I see the moon.

This was the second in a series of five increasingly desperate entries submitted late one semester by a student who still had several observing tasks to accomplish. The weather occasionally gives unexpected opportunities for the students, such as the times when the local television personalities are forced to report on topics in astronomy about which they know little or nothing,

> ...I caught an error on the evening news tonight. The meteorologist clearly doesn't know the phases of the moon... she was about to give the weather report when she showed a picture of the skyline and the moon. She made a comment about how beautiful the moon was a few hours ago - that it was big and orange and (here it is...) not quite full, but getting there. Sorry, but you're wrong! It is now a waning gibbous moon. It was full on Sunday.

What a proud moment for the student and the instructor. A goal of every teacher is to produce students who are competent enough to hold their own in the subject after the class is completed. This student is well on her way, as is this one

> On my way to the post office at 10:00 a.m., I was thinking about the moon phases I had seen this week, and decided that the moon should be out this morning. It was! The sky was very clear and blue, and the moon was a faint waning gibbous moon, setting in the west.

Many log entries involve the sharing of newfound (even if limited) knowledge with friends and family. The following entry, like the last, describes the moon as seen in the daytime -- an occurrence many thought impossible before taking the class

> Walking out of church I saw the moon in the west and showed it to about seven of my friends. They were impressed. I told them about next week's meteor shower and some of them might try to watch it with me...

These writings show a general enthusiasm for the sky that would not necessarily be developed in the traditional classroom treatment (no matter how many pretty pictures the students are shown). Students who gain an appreciation of the sky developed through the process of keeping an observing journal will be able to share that appreciation with their children and grandchildren -- long after they have forgotten how

many moons orbit Jupiter, the difference between a white dwarf and a neutron star, and the intricacies of astronomical spectroscopy. Though this is a simple exercise, it is truly writing to learn.

The first few times this assignment was made there were several instances of students submitting falsified entries. Perhaps they hadn't thought that an astronomy instructor who stressed observing the sky might keep his own log. Constellation observations on rainy nights and bright early evening moon apparitions during third quarter phase are easily spotted as fraudulent, especially when the instructor's log is plotted on the evaluation calendar form and used for comparison.

Questions/Response: Sky and Stars

During the past few years occasional in-class writing exercises have been used to gauge student interest in, or understanding of, course material. Typically, the first class meeting of a semester includes two such assignments. First, the students are asked to write about "something related to space or the sky" about which they are curious. This exercise helps identify areas of student interest for the instructor, and gives students an indication that they have some influence over the choice of topics for the course. Since astronomy is such a wide-ranging science with a range of new topics in the news each year, there is the possibility of tailoring course topics to suit student interests or events in the news (Caton 29). Such specially constructed courses lend themselves naturally to writing-to-learn activities, and some of the exercises discussed herein were used in such a course at Gardner-Webb.

Students come to the class armed with curiosity about the sky and space, and when prompted to inquire in writing about something they have seen in the sky, they respond with a wide range of topics. Basic observational questions are covered, such as,

> People often discuss observing the Milky Way. I have tried several times to see it, or to understand what they are talking about, but I still don't know or can't see it. Is there such a thing and if so, where in the sky and at what time should I look?

This student has a valid concern. References to the Milky Way are common, and the proliferation of astronomical images might give one the impression that they should look for a majestic spiraling galaxy somewhere in the sky, not the faint luminous band that is visible only from dark locations away from light pollution. When prompted by such questions, the instructor can point out and discuss the Milky Way during

class observing sessions. Other submissions touch much deeper concerns than observing,

> Could it be possible that everything, well maybe not everything, but could a bunch of rocks come crashing down to Earth and kill everyone? (At least in my lifetime?)

In these days of increased awareness of asteroids that cross Earth's orbit, such questions have become common, and this topic produces some of the most animated discussions of the whole semester.

The second initial writing exercise, one that produces especially interesting results, is the "What is a star?" assignment. Also at the beginning of the semester, before any information is presented, students are asked to describe their understanding of what stars are. Responses range from the roughly correct representations,

> A star is basically like our Sun, since the Sun itself is a star. Stars are made of gas and are burning in some way. They are formed in a cloud of gas. They eventually die and blow up leaving another cloud of gas. They rotate like Earth.

to misconceptions and the predictable discussions of meteors (so-called "shooting stars" or "falling stars")

> I think a star is a bright light in the sky. We use the stars for guides because if you look in the sky, the brightest star points to the north. I also feel that a star is a piece of something that has fallen off of something in the sky. If you see a star fall from the sky you are supposed to make a wish and it will come true.

The papers are collected and redistributed in anonymous format two months later (after we have discussed stars in detail) for evaluation. In the evaluation stage, students are asked to critique, correct, and add to, the papers they have been given. They are often surprised at the naive and sometimes bizarre descriptions they are asked to critique. Cases like the second example cited above require several obvious corrections, but the first example contains a few subtle points in need of correction or clarification (the "burning," "rotate like the Earth," and "blow up" points in particular). The responses show the confidence that comes with knowledge of the subject, and are useful indicators of student understanding of the material. The environment in which the evaluation is undertaken is not so tense as a regular examination, as students are given half credit

for submitting an initial star description, and are asked to earn the remaining 50% with their discussion of the writing sample.

General Questions/Response: Dealing with Problem Material

Short in-class writing assignments can also be used to probe student knowledge and to identify problem topics. For several semesters, in-class writing was assigned on occasion to address problems students were having with material that had been covered to date. The assignment required that students write about a topic with which they had struggled unsuccessfully to understand. Simple questions alone were not accepted. Each response was to include a discussion of what aspects of the topic were understood as well as notes on where trouble arose. Comments and follow-up questions were noted by the instructor on the collected papers. Upon return of the papers, the students were asked to answer their questions and clarify their earlier statements. Again, 50% credit was granted for acceptable initial responses, and the remaining credit was earned through the student follow-up. Such exercises were typically assigned 2-3 times per semester. They allowed students an opportunity to overcome problems with the material, and helped the instructor identify problems the class was having.

For the present semester's large class (28 students), this idea has been carried to an extreme, in interest of determining 1) the usefulness of such an approach on a regular basis, and 2) the best way for an instructor to handle a large flux of student response writing. Students are asked to bring questions/discussions and general reading responses for each reading assignment (typically two per week). The same restrictions apply as in the occasional assignments of previous semesters, and some instructor response is noted on each paper, but there is no required follow-up. In this format the assignments function as an information exchange between student and instructor. Students are encouraged to cover specific topics in the assigned reading, or to branch out to related topic of interest, always taking care to discuss the nature of their understanding and the context of their questions. Responses range in length from a couple of sentences to a page, and they might contain one question or several. Grading is handled on a five-step scale, with scoring indicated as +, ✓, -, x, and 0. The highest grades are rare, and are reserved for students who really engage the material, communicating effectively their level of understanding and developing well-thought-out questions. Students are advised that the point of the exercise is not to get things "right," it is to communicate what they are understanding/struggling with about the material, i.e., it is okay to be wrong. Any reasonable attempt to indicate a problem with the material at hand will

score at least a -, and the last two grades are reserved for inappropriate or no response. Several grades are dropped when calculating the final assignment average, so that absences and occasional lack of response is allowed.

Typical response rates are about 75%, and it takes approximately an hour for the instructor to work through the papers. Instructor comments range from brief notes of clarification or suggested reading to half-page discussion of the topic. The papers are read the morning before the upcoming class, thus preparing the instructor to cover any points that need further clarification, or to expand the discussion in a new direction indicated by student interest.

It is common that certain topics will confuse large numbers of students. Consider the case of synodic and sidereal periods of a planet. In the grand scheme of the course this topic is not particularly important, but as students make their way through the text they often come to a grinding halt when confronted with it. Reading responses from this chapter sometimes focus on synodic and sidereal periods, with a wide range of results. For instance, after reading the material, one student guessed the definition of the synodic period as follows:

> ...Is the synodic period the time it takes to go around twice? Or am I not even close?

While another student asked,

> Is the difference between the synodic and sidereal periods just that sidereal is the time for one orbit and synodic the time for half an orbit?

These students read the same material, but reached very different, and both wrong, conclusions about the nature of the synodic period, which in reality is just the time it takes for successive orientations of Earth, Sun, and Planet to occur (The sidereal period is essentially the time for one complete orbit .). Other responses range from the whimsical

> ...if the Sun were cubical would it produce square orbits, assuming that the planets were cubical as well?

to the reflective (note the recurring impact theme)

> After reading this section I have come to realize that collisions between objects in space are fundamental in shaping the

> planets and satellites. If this is so, should we be worried about getting hit?

At first, there is quite a bit of resistance to writing about what one does not know. Students believe that if they write something that is wrong, that they cannot receive full credit. There is also the fear of asking the ever-dreaded "stupid question." Thus, early responses tend to be straightforward questions and pleas for help with difficult material, along the lines of

> I do not understand Kepler's Laws. Can you please explain them to me?

Though this response serves the purpose of informing the instructor about a problem topic, it does not shed much light about the level of understanding the student has reached. Such responses are scored low, with feedback added to encourage students to tell more about what parts of the material they do understand, and where it is that they become unsure. They are also encouraged to attempt to explain the topics as best they can. In doing this, they are forced to confront the material. It is this engagement that helps the learning process, and stimulates class discussion. An amazing transformation happened to the class only two weeks into the present semester. During the lecture of moon phases and eclipses a sudden flurry of questions erupted from a class that had been mostly silent to that point, elevating the discussion to levels rarely reached. Having an audience that has done its background reading and wrestled with the material has its advantages.

The questions generated by this method are quite useful for the instructor and the student. The instructor sees something of the student thought processes, while the student gets personal feedback on topics of interest or difficult points. It is interesting that some of the students who are least likely to talk in class are contributing some of the most involved responses. Thus far, discussions with students in and out of class have revealed a level of general competency and familiarity with course material that has been lacking in the past. This is a direct result of the daily interaction with the information presented in the textbook through a simple writing-to-learn exercise.

For a large class (for the case at hand, large might be defined as more than 20) daily assigned reading responses impose a severe burden on the instructor. A scaled-down version of this approach would be better suited for the course, perhaps weekly responses, or full-chapter responses would still accomplish the goal of producing students who are

prepared for the lecture, and who communicate their understanding of, and problems with, the material to the instructor.

Inclusion of writing to learn exercises in the form of observing logs and various in-class writing assignments and required reading responses has favorably enhanced the introductory astronomy course at Gardner-Webb University. The student writing allows the instructor a means of assessing student progress, in addition to allowing the students an opportunity to receive feedback on the material at hand. It has been an experiment worth undertaking, provided that class sizes are small enough to keep from overburdening the instructor, and will continue to be applied by this instructor, both in the formats presented here, and in other applications.

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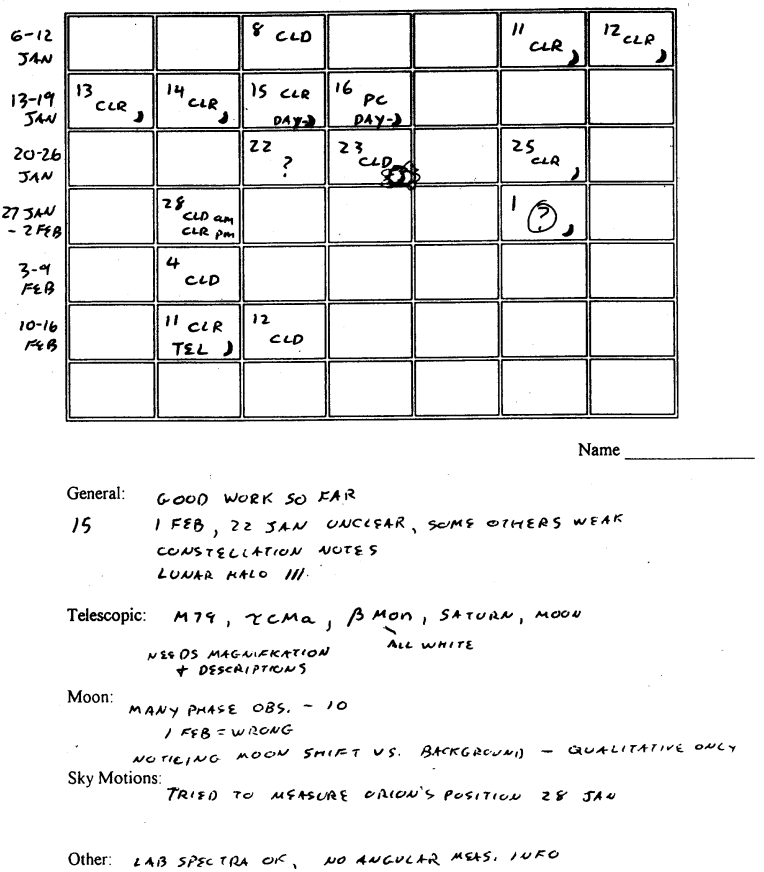

Figure 1. Sample evaluation sheet for observing logs. Each student observation is noted in the calendar section, while specific comments regarding individual requirements of the log are noted in the allotted areas. Calendar abbreviation key: CLR = clear, CLD = cloudy, PC = partly cloudy, TEL = telescopic observations made on this date,) = moon observation.

The Odd Couples: Interdisciplinary Team Teaching

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I. THE FOCUS PROGRAM

In 1993, the University of Vermont was looking for ways to improve first-year students' academic experience. In my role as director of UVM's Living and Learning Center, I (Char) worked with the College of Arts and Sciences to create the FOCUS program (Focus On Creating Undergraduate Success) in order to offer students some specific types of experiences in their first year: (1) I wanted them to have at least one small class and to have that teacher be their academic advisor; (2) I wanted them to understand the nature of disciplinary perspectives, so courses are interdisciplinary and team-taught (two faculty members, thirty students); (3) I wanted them to be actively engaged in processes of writing, reading, and speaking; and (4) I wanted students to live together and work on collaborative projects so they would make more connections between their in-class and out-of class lives.

As for the faculty teaching the FOCUS classes, I thought that they'd simply be doing what they already knew how to do well: teaching from their discipline's perspective. They'd have a chance to teach the course of their dreams--on a topic of their own choosing, to a small group of students. And they would be stimulated by learning another discipline's approach to their subject matter.

In fact, faculty did respond in the ways I expected. During the summer, as they chose texts and designed syllabi and assignments, they were excited and enthusiastic about the richness of their course materials; they could hardly wait for the students to arrive. But when fall came, with it came some surprises for both the faculty and me.

I soon discovered that while faculty did expect their teaching partner to approach the subject matter from a different disciplinary perspective, they did not expect that partner to approach teaching the subject matter differently. But differences in assumptions about teaching con-

tinually emerged in each team: over how to run the classroom, over the relative importance of "content" and "process," over how to approach texts, over teaching the writing process, over how to respond to students, over evaluation.

In the following two stories, we see the differing assumptions teachers from various disciplines bring to their teaching, the ensuing surprises and tensions that emerge when they try to team-teach, how these tensions shape students' experiences of the classroom, and how, when openly discussed, these tensions can lead to increased awareness of one's own way of being a teacher and increased respect for other ways.

