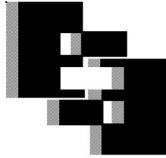


Language and Learning Across the Disciplines

A forum for debates concerning interdisciplinarity, situated discourse communities, and writing across the curriculum programs.



**A Process for Establishing Outcomes-Based Assessment
Plans for Writing and Speaking in the Disciplines**

Michael Carter, *North Carolina State University*

**Design, Results, and Analysis of Assessment
Components In a Nine-Course CAC Program**

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January 2003
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Language and Learning Across the Disciplines is a forum for issues concerning interdisciplinarity, situated discourse communities, and writing across the curriculum programs. The journal will publish articles dealing with issues in learning theory, discourse analysis, participation in disciplinary discourse, and the social, intellectual and political locations of WAC programs. We welcome articles seeking to make connections among several such areas of inquiry. All manuscripts will be carefully reviewed by members of the editorial board and appropriate outside readers. You may expect to hear from us in two months. When submitting a manuscript please follow the current MLA or APA style sheet; submit three copies (3,000 to 7,000 words); print your name, address, telephone number and affiliation on a cover sheet, not on the manuscripts; and enclose sufficient return postage clipped, not pasted, to a self-addressed envelope. Send manuscripts to Sharon Quiroz, Editor, *Language and Learning Across the Disciplines*, Illinois Institute of Technology, 3301 S. Dearborn, Chicago, Illinois 60616. Email submissions to quiroz@iit.edu. Major funding for *LLAD* is provided by the Academic Resource Center of the Illinois Institute of Technology. <http://aw.colostate.edu/llad>.



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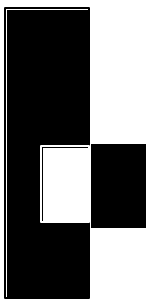
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Note from the Editor

Sharon Quiroz

Illinois Institute of Technology

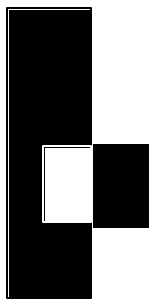
This issue of *Language and Learning Across the Disciplines* offers very practical articles on assessment and course design, and a survey of our genre practice in WAC programs.

Michael Carter's article, "A Process for Establishing Outcomes-Based Assessment Plans for Writing and Speaking in the Disciplines," describes the involvement of North Carolina State University's Campus Writing and Speaking Program in preparing for an accreditation visit. Anyone faced with such an accreditation visit will want to look at this report.

Addressing a completely different assessment issue, J. Stanton Carson, Patricia G. Wojahn, John R. Hayes, and Thomas A. Marshall report on the continuing development of the Communications Skills Program at Robert Morris University. In "Design, Results, and Analysis of Assessment Components in a nine-course CAC Program," the authors report on the development of a multiple-choice writing test they feel compliments their portfolio assessment, captures real information, and addresses the demands of administration and business sponsors.

Natasha Artemeva and Susan Logie's article "Introducing Engineering Students to Intellectual Teamwork," describes and evaluates the use of peer feedback large sections of engineering courses. Seeking to provide evidence of the intellectual growth outcome of peer feedback.

Finally, Dan Melzer surveys the genres assigned in writing intensive courses that are offered on-line. His method makes it possible to sample widely, giving us a nice overall view of what is happening with "Assignments Across the Curriculum: A Survey of College Writing."



A Process for Establishing Outcomes-Based Assessment Plans for Writing and Speaking in the Disciplines

Michael Carter

North Carolina State University

Outcomes-based assessment is gaining prominence in higher education. Many regional accreditation agencies are either strongly encouraging or requiring that colleges and universities under their purview instate this kind of assessment.¹ Professional accreditation organizations are also moving toward outcomes-based assessment. Perhaps the most dramatic case has been the American Board of Engineering and Technology (ABET), but there are others as well. For example, the National Council for Accreditation of Teacher Education, the Institute of Food Technologists, and the Council on Social Work Education are either considering or have fully established this assessment method for accrediting member institutions.² In addition, many colleges and universities, such as mine, have embraced outcomes-based assessment as a way of encouraging continual improvement in academic programs and of demonstrating accountability.

Outcomes-based assessment invites us to view our courses and curricula from a different perspective. We're used to thinking about education primarily in terms of inputs: we designate a particular set of courses for students to take and when the course count is completed we declare them educated and send them on their way. We assume that the inputs we provide for students will lead to certain outcomes, the knowledge, skills, and other attributes we believe graduates should possess. However, an outcomes-based approach to education does not rely only on assumption. By that method, faculty identify the educational outcomes for a pro-

gram and then evaluate the program according to its effectiveness in enabling students to achieve those outcomes.

The main advantage of this outcomes perspective is that it provides data for closing the educational feedback loop, that is, faculty can use the results of program assessment to further improve their programs. In addition to this general benefit, an outcomes-based model also has potential advantages for writing and speaking professionals working in the disciplines. First, asking faculty in the disciplines to identify writing and speaking outcomes for their programs—either as part of an institution-wide initiative or, on a smaller scale, focusing individually on departments—encourages greater faculty investment in their students' writing and speaking. Because these outcomes reflect the values and goals of the disciplinary faculty, not those of outsiders, the outcomes may possess greater credibility with the faculty in the discipline. The role of the writing and speaking professional, then, is to work with faculty in the disciplines to help them make their insider's knowledge and expectations explicit, to enable them to recognize and define their own expertise in writing and speaking in their disciplines.

Second, asking faculty in the disciplines to assess their students' writing and speaking based on the disciplinary outcomes they themselves have created places the responsibility for writing and speaking in the majors on the program faculty. Writing and speaking become intimately tied to disciplinary ways of thinking and professional discourses of the field. Thus, the quality of students' writing and speaking is also an indicator of students' ability to master the ways of thinking and professional discourses of a discipline. Communication abilities are not outside the discipline, solely the purview of writing teachers, but linked directly to the discipline and are thus the responsibility primarily of faculty in the disciplines. The role of the writing and speaking professional, then, is not to take on the task of teaching students to communicate more effectively but to better enable program faculty to meet their responsibility for their students' writing and speaking.

And third, involving disciplinary faculty in outcomes-based assessment encourages them to take a wider view of writing and speaking in their programs. One of the problems of incorporating writing- or speaking-intensive courses in the disciplines is that faculty tend to see communication

as isolated within their programs, something to be taken care of elsewhere, not in their own courses. However, program outcomes lead to a programmatic perspective. Writing and speaking come to be seen as critical throughout the program. Students' failure to meet an identified outcome means that faculty must look at the entire program to identify opportunities to improve students' learning. The role of the writing and speaking professional is to help faculty recognize those opportunities and design instruction that will better enable students to meet the outcome.

Thus, the function of writing and speaking professionals may change in an outcomes-based model of assessment. This paper focuses on the first role mentioned above, helping faculty in the disciplines identify program outcomes and devise assessment procedures for measuring those outcomes. At my university, we have been involved in university-wide, outcomes-based assessment for over five years and have developed a procedure for working with program faculty to generate assessment plans. I will present that procedure in detail here as an aid to writing and speaking professionals interested in initiating or in taking a more prominent position in an outcomes-based program on their campuses.

Institutional Context at NC State

Institutional context is, of course, critically important. The particular history and ethos of a college or university shapes its writing and/or speaking programs in particular ways. In order to provide a better understanding of the NC State program, I will briefly describe its background.

In spring 1997, a university committee submitted a proposal for a rather modest writing-across-the-curriculum program instituting two writing-intensive courses within the majors, ideally one each in the junior and senior years. Much to our surprise, the proposal was rejected by the provost and deans, who asked us instead to design a more ambitious program that would: (1) focus on speaking as well as writing, (2) place primary responsibility for writing and speaking in the majors on the faculty in each department, and (3) hold departments accountable for writing and speaking in their majors through outcomes-based assessment. After a brief period of shock, we set about designing a discipline-specific, outcomes-based writing and speaking program.

It was clear that we could not simply expect the colleges and departments to manage writing and speaking assessment by themselves. Thus, the university created the Campus Writing and Speaking Program (CWSP) to provide guidance to departments for assessment and to offer faculty and course development related to writing and speaking. The CWSP began by creating a plan whereby it would work with each of the nine undergraduate colleges over five years to help departments generate writing and speaking outcomes and procedures for evaluating those outcomes. After this process had begun, the CWSP provided additional support for faculty through an extensive program of faculty development workshops, seminars, and grants.

In the fourth year of the five-year plan, another NC State faculty committee launched a university-wide assessment initiative that mandated all academic programs be reviewed periodically through outcomes-based assessment. This change in program review dove-tailed quite well with the ongoing writing and speaking assessment because we had realized very early in the process that, to a large extent, writing and speaking outcomes are also curricular outcomes: the sophisticated knowledge and skills that faculty expect of their graduates can best be demonstrated (as well as taught) by students' writing and speaking.

The university program review and the CWSP have worked closely with each other toward mutual goals. The program review has taken advantage of the fact that the campus had already been thinking in terms of outcomes-based assessment and so many departments had already generated assessment plans. The CWSP has taken advantage of the university's putting its full weight and resources behind outcomes-based assessment. The CWSP continued to work with departments in creating outcomes-based assessment plans.

NC State's CWSP represents one approach to writing and speaking in the disciplines. There are, however, other ways an outcomes-based model can be applied. For example, it could be used with just one department or college seeking a better focus for its curriculum. It could also be used in conjunction with writing- or speaking-intensive courses to help program faculty to consider students' communication abilities within a wider programmatic framework. The following process, then, may be useful in a variety of institutional contexts.

A Process for Generating an Outcomes-Based Program Assessment Plan

Outcomes-based assessment of academic programs typically seeks answers to three questions: (1) What are the outcomes—skills, knowledge, and other attributes—that graduates of the program should attain? (2) To what extent is the program enabling its graduates to attain the outcomes? and (3) How can faculty use what they learn from program assessment to improve their programs so as to better enable graduates to attain the outcomes?

The first question marks the starting point for the process; outcomes-based assessment must begin with outcomes. After identifying outcomes, program faculty answer the second question by assessing the program according to the outcomes, which requires an assessment procedure. The last of the three questions is the most important. The primary purpose of outcomes-based assessment is, as I have said, to provide program faculty the opportunity and the data for improving their programs. Faculty can close the feedback loop of the assessment process by using the data from the program assessment to discern strengths and weaknesses of the program and find ways to build on the strengths and target areas that need improvement.

In this paper, I will address the first two of the three questions, describing a process we have developed at NC State to guide faculty in the disciplines in identifying outcomes and generating assessment procedures to evaluate those outcomes. The following process is designed to meet three criteria. It should be:

1. student centered, i.e., it should place students at the center of the process by focusing on student learning outcomes;
2. faculty driven, i.e., it should encourage broad faculty investment in and responsibility for teaching and assessing program learning outcomes; and
3. meaningful, i.e., it should provide the data and the means for faculty to make valid and appropriate improvements in their programs.