II. FOCUS: RIVERS

Jack is a geologist at UVM and Jean directs the Writing Center. We were both excited about teaching a year-long course on rivers, imagining (respectively) canoe trips on local rivers on beautiful fall afternoons and animated class discussions of *A River Runs Through It*, the novel vs. the movie. We planned these activities for our class and more: we'd read McPhee and Abbey and Twain; we'd go to the local outfitters to try fly casting (the better to read *A River Runs Through It*); we'd plant trees and shrubs along a stream as a community service project and as a way to learn about the value of streamside buffer zones.

For both of us, writing was central to the course, and we wanted students to write both scientific research papers and essays on literature. Because we each served as academic advisor for half of the students, we planned to each read all the writing of our own students. But compatible as we were when outlining our syllabus, when we began teaching writing we were surprised to find that our purposes, assumptions, and pedagogies were often at odds.

What's Our Overall Purpose?

Jack: I come from a "content"-oriented discipline. Because Rivers was receiving science distribution credit, I felt an obligation to depth of inquiry if not to breadth. My concept of "process" was the scientific process of investigation or perhaps geological processes which could be discussed on a theoretical basis or examined during field studies. Given the competing demands on class time, I often felt lecturing was the most efficient way to deliver information students needed to know, information that would be combined with the data they'd collected on field trips and the outside reading they'd done to produce their scientific papers.

Besides, I'm personally less comfortable in a discussion format than in a lecture format--I'm there, after all, not just as a facilitator but as an expert. Given limited time and specific topics to cover, I feel that

sometimes lecturing is the best way to get from point A to point B and provide some commonality of information and basic principles upon which to build the scientific paper. Clearly, my attitude is reflective of my own education and past experience in the classroom.

Jean: My discipline emphasizes process, so I'm more concerned that students learn to *do* certain things than that they master a body of knowledge. I want students to learn to use language to explore ideas for themselves and to communicate with others, and so I think they need to be sitting in a circle or in small groups actively using language for at least a part of every class. I want them to become better readers of the texts we assign, the texts they write, and the texts their fellow students write. To accomplish this, we need to discuss our reading in class, discuss their developing papers in conference, and share papers in small group workshops. For me, assigning a text such as *Life On the Mississippi*, which does say a lot about river processes, is still a means to an end, that end being to help students learn to read carefully, to use evidence from the text to support their interpretation, to do the critical thinking that will enable them to construct a compelling argument in their essays.

I think of myself as a facilitator rather than an expert. I plan activities, pose questions, listen, guide, encourage—but generally don't take center stage.

> *Jack wants to invite a professor from Art History and another from the Music Department to lecture for a week each on the theme of rivers in their respective disciplines. Jean doesn't think students can easily integrate such lecture material into their thinking about rivers and vetoes the idea, but is delighted when, for final presentations, two students do a slide presentation on rivers in art and two others play music featuring rivers to end the class.*

> *In the spring we do a unit on Thoreau, preparing for a (volunteers only) canoe trip on the Penobscot. After much Jean-led journal-writing and discussion, Jack invites an American literature specialist to lecture on Thoreau. The lecture brings all that has preceded it together beautifully, and students are delighted to have an opportunity to take notes.*

What Will The Papers Look Like?

Jack: One of the decisions we made (rightly or wrongly) was that our writing assignments would be disciplinary rather than interdiscipli-

nary. This was in part so that students would be exposed to a variety of writing styles. Thus, their scientific assignment was to write a research paper in which they integrated field measurements, studies of the scientific literature, and lecture notes. The format was fairly tightly constrained and there certainly was a specific content expectation. I knew what data were available from our field studies, and what principles and processes had been presented and discussed in class. In fact, I had even identified the three major topics upon which to focus their data analysis and discussion. I expected students to report, interpret, and discuss the data. The structure of the paper was well-defined: abstract, introduction, methods, results, discussion, conclusions, and bibliography. The emphasis in writing this paper was on clarity of presentation and thoroughness of analysis. Although any writing process can be thought of as "creative," clearly this paper was content-focused. Creativity and personal involvement were expected in the quality of the discussion and the integration of our data with basic principles and data from the literature.

Jean: While I understood that the scientific papers would be alike in format, I expected the literature papers to look very different from one another. After all, students interpret *A River Runs Through It* differently, since they bring their own individual experiences to it. And their interpretations will be supported by different evidence. So although Jack gets concerned if students' introductions sound a little too similar, I actually encourage students to get ideas from one another—I think that's what happens in any worthwhile discussion. I hope that after seeing the movie version of *A River Runs Through It*, they'll go back to the suites discussing what was missing from the novel and why, what was added to the movie and why. And if any of the ideas they get from such a discussion help support the points they make in their essays, I hope they'll use them. What they'll be judged on is how *well* they use them.

> *Jean gets a science research paper entitled "Scruffy the Tugboat Does the Lamoille" [the site of our data-gathering field trip], set up in chapters that narrate Scruffy's adventures. Has she sent the wrong message to her students about the science paper or has this student made some assumptions about writing papers for an English professor?*

> *In another class with Jean, one of the star science students writes a poetry paper in which, in the second paragraph, she lists all the poetic devices she can find because "first you summarize the data and then you interpret it." Maybe disciplinary conventions aren't as obvious as we think.*

How Much Revision?

Jack: For the scientific paper, clear, concise writing was expected, but there was also a very definite content expectation. I read the papers for what was missing. Discussions with students on early drafts (in one-on-one conferences) reflected this, making it clear where the paper should go and how to get there. A significant part of my efforts in the revision process were directed toward discussing clarity of argument, methods for including the work of others in discussions, how to write an abstract, appropriate voice in a scientific paper, etc. For many students this was clearly a whole new experience, far different from either the essays or science lab reports they had written in high school.

> ***Jack:*** *Now I'm not raising your grade if all you do is make the grammatical corrections I marked. That's not revising.*
>
> **Student:** *But you marked everything. What else is there to do?*
>
> ***Jack:*** *Think about expanding the substance where I've indicated.*

With regard to how much revision to allow, I felt that it was important to define the writing process, that is, the sequence of drafts, but that at some predetermined point the assignment was done, given a final grade, and we moved on. I had no problem bringing closure to an assignment midway through the semester so long as there had been appropriate opportunity for revision and discussion.

Jean: When I have conferences with students, which I too like to do after they've written a first draft, I ask questions about that draft, trying to better understand their intentions or the problems they're having, and then to help the student articulate plans for revision. I try not to impose my own notion of where the draft is headed or should be headed: I want students to think of themselves as writers, and writers make their own decisions. I like students to be able to return to a piece all semester. This allows them to set the piece aside and get some distance from it, so that they can view it with fresh eyes when revising for final portfolio.

> ***Jack:*** *I think we have a problem.*
>
> ***Jean:*** *What's that?*
>
> ***Jack:*** *Alice tells me you said her roommate could revise her essay on Cadillac Desert for final portfolio. Didn't we agree that essay was finished? Now we're going to have to*

let everyone revise. And how do we teach students to adhere to deadlines?

How Do We Grade Students?

Jack: I'm far more willing than Jean to assign grades to first drafts as an indication of my level of expectation and as an incentive for students to take the first drafts seriously. Obviously I think that grades have to be heavily weighted toward the final product, but interim grades can be constructive rather than punitive. At the end of the semester, I'm used to grading mathematically. All of the important activities in the class are assigned a certain percentage of the grade (as clearly indicated on the syllabus), and when final grades are calculated, students can see where their grades come from. All drafts of papers are collected in a final portfolio so that student and teacher can see what work has been done. In this sense I am more focused on grading the products of the semester than the processes involved.

Jean: For me, grading a first draft means that it's "done" in some important sense, so that all students do from then on is tinker. A low grade discourages them and a high grade makes them too complacent, so that they're not apt to cast a critical eye over the piece. Unlike Jack, I'm used to grading holistically, assigning a midterm estimate to a works-in-progress portfolio and then one overall grade for the final portfolio. For me portfolios are more than a collection of the student's past work. They need to include revisions of selected pieces and some reflection on the self as writer. Like Jack, I grade the portfolio as a final product, but if the student hasn't gone through the process—hasn't revised, hasn't offered responses to other writers, hasn't been present for class activities--his or her grade will suffer.

***Jean**: How do I do these grades?*

***Jack:** Assign a certain number of points to each grade--you know, A+=13, A=12, A-=11. Then multiply the points by the percent of the overall grade that that paper gets. Add all those numbers up and you'll have the grade.*

***Jean**: But what if that's not the grade the student deserves?*

***Jack**: What do you mean by "deserves"?*

***Jean**: Jack, I just totaled up all my grades using that formula you gave me. I think I did the math right, but I got all B's but one.*

***Jack**: So did I.*

***Jean**: How did that happen?*

Jack: *Remember when we were grading those debate teams and we gave them all some kind of B? It leveled everything out.*

Jean**:** *What can we do?*

Jack: *Nothing, except redesign our distribution of grades or assign individual grades in group projects next time.*

So What Happened?

Our Rivers class as a whole was as much fun to teach as we had expected and students liked it: the evaluations were positive and we lost only one student from first semester to second. But even at the time we were not totally happy with our students' writing. Jack didn't think some of the science papers were up to snuff, and Jean thought the portfolios revealed little new thinking. To understand why required the close analysis involved in preparing a talk for the Third National Writing Across the Curriculum Conference and later writing this piece. Our analysis revealed that our teaching of writing had been inconsistent and confusing. The good writers did well in spite of us, but those who needed to learn a process for writing a scientific research paper or needed to learn to read an Abbey essay carefully enough to describe and account for tone did not get enough guidance from us.

Fortunately, we get to try again, as we'll be teaching Rivers next year, and we do have some ideas. We plan to use fewer texts, so that we can be more thorough and pay closer attention to process issues. For example, we'll have students write the scientific paper in sections: when we return from our data-gathering field trip, we'll talk about what goes into the methods and results sections of the paper and have students write up those sections, perhaps putting a few on a transparency to discuss. At the end of a lecture, we'll take time to ask where the information presented might fit into the paper. And we'll use writing tutors earlier in the process, so that students can discuss with a peer how they might develop a section or can get help doing spreadsheets. We also want to try writing in a more interdisciplinary genre, such as a nature essay. We'd like students to try combining close description in the field with personal response and attention to style. We'll read from a collection of essays such as Kathleen Dean Moore's *Riverwalking*, so that for this unit students are reading and writing in the same genre.

Still, a critical issue in a course such as this is the integration of content and process and providing adequate class time and instruction in both. Jack remains concerned with standards, with receiving a student's best first draft effort, with finishing one paper before going on to the

next. Jean remains committed to teaching students to think of themselves and for themselves as writers, having them decide what to revise and why instead of letting a grade decide for them, and letting them work on revision all semester. Like Felix and Oscar in *The Odd Couple*, we seem to have entire personalities, not to mention disciplines and histories, tied up in these stances. In such a situation, we have to ask ourselves what team teaching really means. To us, it means identifying what is absolutely essential and non-negotiable to us as individuals and then developing a framework to accomplish those goals while taking advantage of our differences.

III. FOCUS: WORKING

Shirley and Sue developed a FOCUS course on the experience of working in America in the twentieth century, from the perspectives of labor economics, social theory, and literature. We were both extremely excited about the course content, and spent the summer choosing texts, designing a syllabus, and writing the assignments. We didn't consider that team teaching would be problematic; we each had fifteen years of university teaching experience and had each received university awards recognizing teaching effectiveness.

The Players

Shirley: I'm used to teaching economics to first year students, in a large lecture format, with a difficult textbook. I see my role as a teacher to make the content accessible to students. I try to weave a web, drawing students into the discipline through the lectures, pointing out how one part connects to the whole. I'm conscious of my own persona: a teaching persona that is engaging, entertaining, that tries to draw students into the discipline and toward me, and yet is also self-mocking as I work to get students to see me as a person and approach me. I'm in the current of power, trying to get my students to plug into and become energized by the same source.

While I work at being approachable, I also cultivate myself as an expert. Behind this expert persona is the belief that knowledge is power; that power is to be learned and used; that we all are part of a larger structure and that knowing our relationship to that structure empowers us to move. Part of my goal is helping students locate themselves and achieve power within that structure.

Sue: I teach writing courses. In these courses, process is at the center. There is no specific body of knowledge that I feel responsible for teaching my students. Rather, the content that they choose to write about

in their papers and the readings in the course are vehicles for examining and becoming better at processes of reading, writing, and thinking. While Shirley feels obligated to cover certain "content" so that her students will be ready to take the next course in a sequence, I feel obligated to help each student develop processes for writing and thinking that he or she can draw upon in subsequent courses.

In order to do this, I have developed the persona of a facilitator. I deliberately want to shift students away from focusing on what I want, which never leads to good writing, to focusing on the meaning they're trying to create. Furthermore, like many members of my discipline, I see myself as teaching students above all to think critically, which means to question what the academy represents and their connection to it, rather than seeing myself as showing them the way to achieve power within it.

Scene One, The First Day Of Class: **Differing Classroom Personae**

Sue: On the very first day, before we even had any "content" to talk about, I knew I was in trouble. In welcoming the students, Shirley presented the course as a way to gain quicker entrance into the academic community. Unlike other introductory economics courses, our course, she promised, would introduce students to key ideas in the social sciences, enabling them to go in and talk confidently with professors in the social sciences. Furthermore, students should let us know if they had any trouble getting into classes, because we were advisors who "knew people" and could make phone calls.

This left me speechless. I could tell that students were attracted to the strength of Shirley's personality and the promise of power. And I felt them turn their gaze to me, to see what I had to offer. From this perspective, I felt myself shrink into something pale and powerless. Within the hierarchical classroom that had been created, I felt unable to shift the energy to the students and to play the facilitative role that gave me power. Furthermore, I hated the underlying suggestion that this course was about achieving power—that what we knew gave us power, and that by sharing what we knew with our students, we were going to give them power. I didn't want to be in the role of making students like—and then become like—me.

Scene Two, Class Discussion: **Differing Priorities**

Shirley: In our second class, we discussed an article from *Business Week* on "The New World of Work." We divided the class up into groups and gave each group a different question. To the question "What's causing the world of work to change?" a group responded "technology." I

jumped in and began talking about how technology was indeed changing the world of work. I pointed out how computers enable check-out clerks to also perform inventory analysis. Then we talked about how this cuts out the need for additional middle management.

Sue: As Shirley was going on and on, I grew more and more impatient. The article did not say that technology was responsible for the changes. It clearly stated that global competition was responsible, while technology was the instrument that allowed change to occur. I finally stopped the class and asked them to find the place in the article that presents technology as the cause.

Shirley: I couldn't understand why Sue kept wanting to let the text lead the discussion. I felt she was really nit-picking and slowing us down. For me, it didn't matter what exactly the *Business Week* article said--I saw the article as a springboard for more discussion. I didn't see myself as bound by the article as the only source of information for this topic. Indeed, I couldn't imagine having the text be the only source of information. As "the expert" on this topic, I had stuff to say. I wanted students to see how exciting it was to know they could read *Business Week* and talk to a real economist about it.

Sue: But I didn't see the text as leading the discussion. I saw our underlying purpose as helping students become better readers. Their answers told me that they hadn't read carefully or understood the ideas presented in the text. It would have been fine with me if Shirley added more to the discussion once the ideas in the text had been accurately represented, but I wasn't willing to let the students' misreading go. I thought Shirley, in her own enthusiasm about the topic, was forgetting why we were here.

Scene Three, Preparing A Class: Differing Approaches To Texts

These different approaches to working with texts continually left us befuddled. Both of us intuitively knew that *Atlas Shrugged* fit in perfectly with our course. But we each were shocked at what the other wanted to do to prepare to teach *Atlas Shrugged*.

Shirley: I saw the text as a way to introduce an ideology. The text was a vehicle to the ideas that Rand held. The only way to really get a grasp of the ideology was to have background information about Rand and to place her variant of objectivism in the context of other ideologies. Reflexively, I headed to the library to look up what others said about Rand and her philosophy and began to prepare a lecture which would construct a web connecting *Atlas Shrugged* to alternative ideologies.

I assumed I did not need to teach students how to read the book. They could construct the meaning, glean the plot, understand the char-

acters. My role was to help them make a connection between the meaning of the book and the rest of the world. My approach focused on the dialectic of how the study of a text can become a passport to the world. My role as a teacher was to help engage and draw students into my dialogue.

Sue: I've worked enough with first-year students to not assume that they would come to class having constructed an interpretation of *Atlas Shrugged*. And I didn't want to confirm a passive view of reading by having them come to class to be "told" what the novel meant or sent to the library to "look up" what it meant. I wanted them to learn that reading involves interacting with a text to construct meaning. Furthermore, I felt that students would actually get a richer understanding of Rand's ideology by looking closely at the complexities of the novel and constructing that ideology for themselves rather than by being told what that ideology is. (After all, Ayn Rand chose to write a novel rather than a treatise to embody her philosophy.) Then students would be prepared to see Rand's text in a dialogue with the other texts in the course.

Scene Four, What Happens When Students Haven't Done The Work?: Differing Responses To Students

Our different priorities and approaches to texts led us to respond to class situations quite differently. A time when these differences emerged dramatically was in the class discussion of Reinhold Bendix's *Work and Authority in Industry*, for which we had separated the class into two sections.

Shirley: In my section it became apparent that the students were not prepared. I knew that this was a difficult reading, but was excited to discuss it because Bendix was able to put together brilliantly a number of themes that we as a class had discussed over the past several months. This was the capstone of the course. Everything was coming together with this reading. Students would see the new paradigm that was implicit in the course; my "web" was being revealed through this reading—and they missed it!

My impression was that the students had not tried to struggle with the text but had given up, hoping that others in the class would carry them that day. I was disappointed and angry at the class. For me, part of learning how to acquire and use knowledge as power is by learning responsibility—to come prepared or to let me know that you are having difficulty understanding and to ask for discussion. Underlying this is a responsible-citizen model that I hold. That they came unprepared and stated that the reading was boring, as though that was sufficient excuse, made me furious, and I showed that in class by dismissing them.

Sue: In my section, it was also clear that the students didn't understand Bendix and didn't enjoy the text. My response was not to be angry, but rather to assume that something had made this text especially difficult for the students, and to try to figure out what that was. In our discussion, I discovered that the many different voices in the chapter were confusing the students. They thought all of the ideas were Bendix's and couldn't distinguish the different points of view he presented or what points he was trying to make with them. Rather than being upset, I felt the text offered us an opportunity to focus on reading process.

What To Do?

Shirley: I was totally inexperienced in pedagogy, had a teaching style that worked for me, and had hoped Sue would be more dynamic.

Sue: I had my own interpretation of what was happening—pretty much the interpretation we've presented here. I could tell Shirley had no idea of what was going on and why and was responding to the tensions in our class by disengaging, rather than by trying to figure them out. She even suggested we teach our second semester sections separately (taking me completely by surprise). Being a facilitator, I felt if she didn't see what was happening, my telling her wouldn't make her understand. Also, I was conscious that Shirley's interpretation of the tensions, had she attempted to construct one, would be different from my own. I didn't want to impose my interpretation on the situation.

Shirley and Sue: So we never sat down and talked about all of this until we decided to be on a panel about team teaching at the Third National Writing Across the Curriculum Conference. As we explained ourselves to each other, we realized that our differences were not due simply to different personalities but were shaped by our previous teaching experiences and our disciplinary perspectives. Once we understood our different approaches, we appreciated them, and thought incorporating them both into the course would make the students' experience richer. First-year students do benefit from looking closely at processes of reading, writing, and thinking, but they also benefit from being drawn into the larger, exciting world of a discipline.

So how do we work together? Creating the syllabus does not seem difficult—we now want to incorporate both of our approaches, Shirley seeing the need to spend time helping students construct meaning from the texts, and Sue seeing the value of helping students see those texts as part of a larger web. Though this means we'll have to cover fewer texts, we're excited about creating such a syllabus. But how can we both, with our opposing ways of creating energy, operate within the same energy field? How do Shirley, the entertainer and information disseminator, and

Sue, the patient facilitator encouraging students to see for themselves, occupy the same physical space? Perhaps now that we better understand each other, we can better support each other's ways of being in the classroom.

IV. WHAT'S A DIRECTOR TO DO?

The stories of Jack and Jean and Shirley and Sue have made me think more realistically about the implications of team teaching. It occurs to me now that as faculty our experience almost makes us ill-equipped for sharing a classroom. After all, we are used to being totally in control of our classrooms, giving us little to draw on in learning to share that control. We also are used to being successful. Feeling that the tensions of team teaching suggest a failure on our part, we are often unwilling to acknowledge them. Furthermore, our assumptions about teaching and learning often remain tacit, because we're surrounded by people in our own discipline—we don't have a language for explaining and then discussing why we do what we do. And finally, we lead busy lives, and aren't expecting to have to spend time creating a method of team teaching. In fact, in creating the FOCUS Program, we didn't even consider that there was a method of team teaching that differed from what we did as individuals in the classroom.

Can a director do anything to help faculty work out the complexities involved in team teaching? Some help could be provided at introductory workshops. Of course, until faculty actually become involved in team teaching, they may have difficulty conceptualizing the tensions that may emerge, but having faculty like Jack and Jean or Shirley and Sue share their experiences in a workshop setting could provide a starting place. Faculty could then write about and discuss questions such as (1) What persona do I adopt when I step into the classroom and why? (2) How do I usually structure classroom time and why? (3) What assumptions about students and about teaching do I bring to the classroom? (4) How do these assumptions reflect my past teaching experiences? My discipline (or course content)? My personality? (5) How do I integrate writing, reading, and speaking into the classroom? (6) How do I evaluate student work or performance?

Once faculty begin team teaching, I plan to have a few informal dinner meetings, using the stories of Jack and Jean, Shirley and Sue to suggest that resolving the tensions inherent in team teaching requires some open discussion, and hoping to create a safe environment for sharing tensions and problems. In subsequent weeks, we can then take a group problem-solving approach to addressing whatever challenges of team teaching the teams feel ready to address. After all, the potential

rewards are great: new ways of being in the classroom, closer relationships with colleagues, and new insights into what for most of us is central to our identity, our selves as teachers.

When Consensus Fails: How Faculty Writing Seminars Limit the Possibility of Multiple Discourses in a College Community

Jean Ketter and Judy Hunter
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This case study describes how faculty members at Grinnell College, a small, highly selective undergraduate liberal arts college, create and maintain what in many ways is an ideal Writing Across the Curriculum program. Curricular elements of this program have been in place for more than twenty years: the tutorial, where Grinnell students focus on writing intensively in a one-semester course taught by members of the faculty from all disciplines; designated writing courses with limited enrollments of twenty students focused on improving writing skill; and required writing in most courses in many departments.[1] In addition to emphasizing writing in its curriculum, the college also devotes significant resources to support the faculty's teaching of writing. The college staffs its writing lab with five full-time professional teachers of writing; it offers faculty writing workshops in the summer; and faculty members occasionally focus on and often discuss writing in colloquia and workshops. Clearly, Grinnell College devotes an enviable amount of resources to its writing program.

Since its beginning, the writing program, although organized by the dean and the head of the Writing Lab, has been controlled by the faculty. At Grinnell, where faculty control over the curriculum is valued in all areas, the loose structure of the writing program allows faculty members freedom to teach in the way they want. This freedom gives them ownership of the program. Although we believe that faculty ownership of curriculum is a desirable characteristic of liberal arts colleges, our study suggests that faculty ownership of the writing program at Grinnell may constrain faculty members from examining complicating or alternative views of the way writing can function in a liberal arts curriculum.

A site where this constraint is particularly evident is the faculty writing seminar. In the faculty writing seminar, new faculty members learn techniques for and encounter assumptions about the teaching of writing at Grinnell. These faculty writing seminars are of crucial importance as a way of passing on beliefs about writing and learning within the

college because there the faculty formally and consciously constructs the college's view of teaching writing. In our case study, we investigated how the discussions in the faculty writing seminars both create and communicate the ways in which faculty will teach and assess writing. Discussions in these seminars emphasized a narrow notion about what good writing is; a drive for consensus caused discussion to veer away from conflicting approaches to academic discourse.

Setting and Participants

The two researchers approach this study from different perspectives. Judy, a veteran of 20 years of tutoring Grinnell students in the Writing Lab, is a former high school English teacher. Jean, assistant professor of education at Grinnell and also a former high school English teacher, specializes in the assessment of writing and preparing college students to teach at the secondary level. In order to investigate this writing program, we built upon several strands of research, including an archival search, interviews with several key architects of the tutorial and with current faculty, and our own experiences teaching writing and tutoring at the college. Most important, we each participated in and observed a faculty writing seminar during the summer of 1996.

The two seminars in which we participated are representative of the organization and procedure in most faculty writing seminars at Grinnell. First, each seminar included a mixture of people from different departments, different divisions, and with different amounts of experience in teaching. Second, the leaders of the seminars were not from the English department; of the three seminars held during the summer of 1996, two leaders were from the history department and one was from the art department.[2] Third, the procedure followed in both was for each participant to submit two papers, one which the participant judged to be successful and the other which the participant judged to be unsuccessful. All participants read and discussed all the papers. These procedures reflect the way most of the faculty writing seminars have been organized and run for more than twenty years. Our participation in these seminars allowed us to record and reflect on the seminar discussions as they affected us as teachers of writing and as faculty.

We entered these seminars with well-developed beliefs about how writing should be taught and assessed. Both of us are familiar with and supportive of WAC approaches to the teaching of writing. For example, Herrington suggests that teachers of writing must recognize that knowledge is always communally created, that truths are partial and unstable, and that students use writing to produce knowledge in particular contexts and for particular audiences (119). Similarly, McClelland stresses that

learning is dialogic, that we have to talk with the students, to determine with them, in relation to each other and to the course material, what good writing is (407). However, most of the new faculty participating in the Grinnell faculty writing seminars are not familiar with research on teaching writing or with composition studies.

Taking participant observer positions in these seminars, we participated in the discussions and activities, and we also observed how the process worked. After discussing our experiences, reading our field notes and the other seminar members' summaries of the experience, we concluded that the strongest theme emerging in these seminars was the drive for consensus. The emphasis on consensus prevalent in the faculty writing seminars diminished faculty members' opportunity to grapple with notions discussed in composition studies that may complicate and challenge the dominant view of teaching writing at Grinnell. We are aware that what we describe in this paper does not reflect every person's experience in these seminars; in fact, we suspect that every one who participated would describe his or her experience differently. Although we make no claims to having captured the experience for every member, we do think that the common patterns apparent in our observations have important implications for faculty at our institution.

Problem: A Drive for Consensus in the Faculty Writing Seminars

We saw a strong drive for consensus in these seminars. We believe this drive for consensus helped seminar participants achieve comfort. The seminars provide a good way for new faculty to increase their level of confidence about teaching writing. In both seminars, participants expressed uncertainty and frustration about matters connected with the teaching of writing, and expressed gratitude about finding their frustrations shared or having ideas suggested for dealing with difficulties. Not only in the two seminars in which we participated but also in our interviews with faculty members who have participated in seminars in other years, we found that faculty members truly appreciate the opportunity both to talk to others outside of their disciplines and to talk about pedagogy (Sullivan). However, a concern for consensus in these discussions can be damaging. In the seminars we attended, few alternative or complicating views were seriously discussed. Instead, members of the seminar sought to find a shared belief about what good writing is, to agree on the pre-eminence of academic writing, and to assent on the criteria for assessing quality in writing. Moreover, ideas that are a part of WAC conversations, such as the context of the writing situation, the dialogic nature of writing, or the issue of identity in authorial stances, were not considered in these seminars.

Shared Beliefs about What Good Writing Is

The Faculty Writing seminars emphasized the common aim these participants believe to be shared by teachers of writing across disciplines: the goal of helping students create a well-crafted academic argument. In support of this goal, the discussion focused on identifying good linear thinking as evidenced by clear logic in all disciplines. For example, when an instructor from the fine arts division read two papers that had been submitted for an upper-level biology course, he found that he had pinpointed the same difficulties as the biology professor had; she claimed that this showed "uniformity in what we're looking for." This drive for a common view of good writing was also clear in the discussion that occurred on the first day of Judy's seminar when the facilitator asked whether differences in expectations among the disciplines might confuse students. The first response to the question, made by a science professor, suggested that in all disciplines, students are required to "make things clear"; she suggested that this common goal is more important than are differences. This focus on clarity as the principle that unifies the writing done in different disciplines was reiterated several more times throughout the seminar. In Jean's seminar, the first day's discussion focused on what beliefs the participants shared about good writing. One professor opined that even though the form of student writing might vary, in all disciplines the content was aimed at "making explicit the interpretation of evidence." The summary of Jean's seminar written by the seminar leader states that "most assignments call for inferences on the basis of evidence, and require from the student the same clarity of expression and rigorous logic, irrespective of discipline" (Grinnell College Report).

Pre-eminence of the Academic Essay

In pursuit of consensus about what good writing is, the seminars focused on only one kind of writing—the academic essay. In these seminars, the academic world is seen as a unified community which values only one type of discourse—the formal, argumentative, thesis-driven type of writing often referred to as "academic discourse." Dipardo describes such academic writing as "decontextualized, depersonalized 'expository' prose written for the sole purpose of fulfilling a teacher's expectations" (67). She points out that Western academia generally values exposition because that kind of writing conveys knowledge that is "verifiable, quantifiable, generalizable" (87). Because academia holds that exposition is superior to less linear, more personal, and less expository expression, it may exclude some students who come to the classroom able to convey powerful stories but lacking the ability to express their knowledge in the

"presumably more sophisticated and usually depersonalized world of exposition and argument" (66). As Dipardo says, an emphasis on academic prose may suppress the stories of students: such suppression means that their "outside cultures are kept outside" (86).

This emphasis on academic prose was reinforced throughout the seminars. One leader was careful to state on the first day of the seminar that there are other kinds of writing, but that academic discourse is the kind the writing the seminar would discuss. Such a position may be seen merely as a recognition that, in the limited time available to the seminar, one has to limit one's sights. However, such a limitation is also a statement that the faculty writing seminars value academic discourse above other types of writing. This focus on the standard academic essay is seen as what unites us as a liberal arts faculty. In general, the process followed in the seminars, with each participant responsible for bringing both "successful" and "unsuccessful" examples of writing, supports the notion that we are all teaching the same paper and that what counts is the product.