1. *Setting the stage.* The initial goal of the assessment process is to establish a committee of program faculty for the writing and speaking professional as facilitator to work with.

But before that can occur, it's important to prepare the way by involving college and departmental administrators in the process. Even though we are seeking a bottom-up engagement in assessment, we cannot ignore the top-down administrative structures of most colleges and universities. Sometimes this can be a time-consuming part of the process, so it's best to begin early.

Our work with each departmental program starts at the college level. The facilitator meets with the associate dean for academic affairs, the second-in-command after the dean, and also with the dean if she would like to be involved. We explain the institutional background of the assessment process, describe its goals, provide examples of assessment plans from other colleges, and then ask for guidance on how to proceed in that college. This latter move is the critical one. It includes the deans as partners in the process, allowing the facilitator to take advantage of their political stature within the college and their understanding of its culture. This usually provides a valuable insider's perspective into the college, its programs, its needs, its politics, all of which may be useful in working with departments in the college.

Next, the facilitator moves to the level of department heads. We prefer to meet with the college deans and department heads together if such a venue is possible. The facilitator runs through the same topics as above, ending as before by asking the department heads for their suggestions for making the process work in their departments and in the college as a whole. If there is no opportunity for meeting with the heads together, then we set up individual meetings, also including the undergraduate coordinators or associate heads of the department and, perhaps, other critical faculty, such as the chair of the departmental curriculum and instruction committee. In a large university such as ours, we have found that it is the undergraduate coordinators or associate heads who typically become the primary and most valuable contact in the departments.

The last element of setting the stage is to visit faculty meetings of the various departments we will be working with. It is at this point that we being to involve the faculty directly in developing an assessment plan. The facilitator gives a five-minute overview of the procedure, its goals, the process we will follow, a sample assessment plan from a similar department, and the potential value for the department's programs. After the short presentation, the facilitator takes ques-

tions for as long as the meeting's agenda allows, responding as frankly as possible (see *Dealing with Resistance* below). This is a critical meeting because it is where faculty buy-in must begin.

We have found that this procedure of working down through the administrative ranks works well at a university as large and decentralized as ours. Colleges and universities that are smaller or more centralized many not require such an elaborate operation for setting the stage. Whatever the situation, though, it is helpful for the facilitator to be sensitive to the political structure of the institution and to work effectively within that structure.

2. *Establishing a program assessment committee.* Creating the assessment plan is the task of a committee of program faculty who are assigned or volunteer to work with the facilitator. Usually, the undergraduate coordinator or associate head will appoint faculty to the committee or identify an appropriate standing committee to work with. We generally ask that the committee meet three criteria:

- (a) it should be representative, i.e., it should be composed of faculty from the major elements of a department so that the final document produced by this committee reflects the outcomes of the faculty as a whole. For example, a committee from the department of history may consist of faculty from American history, modern European history, ancient and non-Western history, and philosophy of history and historiography.
- (b) it should be large enough to be representative but not so large as to be unwieldy. We prefer groups in the range of five to eight faculty.³
- (c) it should be able to focus its attention on the assessment plan. One of the problems with working with standing committees such as a department's curriculum and instruction committee is that they usually have very full agendas. One such committee kept putting us off for more pressing matters until the time allotted for them had disappeared.

How the facilitator interacts with these committees is also important. It's a good idea, for example, never to chair the committee. Not only would that burden the facilitator with calling the meetings and sending out reminders and trying to work with faculty members' schedules, but it also projects the impression that it is the facilitator who is in

charge, the one who is responsible for the assessment plan, thus sending a mixed message as to her role as facilitator. In conjunction with that, the facilitator should also play close attention to other aspects of committee management in order to place authority and responsibility for the process on the faculty. For example, always let the chair of the committee initiate the meeting, avoid sitting at the head of a conference table, and defer whenever possible to the chair when there are disagreements among members or logistical issues to be decided. It is important to demonstrate that it is the program faculty who are in charge of the process and that the facilitator is there primarily to make their job easier.

3. *Explaining the task to the committee.* At the first meeting of the program assessment committee it is necessary to make sure all the members understand the purpose and goals of the process. The facilitator may quickly restate some of the material presented during the faculty meeting (if there had been a faculty meeting), place the committee's task within the broader assessment process of the university, and then describe in more detail what it is that the committee will produce and the recommended process it may follow. The committee's assessment plan will consist of objectives, outcomes, and a procedure for assessing the outcomes. It is helpful for the facilitator to define each of these terms.⁴

- (a) *Objectives* are broad goals that the program expects to achieve, defining in relatively general terms the knowledge and skills the program faculty will help its students to attain.
- (b) *Outcomes* are operational definitions for each of the objectives. Because educational objectives are broadly stated, they do not provide enough detail to be teachable and measurable, that is, to guide teaching in the curriculum and to be reliably assessed. Thus, they should be written in a way that is demonstrable, that is, they should state what it means to demonstrate the knowledge and skills named in the objectives.
- (c) An *assessment procedure* outlines the methods program faculty will follow to determine the degree to which the program is enabling students to attain the outcomes. It typically identifies for each outcome what data will be gathered, what kind of assessment tools will be applied to the data, and when assessment will be done.

To help the committee members comprehend and keep up with the overall process, we give them a checklist of the various tasks of the committee (see Figure 1). And to set their minds at ease about the commitment they are taking on, we make it clear that mainly what we need from them is their time and disciplinary expertise. The work of drafting the assessment plan will be the job of the facilitator.

- ___ 1. Draft of program objectives (a list of broad goals the program seeks to achieve)
- ___ 2. Draft of program outcomes (a list of specific, teachable and measurable skills, knowledge, abilities majors are expected to achieve)
- ___ 3. Objectives and outcomes approved by program faculty
- ___ 4. Draft of program assessment procedure (the data to be gathered and the form of analysis to be used for each outcome)
- ___ 5. Program assessment procedure approved by program faculty
- ___ 6. Assessment initiated (begin to gather and analyze data)
- ___ 7. Preliminary report submitted to college Courses and Curriculum Committee and University Academic Program Review:
 - list of approved program objectives
 - list of approved program outcomes
 - approved program review plan
 - results of initial assessment
 - description of assessment activities to be carried out in the following year

Figure 1 This handout is given to faculty on a program assessment committee. It outlines the initial steps in the outcomes-assessment process.

4. *Dealing with resistance.* As you can imagine, some faculty members may be initially resistant to outcomes-based assessment. And this resistance is often expressed in the first meeting of the program assessment committee (also in the faculty meeting). We can certainly appreciate the source of such resistance. Course-counting has served as our standard of practice for so long it is difficult for many faculty to see any other way. A significant change in the status quo, and particularly the prospect of being held accountable for program outcomes, may understandably generate feelings of threat.

So after the introductory remarks, the facilitator invites comments and questions about the assessment procedure (often an invitation is not necessary). It's extremely important that faculty be given the opportunity to speak their minds as well as that the facilitator demonstrate that she is open to their concerns and will not dismiss them. Often, we will spend the entire first meeting dealing with resistance. And that's perfectly fine. We know what drives it and do our best not to take it personally. The challenge is to avoid becoming defensive, to listen to faculty concerns and respond with empathy and good humor. In our experience, the overwhelming majority of resistant faculty will energetically engage in generating the assessment plan once they are able to voice their objections and to see that those objections have been heard.

Here are some of the questions and comments faculty may bring up:

- Why do we have to do this?
- Who's behind this, who's making us do this?
- Is there any evidence that this outcomes-based approach actually improves programs?
- Focusing only on measurable outcomes reduces our program only to what is measurable. All the non-measurable goals we have will no longer be of value.
- How's this going to be used against us? What kinds of punishment will there be if we don't meet our outcomes? Are we going to have our funding cut?
- We're already way too busy with what we're doing now. How in the world will we be able to find the time to do all this assessment stuff?
- We already give grades to students in our courses? Why can't we just use those grades for assessing our program? If students are passing our courses, that

must mean we are doing a good job. Or doesn't the university trust the faculty?

- I think it's unfair to evaluate individual faculty this way.
- This process assumes there are problems with our program. What evidence is there that such problems exist?
- What happens if we don't do assessment?

These are all legitimate issues and deserve a fair response. Often they are the result of misunderstandings that can be easily clarified; sometimes they are only exhibitions of resistance. In all cases, the facilitator should take them seriously and respond as helpfully as possible. (Responses to some of these and other questions may be found at http://www.ncsu.edu/provost/academic_programs/uapr/FAQ/UAPRFAQ.html; see also Patton et al.).

5. *Eliciting information about program objectives and outcomes.* Now it's time to turn to the task of generating objectives and outcomes. We avoid asking the committee directly to identify program outcomes, which can make for a very constricted conversation punctuated by lots of squirming in chairs. Rather, it's best to start indirectly by asking open-ended questions that encourage faculty to talk about their program, particularly its value, what it offers its students, and what opportunities for student learning and performance of learning it provides (see Figure 2). Our strategy is to take detailed notes of the conversation generated by the questions, trying to capture as much of the language of the faculty as possible. It usually takes somewhere between forty-five minutes and one-and-a-half hours to get enough information to begin drafting objectives and outcomes.

We have found that it is best not to start this process with any list of departmental goals that may have been previously drawn up. Such goals are generally created by administrators and are not likely to encourage the faculty investment that comes of a process that involves the faculty in defining their own values for teaching and learning. Indeed, the facilitator will likely find that this step is the most enjoyable part of the process. Typically, all resistance disappears because faculty love talking about their programs, especially with a very interested outsider. Also, the experience provides the facilitator a unique opportunity to understand a discipline from an insider's perspective.

Questions for Brainstorming Objectives and Outcomes

Imagine an ideal graduate from your program. What kinds of skills, knowledge, or other attributes characterize that graduate?

What is it that attracts students to this program?

What value does this program offer a student?

How do you know whether your students possess the kinds of abilities, knowledge, skills, and attributes you expect of them?

What kinds of assignments or other activities do people in this program use to encourage the kinds of abilities, knowledge, and skills you have identified?

What is it that distinguishes this program from related programs in the university?

Is there anything about your program that makes it stand out from other similar programs?

What kinds of research methodologies are people in this field expected to perform?

Oftentimes, disciplines are defined by ways of thinking. What does it mean to think like a person in this discipline?

What kinds of jobs do students in this field generally take?

What kinds of skills are appropriate to jobs in this field?

How do you know whether students possess those skills?

What advantages does a student in this program have on the job?

What sorts of speaking and writing do professionals in this field do on the job?

What sorts of speaking and writing do students do in their classes?

Are there any particular types of communication that people in this field are expected to master?

Figure 2: These are questions the facilitator can use for initiating and guiding the conversation with faculty concerning program objectives and outcomes. They are meant to be heuristic, not to be rigorously covered by the facilitator.

6. *Drafting objectives and outcomes.* The next, and perhaps the most challenging, step is to use the notes to draft objectives and outcomes that the program faculty will readily see as reflective of their own program. This means identifying the broader values or goals, which could become objectives, and the detailed information about each of those goals, which could become outcomes.