Some dissenting voices to this view of commonalities were heard; for example, in Judy's seminar, one professor who has taught composition at another college early in her career raised the question of whether argument is the same in all disciplines. She pointed out that she talks with her students not about argument but about persuasion. She has them read each other's papers because she feels that they "develop questions better when they think about persuading someone." So, although the seminars focused mainly on a search for consensus about evidence and logic, the participants in this seminar briefly talked about the similarity in the rhetorical aims we try to get students to achieve (see Kurlihoff for a discussion of why such a rhetorical focus is beneficial in faculty writing seminars).

Agreement about Assessing Writing

Connected to the desire to iterate the common goal of writing in the liberal arts was the focus each of these seminars placed on grading. It is through grading that faculty communicate to students information about their attainment of the common goal. It was clear to both of us that the faculty members were somewhat uneasy about how their grading "compared" to that of others in the faculty and sought reassurance that they were noting the same errors as other, more experienced faculty. There was much conversation about grammar, about what faculty saw as their inability to "correct" grammar; this worry led to discussion about whether style is separable from content. The notion that good writing is grammatically correct made the participants uncomfortable, yet many seemed to return

to grammatical correctness as a standard by which faculty can grade. When one participant in Judy's seminar talked about how she writes comments not to assess whether something is good or bad but rather to show the students how one reader reacts to their prose, another participant moved the discussion directly to grades, asking her how she would grade using that system. Another participant said that he'd been "all over the farm" on how to grade: he'd been harsh, he'd been lenient, he'd judged by the product, he'd judged by the process, he'd evaluated the paper as a distinct entity, he'd taken into account what he knew about the student. He seemed to be asking for an acceptable way to grade. When this group of faculty discovered that they gave similar grades to sample papers, they felt reassured that they knew what they are doing.

From the requirement that faculty bring "successful" and "unsuccessful" graded papers to the seminar for purposes of comparison, and the discussion about the weaknesses of the unsuccessful papers, the discussion leaders, through the discussion of grades, worked to demonstrate how the participants shared a common standard of excellence. They saw this standard as the one on which faculty could grade students. In Jean's seminar, discussion about "grade inflation" and lower standards also fed into the drive to create a common standard of excellence with which to grade papers. One of the tenured faculty members explained that he told his students before a class that very few of them would earn A's because he reserved A's for "extraordinary work." He hoped this statement would motivate students to work hard and would also make it clear that he had high standards of performance. He explained that he was comparing his students not to one another but to an "absolute standard." Another junior faculty member explained his grading policy as using a curve. He aimed to have grades "distributed" on that curve to separate the truly excellent from the merely good. A participant asserted that we as professors are obligated to let a student know where he stands in comparison to others, that we do students no favors by "inflating their grades." As these comments reveal, Jean's group seemed to be in consensus about the need for high standards and high expectations, and many believed that grading helped produce student writing that met those standards and expectations.

Not all participants saw grading as a way of motivating students to perform to higher standards, however. In Jean's seminar, she raised the issue of whether students are motivated to improve by receiving a low grade. In Judy's seminar, a participant pointed out that in her comments on students' papers, she does not present herself as a judge writing evaluative comments; rather she tries to show her student how she is reading. Her comments explain to the student what she sees as she reads and how she reacts. That more readerly way of commenting, she believes, gives

her students a sense of audience, of a reader reading. This professor suggested that students may find it valuable for the professor, as a reader, to express her frustration with the student's failure to achieve the potential in a paper, to say "I see the paper that might have been here, and I wish I could have read that one"; again, this kind of comment would show the student someone responding as a reader rather than as a judge.

Despite these occasional comments, the seminars focused mainly on grades, including procedural issues connected to grading and the accompanying comments. Participants discussed the number, placement, and tone of comments. One said he wrote "a ton of comments" so students would "feel I was taking them seriously" and would therefore take themselves seriously. Some viewed comments as a way to justify the grade or document failure; others sought to establish a common relationship between marginal comments and the grade. One participant suggested that she grades the paper by judging it against an ideal of a paper. Two other participants suggested that they rank the papers against those of others in the class; one noted that his procedure of first reading all the papers afforded him the opportunity to get a sense of the range of quality of those papers. In Jean's seminar, most of the participants agreed that the comments accompanying the grade offered students a means of improving their writing, that is, approaching the ideal paper, on the next try. The comments were generally not seen as engaging the student in a dialogue about the student's ideas; instead, they were intended to provide students with directions, which, if followed, could improve the paper.

In both seminars, certain participants brought up the possibility of not grading, of not using the grade to exert the kind of power that they all saw it as having. When one participant mentioned Alfie Kohn's criticism of grades in the book *Punished by Rewards*, which several faculty members were reading in order to discuss it at a teaching seminar, others dismissed Kohn's notions as unhelpful and idealistic since in the real world professors are required to give grades. In both seminars, members discussed alternatives to grading only briefly—participants tended to see such suggestions as impractical and to dismiss them.

The seminars placed so much emphasis on grading, we believe, because only a few of the participants sought to question the underlying assumptions about grading practices. Most of the participants were comfortable assuming that they know what good writing is, and that their job is to communicate that vision to the students. Because faculty in these seminars are comfortable with a belief in an ideal text as an overlay for student texts, they use grades to guide the student to approach more closely this ideal text of the excellent persuasive argument or an objective and balanced analysis of an issue. The summary of one seminar written

by its leader shows a congratulatory attitude about the agreement he believed was demonstrated in the seminar: "the greatest degree of accord surrounded our grading of the sample papers; in most cases our grades varied by no more than a half-grade or so, suggesting that even if we do not agree on exactly how to teach good writing, we recognize it when we see it" (Grinnell College Report). This statement reveals the belief that the agreement came from the existence of this ideal text and our ability to recognize it; it does not allow for the possibility that our agreement might arise from young faculty member's desire to show that they have the same tough standards as the more senior members of the community. We believe it was a great comfort to participants to find that they "recognized" good writing when they saw it; but that sense of comfort came by downplaying the many excellent complicating questions faculty raised when discussing grading.

What Wasn't Discussed: The Importance of Context and the Dialogic Nature of Writing

Because the seminars focused on how we share a common view of academic writing and reinforce a universal standard by grading, the seminars did not focus strongly on the contexts from which the individual students produce writing. In the seminars, participants were reluctant to discuss students as individuals, reluctant to approach writing from within a context that might reveal the subjectivity of grading. The participants seemed to want the text to speak for itself and stand by itself. For example, in discussing the paper of a learning disabled senior whose text gave a personal and moving nine-page account of her reaction to Elie Wiesel's *Night*, participants focused less on what the student said and more on whether the text met the assigned length of fifteen pages. They expressed some disbelief when they heard that the professor who assigned the paper had given it a high grade despite its length. Similarly, in his summary one leader emphasized the faculty's ethical responsibility to lead students to produce more perfect academic discourse: "several participants noted that they did not see it as a help to disadvantaged students to neglect helping them improve their writing" (Grinnell College Report). This remark reveals the writer's assumption that teaching students writing means "helping them improve," that is, making their writing conform to the standard template envisioned by these professors. Such a view does not make room to value the individual perspectives of the students; it assumes that what is needed is correction, which implies a method of teaching that leads students away from their own ideas and ways of writing toward the common goal of academic discourse.

Just as the seminars emphasized a standard paper rather than writing that emerges from different contexts, the seminars emphasized writing as a product of an individual mind, not as the result of a dialogic process. The focus on evidence and thesis and logic all indicate that the faculty see writing primarily as a way of demonstrating mastery of knowledge. They did not focus on writing as a collaborative activity that produces knowledge or that results from dialogue with several readers. One participant did bring up the changes in ways of thinking and communicating that are being produced by such technological advances as the World Wide Web—its non-linearity, its similarity to the brain in its multi-leveled organizational pattern, the increase in collaboration it encourages, the flexibility in organization it allows. He even questioned whether writing an individual analytical paper is central to a student's education any more. He discussed how in most situations outside the academy people work together to solve complex problems, but in college the problems we give to students to solve in analytical papers are simplified so that an individual can solve them. The possibilities suggested by this participant's challenge were not seriously considered in the conversation that followed his challenge; instead, participants worked to assimilate these ideas into the dominant view, saying that Web pages had to be well organized and that this organization was the same as that of academic papers.

Beyond Common Ground: Discovering the Value of Conflict

These seminars, with their focus on commonalities, on grading, on discussing writing without reference to context, and on writing as an individual act, offer a view of knowledge that differs from that suggested in WAC discourse. As McLeod suggests, faculty in advanced writing seminars can move beyond concern with mere technical details of writing to develop different approaches to writing by exploring and critiquing varied authorial identities (82). We suggest that students too may benefit from exploring the objective, neutral identity most often assumed in academic writing, from recognizing how contexts affect writing, from writing in dialogue with others, and from working collaboratively.

The vision of writing offered by the Grinnell seminars, which differs markedly from this WAC view, is closely tied to Grinnell's definition of itself as a liberal arts institution. The Grinnell College Catalog says that the value of a liberal arts education is its promotion of "critical and unprejudiced inquiry, free and open discussion of ideas, and the pursuit of knowledge as an end in itself" (30). This definition implies some problematic assumptions. First, the notion that inquiry can be unprejudiced reveals the hope that the inquiry exists in a world unsullied by the biases of individuals. Second, those wishing to achieve "free and open discussion

of ideas" must at least consider that all participants in such a discussion may not be equally free but may be inequitably constrained and empowered by their genders, ethnicities, and social class. Finally, this definition implies that knowledge is something that can be captured, pursued, hunted, and finally conquered. The vision of the pursuit does not suggest a dialogic process which itself creates the knowledge; instead it posits an individual chase after an extant object. Such a view of education is probably fairly typical of selective liberal arts institutions, which attempt to present themselves as special places where inquiry unsullied by the mundane world is possible. Of course, this unitary vision is easier to maintain in an institution whose clientele come from one privileged group than in an institution whose clientele have varied experiences, diverse backgrounds, and different views of knowledge and its value.

By setting academic discourse as the only acceptable standard, the faculty at the college narrows the range of acceptable writing. We believe this narrowing has an effect on the college's efforts to diversify its community, that is, its attempts to include people of different cultures and classes who may be unfamiliar with the assumptions of academic discourse. Students from diverse backgrounds often struggle with understanding the identities and discourses one must appropriate to be successful in academic settings. When students expose their lack of experience with academic discourse, our responses are determined by what we believe about writing and knowledge. As Glynda Hull points out in her essay "Seeing with a Different Lens: Thoughts on the Teaching of Writing," because "we are all most at home in our own discourse communities, . . . we take our own language and literacy practices as natural and right and look askance at different ways of using words." If we believe that the "standard forms and practices that we adhere to in order to produce what will be recognized as academic writing—that is—our ways of marshaling evidence and seeming like authorities and handling source texts and developing an argument . . . [are] right and obvious and second nature to anyone who has his wits about him" then we will respond to "non-academic" writing as deficient and "in error" and will give students advice about how to "fix" what they have written to make it adhere more closely to academic discourse. We will see it as our responsibility to explain to the student how such a response departs from the "conventions valued in schooling and the academy." Hull suggests that our purpose should be instead to discover how the student's writing adheres to the student's logic and history, to find the coherence present in the piece in order to "see a student's text and discourse anew" (403).

If the college were to value the WAC view of knowledge, the teaching of writing at the college might well change. Professors facing an increasingly diverse group of students would see students' differing dis-

course abilities not as a problem but as an enrichment. If a faculty member used writing to help students to examine authorial identities, to share ideas, and to explore different contexts, that faculty member would necessarily raise the question of what the academy requires of students unfamiliar with middle-class notions of schooling. If a professor were to use writing in ways that value students' different discourse communities and backgrounds, that professor would create a welcoming and nurturing classroom community. In this more dialogic writing classroom, teachers would honor the richness and diversity of students' experiences, an act necessary if the college hopes to attract and retain a diverse group of students. That is, if the college were to expand the kinds of writing it considers acceptable, then the cultures that Dipardo says have been kept outside may be brought inside the academy, to the benefit of both the student and the academy.

To encourage such a reconsideration of the uses of writing, we suggest that faculty writing seminars explore how the academic community constructs the notion of the author of the academic essay as an unbiased, disinterested writer, able to balance competing claims through the use of linear logic. As a logical outgrowth of this discussion, faculty could explore how disciplines create and value knowledge, particularly through the academy's emphasis on the academic essay**.** Our suggestions do not imply that the academic essay has no place in the academy. Indeed, it may well be one useful mode for students to learn. But we see writing as a much more powerful tool than this one restricted mode allows. We would like the seminars to encourage professors to look beyond that one mode, to see writing as having more goals, more contexts, and more authorial voices than the one usual in academic discourse. By doing so, professors will communicate better to students of all types what is expected of them, and professors will come to appreciate what other goals writing can fulfill.

If professors adopt a less restricted approach to the teaching of writing, they can create a welcoming pedagogy for all students, not just those already familiar with or unfazed by academic discourse. Of course, such a pedagogy may allow more conflict to surface in the classroom as more points of view are expressed and explored through writing. Although some may dread this surfacing of conflict, many teachers are recognizing that, in order for diverse points of view to be honored and valued in the classroom, teachers must not necessarily seek consensus but must learn to welcome conflict (hooks, Pratt, Harris). Conflict in the classroom, among students of different backgrounds, classes, ethnic origins, and genders, can complicate and enrich the experience of learning about any subject.

In seeing writing at the college through what Hull calls "a different lens," Grinnell faculty may consider more intentionally what kind of community Grinnell will be, for both faculty and students. If faculty were to see writing seminars as a place where conflict about goals and practices could be explored and honored rather than bypassed or ignored, the faculty might go beyond the drive for consensus. In doing so, they might see how a community that encourages diversity and conflict can exist in a liberal arts setting.

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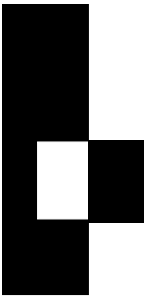
Notes

[1] We reach this conclusion from examining the college's Writing Inventory. Since 1995, the college has published this document for the benefit of students registering for courses. Written by faculty members, it details the number and type of writing assignments a course will require during each semester.

[2] Originally the seminars were taught by professors of English; in 1974, the first year of the seminar, six seminars were offered, all of them taught by English faculty. Now the seminars are taught by members of many different disciplines: in recent years, leaders have come not only from the department of English but from departments of economics, philosophy and classics, sociology, mathematics, psychology, philosophy, theater, German, math and computer science, education, history, and art (Record of Participation).



Seven Promising Shifts and Seven Powerful Levers: Developing More Productive Learning (and Writing) Communities Across the Curriculum

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Overview[1]

Despite problems old and new that threaten the future of US higher education, I see promising signs that our academic culture may actually be improving in deep, meaningful ways. Specifically, I see shifts already underway that could lead to campus cultures that are both more collegial and more productive. If these shifts proceed apace, our colleges and universities could come to look and act more like intentional learning communities and less like the teaching factories or educational shopping malls they too often now resemble.

The text that follows has three main aims. First, I'll attempt to highlight connections and draw parallels between the learning communities movement of the 1990s and the writing-across-the-curriculum (WAC) movement, which originated in the 1970s. I'll suggest that learning communities are natural offspring and logical extensions of the WAC movement and that both efforts share much in terms of educational philosophy, social values, and pedagogical goals. Given their similar aims and approaches, I'm convinced that leaders of the learning communities movement can profit from 25 years of WAC theory, research, and practical experience. At the same time, by allying themselves with the learning communities efforts, WAC activists may increase the likelihood of realizing their reform agenda.

My second goal is to explain why I'm so optimistic about changes in the academic culture of American higher education. I'll review some of the persistent barriers to instructional and curricular reform that have limited the effects of WAC and related efforts to date and suggest that the timing and circumstances may now be right for learning communities to overcome or at least lower those barriers. I'll briefly sketch what

existing learning communities look like, consider seven promising shifts already moving us in that direction, and identify seven powerful levers that faculty and administrators can use to direct and speed this desirable transformation in academic culture.

My third goal is to promote conversation and collaboration between WAC and learning communities activists. To that end, I'll suggest a few modest steps campus change agents might take to advance the shared reform agenda of both movements. I'll close with a personal note to those in the WAC movement who've shifted my thinking and provided me with powerful levers for personal and professional change.

A personal introduction and *caveat lector*

Despite the fact that I'm in no way a WAC expert, and am surely unknown to those who are, I was invited to share a few ideas with participants at the 3rd National WAC Conference and with readers of this journal. There are two probable motivations behind those generous invitations. First, the conference program committee was interested in exploring connections between assessment and WAC. From 1994-1996, I served as director of the Assessment Forum of the American Association for Higher Education (AAHE) in Washington, DC. Since 1985, the AAHE Assessment Forum has been the national convener and clearinghouse for information on assessment in higher education, as well as a strong advocate for focusing assessment efforts primarily on understanding and improving student learning. In addition, I've spent more than a decade working with K. Patricia Cross, David Pierpont Gardner Professor of Higher Education at UC Berkeley, on grassroots approaches to assessment, related forms of action research known as classroom assessment and classroom research (Angelo & Cross, 1993; Cross & Steadman, 1996.).

But the invitation I received also mentioned my experience and interest in teaching writing. Although I'm not a professional, full-time composition instructor, at various times over the past 20 years I've taught freshman composition, ESL writing skills, writing for special purposes, and writing-intensive courses in political science, teacher education, and higher education on campuses as diverse as Harvard, UMass Boston, UC Berkeley, CSU Long Beach, and Boston College. At the University of Miami, I'm teaching undergraduate and graduate writing intensive courses. So, inviting an assessment person with some firsthand experience and interest in writing instruction may have seemed a good idea.

I doubt, however, that the conveners or editors could have known just how profoundly WAC teachers, scholars and their work have transformed my understanding of student learning, the ways I teach, and the

kinds of assessment, research, and faculty development work I've engaged in for the past 15 years. Walvoord, Hunt, Dowling Jr., and McMahon (1997) categorize into a half dozen themes the many and various ways faculty say that participating in WAC has affected their career patterns and teaching. The last two of their six themes best capture the effects that exposure to WAC ideas and techniques had on my thinking and work:

· "The Road to Damascus," where there was a revolutionary turnaround in their thinking or teaching; and, finally,

· "New Worlds," in which WAC served as a spur to move outward in many directions which faculty had previously not imagined for themselves (Walvoord, et al., 1997, p. 138).

Let me, therefore, begin by acknowledging my general debt of gratitude to the WAC community for epiphanies large and small and for opening doors to many brave new worlds. I'll save my specific thank-yous for last.

From a Teaching-Centered to a Learning-Centered Paradigm

Throughout its 360-plus-year history, American higher education has changed and reinvented itself repeatedly in response to socioeconomic, political, and cultural trends and crises. Despite current economic and technological challenges to our viability, I see many reasons to believe that we will successfully respond again. Today, much as happened at the end of the 19th century and again after World War II, new ways of envisioning and organizing academic life are emerging, signs of another historic realignment and renewal of our academic culture. This time, however, both the focus and locus of change are different. This time, the changes center less on building new institutional structures, redefining the curriculum, or expanding access, and more on the very heart of higher education—the teaching-learning process.

In the most widely read and discussed higher education article of the past few years, Robert Barr and John Tagg (1995) characterize these changes as a shift from our current teaching-centered model of undergraduate education to a new learning-centered paradigm. As Barr and Tagg see it, the primary purpose of colleges and universities in this new paradigm will be to produce learning, rather than to provide instruction. By focusing on learning as the end, this new paradigm redefines traditional classroom teaching as only one among several possible means of learning production.

Although the term *paradigm* always makes me a bit queasy—Thomas Kuhn (1962) reportedly tried to withdraw the term from use late in his life—I think Barr and Tagg are correct in their view of the magnitude of

these changes. One possible outcome of this paradigm shift could be the transformation of our mental models of teaching and learning. Judging by the way we organize our work, we seem to imagine colleges and universities as types of teaching factories or educational shopping malls. Students are conceived of as products we turn out or customers we service. In the new learning-centered paradigm, by contrast, we're encouraged to view students as collaborators in the learning process— albeit often novice ones—and, consequently to construe, construct and inhabit our institutions as communities of learners, or learning communities.

The Learning Communities Movement

The phrase has a congenial ring to it, but what exactly is a *learning community*? (Here, in the best tradition of reflective writing, I urge you to take a moment to jot down your own definition, as participants in the conference keynote did, before reading further.)

Several alternate definitions of learning communities exist, but most center around a vision of faculty and students—and sometimes administrators, staff, and members of the larger community—working collaboratively toward shared, significant academic goals in environments in which competition, if not absent, is at least de-emphasized. In a learning community, faculty and students alike have opportunities and the responsibility to learn from and help teach each other. The faculty member's role shifts from delivering course content to designing learning environments and experiences, and serving as expert guide, coach, and role model for learners. The student's role shifts as well, from one of relatively passive observer of teaching and consumer of information to one of active co-constructor of knowledge and understanding (See Gablenick, MacGregor, Matthews, & Smith, 1990; Tinto, 1997).

Though they are a relatively recent phenomenon, functioning learning communities already exist at LaGuardia Community College, Seattle Central Community College, Portland State University, Temple University, the University of Washington, the University of Miami, and on a couple of hundred other campuses—and new initiatives are being launched regularly. While there are many variations on this theme, learning communities typically feature purposive groupings of students, shared course scheduling, significant use of cooperative and/or collaborative learning approaches, and an emphasis on connecting learning across course and disciplinary boundaries. As Vincent Tinto notes, "Nearly all the experiments have two things in common . . . One is *shared learning* . . . The other is *connected learning* (1997, p. 3, emphasis original).

In existing learning communities, anywhere from 20-100 students may be enrolled as a cohort in a cluster of conceptually-linked courses

from diverse disciplines organized around themes such as *Body and Mind, Environment and Community Health,* or *Schools and Families*. In some programs, participating students attend an additional group meeting each week, facilitated by a peer advisor. Faculty explicitly design and teach these linked courses to foster coherence and connections. Through them, students learn not only the academic content but also the learning, study, and group-process skills needed to successfully shift from a highly individualistic to a more cooperative academic culture.

The Writing-Across-the-Curriculum Movement

Although the label *writing across the curriculum* is used to refer to a bewildering variety of programs, there is a core of defining assumptions and features shared by almost all WAC efforts. McLeod (1992) offers the following portrait:

> Writing across the curriculum may be defined, then, as a comprehensive program that transforms the curriculum, encouraging writing to learn and learning to write in all disciplines. [WAC assumes] . . . that writing and thinking are closely allied, that learning to write well involves learning particular discourse conventions . . . that students learn better in an active rather than a passive (lecture) mode, that learning is not only solitary but also a collaborative social phenomenon, that writing improves when critiqued by peers and then rewritten . . . Profound curricular and pedagogical change can come about as a result of a WAC program, but such change will not take place unless it comes from the faculty themselves. And change takes time. (pp. 5-6.)

WAC, in its manifold forms, is probably the most widespread pedagogical and curricular innovation in the history of US higher education. Since the early 1970s, tens of thousands of faculty on somewhere between one third and one half of all American campuses have taken part in WAC workshops, retreats, study groups or programs (McLeod, 1992). As a result of their involvement in WAC efforts, faculty report changing to varying degrees the ways they think and teach. While some have made only modest changes in their teaching techniques, writing assignments, or in the ways they respond to student writing, others have redesigned courses to make them writing-intensive, and still other faculty have developed ambitious team-taught cross-disciplinary curricula focused on writing skills development (see Walvoord, et al., 1997).

WAC programs developed in the early and mid-1970s in response to the widening of access to higher education and the consequent enrollment of many underprepared students, as well as to a much publicized literacy crisis. Over the past 25 years, WAC has continued to evolve and grow while many other pedagogical reforms have proven to be short-lived fads. Thanks to its continued relevance and adaptability, the influence of WAC has gone far beyond its effects on particular instructors and institutions. Russell (1991) notes that in the 1980s:

> . . . WAC became only one of many reform movements, though it served as a model for several: speech communications, critical thinking, ethics, computer literacy — all "across the curriculum." WAC also became part of a general rethinking of pedagogy and assessment, as institutions sought to increase student "involvement in learning," as one of the reports put it, through faculty-student mentoring programs, offices of faculty development and teaching, "freshman experience" programs to retain students in an era of dwindling enrollment, and a host of other programs (Russell, 1991, p. 290, emphasis original).

Similarities between WAC and Learning Communities

By this point, the many similarities between WAC and learning communities movements may already be obvious. Learning communities are, like WAC programs, explicitly focused on developing process skills as well as product. And like interdisciplinary WAC programs, learning communities seek to help students construct coherence across largely arbitrary course boundaries. Learning communities evince the same social constructivist philosophy of learning and understanding that informs WAC. Both view meaningful learning as active and personally engaging, interactive and transactional, and developmental. And learning communities have been largely faculty initiated, much like the first generation of WAC efforts. It's worth noting, as well, that the most of the founding leaders of both reform movements have been women.

As the excerpt from Russell above suggests, these similarities are not accidental. Both movements spring from a broadly cognitivist, constructivist, developmental mix of learning theory that has influenced educational reform since the waning of behavioralism. And many of the same individuals and institutions now involved in the learning communities have been or are still involved in WAC efforts.

A Few Differences between the Movements

Notwithstanding their many similarities, the learning communities and WAC movements do differ in a few important aspects. Given that these two movements arose in different decades and in response to somewhat different circumstances and contexts, these differences — most in degree, not kind — shouldn't be surprising. For example, the scope of learning skills on which the two approaches focus differs. Typically, the learning communities model extends the WAC aim of transforming the curriculum to focus on developing skills in addition to writing, such as speaking, critical/creative thinking, and teamwork. Cooperative and collaborative learning methods play a much more central role in learning communities than in WAC, partly because these methods came into widespread use only in the 1990s. In response to the current sociocultural climate in higher education, learning communities are more apt to explicitly include diversity issues than were WAC efforts. In fact, many learning community faculty purposively use collaborative learning approaches to help break down barriers and stereotypes among diverse groups of students. In a related sense, many learning communities focus more on developing educated citizens than on developing effective writers.

Persistent Barriers to Change

The WAC movement's survival and successes over the past quarter century are all the more impressive when we consider the significant and persistent barriers that stand in the way of instructional reform efforts. These same barriers have often limited WAC to a marginalized status on the perhaps 50% of US campuses where it exists and, in many cases, kept WAC from penetrating the remaining, resistant half.

Some of the barriers are conceptual and cultural, involving conflicts about views of teaching, learning, and appropriate faculty and student roles. As Russell (1991, pp. 292-299) explains, WAC challenges many faculty's assumptions about the nature of writing and how students learn to write. Traditionally, writing has been viewed as either an unteachable talent or gift or a mechanical skill learned early in schooling or never at all. In addition, by focusing on process, WAC runs counter to views that equate learning with mastery of content, and engaging students in more writing almost inevitably implies less time for content coverage. Many students and faculty alike perceive additional writing as an extra burden, rather than an intrinsic element of higher learning. And WAC requires different and non-traditional working relationships between teacher and

students and among students, again challenging traditional and comfortable roles.

Other barriers are more clearly structural and organizational. For example, since responsibility for the improvement of student writing is seen as belonging to no particular discipline — except perhaps to Composition or Rhetoric — WAC efforts often founder against the hegemony of discipline-based departments, in which faculty roles and rewards are directly related to research and teaching about the discipline. The ways in which undergraduate teaching and teaching innovation are evaluated and rewarded tend to ignore or even punish faculty involvement in WAC.

To engage in WAC, then, faculty must swim against powerful, prevailing currents.

> It [WAC] asks for a fundamental commitment to a radically different way of teaching, a way that requires personal sacrifices, given the structure of American education, and offers personal rather than institutional rewards (perhaps this explains the religious metaphors common in the movement). A group of faculty who are personally committed to WAC can ride out any administrative changes (and perhaps increase their number), for the reforms are personal not institutional, and their success depends on conversion not curriculum. But on an institutional basis, WAC exists in a structure that fundamentally resists it (Russell, 1991, p. 295).

The same list of barriers to change could be used to explain the limited success of the assessment movement, critical thinking across the curriculum, or efforts to use Total Quality Management approaches in the Academy — they simply don't fit well within the prevailing organizational cultures and structures. In the final analysis, no reform can succeed fully unless it becomes an integral part of the culture of an organization and is institutionalized in its systems and standard operating procedures. Learning communities, which arguably make even greater demands on faculty and students than WAC efforts, are and will continue to be limited by the same barriers — unless we can find ways to infiltrate and influence the prevailing academic culture or unless that culture is changing.

Why I'm Optimistic about Change Now, or, Timing is All

Good ideas often wait a long time for the right moment, but advance swiftly when their time comes. I think the time may have come for many of the good pedagogical ideas represented by WAC and other related reform

efforts, and that the learning communities effort may be an effective vehicle for moving those ideas forward. A constellation of related external pressures on US higher education makes a shift from a teaching- to a learning-focused paradigm more likely now than in the past. These pressures include: dwindling post-Cold War Federal research funding, increasing competition for public support at state and local levels, competition among institutions for students and tuition dollars, pressures from parents and students for better instruction, the threat of competition from for-profit distance education and powerful instructional technologies, employers' calls for a better-educated workforce, and demands from legislatures and boards of trustees for better results and more accountability.

My sense is that these external pressures are weakening and eroding many of the barriers to reform mentioned earlier. And as those walls and speed bumps begin to come down, reforms that were stuck can be moved forward. But there's nothing inevitable about the direction of change. If we're to take advantage of timing, we've got to focus our efforts and our leverage carefully. I see learning communities as a promising vehicle — or perhaps a fulcrum — for change.

Seven Promising Shifts and Seven Powerful Levers

As is often the case for participants in WAC programs, involvement in learning communities can represent the fulfillment of long-held personal and professional aspirations. Many faculty hunger for the community of scholars they expected to find in academic life. And the recent explosion of newsletters, books, conferences, listserves and websites focused on teaching and learning is an indication of the breadth and depth of this longing in American higher education.

Notwithstanding the value of enhancing faculty's personal and professional fulfillment, that alone isn't reason enough to make the changes required to develop learning communities. We need first to ask how effective learning communities are at achieving their central aim: producing student learning. Early results are promising. Research done by Vincent Tinto and others is demonstrating that learning communities can produce significant gains in student involvement, learning, satisfaction, social connectedness, persistence and retention. And these benefits appear to accrue to remedial and non-remedial students in community colleges and research universities alike (Tinto, Goodsell Love, & Russo, 1993).