One way of doing this is to:

- (a) type up and print the notes while the conversation is fresh and it is still possible to elaborate where the notes may be sketchy;
- (b) read the printed notes several times, at first just to get a sense of the whole and then to search out superordinate ideas or themes: broad concepts that emerged from the conversation, ideas that are repeated, points that faculty members particularly emphasized, key words or phrases that keep coming up, etc.;
- (c) mark the themes in the text of the notes and make a list of them, eliminating all but the ones that seem to be most important to the faculty;
- (d) rearrange the electronic version of the notes to create a rough thematic outline consisting of the themes and under each theme the subordinate ideas that are attached to it and define it in more concrete terms;
- (e) draft formal objectives by starting with a heuristic sentence opener such as, “Graduates of the Department of X should be able to demonstrate that they can: ...” and rewriting each objective, i.e., each theme, as the completion of the sentence;
- (f) draft the outcomes for each objective also by starting with a sentence opener such as, “Specifically, graduates should be able to demonstrate that they can: ...” and completing the sentence by incorporating, wherever possible, concrete verbs used by the faculty to indicate what students should be able to do—to describe, to analyze, to critique, etc. (when in doubt, Bloom’s taxonomy provides a good source for such verbs).

See Figure 3 for an example of a final draft of objectives and outcomes.

Program Review
Department of Sociology and Anthropology
B.A. in Anthropology

PROGRAM OBJECTIVES

The objectives of the faculty in Anthropology are to:

1. provide instruction to enable students to understand the interrelationships among the social, cultural, and biological bases of human behavior
2. help students achieve competence in understanding, critically assessing, and using major anthropological concepts
3. introduce students to the various theoretical perspectives of anthropology and to encourage an appreciation for the historical development of the discipline as a social science
4. equip students with a knowledge of research methods appropriate to socio-cultural anthropology
5. encourage in students a rich understanding of and appreciation for cultural differences through knowledge of major forms of social organization from a cross-cultural perspective

PROGRAM OUTCOMES

Students should be able to demonstrate:

- 1. An understanding of the interrelationships among the social, cultural, and biological bases of human behavior. Specifically, students should be able to demonstrate that they:**
 - a. can describe critical cross-cultural *differences* in human behavior (in evolutionary and/or contemporary contexts) and to account for those differences in terms of the interplay among society, culture, and biology
 - b. can describe critical cross-cultural *similarities* in human behavior (in evolutionary and/or contemporary contexts) and to account for those similarities in terms of the interplay among society, culture, and biology

- 2. Competence in understanding, critically assessing, and using major anthropological concepts. Specifically students should be able to demonstrate that they:**
 - a. can define major anthropological concepts in such a way that shows a firm grasp of the concepts
 - b. can apply major anthropological concepts to specific situations, showing that they are able to (1) use the concepts to organize and make sense of what they find in specific situations and (2) use specific situations to exemplify and amplify major anthropological concepts
- 3. A familiarity with various theoretical perspectives of anthropology and an appreciation for the historical development of the discipline as a social science. Specifically, students should be able to demonstrate that they:**
 - a. understand the major theoretical perspectives of anthropology
 - b. appreciate the contribution of the major theoretical perspectives to the development of anthropology as a discipline
- 4. A knowledge of research methods appropriate to socio-cultural anthropology. Specifically, students should be able to demonstrate that they can:**
 - a. identify, define, and give examples of various methods used in anthropological research of contemporary societies
 - b. recognize and interpret research methodology in anthropological literature
- 5. A rich understanding of and appreciation for cultural differences through knowledge of major forms of social organization from a cross-cultural perspective. Specifically, students should be able to demonstrate that they can:**
 - a. show that they are familiar with the major forms of social organization characteristics of the cultures of at least one non-Western ethnographic area

b. show a rich appreciation for cross-cultural differences and an understanding of the importance of cultural context

**SOURCES OF DATA FOR REVIEWING
PROGRAM OUTCOMES**

Exit interview question

Faculty survey of students' abilities

Portfolios of student work

- selected exams or other assignments from all 400-level courses except theory (ANT 411) and methods (ANT 416)
- selected assignments for ANT 411
- selected assignments for ANT 416

Student self-assessments

- ten-to-fifteen-minute in-class exercise in which students are asked to identify and comment on two major theoretical perspectives in anthropology
- ten-to-fifteen-minute in-class exercise in which students are asked to identify and comment on two major anthropological research methods

Outcome #1: an understanding of the interrelationships among the social, cultural, and biological bases of human behavior

- Exit interview question to be added to the existing instrument: "Did your program of study help you become aware of cross-cultural similarities and differences among human groups?"

Outcome #2: competence in understanding, critically assessing, and using major anthropological concepts

2a: to demonstrate that majors can define major anthropological concepts in such a way that shows a firm grasp of the concepts

- Faculty survey of students' abilities

2b: to demonstrate that majors can apply major anthropological concepts to specific situations, showing that they are able to (1) use the concepts to organize and make sense of what they find in specific situations and (2) use specific situations to exemplify and amplify major anthropological concepts

- Faculty survey of students' abilities
- Portfolio of selected exams or other assignments from all 400-level courses except theory (ANT 411) and methods (ANT 416)

Outcome #3: a familiarity with various theoretical perspectives of anthropology and an appreciation for the historical development of the discipline as a social science

3a: to demonstrate that majors understand the major theoretical perspectives of anthropology

- Portfolio of selected assignments for ANT 411
- Student self-assessment: ten-to-fifteen-minute in-class exercise in which students are asked to identify and comment on two major theoretical perspectives in anthropology

3.b: to demonstrate that majors can appreciate the contribution of the major theoretical perspectives to the development of anthropology as a discipline

- Portfolio of selected assignments for ANT 411

Outcome #4: a knowledge of research methods appropriate to socio-cultural anthropology

4a: to demonstrate that majors can identify, define, and give examples of various methods used in anthropological research of contemporary societies

- Student self-assessment: ten-to-fifteen-minute in-class exercise in which students are asked to identify and comment on two major anthropological research methods

4b: to demonstrate that majors can recognize and interpret research methodology in anthropological literature

- Portfolio of selected assignments for ANT 416

Outcome #5: a rich understanding of and appreciation for cultural differences through knowledge of major forms of social organization from a cross-cultural perspective

- Faculty survey of students' abilities

PROGRAM REVIEW CYCLES

Initial Program Review Cycle

2001/2002: Develop program objectives, outcomes, and assessment plan; initiate assessment of outcomes

August 2002 Preliminary program review report submitted to CHASS Dean and to Committee for Undergraduate Program Review:

- program objectives
- program outcomes
- program review plan
- results of initial assessment
- description of assessment activities to be carried out in the following year

Fall 2002: Continue gathering assessment data and complete assessment of outcomes

Spring 2003: Assessment reports submitted to departmental Curriculum Committee:

- description of process of assessing program outcomes,
- results of assessment
- recommendations for changes in curriculum and/or changes in outcomes and assessment plan

Departmental Curriculum Committee considers recommendations and takes them to faculty for discussion and approval

August 2003: Full program review portfolio completed and submitted to College for review and then, with any necessary revisions, to Committee for Undergraduate Program Review

Subsequent Seven-Year Review Cycles for University Program Review

2002-2005: Continue gathering assessment data at appropriate intervals

A Process for Establishing Outcomes-Based Assessment Plans for
Writing and Speaking in the Disciplines

Fall 2004:	Assessment reports submitted to departmental Curriculum Committee: <ul style="list-style-type: none">• description of process of assessing program outcomes,• results of assessment• recommendations for changes in curriculum and/or changes in outcomes and assessment plan
Spring 2005:	Departmental Curriculum Committee takes recommendations to faculty for discussion and approval
August 2005:	Full program review portfolio completed and submitted to College for review and then, with any necessary revisions, to Committee for Undergraduate Program Review
2005-2008:	Continue gathering assessment data at appropriate intervals for third review cycle
Fall 2007:	Complete assessment of outcomes; assessment reports (including description of assessment process, results, and recommendations for changes in curriculum and changes in outcomes and assessment plan) submitted to Curriculum Committee
Spring 2008:	Curriculum Committee takes recommendations to faculty for discussion and approval
August 2008:	Program review report completed
August 2009:	Reports of both review cycles submitted to Committee for Undergraduate Program Review
Etc.	

Figure 3: This document, created by anthropology faculty at NC State, contains the major elements of an assessment plan, program objectives, outcomes, and an assessment procedure.

7. Reviewing the draft of objectives and outcomes with committee. The next meeting of the committee is given over to reviewing the draft. At the end of the previous meeting, the facilitator should ask whether or not and in what form the committee members would like to see the draft before the following meeting. The facilitator will likely find, however, that even if they elect to receive it, many if not most of the members won't read it ahead of time and often forget bring the copy to the meeting. So it's helpful to arrive with a few extra copies.

The procedure that seems to work best is to read the draft aloud one objective and outcome at a time and, after each, to stop and give the members time to process the material and to ask questions and suggest revisions. As facilitators, we take great care to distance ourselves from the draft so as to give faculty full rein in criticizing it. We do not want the faculty to think that they are criticizing us personally. We actively invite revisions by asking questions about the draft as we go through it, pointing out areas we're uncertain about, asking for committee members' advice about the phrasing, etc.

This step marks a particularly productive point in the overall process because faculty are seeing their program set forth in black and white, usually in an explicitness that they've never encountered before. The course-counting approach to curriculum typically requires little if any discussion of its goals, keeping those goals safely implicit for each faculty member. However, outcomes make these goals explicit, often prompting useful disagreement among committee members as they discuss, usually for the first time, what it is that defines their programs. Generally speaking, the more abstract the discipline, the more disagreement there is. In many technical programs, there tends to be a broad consensus about the outcomes. But elsewhere, in the social sciences and humanities for example, the revision process can go through as many as six drafts.

It's helpful for the facilitator to encourage the faculty to do the hard work of revising together in the meeting, resisting attempts to put it all off on the facilitator to do it afterward. The outcomes need to reflect their words and their decisions. Use prompts such as: "How can we put that into words?" "What can we do here to make it better?" "How can we restate this so that you would agree with it?"

8. *Getting full faculty approval for objectives and outcomes.* After the committee members accept a draft of the objectives and outcomes, they then decide how and when to take the draft to the rest of the faculty for discussion and approval. Making the assessment process truly faculty driven requires extending the process to the full program faculty. We recommend doing so at this point because the committee will need to have faculty approval of the objectives and outcomes before it begins to consider the assessment of the outcomes.

In most cases, the committee members will place a discussion of the draft on the agenda of the next scheduled faculty meeting. Or if there is no meeting soon, they may call a special one. But the logistics of bringing the full faculty into the conversation will vary according to the departmental culture. In some cases, committee members prefer to send the draft to their colleagues beforehand; sometimes they choose to handle the entire approval process by e-mail. The facilitator may or may not be asked to attend the meeting. Whatever the means, it has been our experience that objectives and outcomes are almost always accepted by the full faculty with at most a few minor revisions. Even so, it is critical to involve the rest of the faculty at this stage of the process.