Developing a more cooperative academic culture is vital for our very survival. Just as employers consistently advise us that our graduates need well-developed teamwork skills to thrive in the workplace, faculty need to develop similar skills in order to prepare our students well. Within

the Academy's walls, real and virtual, we'll need better collaboration than we can presently muster to survive coming political and financial shocks. And in the biggest big picture, if we're to cope with our nation's and our planet's increasingly complex problems, we must educate highly effective teamworkers and citizens capable of making connections across all kinds of boundaries and borders. And we must do all the above more efficiently at lower cost—or sacrifice hard-won gains in equity and access.

The challenge, then, is to improve both the productivity of learning and learning quality (Johnstone, 1993; Education Commission of the States, 1995). To realize this vision, to move academic culture toward a more productive learning community model will require several fundamental shifts. The good news is that many positive shifts are already underway, and that powerful levers are available to hasten the transformation. Below, I'll list seven promising shifts and seven proven levers we can employ to build more productive learning communities.

Shift 1. From a culture of largely unexamined assumptions to a culture of inquiry and evidence.

Much of our standard practice in higher education depends on implicit and often highly questionable assumptions. For example, our system of courses and credits assumes that all students learn all subjects at the same rate. Typical general education survey courses assume a vaccination model of learning: A dose of Freshman Composition will make students better writers for the following three years. And some proponents of diversity seem to assume that simply injecting very different students together in the same environment will lead to greater tolerance and appreciation of diversity. While most of us realize these assumptions are problematic at best, practices based on them continue.

Lever 1. Assessment

The assessment movement prods us to examine our working assumptions by turning them into empirical, assessable questions. For example, could more students learn calculus well if we gave them more time? Do students who succeed in Freshman Writing courses write demonstrably better in their other courses? Does simple co-existence with diverse students lead to more open attitudes? After more than a decade of effort, a wide range of assessment tools exist to help us check our assumptions and to determine just how well our well-intentioned innovations are working. WAC, in particular, has a well-developed writing and program assessment literature to draw on (see White, 1994; and Davis, Scriven, & Thomas, 1987). At this point, I would argue that we

have sufficient technical skill to do assessment well. It's sufficient political will that's been lacking.

Shift 2. From a culture of implicitly held individual hopes, preferences, and beliefs to a culture of explicit, broadly shared goals, criteria and standards

The notion of community implies shared goals and values that direct decisions and actions. To get anywhere, we first have to agree on the destination. To create meaningful learning communities, we'll need to develop shared goals for student learning outcomes, shared criteria for assessment and evaluation, and shared standards for measuring student and faculty success. Very few departments or campuses have even begun this process.

Lever 2. Goal-, criteria- and standards-setting methods

Several practical methods for building broad agreement on goals, criteria and standards have been developed in the corporate world and in K-12 education. Some of the most promising are TQM/CQI approaches, such as open-space technology, visioning, and future search (Brigham, 1996) for creating shared goals; and a criteria- and standard-setting method used widely in WAC, known as *primary trait analysis* (Walvoord & Anderson, 1995; Bean, 1996).

Shift 3. From a teaching culture which ignores what is known about human learning to one which applies relevant knowledge to improve practice

For far too long, far too few college faculty were informed about applicable research on learning and teaching and far too many were dismissive of its potential value. Imagine if other applied professions, such as medicine or engineering, took the same view of research in their related sciences. How many of us would respect a physician who thought that the biological sciences had no relevance to her practice, or a civil engineer who didn't bother keeping up with materials science?

Lever 3. The research and practice literature on teaching and learning

After more than 50 years of research in psychology, cognitive science, and education, there are some general, well-supported principles of teaching and learning that can inform our professional practice. Books published in the last decade by Boice (1996), Campbell and Smith (1997),

Cross and Steadman (1996), Gardiner (1994), McKeachie (1994), Menges and Svinicki (1991), and Pascarella and Terenzini (1991), among others, offer useful research syntheses and practical, empirically-based suggestions for improving teaching and learning.

WAC, once again, has a particularly useful and diverse theory and research base to draw on—one that has much to offer learning communities faculty—including work by Bereiter and Scardamalia (1987), Bruffee (1989), Daiute (1985), Faigley, et al. (1985), and Young and Fulwiler (1986).

Shift 4. From a narrow, exclusive definition of scholarship to a broader, inclusive vision of scholarship

In *Scholarship Reconsidered* (1990), the late Ernest Boyer made a persuasive argument for broadening our vision of scholarly work from traditional discipline-based research only, which he termed the scholarship of discovery, to include the scholarships of integration, application, and teaching. Boyer and his heirs have argued that the restrictive traditional research paradigm is a Procrustean bed on which the creative and productive energies of many faculty are lopped off or, at best, diverted. At the same time, a narrow view of research inhibits faculty from focusing on applied pedagogical inquiry, precisely the kind of scholarship needed to improve learning quality and productivity.

Lever 4. The faculty evaluation system

Like most everyone, faculty tend to do what they are evaluated on and rewarded to do. Therefore, changing the faculty evaluation system used for retention, tenure, and promotion decisions is a pivotal shift. Inspired by Boyer's challenge, campuses throughout the country are working to develop ways to document, assess, evaluate, and reward a broader range of scholarship. The American Association for Higher Education's [AAHE] Peer Review of Teaching Project (Hutchings, 1995) and Forum on Faculty Roles and Rewards (Rice, 1996) are two national efforts to move this agenda "from ideas to prototypes." Perhaps the most promising tool in these efforts, the teaching or course portfolio, is well-known and has been long used in WAC to assess student writing (see Yancey & Weiser, 1997).

Shift 5. From an academic culture that tends to ignore costs to one that attempts to realistically account for direct, deferred, and opportunity costs

The "cost disease" threatens the health of higher education generally, and the very existence of many particular programs and institutions. Yet, for the most part, we lack accurate information on the real costs and benefits of our programs and activities on which to base decisions. There's no general agreement, for example, on what the appropriate, meaningful unit would be in a cost-per-unit accounting of learning. Without better and more appropriate accounting, in the broadest sense, we can't determine our productivity, much less improve it. This is a particular problem for pedagogical innovations, which are rarely less expensive when typical student head-count or credit-generation accounting is used, but might well be more cost-effective in generating learning—if only we could measure and account for it.

Lever 5. New accounting methods

Innovations in accounting, such as activity-based accounting and full-costing are beginning to be adapted and applied to academic units, informing our assessment and decision making. Inside the Academy, leaders like Guskin (1994), Johnstone (1993), Plater (1995), and Zemsky and Massy (1995) are working to develop new, more appropriate models and measures of teaching and learning productivity.

Shift 6. From a culture that emphasizes and privileges individual struggle for private advantage to one which encourages collaboration for the common good and *individual advancement*

While it's critical to change the evaluation and reward systems for faculty and testing and grading system for students to encourage and reinforce community, it's also necessary to teach all involved how to work together effectively. Since group process is the major determinant of group effectiveness, this means training faculty and students in group process skills.

Lever 6. Cooperative and collaborative education methods

A rapidly growing body of research on and practical expertise in these approaches can guide and inform our efforts. Johnson, Johnson, and Smith (1991) and Goodsell Love, Maher and Tinto (1992) are particularly useful resources.

Shift 7. From a model of higher education as primarily a quantitative, additive process to one that is fundamentally qualitative and transformative

In the US, higher education is often equated with course-taking and credit-collecting, as if the simple adding up of experiences necessarily led to any significant learning. No pile of bricks, however large, will by itself make a building; no list of disconnected courses, however long, will automatically make an education Too often, students are awarded degrees primarily for persisting, and employers complain, with some justification, that our graduates lack basic skills and knowledge.

Lever 7. Competency-based, mastery learning

One way around this unsatisfactory academic bean counting is to de-couple course-taking and grades from degree-granting. It would require that we define the competencies (what learners must demonstrably know and be able to do) that we most value, the core criteria for evaluating them, and the standards for how well students must perform, and develop adequate means to assess them. In a productive, competency-based learning community, students could demonstrate their mastery of some aspects of the curriculum without taking courses, but they could not become certified simply by taking courses.

The necessary connection between competency-based learning and assessment brings us full circle, a transit that underlines the necessary connectedness of all these shifts. Competency-based learning isn't a new idea. Most of the ideas listed above are not. My hope is that they are good ideas whose time may finally come. Our efforts can play an important role in making the timing right. Progress toward more productive, more authentic forms of academic community will require movement on many fronts at once—many small shifts propelled by many small levers.

In Lieu of Summary: Another Way of Putting It

Peter Senge, well-known in the business world for his work in Total Quality Management, has written about the need to transform corporations, and educational institutions, into what he calls learning organizations. While my focus above has been on a more modest level, on learning communities that involve subsets of the total campus, many of the same ideas apply. In his best-seller, The *Fifth Discipline* (1990), Senge suggests that the transformation to a learning organization requires the development of five disciplines—well-developed ways of thinking and acting—which he labels personal mastery, mental models, shared vision, team learning, and systems thinking. Judy Sorum Brown (1997) suggests that change agents trying to transform a college or university into a learning organization—or perhaps a learning community—would do well to prac-

tice Senge's five disciplines. To create learning organizations/communities, Sorum Brown argues that we'd need to: become committed lifelong learners ourselves (personal mastery); become aware of and check our assumptions and metaphors against those of our colleagues and the external reality (mental models); develop and follow a shared sense of what matters most (shared vision); learn to learn from and collaborate effectively with colleagues within the university (team learning); and develop the ability to see the larger patterns and the multiplicity of variables involved in change (systems thinking). The practice of those five disciplines, even by a substantial minority on any campus, would surely alter its culture.

Five Modest First Steps

For those interested in building connections between WAC and learning communities efforts, or in transforming a WAC program into a learning community, I'll suggest five modest steps which I think are consistent with Senge's five disciplines.

As a first step in personal mastery, resist the understandable urge to hurry the change process; it rarely works. Experience shows that most successful instructional innovations take years to bear fruit—often as long as actual fruit trees do. You'll save time and grief later in the process if you take the time *at the front end* to develop shared trust, shared language with which to discuss change, and a few shared goals. To explore mental models, you might begin by sharing successful teaching experiences, definitions of meaningful learning, or examples of exemplary student work. Building on that second step, develop a shared vision of what your students should know and be able to do at the end of a course, a program, or upon graduation.

Fourth, from the start, or very early on, focus on team learning. Engage in some group-process training yourselves. Get an outside facilitator to help you learn how to work effectively as a team. After all, you won't be able to teach cooperation and collaboration to students unless you've mastered their challenges yourself. And few of us learned cooperation in graduate school.

And fifth, apply systems thinking to your planning. Ask how well what you are proposing fits within the institutional structure and agenda, as well as how it fits into the systems of faculty work and careers and students' lives. Do some reading and research. Learn from the successes and failures of other efforts, both on and off your campus. But remember that good ideas and promising practices can only be adapted, not adopted. In sum, if you can create a learning community first among the committed activists, then you can more easily convince the open-

minded and the skeptics. The truly cynical will never be convinced, so leave them to plan their retirements.

A Closing Acknowledgment

I'm convinced that, as a profession, we academics don't honor our valued teachers often or well enough. So, I'd like to close by thanking those in the WAC community from whom I've learned most. The first and most personally meaningful book I've read on writing remains Mina Shaughnessy's *Errors & Expectations* (1977). In my first year as an inner-city high school teacher, Shaughnessy gave me ways to make sense of my students' writing and, more importantly, hope that they could actually learn to write well. In twenty years, no other book has had more impact on my teaching. My second epiphany on the road to (WAC) Damascus came during a workshop led by Elaine Maimon in 1980-1981 at Boston College. I was then in my first year of college teaching, a temporary sabbatical replacement struggling with several sections of Freshman Comp. Elaine Maimon's vivid examples from Beaver College's pioneering WAC program, her passionate engagement, and her practical suggestions all helped me find ways to help my students make writing connections beyond my own classroom (Maimon, 1981).

Over the years, I've benefited greatly from courses taken, seminars attended, or conversations with other WAC luminaries, including Collete Daiute, Peter Elbow, Toby Fulwiler, Dixie Goswami, Donald Graves, Lad Tobin, Barbara Walvoord, and Vivian Zamel. My sincere thanks to them, and to all those whose writings I've drawn on above, for opening doors to new worlds.

Notes

[1] This text is an expanded version of a keynote address given by the author on February 6, 1997, at the Third National Writing Across the Curriculum Conference in Charleston, SC. Elements of these remarks have appeared previously in the December 1996 issue of *The National Teaching & Learning Forum* and the May 1997 issue of the *AAHE Bulletin*.

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Writing Advisory Councils: Trading Expertise for Ethos in WAC

Yvonne Merrill
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Historically, university advisory councils have been thinly disguised fiscal development tools. Prominent citizens and members of the corporate sector give token input into programs while providing them with much needed funding. Employed in this manner, such councils pose little threat to the integrity of university curricula, something university personnel usually do not wish to invite. Yet, these local constituents are becoming expert in curricular matters because they often serve on more than one council over long periods. They have also been over-tapped while being thus undervalued, so are understandably leery when approached by university programs to participate in yet another advisory capacity. But those of us involved in university writing-across-the-curriculum (WAC) programs could be making effective use of the substantial qualifications these community figures bring from the workplace, especially since most of them are proven communicators and highly articulate. We could also repay our debt to them with our own expertise and actually effect some larger workplace changes through their influence, instead of overtaxing them. As I see it, writing advisory councils provide us an opportunity for education to go both ways—from community to university and *vice versa*.

Even though we face the almost universal perception by people who are not writing theorists that composition is a field without a content, we ourselves often forget that composition *is* a theoretical content, and composition programs and WAC courses are the only place where this theory is directly taught. Not only do our students need to understand the process and principles of composing in writing, but professional people in work settings also need to understand these concepts because they, too, do very real teaching of writing in their professional practice. They refer to it as *training* because it is hands-on and pragmatic. But as a corporate trainer myself at one time, I know that what they are really doing is situated rhetorical analysis, for which on-the-job trainers and peer mentors have had to develop their own vocabulary because they did not have our theoretical grounding.

For example, in a study of the rhetorical practices of both engineering faculty and working engineers, I discovered that the practicing engineers not only did extensive rhetorical analysis for every document they composed, but they had developed an elaborated vocabulary for what they were doing. Engineering faculty, on the other hand, appeared completely unaware of their textual adaptations for meeting their particular rhetorical constraints. In fact, they often chose to submit their articles to different professional journals, rather than adapt their texts to fit the ones they had originally chosen. Rhetorical practitioners on the job are also hungry for theoretical principles to shorten the apprenticeship time for new writers in their workplaces. Time costs money, and the more quickly new employees can begin writing effectively in their positions, the less costly they are to hire and train.

Writing across the curriculum was languishing in 1994 when I came onto the University of Arizona Composition Board as assistant coordinator for writing in the disciplines. To give it a jump start, I recruited an external advisory council, primarily to breathe some life into our internal Intercollegiate Writing Committee (IWC) and give it a focus[1]. It had not met in two years, lower division courses had become too large for effective writing practice, and the writing emphasis courses had undergone several generations of new faculty, which had diluted their theoretical content. From the beginning, I saw that my job as a writing educator went in both directions. The faculty for whom I was grooming the council needed to understand the council's very real workplace requirements for our graduates, but these workplace experts also needed our theoretical framework to apply in pragmatic rhetorical settings.