9. *Identifying data and research tools for assessment procedure.* Once the program faculty have approved the objectives and outcomes, the next major task of the committee begins—deciding how to assess the outcomes. Even though we all assess student learning in our classes, most faculty find it challenging to think in terms of program assessment. It is not assessing students, though it is likely to incorporate some materials produced by students. It is assessment that takes a programmatic perspective; its central question is, “To what extent is the full program enabling students to attain the outcomes designated by program faculty?”

An assessment procedure should identify data to be gathered, how the data are to be evaluated, and when assessment will take place. We have found that it's best to start by giving the committee members a list of possible assessment tools and going over the list to explain the kinds of assessment that are most applicable to the program (see Figure 4). This list helps to make program assessment more concrete for faculty and provides a valuable heuristic for talking about assessment. The tool that often arouses the greatest concern among faculty is the portfolio of student work. We tell them

that the portfolio need not be longitudinal, collecting individual students' work over time, but is likely to be a best-case portfolio, meaning that faculty would identify the student performance that best represents students' ability related to an outcome, usually from a more advanced class, and collect a sample of that performance, such as a homework assignment, a video-tape of a presentation, a lab report, or a project report. In colleges and universities where assessment already plays an important role, such as through institutional use of portfolios or individual program accreditation, it is useful to link outcomes assessment, where appropriate, to assessment measures already required.

Possible Sources of Data for Program Assessment

Sources of Data that Provide Relatively Direct Evidence

Samples of student work (longitudinal or best-case portfolios), such as:

- Homework assignments
- Essay tests
- Research reports
- Capstone projects
- Project proposals
- Student journals
- Reaction papers
- Literature reviews
- Oral presentations
- Student reflections on projects or other assignments

Formal observations of student behavior

External reviews of student projects

Internship reports

Standardized tests

Performance on national licensure examinations

Student self-assessments/reflections on learning

**Sources of Data that Provide Relatively
Indirect Evidence**

Alumni, employer, student surveys
Focus groups with selected students or alumni
Surveys of faculty concerning students' abilities
Discussions at faculty meetings or retreats
concerning students' abilities
Senior exit interviews
Percentage of students going to graduate
or professional schools
Enrollment and retention patterns
Job placement statistics
Reviews from accreditation agencies
Reports from external review committees

Figure 4: This list has been divided into relatively direct and indirect evidence as a way of encouraging faculty not to rely only on the latter. Though not all these assessment tools lend themselves to evaluating writing and speaking, most do.

We ask faculty to apply two criteria to their decisions about assessment procedure: it should be valid (i.e., provide a way to measure what they want to measure) and it should be feasible (i.e., can be done with a reasonable outlay of resources). Sometimes there are faculty, particularly in the social sciences, who will cloud the issue by raising abstruse issues of research methodology. We assure them that for this kind of assessment it may not be necessary to meet rigorous research standards. Rather, the point is to gather data that will enable them to make judgments about their program and to use those judgments to guide decisions for improving it.

We begin this part of the process with brainstorming, going through the outcomes one at a time and for each one asking how the faculty would know whether or not students were able to achieve the outcome. Then from the list of the means of assessment we have accumulated for each outcome, we identify the ones that best meet the criteria of validity and feasibility. Finally, we consider the timing of assessment, when and how often it is to be done; this may already be determined by college or university policy.

10. *Drafting and reviewing the assessment procedure.*
Drafting the assessment procedure is much more straight-

forward than drafting the objectives and outcomes. During the meeting, the faculty committee has identified the key elements in the procedure. If the committee was not able to get through all the outcomes in one meeting, the facilitator should draft the ones they have done, review these at the beginning of the next meeting, and then finish the rest of the outcomes. The review of the assessment procedure typically runs to no more than two drafts. (See Figure 3 for an example of an assessment procedure.)

11. *Getting full faculty approval for assessment procedure.* This is a similar process to the approval of objectives and outcomes. The committee usually prefers to have the facilitator at the meeting to explain the logistics of some of the assessment procedures to the faculty.

Conclusion

An outcomes-based model for writing and speaking in the disciplines can be applied in different circumstances. For example, it can be used in a highly focused way with a single college, department, or even a program within a department. It can be used for a broader, campus-wide writing and speaking program. Or it can be used in conjunction with other outcomes-based initiatives, associated perhaps with university or program accrediting agencies.

In the last case, even though the primary motivation for assessment may not be the improvement of writing and speaking, the potential for such improvement is certainly strong, especially if writing and speaking professionals take an active role in the process. Indeed, writing and speaking professionals have the opportunity to enhance considerably their roles on campus by taking a lead in outcomes-based assessment. Our understanding of assessment, our experience in working with faculty from across the university, and our grasp of a wide variety of disciplines make us valuable players in the process.

Creating assessment plans is only the first step in a longer process. Writing and speaking professionals can also play important roles as the assessment process itself gets under way and faculty must gather data, make judgments based on the data, and devise changes to improve their programs. We can help faculty at each stage of the process through consulting and faculty development workshops. Outcomes-based assessment provides the impetus for continuous improvement

of programs. We can play an important role in providing direction and support for that improvement.

Acknowledgement: I would like to recognize my colleagues Chris Anson, Director of NC State's Campus Writing and Speaking Program, and Deanna Dannels, Assistant Director, both of whom have made major contributions to our university's outcomes-based assessment process, placing the CWSP in the forefront of that process.

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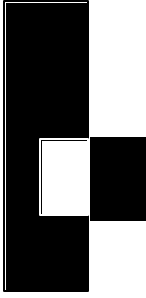
End Notes

¹ For example, the Southern Association of Colleges and Schools sets as a standard that "The institution identifies expected outcomes for its educational programs...; assesses whether it achieves these outcomes; and provides evidence of improvement based on analysis of these results" ("Principles of Accreditation" 11 <http://sacscoc.org/accrrevproj.asp>).

² Information about the assessment procedures of these professional organizations may be found at their web sites: ABET at <http://abet.org/accreditation>; NCATE at http://ncate.org/accred/m_accreditation; IFT at <http://ift.org/education/standards>; and CSWE at <http://cswe.org>. Other organizations, such as the Council of Writing Program Administrators, have published national outcomes to encourage greater articulation among institutions and higher or more standardized expectations for student achievement (see <http://www.cas.ilstu.edu/english/hesse/outcomes.html>).

³ In smaller institutions, the faculty in entire departments may be fewer than the number of representatives mentioned here. Even at our university, we worked with one program with three faculty members, all of whom comprised the program assessment committee. When working with small programs, it is probably best to include all the faculty in creating assessment plans; it is certainly more efficient, and having the full faculty engage in defining their program can be beneficial.

⁴ Our usage of *objectives* and *outcomes* is derived from the assessment guidelines of ABET and formally designated by our university as common language for all programs. As a land grant university with a strong emphasis on engineering, this choice was appropriate. However, other colleges and universities with different traditions and perhaps even previously accepted assessment vocabulary may find language that is a better fit, goals and objectives or teaching aims and learning demonstrations, for example. We have found that having both general specific levels for defining outcomes is useful for helping faculty generate assessment plans.



Design, Results, and Analysis of Assessment Components In a Nine-Course CAC Program

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The case for assessment of college writing programs no longer needs to be made. Although none of us would have chosen the words, we all have come to accept the truth of Roger Debreceeny's words: the "free ride" for America's colleges and universities is indeed over (1). All writing programs face difficulties in selecting the means for the most effective evaluations for their individual programs. Key concerns include how appropriately, practically, and cost effectively various assessment tools address this problem.

Like many postsecondary institutions, Robert Morris University (RMU) is now solving its own version of this national concern. Seemingly immune to outside scrutiny for many years because of a highly successful placement record, the University has recently come under increased pressure to show that we are improving student literacy as our promotional literature says we are. In particular, our University's comprehensive and recently launched Communications Skills Program (CSP), a nine-course program across the curriculum, now needs to provide assessment data to its stakehold-

ers, including the business and professional community that helped to fund the program.¹

Combining the interests of the various communities, a number of us at Robert Morris recently faced the question of how we could show our various stakeholders, including a faculty extraordinarily generous with its time, whether our one-of-a-kind Communication Skills Program is effective in improving students' communications skills and worth a continuing investment. In this article, we argue that we have begun to find our answers in a uniquely tailored evaluation process made up of student portfolio reviews; course plan/syllabus evaluation; and a newly developed program evaluation involving pre-, mid-, and post-testing. To do so, we focus on the context surrounding the development of the latter, "locally grown" program evaluation and on what we have learned from our initial study. We believe we can be very helpful in showing what a committed group with limited time and money can do to create effective evaluation for a comprehensive skills program. We also hope our experiences can serve as models for others interested in developing "in-house" program evaluations.

Throughout this article, we delineate the main challenges we faced, and in some cases continue to face, in attempting to show various stakeholders that our program can add value that national standardized testing will not adequately measure. Standardized instruments test skills that, while important, may or may not be of the highest priority to a specific university. For example, in designing questions for our own test, faculty participating in the assessment committees established goals they considered most important for *our* students participating in *our* Robert Morris Communications Skills Program. Those goals were then kept in mind as we developed our test questions. The assessment path we chose, developing our own instruments around our own goals, supplements existing classroom evaluation practices with further measures developed by a committee of interested faculty from across the business and professional curriculum.

Our approach is designed to allow us to maintain the program's integrity, including the conscientious teaching and testing of communications abilities throughout the four-year program. Our path is also designed to achieve the important goal of creating a program and program evaluation that participating faculty across the entire curriculum consider ac-

ceptable: relevant as well as valid, non-disruptive as well as efficient.

We should underscore that ideas for the evaluation of the CSP were included in the planning for the program from the start. From the start, we also understood that we needed to keep all planning as collaborative as possible, including, at first, the most influential and affected parts of the Robert Morris community, particularly faculty who guide and oversee the program on its most operational level. Discussion among University administrators resulted in initial plans for evaluating as well as implementing a broad communications skills program, with five courses housed in the Communications Department and four communications-intensive courses in students' specialized disciplines. Working with the upper-level administration as we did is strongly recommended by Jankovich and Powell, who suggest that support from the top as well as from those who will be expected to maintain the program will be critical for the life of a program. In addition, input from faculty was—and continues to be—solicited at faculty seminars and through the ongoing workshops and committee structure that help sustain the program. More about those structures later.

Background of the Robert Morris Communications Skills Program

The detailed story of the theory-based planning and implementation of the Robert Morris CSP, including the incorporation of detailed, carefully considered, and systematically reviewed course plans, has been told before (Carson, Sipple, Yahr, Marshall, and O'Banion). But a review of that story will be useful in providing a context for the problem, or a field view, to use the language of the tagmemic examination presented in that January 2000 *LLAD* article (3.3 p. 3-35).

Robert Morris is a medium sized university in the Pittsburgh vicinity. The surrounding tri-state area (western Pennsylvania, eastern Ohio, and northern West Virginia) is the location from where most of our students come and also the home of the businesses and organizations that employ many of our graduates. As our location allows and our demographics suggest, RMU's President, Edward Nicholson, keeps in frequent contact with the business community, particularly employers and managers who work closely with our graduates. As a matter of course, he inquires about the perfor-

mance of our former students. For several years, Nicholson reported that he kept hearing the same analysis: Robert Morris graduates, their managers said, knew their subject areas well (a vote of confidence for their subject-area teachers and for the existing “write-to-learn” Writing Across the Business Disciplines program). Our students, President Nicholson was told, could also perform job tasks effectively, but as a whole, their communications skills were weak. Although this feedback was not systematically collected, stored, nor evaluated, the sheer number of concerned remarks from an important constituency indicated to Nicholson that something must be done.

At a series of meetings, the President invited the Academic Vice President, the Dean of the School of Communications and Information Systems, the Head of the Communications Department, and the Director of the Language Across the Curriculum Program and others to help find a remedy for the situation. The upshot of those meetings was the beginning design for the Robert Morris Communications Skills Program (CSP). As we developed it, the program went through a process of modifications, largely through a series of meetings with other administrators and the faculty from the School of Communication and Information Systems.

Our previous article examines in depth how we used a version of the tagmemic discovery procedure to plan a Skills program that helped ensure successful collaboration from all stakeholders. What emerged was an integrated communication skills program emphasizing reading, writing, listening, and presenting, using appropriate presentation software or other technologies. The instruction takes place in a nine-course, 27-hour series, the first five courses being taught in the Communications Department and the last four in the subject-area courses (or related courses) of the students' majors.

The latter courses were targeted by individual departments to evolve into the upper division, communications-intensive component of the CSP. The 45 faculty from across the disciplines who initially volunteered to teach the courses participated in one of two semester-long workshops facilitated by the Director of the Language Across the Curriculum Program. In subsequent semesters, faculty who volunteered to teach in the CSP were mentored by faculty who participated in one of the earlier seminars. By the end of the seminars or mentoring process, faculty members produce highly detailed course plans

integrating communications skills, including language to learn practice techniques, with already existing course material. Faculty were, of course, paid for their work in the seminars and in creating the course plans. To allow for increased attention, especially feedback, to students' practice of their communication skills, each of the nine courses are capped at 22 students, requiring an almost immediate need for an increase in faculty.

Writing program and many other administrators will immediately recognize that funding such an elaborate program presents one of the first and most formidable problems. The group designing the program concluded that since the business community hiring our students was a stakeholder, this community ought to be willing to help fund a program to improve student skills. Approaching the business community with this argument, RMU was successful in funding the program for several years, complete with new, fully equipped, state-of-the-art presentation classrooms. Now these and other interested constituencies, including faculty who have invested substantial amounts of time incorporating new strategies and stronger skills, expect evidence that their investment is working.

Drawing from faculty across the disciplines, training for the CSP began at Robert Morris in Spring 1995 with a series of seminars in the School of Communications and Information Systems. The collaborative seminars created a set of courses constituting the first half of a Communications Skills Program replacing the more traditional series of courses: Composition I and II as well as Speech. The new Program explicitly adopts rhetorical approaches to integrating reading, writing, listening, and presenting.

The Program's initial five courses, housed in the Communications Department, are sequenced according to level of difficulty and rhetorical sophistication. Audience analysis, a unifying concept for the entire CSP, is apparent in the titles of these first five courses. Students begin with Course I, "Audience as Self and Others." In the next four courses, as their titles suggest, students deal with more complex conceptions of audience: "Audience as Fixed and Singular," "Audience as Varied and Multiple," "Audience as Multicultural," and a business communications-related fifth course, "Audience as Organizational and Professional."

The latter course also serves as a bridge between the first five communication courses and the discipline-specific communications-intensive courses taught and housed in students' majors. As one of the first steps toward evaluation, the business communications/bridge course was designed to include a number of assessments on which students must prove satisfactory before they are permitted to move to communications-intensive courses in their majors.

The first iteration of the initial course, "Audience as Self and Others," was taught in Fall 1995. To compare levels of achievement within the program, we began a pre-, mid-, and post-program testing when the first group of students were seniors. In the meantime, we maximized our time in establishing and revising the newly offered CSP courses, making adjustments after lengthy discussion among "breakout groups" of instructors responsible for each specific, newly designed course.

In creating the first five communications courses, the collaborative faculty seminars refined initial ideas from the earlier administrative meetings into four main principles growing out of problem-solving rhetoric (See Young, Becker, and Pike and, for a development of its application to the Robert Morris CSP, Carson et al.):

1. *Communications as an Ability.* We believe that communication skills can be taught and learned. We see communication skills not as gifts but as abilities that can be (a) practiced and rehearsed, (b) coached, and (c) improved. As a result, we have incorporated a substantial requirement of all graduates who move through any undergraduate program at Robert Morris University: All students are required to take a total of nine communications-related courses. Each of the first five courses, taught within the Communications Department, have the particular audience focus discussed above. So that the important processes of practicing, rehearsing, and coaching are possible, each CSP course was capped at 20 (later raised to 22) students.
2. *Communications Across the Curriculum.* We believe that learning communication skills can find application across the curriculum. We do not see communi-

cation skills as a set of abilities that should be housed in or owned by Communication or English Departments. We follow the theories of many classical and neo-classical rhetoricians in arguing that such a separation of invention from the rest of the communication process is counterproductive (see, for example, O'Banion). We see communications skills as playing a crucial and defining role in all disciplines, fostered by faculty in all disciplines. Therefore, in addition to the five CSP courses taught in the Communications Department, we require all Robert Morris University undergraduates to take four more CSP courses in their majors.

These upper-division, disciplinary CSP courses are communications-intensive versions of already-existing courses taught by faculty from across the curriculum who volunteer to participate in the CSP. To teach a communications-intensive course, faculty initially must have taken one of two 45-hour, semester-long seminars that have been offered as training for the program. Subsequently, faculty joining the CSP are mentored by members of their departments who have taken the seminars. Each participating faculty member must create a detailed communications-intensive course plan or be informed by and use a previously created course plan that integrates the CSP goals for students' third and fourth years. Each course plan must be reviewed and approved by a Communications Skills Program Committee comprised of faculty from across the curriculum who themselves have had course plans approved. These courses are also capped at 22 students to allow for more individual attention on communicating in the context of the students' given fields.

To achieve workplace relevance, each CSP course plan taught in the various disciplines is also informed by a Professional Practitioner Report. To prepare this Report, a CSP faculty member interviews a practicing professional who has experience managing and/or hiring entry-level candidates in the given field. Together, the RMU faculty member and the practicing profes-

sional specify the various types of rhetorical processes and related communications (including writing, reading, listening, presenting, as well as genre expectations, document lengths, and so on) that new hires are expected to master to communicate effectively in their jobs and fields. A sample professional practitioner's report can be found in Appendix A of our January 2000 *LLAD* article (p. 23).

3. *Time on Task as Improving Communications Skills.* A third fundamental principle of the CSP is that time on task is needed to develop these skills throughout a student's college education. Any professional knows that communication skills are not a set of abilities that once learned no longer require practice. The combination of the nine required communications courses allows students to improve their abilities within various contexts, classrooms, and disciplines. By focusing on communications each semester throughout their college careers, students should have ample opportunities to practice and learn the types of communication strategies that work in general as well as those that may help them in specific aspects of their fields and future careers, whether they are communicating with experts or laypeople.
4. *Integrated Approach to Teaching Communications Skills.* Finally, we believe that rhetorical approaches to communicating can effectively be taught in integrated ways and in integrated contexts, just as we daily cycle through a myriad of communication skills: talking on the phone, participating in or running meetings, giving presentations, corresponding with others on electronic mail, writing reports, listening and responding to colleagues or clients, as well as communicating with peers and those outside our disciplines.

As the 1995 report from the Conference on College Composition and Communication Committee on Assessment argues, communication comprises integrated, social activity taking place in particular contexts. To succeed in their fields, students will need to

integrate a range of communication skills. They should know how to effectively make sound and ethical arguments in informal and formal written and oral settings (Cooper). They must also learn to listen and negotiate a range of perspectives and points of view. To this end, CSP students are encouraged in each of the nine CSP courses to practice reading, writing, listening, and presenting with appropriate technology for particular audiences in authentic assignments that often call upon them to *integrate* each of these communications skills.

We trust that exposing students—throughout nine courses—to a myriad of communicative contexts will help them understand that learning the basic skills in a one-size-fits-all manner is not enough. We also trust that the many opportunities provided in the nine required CSP-related courses can encourage students to develop more awareness of the diverse audiences with whom they may communicate. We hope students better understand the implications of the range of genres in which they communicate in their daily personal and professional lives. We consider it important for students to begin to understand the impact of integrated skills and genres and how they work together to shape communicative processes and products (Cross). As McEachern reminds us, “Even a genre that is often considered neutral and objective, such as meeting minutes,” can be used as a tool for control (198). CSP students should leave the program understanding that what they say and how they say it can impact people differently, depending on who they address and on the overt and underlying goals of both sender and receiver. Students should also understand that their messages may have both short- and long-term effects in local or wide-ranging contexts.

The four principles above have guided and continue to guide the development of our program. Since the success of the program requires that many people across the University share these or similar beliefs and commitments, we have—after the initial administrative and School of Communications and Information Systems meetings—worked with interdisci-

plinary faculty every step of the way, from planning to integrating, and, finally, to assessing the program.

In Spring 1999, the first students to have taken all nine required CSP courses graduated from Robert Morris. By the following September, 45 different CSP courses had been created in disciplines all across our curriculum. More than 800 sections of the initial five CSP courses and 400 sections of CSP Courses VI-IX (those taught in students' disciplinary majors) have been taught. Below we share our initial efforts to measure the impact of the Program on particular aspects of students' communication skills.

The CSP Portfolio

Every student going through the curriculum at Robert Morris University is expected to maintain a portfolio throughout the CSP courses. This portfolio should include the range of assignments built to highlight various communications skills, from essays or reports to videotaped presentations. As it evolves, the CSP Portfolio can serve multiple functions, providing Program as well as individual and course assessment.² For Program-specific purposes, students are asked to keep their own materials from each CSP course to arrive at a balanced portfolio with some of each of the following:

- their best pieces of writing
- their best videotaped presentations
- evidence of their performance on listening assignments and tests
- evidence of their performance on reading assignments and tests
- feedback on any of the above from instructors and peers
- their own self-assessments on or reflections of all of the above

Among other purposes, the portfolio serves an individual diagnostic function. At the beginning and end of Course V, instructors and students are asked to review the portfolio carefully, initially identifying the particular communication skill each student seems to have the most strengths in as well as the skill the student needs to attend to most during Course V. The rubrics for the portfolio review are based on the Final

Assessment standards of Courses I-IV. Typically the instructor and student agree to a development plan in narrative form specifying how the student will work on improving his or her weakest skill, such as speaking. Currently, students may also be encouraged to attend sessions in a new CSP Communications Lab. (In 2001, the CSP hired, in addition to peer tutors for the lab, writing/speaking instructors to support the range of abilities found among CSP students.) At the end of the course the student's portfolio is rated by, in addition to the instructor, two other faculty readers according to rubrics with clear standards of performance as noted below. If a student's portfolio and performance in the course are not satisfactory, the student is asked to take the course again before moving on to the four communications-intensive courses required in his or her major.