Here was an opportunity to repay the community with our expertise for the valued loan of their ethos. We needed to prepare prospective employees for real-world writing, and community employers needed our theoretical knowledge in order to help their co-workers perform rhetorical tasks more effectively on the job. My experience has been that workplace writers are much more receptive to our theory than are our university colleagues. In conversations with both groups, I find faculty to have the more reductive view of writing. This narrow view probably accounts for the fear among some university writing personnel that composition instruction is in danger of being reduced to a mere skill in service to others' content. I think this is largely an imaginary bogeyman, however. *We* have the theoretical knowledge to teach writing, and our classes are the only ones that have the luxury of teaching this theory. Both our colleagues in other disciplines and our constituents outside the academy need our expertise. We can reach the former through writing advisory

councils' ethos, and we can provide a real service to our community members by showing them how to do what we do in their own workplaces.

What I would like to do now is show how the documents produced by the University of Arizona's Writing Advisory Council provided sites for this two-way learning experience, in which we traded our expertise for their ethos, to accomplish specific WAC tasks on our campus. By supplying the council with the theoretical language of writing, I was able to help them articulate how writing was actually done in their rhetorical contexts. We can now use their contribution to *our* knowledge to help disciplinary faculty prepare students, not just to perform discrete written language acts, but to give them a tool for becoming adaptable writers who have the necessary virtuosity to address the multiple rhetorical contexts in which they will find themselves. I will then briefly summarize what the council has accomplished and tell how it is constituted for those who would like to create similar councils for their writing programs.

Exchanging Rhetorical Theory for Social Construction of Knowledge

The first document drafted by the council was done using the traditional writing-to-learn strategies we find ourselves modeling in workshops for our colleagues. At the first meeting of the council, I posed the question "What is the importance of writing to the practice of your profession?" I then gave them fifteen minutes to write and followed that with small group discussion, resulting in composite written statements of common writing philosophy (see Figure 1). Does this sound familiar? Each group then reported out orally. I collected the combined written statements, worked them into a single comprehensive statement, and sent it out for their feedback and revision. At each point I shared the rationale for the activity to make them consciously aware of how rhetorical theory informs our teaching of writing and facilitates the composing process and the social construction of knowledge.

Having this philosophy stated has been enormously helpful for persuading faculty to use more writing in disciplinary classes. It has also frequently uncovered the implicit assumption that we are preparing students for careers in acadème, rather than for the outside work world, an unrealistic and erroneous assumption, which when surfaced can be directly addressed. Since many faculty have not spent time working outside the university, we sometimes have little understanding of the larger world's writing realities and unconsciously think in terms of our own disciplinary discourse communities when looking at student writing. Of course, there is much in the philosophy statement that applies to academic writing. But one of the most difficult things those of us in

Writing Advisory Council
Position Statement on Writing

If professional success is a lock, writing is a key. Writing is critical for communicating, learning, recording, persuading, marketing, generating business, and presenting a visible statement of professionalism and quality of work. Writing encompasses all language uses, not solely formal or written professional communication. The ability to analyze an audience, situation, and purpose for communicating is critically important to all writers and speakers, who must make effective decisions about content, format, tone, style, organization and language based on them.

•Writing is an analytical tool that clarifies thinking.

•Writing communicates ideas and allows the writer to expand the audience.

•Writing provides the reader an image of the writer. The image is good or bad, depending on the quality of the writing.

•Good writing is clear and efficient. It saves communication time and focuses attention on the key ideas.

•Good writing speaks directly and interestingly to its readers. It addresses their needs, identifies with their values, and uses their language.

•Good writing requires thorough command of the mechanics of language.

•Good writing requires logical structure of ideas at the sentence, paragraph, and document levels.

•Good writing requires knowledge of the conventions and accepted genres in the various fields--letters, proposals, reports, etc.

•In nearly all professions, good communication is key to advancement.

FIGURE 1
Philosophy Statement of the University of Arizona
Writing Advisory Council

writing have to explain to fellow academicians is the need for thorough rhetorical analysis in order to produce effective written texts for different writing contexts, something I've found successful professional writers outside the academy to be exceptionally quick to understand and adept at doing.

What the council members gained from this experience was confirmation of their actual practices and a theoretical rationale for it. Collaborative writing in most professional careers is a fact of life, so the advisory council members were able to work efficiently together to produce a single document they had socially constructed, even though they had very different backgrounds. They were familiar with the process because they do it all the time. What they learned were the terms for elements of the rhetorical context--audience, situation, purpose--and how analysis of these elements becomes a heuristic for textual invention. *Document design* and *format* are comprehensive terms used in the workplace to cover all the areas of writerly concern we know as *content, organization, style, format, tone*, and *mood*. These concerns are directly and self- consciously addressed by workplace writers, and knowing more precisely the categories for textual decisions can help them write more efficiently.

They are also accustomed to relinquishing "ownership" of their ideas as those ideas become subject to peer review and revision, a concept that is often neglected or resisted by university faculty. Peer review and revision are practiced far more rigorously and regularly in the workplace than in the academy. Working professionals value collaborative effort, as we all know from phrases like "team player." They value it because they believe that knowledge constructed collaboratively is quantitatively and qualitatively better than only one view of a phenomenon. In the academy knowledge is power, and we tend to horde it and protect it from co-optation. We also assiduously credit our knowledge sources to avoid accusations of dishonest scholarship and plagiary. These concerns are important to workplace writers as well. They too must provide appropriate acknowledgment and documentation. But wide circulation of ideas is a good thing in work settings, and individual ownership of ideas is merely the starting place for more valuable knowledge collaboratively constructed to achieve common goals.

Documentation acquires an additional meaning in the workplace: "how one performs a task appropriately for the situation," a new and important concept for writers in the academy. Unless faculty members are specifically writing instructions for new technology or procedures for their peers to replicate, they generally don't write instructions with the same care and attention to rhetorical constraints that writers outside the academy do. Of course, writing often serves more instrumental pur-

poses in the workplace, but attention to language potential and the subtleties of its use are very important to working professionals, who understand that they practice rhetoric daily. *Appropriateness, or propriety,* has the same meaning to them as it did to Aristotle. Saying the right thing in the right way at the opportune moment is critical to persuasive workplace communication, and workplace communicators consciously cultivate this skill as practical rhetoricians.

An example of how working professionals have had to invent their own vocabulary for the composing process appears in the particular philosophy statement "Writing communicates ideas and allows the writer to *expand* the audience." What they meant by this choice I ascertained to be "make accessible to multiple readers," which I also discovered was a high value to these writers. They identified "good writing" with the kind of clarity that enabled multiple readers with different backgrounds and information needs to understand. Unlike many academicians, they are often acutely aware of the negative consequences for not foreseeing the response of some particular reader who was not originally intended. Some of us in the academy, on the other hand, value exclusionary language that guards disciplinary "territory" from non-specialists. We have yet to elevate above independent thinking the socially constructed knowledge derived from cross-disciplinary conversations that working professionals routinely participate in. For workplace writers, democratization of ideas is reflected in the democratization of the language in which these ideas are inscribed.

The time appears to be ripe for us to give more than polite acknowledgment to what we can learn from people who use writing to accomplish extraordinarily varied and complex tasks with real readers, readers who have equal investment in the conversation. The sense of urgency for us to collaborate more effectively with our communities' employers was clearly exemplified by this year's WAC Conference keynote address. Judith Sturnick identified two national trends that favor the use of writing advisory councils: changing student needs and pressure from the corporate community to respond to demands in the workplace through university/corporate collaborations. She explained the latter pressure as deriving specifically from corporate needs for better prepared writers. Though we should not accept the requirements of the workplace as a narrow mandate to teach vocational skills, we do have a mutual obligation with the public sector: we are obliged to provide versatile and proficient thinkers and writers, and employers are obliged to provide us support to do that and to hire our graduates. Writing advisory councils establish a site where an on-going theoretical dialogue can take place in which our two areas of expertise can be exchanged to the benefit of both.

Theorizing the Writing Process

The same writing-to-learn strategies served to produce a second document collaboratively written by the advisory council and the Intercollegiate Writing Committee. Once each group had derived its own philosophy or mission statement, I brought them together to articulate specific objectives for the undergraduate writing program and strategies to achieve them [See Figure 2]. They spent an entire day working in mixed small groups to pool their ideas, which again taught the council members vocabulary for ideas with which they were already familiar, and to teach the faculty that these were not only familiar concepts to workplace professionals, but concepts they needed to teach their students in every discipline *before* they arrived at the workplace.

Though I mediated by providing some of the wording, Figure 2 shows that both council and faculty agree on writing's role as an exploratory act performed in stages to address particular rhetorical constraints, not just a one-step demonstration of completed thought. Though faculty actually practice writing in this way themselves, they don't value it as "writing," almost never share this aspect of their writing process with students, and rarely give students the opportunity to practice it. Working professionals practice it more consciously, but aren't quite sure what to call it. They do, however, model it and recommend that their coworkers use it. Thus the collaboration proved instructive for both groups.

The strategies section of Figure 2 also shows the council's and the IWC's awareness of the need to teach writing processes in all disciplines. Articulating clear ideas about particular subjects evolves through numerous iterations that require adequate time and intervention points. Throughout the recommendations, we can see the need to teach rhetorical analysis overtly and to support the writing process with the kind of review and revision real-world writers have to do in order to achieve successful workplace documents. Impressing faculty with the importance of allowing adequate time and instruction to the writing process is one of the best ways we can use real-world writers' ethos.

Accomplishing Writing Goals with Advisory Council Participation

Writing advisory councils are extremely valuable when we conceive of them as working groups. My experience with ours has shown me that having a direct effect on undergraduates' learning is something that even extraordinarily busy professionals can find the time to do. After the second year of its existence, our council had worked with the writing program and the IWC to accomplish the following activities toward meeting their stated objectives:

Improving Undergraduate Writing at the University of Arizona

Objectives

I. To change student and faculty attitudes about writing by instilling
- * An appreciation of the importance of good writing for communicating, thinking, and exploring, and
- * A recognition that good writing adapts all aspects of the text to the audience, purpose, and situation for writing and follows the expected conventions of specific disciplines.

II. To provide opportunities for students to practice the process of writing, specifically
- *Opportunities to read models of disciplinary writing and to speak about them, focusing on both the ideas and the disciplinary conventions
- *Opportunities to write collaboratively for real-world audiences and to revise writing based on feedback.

III. To take advantage of existing resources for improving writing in the disciplines, specifically
- *Opportunities in all courses for students to practice both formal and exploratory writing
- *Opportunities for faculty to share and improve their own writing and to learn writing pedagogy with the help of the Intercollegiate Writing Committee and the University Composition Board.

Strategies

I. To change faculty attitudes by
- *Supporting faculty through symposia, writing centers, and rewards for using writing pedagogy
- *Showcasing successful classroom strategies.

II. To change student attitudes by
- *Supporting students with models, feedback, and writing centers
- *Providing for the process of writing through real-world assignments, discussion, peer review, and revision.

III. To allow for the writing process by
- *Building time into the course structure to allow for writing to evolve over time
- *Using real-world projects that involve interviews, group work, and multiple documents and drafts.

IV. To use existing resources by
- *Employing community professionals for presentations to deans and department heads about writing and for sharing their work and writing with students
- *Employing IWC and UCB members for presentations to deans and department heads about writing.
- *Encouraging faculty to share their writing with students and to team teach disciplinary writing with community professionals.

FIGURE 2

Collaboratively Written Objectives and Strategies by the Advisory Council and IWC

1. Implemented a writing requirement for all general education courses
2. Approved expansion of the writing center into college-based satellites
3. Reinforced the necessity of discipline-specific writing instruction in the majors
4. Participated in a first-year composition speakers' series
5. Underlined for faculty the importance of peer review and revision as important components of actual professional practice
6. Described for faculty and students the multiple steps in professional writing practice: interviewing, researching, analyzing audience and purpose, proposing, note taking, generating ideas, planning, drafting, peer reviewing, and revising
7. Met with the director of graduate studies in rhetoric and composition to discuss workplace rhetorical analysis
8. Presented their writing values to the provost for undergraduate education
9. Presented the requirements for workplace writing to a conference of university, community college, and high school English teachers
10. Responded to business and technical writing students' work in classroom visits

Several of the activities the advisory council has performed have now become annual or regular voluntary services, such as responding to student papers, participating in the first-year speakers' series, and addressing the conference for English teachers. Each year, the council reviews and updates its public recommendations for the university's undergraduate writing program, and these recommendations are sent to the IWC, the college deans, and the provost for undergraduate education. Their current recommendations include providing opportunities for students to do on-site observation and internships with professional writers, raising faculty standards for evaluating writing in all disciplines, and teaching cross-disciplinary writing skills in every class, such as writing under pressure and writing to summarize, analyze, interpret, solve problems, propose or recommend courses of action, and market ideas--all important to multiple endeavors and fields.

They have also recommended that faculty be supported with stipends for in-service training to learn effective ways to improve student writing. But the most significant thing they have recommended is that faculty and classes give students many opportunities to use writing as a thinking tool, necessary for their acquiring usable knowledge that they can apply. To do that, the council recommends that students be given opportunities to pursue projects in which writing accomplishes actual

tasks that have value for them in settings other than the classroom. They recognize that our students will only value and learn good writing when it gives them something they want or does something they feel is important. As course director for our business and technical writing classes, I immediately used their recommendations to turn these courses into service learning courses, which have since produced very complex and socially altruistic goals.

Implementing a Writing Advisory Council

Having spent four years as a writing consultant to businesses and governmental agencies, I had personally witnessed the mismatch between academic preparation and workplace requirements. Since I had previously worked with many corporate managers and training directors, I decided to reconnect with them and recruit articulate and credible spokespersons for the needs in their fields. Thus was born the Writing Advisory Council. To give it a high profile immediately, I invited our university president to address its first meeting. He responded well to coaching and publicly recommitted the administration to writing improvement, at least in theory. Once given this official stamp of approval, the council went to work generating its philosophy statement, which I felt essential to any conversation between them and university personnel.

In order not to over-extend the individual members of the advisory council, we ask that each provide only three "services" in an academic year. Thus to cover the several events taking place throughout the year, we attempt to maintain twelve to eighteen active members on the council. Generally each member has been willing to serve at least two years. Only one-third to one-half have needed to be replaced each year, providing year-to-year continuity. Members are not asked to serve any particular length of time, but we ask them to nominate and approach their own successors when they elect to leave the council, and we follow up to recruit their nominees. Each member recruits from within his or her field to maintain a representative membership balance, but we may not have a full complement in any given year. I continue to recruit throughout the year, and we usually have one or two mid-year vacancies to fill.

Even though these people lead extremely full professional lives, they have proven incredibly willing volunteers and always find new ways they can contribute to our program. Their contributions have not included fund raising because we have not asked them to do this. We feel that not doing so has encouraged them to respond willingly to our other requests. Limiting requests for individual members' services has also had a positive effect. I keep the calendar of the activities each chooses and do

not allow other university units direct access to them, in order to keep control over their time.