As the Program evolved, CSP V faculty met to define the goals and items to be tested and then created appropriate rubrics for the semester's end. One result of the meetings is the sense that all of the instructors understand the program and course goals as well as the criteria for assessing portfolios and are able to convey them to their students. This collaboration, an important social dimension of improvement, is bringing more coherence to the CSP by raising faculty awareness of program goals and helping them to focus on criteria in courses.

Throughout, faculty across all disciplines teaching CSP courses across the curriculum are encouraged to review their students' portfolios and to suggest particular course assignments that might be useful to include in a job portfolio. In addition to gathering portfolio materials throughout the CSP courses, students are writing self-assessments of their own work and progress as well as receiving feedback on their communication performances (presentations, reports, and so on) from peers and instructors. Portfolios, including all of the above materials, provide important, direct examples of students' communications abilities and progress. Portfolio reviews are important supplementary measures to other graded course work showing students' ability and progress. A portfolio approach, of course, can serve program evaluation purposes as well.

Prior to the portfolio review or our programmatic testing (about to be described), students have multiple opportunities to practice and hone each communication skill. In all CSP

courses students complete a variety of assignments, most asking them to compose and/or present material related to the given course. Students therefore use writing, reading, speaking, and listening for a range of purposes in a variety of contexts. In addition, faculty measure these skills directly in final examinations given in each course.

Finally, the completed portfolio is also used as a way of providing a qualitative measure of the Communications Skills Program as a whole. Random samples of student portfolios are collected and evaluated by trained readers according to the exit standards of Course V. Some sample standards, for instance, ask that students demonstrate rhetorical improvement in presentation skills (evident from videotaped presentations) and in writing successfully in a range of genres appropriate to their fields.

At the end of the most recent term, Spring 2002, we added a more rigorous dimension to our program evaluation. The 13 faculty who teach CSP V performed a criterion-referenced assessment of 417 portfolios available from the 462 CSP V students. Of the 417 portfolios scored, 18 (4.3%) were incomplete and could not be given a final rating. Of the ones rated, 105 (25.1%) were exemplary, 285 (68.3%) were proficient, and 9 (2.2%) did not meet standards.

Each portfolio had two trained readers and, to ensure validity, no instructor was allowed to rate portfolios from his or her students. The portfolios included a few edited pieces of very basic business communications—a cover letter and résumé, a letter or memo—and printouts of six PowerPoint slides. The rating rubrics, based on course goals and practices, were created by CSP V faculty. Faculty shared the rubrics with their students beforehand so that students would know how they were being assessed and that they should take assessment seriously.

The results indicate that CSP V students are achieving appropriate outcomes as designed. We expect a high proficiency rate in this course since students have completed four previous CSP courses. (Some transfer students may be more or less proficient, but they are nonetheless all required to take CSP Course IV and Course V.) Most recently, as Table 1 below indicates, CSP V students demonstrated that nearly 94 percent of them are considered exemplary or proficient in their abilities to write basic business communications.

Design, Results, and Analysis of Assessment Components In a
Nine-Course CAC Program

Total Portfolios Scored	417		
Total CO230 Enrollment	462		
No Submissions	47	10%	of 462
Portfolios Scored	417	90%	of 462
SCORES (6 highest-1 lowest)			
	Total	% of 417	
6 - Highest	6	1.4%	
5 - Exemplary	99	23.7%	
4-3 - Proficient	285	68.3%	
2-0 - Does Not Meet Standards	9	2.2%	
I - Incomplete Submissions	18	4.3%	
		~100%*	

Table 1: Summary of CSP V Portfolio Assessments, Spring 2002.
*Scores do not add up to 100% exactly due to rounding.

Informative as the review of CSP Portfolios can be, we have found that the business and professional community as well as government and other funding agencies are often most convinced by further quantitative assessments.

Assessment Instrument: Creation and Constraints

The results of the portfolio assessment allow us to conclude that, in the opinion of faculty members, students who have taken CSP V show proficient or exemplary communication skills. This result is certainly encouraging assuming that employers of RMU students will agree in this assessment. However, the portfolio assessment is not an “added-value” assessment. That is, it does not tell us that the good performance of the students is the result of the instruction that they received at RMU. To assess the effectiveness of the CSP program, at a minimum, one needs to compare student performance before they had CSP instruction with their performance after they had that instruction. It would not have been feasible to obtain portfolios from RMU students before they entered the program. Therefore, we sought a practical alternative that would allow us to assess the value added by the CSP.

To begin developing such an additional element for our program assessment, in late Fall 1998, the Director of the Language Across the Curriculum Programs appointed a Communications Skills Evaluation Committee made up of faculty from nearly every major at Robert Morris. The Director then

invited John R. Hayes from Carnegie Mellon University, a specialist in curriculum evaluation procedures, to participate as an outside consultant on the Evaluation Committee. After reviewing the needs and constraints of the school, as well as the strengths and weaknesses of a number of evaluation methods, the Committee decided on and began creating its own program evaluation instrument. In considering how to assess the students' communication skills across the curriculum, we had to take into account all facets of the existing CSP, including program goals, shared values and beliefs, possible methods, other assessments (see "The CSP Portfolio," above), and constraints.

Creating a new assessment instrument is never an easy task. One shared belief about evaluation that arose quickly in our discussions was that the best assessment instruments are those that are locally created, designed within a specific context to evaluate locally developed goals, rather than national standardized tests from outside assessment companies (Huot). In their article on assessing competency in business writing, Varner and Pomerence concur, stating that "while standardized tests may make the task of assessing writing easier, the custom-made, site-based test is a better tool for assessing the quality of student writing" in the context in which it was created (85). This aspect became central in the development of our new instrument.

Another shared assumption the committee quickly agreed on is that the best way to measure writing is by examining writing, preferably through multiple pieces, each aimed at particular audiences with specific purposes (White "Assessing"; Camp; Huot). We believe the same holds true for the other abilities: Listening, speaking, and reading can best be measured by examining students performing these abilities, ideally in multiple contexts.

While considering some of these initial beliefs, we had to keep other program measures in mind, such as CSP course final examinations, and our major qualitative individual and program assessment: the evolving CSP portfolio. At the same time, we had to take into account a number of constraints affecting the creation of an evaluation instrument, including time, money, expediency, and space within an already full program. As a result of the existing measures already in place and our existing constraints, our interdisciplinary Committee chose to create a multiple-choice test focused on as-

pects of the communication skills that we considered critical. The development of our specific instrument can best be understood in the context of our needs, purposes, goals, and constraints—all of which we attempt to share below. We do so with hopes that others facing similar challenges can benefit from recognizing the complexities of our experience.

One major constraint was our budget. With our CSP funding and resources already stretched by support for faculty training, presentation classrooms, and additional faculty, we had a smaller budget for evaluating the program. We also faced the significant challenges of limited time. The Evaluation Committee began meeting near the end of Fall 1998. The administration originally requested that quantifiable evaluation measures be attempted the very next semester but compromised on conducting the test the following academic year. Although we had made provision for qualitative assessment of the program through the use of portfolios and the faculty's incorporation of CSP goals into detailed course plans (systematically reviewed by a Communication Skills Program committee), we had not fully prepared an additional quantitative assessment. Being able to avoid such a time constraint is a good reason to include assessment planning throughout the life of program planning. We had spent our earlier time developing one new course after the next and modifying the courses for subsequent offerings. Focused on individual and course assessment, we waited to institute program assessment until all five CSP courses had been offered within the Communications and Information Systems Department at least once.

Again, crucial to an effective programmatic assessment was considering the key goals of our own Communications Skills Program (White "Pitfalls"; Jankovich and Powell). In an attempt to make the CSP concepts very explicit, the early collaborative meetings had unpacked large concepts into some 40 instructional objectives. Translating such a large number of instructional objectives into an effective test that could be used by both Communications Department and faculty from across the entire curriculum became an unmanageable task. Under the direction of our outside consultant, the Evaluation Committee reconsidered the key concepts of the Program.

In the end, we organized our test around measuring five of the most important goals of the Program that could be ex-

amined inexpensively, expediently, yet usefully through multiple choice instruments focused on the following:

1. Reading a longer text and identifying effective corresponding summaries, implications, and key points
2. Reading and selecting effective, contextually based arguments for use in given pieces of writing
3. Identifying appropriate usage and correctness in given pieces of contextualized professional writing
4. Selecting best practices for choosing and incorporating the most relevant analytical research and identifying the best published research on given topics within given contexts
5. Displaying an understanding of proactive listening approaches in given contexts

As we moved to the decision to assess through a multiple-choice instrument, we committed ourselves to creating the best possible instrument of this type, applying principles of user-testing, iterative design, and piloting. We believe we have created a sophisticated instrument that addresses some of the more complex communication strategies and requires students “to *think* about communication problems and solutions” (Allen 372). In designing our instrument, we took into account the common criticism of multiple-choice tests as focusing on one-dimensional questions and worked to ask students to show they “knew how” as well as “knowing that.”

To do so, we focused on creating questions that could provide a glimpse at critical thinking abilities underlying communicative performance (McEwen). As Aiken explains, although multiple-choice tests are notorious for not doing so, carefully designed multiple-choice tests can address complex as well as straightforward aspects of learning.

We specifically strove to create questions that would prompt students to think critically in addressing the five goals listed above. In adopting this approach, we are trying to avoid a trap many educational approaches fall into, namely, focusing on “the lowest level of the cognitive taxonomy—dispensing and testing facts—at the expense of higher order skills” (McEwen 101). Instead, we drew from a number of strategies allowing students to apply critical thinking (McEwen) in such

aspects as the following. After each aspect, we have included a related example from our new assessment instrument.