We are able to benefit financially from our advisory council indirectly by keeping our development officers aware of the council's activities and recommendations, so they can use the council's high community profile to solicit funding for writing initiatives in the individual colleges.

We keep the college deans aware of the council activities by rotating a request among the colleges for hosting the annual Fall and Spring meetings. At the Fall meeting we map out the year's calendar of events. Together the meetings count as one service, but most members have chosen to do three voluntary events in addition to the meetings because they sometimes have to miss meetings. We hold an end-of-the-year meeting for those members unable to participate in all of their services, at which we recap the year's activities and re-enlist for the ensuing fall. Most of our planning and document drafting takes place by mail and e-mail.

Conclusion

Though our advisory council appears to provide a stable structure for putting continued pressure on the university to improve student writing, it requires constant maintenance. But the benefits cut both ways, so it's well worth the trouble. The erratic performance of our internal writing committee has taught us that strong, consistent leadership and institutional support are also required. Without them, the Writing Advisory Council and the many good things *it* supports would also rapidly disappear. These are some of *our* realities that the council has come to understand through our new medium for university/community communication. Realizing them has tempered the council's impatience to see their recommendations put into immediate practice.

We can't accept their recommendations uncritically either. But we need to give them credit for a broader understanding of writing than we are accustomed to assuming. In the workplace, writing is a collaborative endeavor, accomplished in stages and requiring conscious rhetorical analysis. It is also viewed as demonstrated thinking in much the same way as academic discourse is viewed. Effective workplace writing requires interventions that entail collaboration and relinquishing ownership of ideas. Knowledge constructed socially is valorized because it accomplishes goals shared among conversants. Workplace writers understand perhaps better than academicians that writing is always situated within a specific context and that the writer overtly assumes a stance in relation to the subject and the reader.

The academy has waited too long to open itself to what it can learn from the people who put our theory into practice--people who would welcome our theory if we only made it accessible to them. Universities need to realize that our educational mission extends well beyond our ivied walls and goes both ways. When we accept time, energy and largesse from our community, we need to repay it in the currency we have--the theory for accomplishing socially valuable goals our research provides.

Notes

[1] The make-up of the advisory council is intended to reflect the principal employers in Southern Arizona: the mining, medical, high-technology, bio-technology, and financial industries; the legal, architectural, governmental, environmental, and artistic professions; large commercial employers; and independent consultants.

Back to the Future: Instructional Practices and Discourse Values[1]

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Yesterday afternoon, in the midst of the conference, I set my previously prepared paper aside and began to revise this talk. I had decided my previous version focused too much on problems and not enough on possibilities, the exciting possibilities I had heard so many of you talk of as your current practices. So, I felt I needed to revise—my students would say that's a fate a writing teacher deserves! What follows is a bit of a collage from my previous version and my notes from the conference.

It may be a sign of my aging, but I think it's equally a sign of the times, that when I think of writing-across-the curriculum—especially when asked to look toward the future, I am drawn to looking back to my initial involvement in WAC in the mid-1970's. In his history of writing-across-the- curriculum, David Russell claims that "Cross-curricular programs were almost always a response to a perceived need for greater access, greater equity" (21). That was certainly true of the 1970's. At the time, I was responsible for a developmental reading and writing program at a small state college with an open admissions policy. Many of the students I taught—for reasons of previous education, and beyond that, family background and class—were ill prepared for college. My colleagues and I were drawn to writing-across-the-curriculum out of our commitment to access and WAC's focus on using writing as a way of helping students become more successful learners and writers (Herrington).

When I think of names that influenced me and my colleagues initially, I think of Mina Shaughnessy, articulating a commitment to education for many students previously excluded and linking access to education with "the realizations of a democracy" (294); Janet Emig, arguing persuasively that "writing represents a unique mode of learning". . . active, engaged, personal—more specifically, self-rhythmed—in nature"

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[1] *Talk delivered at the closing plenary session of the 3rd National Writing Across the Curriculum Conference, Charleston, SC, February 6-8, 1997*

(122, 124); James Britton, Nancy Martin, and colleagues making a similar case for language for learning, with Britton stressing informal "expressive" writing. Britton's influence is seen in the stress on journal writing and other informal writing as a medium for learning. Taking a more analytic approach and viewing even more formal writing for an audience as a way of learning, Lee Odell called on teachers to analyze writing tasks and figure out ways to teach students how to do the kind of thinking and writing demanded by those tasks, asking what does it mean to think and write like a biologist, an engineer, a sociologist. Both Britton's and Odell's approaches were about supporting "access" to learning and using writing as one medium for that learning.

It is this early guiding vision that should drive any future WAC efforts, with teachers aiming for instructional practices that 1) prompt students to be more active, personally engaged, reflective knowers, 2) respect students' authoritative knowledge, 3) help them pursue their personal interests and motivating intentions through the means offered by particular disciplinary methods, and 4) foster a relation of students working, as Fulwiler writes, "as partners in dialogue with the teacher." The guiding model should be faculty coming together to discuss teaching practices, reflectively and generously, as we have done here at this conference. The goal should not be eliciting more writing as a good thing in itself, but fostering student learning. Those of us who believe in this goal should insinuate ourselves across our schools, whether through specifically designated WAC meetings or groups focusing on such topics as community service learning, using electronic media, cooperative learning, general education (Walvoord).

We should also be seeking input from our students, both informally in our classrooms and formally through research studies of specific writing activities and students' experiences of them. I am thinking of studies such as one conducted by Gisela Meyer Escoe, Jack Julian, and Philip Way of the University of Cincinnati on the efficacy of specific writing-to-learn activities for students, considering such factors as gender and race. Essentially, their research is asking whom such activities are benefiting and whether those benefits are differentially distributed. Also, at the University of Minnesota, the Center for Interdisciplinary Studies of Writing makes small research grants available to teachers (Bridwell-Bowles).

The importance of such classroom-based research is underscored by a negative case I want to report, one that highlights the connection between instructional practices and students' writing and learning. It is taken from a research study conducted by me and my colleague Marcia Curtis and involves an experience of an African American student in an Introduction to Sociology class. For one assignment, students were asked

to summarize and compare two views on poverty, one that was implicitly racist, characterizing a "normal" class not in poverty and a "lower class," responsible for their poverty and by contrast with the "normal class," implicitly "abnormal" and not white. Asked to summarize this position in a disinterested way where he was not asked to draw on his own knowledge—knowledge that would have challenged this view, this student not surprisingly had difficulty, difficulty that was as much ideological and deeply personal as linguistic. It is not surprising, then, that he said he could "find no place to fit in." He reported that he was very frustrated trying to write the paper and kept contradicting himself. He received a C for the paper. Contrast his experience in this class with his experience in an Anthropology class where he was asked to reflect on his own experience and position in relation to the topic he was writing about. Further, where instead of being asked solely to summarize a point of view, he was asked to shape his thoughts about something.

WAC is about showing students how to draw on their own authoritative knowledge when relevant and how to link personal knowledge and interests with knowledge from other sources. In some areas, students may have authoritative knowledge that we do not have and that may not be adequately represented, or may even be misrepresented or distorted in the materials we present to them. As another student from our study has explained: "Sometimes the way we experience things in the world isn't exactly how theories explain things or how something you learn in class explains things."

WAC is about connecting students' own interests and values with disciplinary projects. For example, in an Economics course, Gisela Meyer Escoe, Jack Julian, and Philip Way of the University of Cincinnati pose a project to students to advise a congresswoman on whether to support raising the minimum wage; each student decides on how to weight the criteria used to make the policy decision (improving economic growth, efficiency, equity). In this way, they are able to develop an economic policy recommendation on the basis of their own values. In an Econometrics courses, Bob Gillette of the University of Kentucky has students, working in groups, choose their own problems to study for a major project. In their groups, they also provide feedback to drafts of their work in progress. Al Gubanich in biology at the University of Nevada has his students design experiments to test their own hypotheses. In other words, within reasonable parameters set by the teacher and using the disciplinary methodologies they are trying to learn, students pursue their own interests and curiosities.

At other sessions, I've heard teachers talking of other ways of encouraging more active engagement and interaction among students. Karl Smith, a civil engineer at the University of Minnesota, spoke of using

cooperative learning principles with writing to foster more active learning and positive interdependence among students working together in groups. Others spoke of using e-mail and the World Wide Web to foster more active participation. For instance, Virginia and Gary Hardcastle of Virginia Tech use "WebChat," an application that, when run on a World Wide Web server, allows for participants to engage in on-line discussions in real time, analogous to software that allows for asynchronous online discussions among networked computers. The Hardcastles find that Webchat is an effective way to integrate informal writing for thinking and communicating into their philosophy classes. Pat Mower of Washburn University spoke of making her College Algebra course writing-intensive and using writing tasks to foster understandings of why something works, not just how. One kind of writing assignment she uses requires students to post "crib sheets" on the e-mail list, explaining a concept so an absent student could understand it. Stanley Zoltek of George Mason University, also a mathematician, asks students to create sample problems to show their understanding of particular course materials and post their problems on the Web. Both pointed to the additional value of students having an audience—their classmates in Mower's case, and anyone accessing the Web in Zolteck's case, for encouraging students to take extra care in what they post.

Linking writing with community-service learning projects also presents exciting opportunities for more active and reflective learning as well as prompts teachers to explore new pedagogical approaches (Deans). At the conference, Ruth Overman Fisher spoke of a writing-link course at George Mason University where a writing course is linked to both a sociology and a project-based service learning course. At my own university, the University of Massachusetts at Amherst, our Junior Year Writing course in Exercise Science includes a community service-based writing project. As our experience has shown, such courses prompt both students and teachers to broaden their notion of the scope of disciplinary work and also to reflect on the kind of disciplinary and professional texts they value.

That's a second key point I want to make: In addition to continuing to focus on instructional practices, WAC should encourage teachers to reflect critically on disciplinary values. To underscore why this is important I want to cite another negative case, one where discourse conventions were taught rigidly and without reflection on them. Through my research, I learned of a psychology research methods class where American Psychological Association style conventions were presented as "rules," quite inflexible rules. Indeed, students were limited even more than the APA style book with students being told they could never use "I," even though in practice the prohibition against using "I" varies from

journal to journal. As the teacher told me, "the more consistent the rules you give them, the easier I think they find the writing." Even when that consistency misrepresents disciplinary practices? Students in the class had questions about this practice, particularly given what they read on their own in research articles, but these questions were not brought out into the open for discussion (Herrington and Moran, "Prospect"). In contrast to the practice in this class, I think of another writing-intensive social science class, where the teacher presented examples from professional discourse that illustrated some of the range of practices in disciplinary writing and where questions about conventions were invited.

In order to introduce students to some of the variation already apparent in disciplinary/professional practices, we need to be attune to it ourselves and follow debates about these practices: What are the assumptions about knowing and representation embedded in our discourse conventions? Linked courses—where a writing course is linked with a course in another discipline—seem like a productive way of helping us recognize some of these assumptions and possible biases. For example, Terri Myers Zawicki of George Mason University spoke of teaching a writing link course with a political science teacher and discovering she and the political science teacher had a different perspective on the acceptability of "I" in texts. Their different perspectives helped the other see a taken-for-granted convention anew and reflect on the rhetorical reasons for the convention. Zawicki stressed that such conversations were possible because each was a co-equal partner in teaching the linked courses. She spoke also of teaching a writing course linked with an anthropology course that brought issues of representation and objectivity to the fore. We should also be open to possible biases in disciplinary language. For example, sexist biases in the language of molecular biology have been criticized by Bonnie Spanier, herself trained in that field. In "Encountering the Biological Sciences: Ideology, Language, and Learning," she links this critique with undergraduate education, arguing that "writing-across-the curriculum projects that address ideology in the discourse and practice of science are potentially transformative" because they can help "promote the development of aware and 'resisting' students who can take their rightful places in science" (193-94).

Such awareness is promoted only when discourse conventions and debates over them are brought into our classes. Underscoring this point, Harriet Malinowitz argues in "A Feminist Critique of Writing-in-the-Disciplines" that it is:

> important to help students examine the extensive, though largely hidden, hybridity of disciplines (a practice which would itself press at the bit of those academic departments

> that mask hybridity from their protegees and, often, from themselves). (25-26)

Given the kind of thoughtful reflection I have heard from students when given knowledge about the options they have, it seems to me that we should trust our students enough to bring them into considerations about disciplinary conventions, recognizing these conventions as the rhetorical practices they are. (See also LaCourt.)

We need to be equally open to reflecting on our disciplinary values regarding epistemology. What ways of knowing are privileged? And what ways are marginalized or even excluded? Having studied the writing of experiences of three students over their four years in college, I have been struck as much by the sameness of the writing tasks they were asked to do as the apparent differences. Almost all called for detached, analytical thinking. One of the exceptions, in a Foundations of Human Services course, called for empathic knowing (Belenky et al). For example, for one project, "a cultural exploration" paper, students were to learn about a group they did not belong to by reading a relevant book and interviewing two people who self-identified with the group, trying to understand their perspectives. A student who told me of the assignment said it "restructured the way I thought about things." I'm struck by her choice of the verb "restructured," since she did not use it in talking of other writing projects. I do not mean to deny the value of analytic thinking—indeed, the project I just mentioned involved analysis and standing back as well as empathic identification. My broader point is that we should consciously consider the multiplicity and richness of ways of knowing we might introduce students to over their years of college and how writing could be one medium for engaging in that learning. WAC forums—like this conference and ones we can create on our campuses—that bring us together from our diverse departments, are a perfect place to think about the ways of knowing we might want to introduce to students in our courses, in general education curricula, and our majors. I'm thinking of a session I attended yesterday by Roger Martin of Architecture and Landscape Architecture at the University of Minnesota, showing the power of visual images and metaphor for landscape architects. Also, Linda Powers at Virgina Tech spoke of the "Rule of Four" for learning math concepts: investigate a concept symbolically, numerically, graphically, and verbally. As she explained these four, I realized how I, a word person, too often encourage the Rule of One, verbal learning alone although rhetorical concepts certainly lend themselves to symbolic and graphical learning, even dramatic enactment. While these examples may seem ideologically safe, the debate within some of our disciplines over dominant practices also involves issues of

power and representation as Spanier's critique makes clear, issues that come into play in our classrooms as well, as the example of the student writing for the Introduction to Sociology course illustrates.

Well, I best conclude quickly: When I think of the future—websites, online writing courses, proliferation of writing-intensive courses, links with community service learning projects, I feel both excited and a strong pull to reaffirm the core values of Writing across the Curriculum: WAC should reaffirm its commitment to access to education and be about instructional practices that aim to foster success for students as active, personally engaged learners who can make places for themselves within our disciplines. As teachers, we need to be open to new challenges and take reflexive, critically open and flexible stances toward our teaching and disciplinary practices. Finally, and if only to keep ourselves energized, we need to nurture our local community of teaching colleagues and nurture our cross-institutional community at conferences like this one.

I'll close with comments from three students, from three different schools, commenting on writing projects in three different disciplines. They remind me of why we're engaged in this project:

> "[The writing] encouraged me to think, to relate the material, and not merely memorize it."
>
> "Writing is my way of putting things together. A lot of things I didn't quite understand about distillation. I really put distillation together when I wrote that lab."
>
> "It restructured the way I think about things."

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