- **Identifying central issues.** *Example:* After reading a critique of Robert Kelley's book *How to Be a Star at Work*, students are asked: "Your supervisor asks you to write a summary of *How to Be a Star at Work* for a committee she is heading on Peak Performances at your growing company. Based on your reading of DeBare's article, which of the following four passages would best serve as a summary in the memo you send to your supervisor?"
- **Recognizing underlying assumptions.** *Example:* After reading a paragraph on the drinking age, students are asked: "The paragraph above would be most useful to support:
 - A. An **argumentative thesis** supporting lowering the drinking age.
 - B. An **argumentative thesis** opposed to lowering the drinking age.
 - C. An **informational thesis** presenting both sides of the drinking age issue.
 - D. An **informational thesis** identifying benefits to lowering the drinking age."
- **Evaluating evidence or authority.** *Example:* After reading a piece on legalizing riverboat gambling in the local (Pittsburgh) community, students are asked: "Which of the following would be viewed as the most **impartial source** for information on the issue of gambling impact on communities?"
- **Drawing warranted conclusions.** *Example:* After reading a piece on a new tax system, students are asked: "Given the disadvantages mentioned above, which of the following would most likely **oppose** a flat tax proposal?"
- **Considering alternatives to an argument.** *Example:* At a party, you overhear four people talking about *How to be a Star at Work*. You conclude that three of the people trust Kelley's research, but one

doesn't accept Kelley's findings. Which comment would most likely belong to this fourth person?

- A. "Most stars are more intelligent and ambitious than average performers."
- B. "Stars often work the same number of hours as average performers do."
- C. "The workers I know want to be more productive but cannot seem to make it click for themselves."
- D. "Stars are made, not born."

- **Locating and evaluating sources of information.** *Example:* After reading a piece on complexities of the new tax system, students are asked: "Which **key phrase** would be most useful in conducting additional search on this topic to aid in your understanding of its implementation?"

As do many faculty, we believe that open-ended questions and opportunities for more authentic measures can allow the most direct and highest level evidence of learning (White "Assessing"; Kubiszyn & Borich). In our case, such opportunities are instituted within the final examinations assessing the four main communications skills in each CSP course, as well as within materials included in each student's portfolio. Like a number of faculty and researchers, we hold the additional belief that well constructed multiple-choice tests can provide revealing and informative results (Hansen and Dexter) and that they can complement well the range of measures gathered through other means. We would not argue that a program evaluation should rely on just one type of assessment. In our case, the range included performance in the CSP course, final examinations focused on communications skills, an evolving portfolio displaying authentic student performance, and scheduled multiple-choice assessments.

In the end, we see our test as a means to provide a quantitative picture to complement the qualitative measures already being gathered through the CSP portfolio and the creation and systematic review of detailed CSP course plans.

Administration of the Initial Evaluation Test

The resulting multiple-choice assessment is designed to test students at three stages in the CSP Program: at the beginning of Course I (as a pre-test), at the end of Course V (as a mid-test in the Program) and at the end of Course IX (as a post-test).

Our initial evaluation instrument was completed and piloted in early March 1999. Since the entire test instrument requires more than a 50-minute class period to administer, the Committee decided to give the test in the following major parts, each taking about 30 minutes:

- Part 1 is Assessment of Reading and Constructing Arguments
- Part 2 is Assessment of Correctness and Usage
- Part 3 has two sections, each taking about 15 minutes
 - 3a. Assessment of Research Skills and
 - 3b. Assessment of Listening Skills.

As the pretest sample, 69 students in various sections of the first CSP course each took one of the three parts of the test in mid-March 1999. Although these students already had the benefit of about half a semester of their first CSP course, they were deemed sufficiently naïve of the program to take part in a trial run of our pre-test. In May 1999, the various parts of the same test were administered as a mid-level assessment to 156 students in sections of Course V, and as a post-test to 99 students in sections of those courses across the disciplines generally taken as students' last CSP requirement. Additionally, 17 CSP faculty also took parts of the test at a Spring 1999 Language Across the Curriculum workshop to field-test the instrument and any possible problems with difficulty levels and so on.

Our initial hypothesis about the results was that, because of the strongly integrated and sequenced nature of the first five courses, students would increase their skills significantly from CSP Course I to Course V. The Evaluation Committee thought that, since the emphasis of the last four CSP courses is on the application of communications skills in disciplinary discourse communities rather than on increased knowledge of communication skills per se, we might expect, minimally,

no drop off in scores by Course IX. Any improvement would, of course, be an important plus.

Initial Results of the Program Assessment Tool

The results from pilot tests at all three levels indicate that our hypotheses were partially supported. As Table 2 shows, students in the fifth communications course performed, on average, better on the various tests than did students in the first communications course. In particular, Course V students scored substantially better than Course I students on the “correctness” and the research tests. In this respect especially, our hypothesis that the CSP was helping the students to improve in communications-related abilities was confirmed.

	Course V minus Course I		Course IX minus Course I	
	<i>Advantage%</i>	<i>Possible Gain</i>	<i>Advantage</i>	<i>% Possible Gain</i>
Part 1: Critical reading and writing	.062	14.6%	-.008	-.1.7%
Part 2: Correctness and usage	.153	35.0%	.045	10.3%
Part 3a: Research	.235	42.3%	.102	18.4%
Part 3b: Listening	.102	18.7%	-.001	-.2%
Averages from the entire test	.138	27.7%	.0345	11.3%

Table 2: The advantage of Course V students and Course IX students over Course I students in proportion of correct responses. (The percent of possible gain is the advantage score divided by one minus the proportion of correct responses for Course I students).

However, average scores of students in Course IX, the fourth of the communications-intensive courses in the majors, tended to be lower than the average scores of students in the fifth communications course and quite similar to those of students in the first course.

Table 3 provides another view of the scores provided above. This table offers a statistical look at the general gains that Course V and Course IX may offer to students following their introduction to the Program. While the gains by Course IX are not as large as those by Course V, students' scores in Course IX indicate an improvement of 11.3% of possible gain over Course I scores.

	CSP V minus CSP I		CSP IX minus CSP I	
	Advantage	% Possible Gain	Advantage	% Possible Gain
Test 1: Critical reading and writing	.062	14.6%	-.008	-.1.7%
Test2: Correctness and usage	.153	35.0%	.045	10.3%
Test 3a: Research	.235	42.3%	.102	18.4%
Test 3b: Listening	.102	18.7%	-.001	-.2%
Average of the four tests	.138	27.7%	.0345	11.3

Table 3: The advantage of CSP V students and CSP IX students over CSP I students in proportion of correct responses. The percent of possible gain is the advantage score divided by one minus the proportion of correct responses for CSP I students.

Discussion of Results

The scores clearly indicate that students perform better on our tests of communications-related skills after experiencing CSP Courses I-V. Students' scores increased from the pre-test, Course I, to the mid-test in Course V, by an average of 13.8%. That figure represents 27.7 % of possible gain. Test results also indicate that although students' average scores improved between Course I and Course IX, students' communications scores did drop off from CSP Course V to Course IX. This is a puzzling result since students in Course V have, the test indicates, already mastered many aspects of these skills. We are examining reasons for improvements as well as focus-

ing on the Course V to Course IX fall off in test scores. Below we share a series of possible explanations for the drop in scores.

First, a possible explanation is that a large percentage of Course IX test-takers were transfer students but unidentified as such. Although they are required to take at least CSP Course V and therefore show themselves to be proficient in CSP skills prior to taking the four communications-intensive courses in their majors, transfer students might still be considered to have absorbed fewer CSP skills and to have absorbed them less thoroughly than students who actually took CSP Courses I-V. In an attempt to control for this possibility, we asked students to fill out extensive headers at the beginning of each test. One header question asked students to state whether or not they were transfer students. Unfortunately, a number of Course IX students did not fill out the headers at all, which prevented us from identifying transfer status in our Course IX sample. However, a comparison of scores between students in sections of Course V identifying themselves as transfers and those identifying themselves as non-transfers indicates no significant difference in scores.

Second, it is possible student skills fall off from Course V to Course IX because the skills taught in Courses I-V are not being sufficiently reinforced in Courses VI-IX. In an attempt to meet the rigorous disciplinary requirements of Courses VI-IX, some faculty may not be fully exploiting the possibilities of applying CSP goals in these courses. Whether or not that is the case, as many other researchers have noted, knowledge transfer (in this case, from communications skills in Communications Department courses to communications skills applied in the courses across the curriculum) doesn't carry as well as or doesn't have the reach that we would like to think it does (Beaufort; Pennington, Nicolich, & Rahm; Teich).

A third possibility for the fall off in scores is that there may be problems of validity inherent in the pilot test. These problems can be discovered only after a pilot test is given and are, in fact, a reason for a pilot study. In our case, a number of test questions were discovered to be too easy. Such questions were identified by the large number of students (more than 85%) who answered them correctly in the pre-test, that is, before CSP training. Similarly, a number of questions were too hard for students in the post-test or were poorly written. The questions judged unusable on this end of the spectrum were ones that Course V students and faculty answered cor-

rectly fewer than 15% of the time. Both the “too easy” and “too difficult” questions need to be rewritten for a more valid test and tested once again. Generalizations about the questions we eliminated are difficult since results depend not only on effective test-construction but on the types of incoming students and their pre-university training as well as on the emphasis of instruction in various communications programs.

A fourth explanation for our pilot results is that students are not taking the test seriously. Robert Morris evaluators have reported an ongoing problem with standardized evaluations given to seniors at the end of the school year. These evaluations have no bearing on students’ grades, and, therefore, students may not apply themselves to the test. Several on the CSP Evaluation Committee, particularly those teaching Course IX versions of classes in the majors, say they do not believe that this argument fully explains the phenomenon of falling scores. Many members of the Committee used their own classes to give the pilot test and encouraged students to take it seriously. Nonetheless, it is often the case that when students perceive no connection between their performance and their grades, performance can drop off. Our consultant additionally suggests that a failure among Course IX students to complete header information is a good indication of failure to take the test seriously.

Along the same lines, it could be that the students in the communications-intensive courses did not take the tests as seriously as did students who were under the jurisdiction of faculty teaching communications courses exclusively. In other words, students in CSP courses in their majors may have put more effort into their final examination on course content rather than on our programmatic assessment attending to communications-related concerns.

A fifth possibility relates to the “newness” factor—most of the students being tested in Course IX had been the first students taking the totally new CSP courses, taught by instructors teaching a new version of a course, within a new program. In other words, when the Course IX students had taken Course I, they were the first students ever to take the course. When they took Course II, they were also the first students ever to take Course II and so on. Since its inception, the program and its courses have continually been revised and, we hope, improved. CSP faculty continue to spend substantial amounts of time working on the program itself, meeting once

or twice a month as a group for several hours at a time to discuss and make improvements in each course of the program. In effect, then, the particular Course IX students taking our pilot test did not have the benefit of our improvements or revisions, whereas the tested students in Course V did. As we continue to refine our assessment instrument, we hope to be able to track individual students as they take all 3 parts of the test—the pre-, the mid-, and the post-tests. This approach should, of course, be even more revealing of any programmatic effects on student abilities.

Recommendations

Below, we share more general suggestions that may be useful for other institutions interested in creating and refining local evaluation instruments. Specific suggestions relevant to our own program are included as well. We apologize if some of these seem too obvious, but we wanted to err on that side, rather than leaving something useful out.

1. *To achieve greater faculty “buy in,” invite representatives from across the disciplines to participate in the entire assessment process, including the creation of the instrument.*

Mottilla, Hatfield, Taylor, and Stone remind us that “interpreting standards and identifying appropriate responses . . . is a faculty-driven process, and it must be remembered that ‘faculty’ is a collective noun” (292). We strongly believe that instructors who help design the assessment instruments are more likely to attend to and work with the results. As Greenberg, Wiener, and Donovan state, “Teachers who shape an exam . . . will see that its principles infuse the curriculum and classroom practice” (xv). Our Evaluation Committee represents a cross section of University disciplines. In our case, faculty from across the disciplines have not only helped design the assessment instruments, but also helped shape each aspect of the program—from participating in planning, training, re-envisioning approaches to teaching course material, adapting existing courses into communications-intensive versions of the courses, serving on the Evaluation Committee itself, and making room in

their courses for program assessment. This level of participation will increase the likelihood of accountability, growth, and improvement within the program (Haswell and Wyche-Smith).

2. *Create your own, locally based instrument that reflects and tests your program goals.*

Varner and Pomerence note that “a custom-made instrument will ensure that the assessment fits the local conditions” (83). Haswell and Wyche-Smith put it another way: “Let the local scene shape the examination, not the other way around” (223). Our instrument focuses on the five objectives that a committee from across the curriculum agreed to be most important to the students’, the Program’s, and the University’s interests. We believe that this approach allows us to focus on those qualities that we—and not outside testing agencies—deem most critical for our students and our program. Other institutions interested in assessing communication skills across the curriculum may likewise want to invest the additional time and reflection required in the creation of a useful locally based instrument.

3. *Use a workable set of objectives.*

Although we knew this simple maxim, we didn’t truly understand its importance until we began creating an assessment with our original 40+ goals. Such a large number of goals, even though well articulated, proved unworkable. We therefore streamlined them into five main goals to be connected to the test areas. A more focused set of objectives can prove more productive for an evaluation committee as well as more operational for instructors creating course plans and for students attempting to meet program and course goals. This process, we believe, helped unify and improve our vision for the Program as well.

4. *Rewrite test questions that are found to be too easy or too difficult.*

Problematic questions can be identified in pilot tests as those answered correctly by more than 85% of test takers *before the program* (too easy) and those an-

swered incorrectly by more than 85% of the test takers *after the program* (too hard or poorly written). Similarly, questions that most participating faculty cannot answer will likely be too difficult for students. As mentioned earlier, those questions will depend on student high school training and on the emphases of the individual program.

5. *Allow ample time for pilot-testing the assessment instrument.*

Since pilot tests are most useful for identifying problems with the test, plan on giving at least one revised pilot test. In doing so, your committee can attend to the instrument's validity, the extent to which the assessment instrument is measuring what it is intended to measure through a variety of procedures such as triangulating results with other measures. Revised pilot testing also allows for a trial run of any additions or other changes to the instrument that occurred after addressing problems such as floor and ceiling effects. As Haswell and Wyche-Smith state, "To the degree that the test is innovative . . . follow-up studies are essential" (234).

6. *Design test headers to capture desired information.*

Some institutions may be interested in performance by gender, non-traditional status, or other factors. For our purposes, we hoped that isolating a population of transfer students could allow us more information about contributions of early CSP courses. Our headers, therefore, should either define what "transfer student" means or ask students how many communication credits they have transferred.

7. *Suggestions should be provided for helping faculty and any proctors to motivate students to take the test seriously.*

If faculty treat the test as a frivolous administrative add-on, students will also. One suggestion is to have faculty check the tests as students hand them in to be sure that students complete the headers as well as the test. Alternately, a computer or research center can provide tests pre-labeled with students' names

and other header information. Or such information can be referenced by the school research or computer center later. Total anonymity on these kinds of tests can lead to irresponsibility. We have already instituted one change in the procedures for the test. Faculty are given a sheet of prompts, one which asks faculty to wait until all students have filled out the headers before they allow the test to begin.

8. *Faculty teaching courses in the program being assessed should be made aware of the results and encouraged to learn from the positive as well as the poor results.*

In our case, we need to inform the CSP faculty of patterns such as rising and falling scores as well as possible reasons for both. We can also solicit the faculty's hypotheses to help explain student strengths and weaknesses suggested by the tests. We can do more to encourage all faculty to tap into creating, using, and evaluating communications-oriented approaches. Faculty from across the university can discuss indications of successes and problems at workshops and meetings as well as in online interactions. In our case, CSP Courses I – V faculty meet for such purposes once or twice each month; CSP Courses VI – IX faculty currently share experiences and successful materials at a once-a-semester workshop.

9. *Determine when to assess—and why; it's not just "what to assess" that is meaningful.*

In our case, in addition to instituting a Course V portfolio measure, we chose to pre-test, mid-test, and post-test. We want to see how students are performing on our measures at three times during their exposure to the Communications Skills Program: first, prior to taking any courses in the Program; again, when they've completed a little more than one half of the CSP courses (typically at the end of their sophomore year); and, finally, once they've completed all nine CSP courses (typically at the end of their senior year). This approach will allow us to identify patterns and to examine whether students are maintaining the communication abilities they have developed in the first

five courses. Since our initial pilot testing suggests a possible drop off rather than maintenance of communications skills, we are considering testing students at the end of their junior year to more clearly identify where students are falling off in our measures of communications-related skills. We are also planning to track results from individual students as they move through the four years of the Program.

10. *If possible, provide student incentives for the assessments.*

We are considering options such as asking faculty to count the assessments as part of the course grade. Following such a recommendation could send the important message that administering and taking the test is serious and meaningful University business.

11. *Work with those at the administrative level to ensure support.*

As White reminds us, “Political matters exist at all phases of the testing program, from the planning of goal statements (which require general assent) to test development and scoring (which require funding and general participation) to evaluation (which is often prepared for the use of public funding agencies)” (“Pit-falls” 77). Sometimes those with power over budgets have goals that differ from those within a program and those most affected by the program’s development. In working with administration to seek budgetary lines for evaluation, it should be kept in mind that “money spent to compensate teachers for involvement in assessment is also money spent on faculty development and curriculum reform” (CCCC Committee on Assessment 433). Keeping in close touch with the upper-level administrators can keep the paths to shared goals, commitment, and support open throughout the process (Varner and Pomerence; Jankovich and Powell).

12. *Incorporate multiple measures of program assessment.*

As we all know, learning styles vary from student to student (Sharp). Our program attempts to respond

to that fact through its emphases on various facets of communication. Similarly, our program attempts to respond to that fact through its program evaluation instruments. Assessing a program through multiple measures can help identify and more clearly confirm successes and problems that just one type of measure might not capture.

Much has been done and much remains to be done in building and assessing our innovative program. Given the constraints of our system, for example, that our budget did not currently permit holistic scoring, we believe our pilot testing has taught us a great deal about the Program, its successes, and what needs to be done for a better assessment and an improved program. We consider our experience so far a formative evaluation in the life of the Program. We will spend more time exploring the results, including identifying features that make an exemplary portfolio and what aspects of our Program can account for a lowered score on our new assessment instrument between the CSP V and the CSP IX courses. We look forward to learning more about how we can use such evaluations to better help prepare students to use communication abilities effectively in the classroom, workplace, and life settings that await them.

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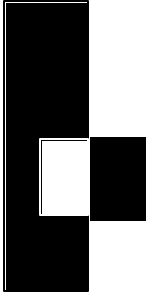
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Endnotes

¹ It is worth noting that the promise of graduates/employees with improved communications skills has made the business community more willing to provide such needed funds.

² Many students additionally choose to rework the CSP portfolios into job interview portfolios.



Introducing Engineering Students to Intellectual Teamwork:

The Teaching and Practice of Peer Feedback in the Professional Communication Classroom

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A rich discussion of collaboration as integral to writing in academia and the workplace has been on-going for some time among writing instructors and researchers (e.g. Bruffee, 1984; Dias and Paré, 2000; Ede & Lunsford, 1992; McGroarty & Zhu, 1997; Thralls, 1992; Reither & Vipond, 1989). The outcomes of this discussion have convinced some writing instructors to promote peer feedback as one of the forms of collaborative writing in the classroom (e. g., Perry & Collins, 1998; Schriver, 1993; Sitko, 1993; Villamil & De Guerrero, 1998). In this paper we report on the preliminary stages of a longitudinal study of the role and place of peer feedback in the development of students' writing.

The site of our research is a mandatory undergraduate communication course that we teach to engineering students at a Canadian University. In this course the student to instructor ratio often reaches 130 to 1, where students are divided into sections of 25-30, and where one instructor teaches 4-5 sections. This high number of students is of particular concern in a communication course, in which students need to continuously practise written and oral communication strategies by interacting with each other and their instructors. The major goal of this course is to facilitate the acquisition of domain-specific communication strategies¹ necessary for students to successfully communicate in engineering, both in writing and orally. To help students to acquire these domain-specific communication strategies and, therefore, to

meet the goals of the course, and to facilitate student learning in large classes, it is necessary to develop an effective pedagogical approach. The present study stems from our attempt to develop such a theoretically sound and practical pedagogical approach. In the attempt to develop such a pedagogical approach and because of the high number of students enrolled in the communication course and the communicative nature of the course, we considered it appropriate to look to the social theories of writing.

Research into academic and workplace writing practices suggests that "competence is a necessary but not a sufficient condition for success . . . writers must be 'able to work together.' They must, in short, be able to collaborate" (Ede & Lunsford, 1992, p. 66). Contemporary theories of language and, in particular, Bakhtin's (1986) theory of the communication chain "provide a solid vantage point from which to begin to explore the sense in which collaboration is present in both individually and jointly authored texts" (Thralls, 1992, p.65). Therefore, to facilitate student acquisition of domain-specific communication strategies writing instructors should help students to realize that collaboration, as Thralls suggests, is integral to all writing and not unique to co-authorships. Instructors need to provide an environment that is conducive to "social engagement in intellectual pursuits" (Bruffee, 1984, p. 652) and promote the understanding that all writing is collaborative because all writing is social (Ede & Lunsford, 1992, p. 15).

In our communication course students are working on engineering projects of their own choice². They have to complete tasks that require them to manipulate existing information and, sometimes, to produce new information. Students are then asked to communicate this information through written documents. We feel that, because of the social nature of writing, it is necessary to involve students in collaborative writing, that is, to introduce them to one of the types of intellectual teamwork. As Galegher and Kraut suggest, "The concept of intellectual teamwork embraces information intensive work of many kinds The central image underlying . . . [intellectual teamwork] is one of individuals working together to produce or manipulate information . . ." (Galegher & Kraut, 1990, p.1). And so, to ensure that our pedagogical approach involves students in genuine intellectual teamwork (Galegher, Kraut, & Egidio, 1990) in the class-

room, we need to create an environment that would stimulate student intellectual collaboration. That is, we need to introduce a social dimension in our classroom.

Teachers of writing were attempting to introduce a social dimension in the writing classroom as early as the 1960s (Moffet, 1968). An example of such a pedagogical approach developed when the writing process movement was gaining momentum in the 1980s is the teacher/student conference that became an integral component of the "process-conference approach" (Graves, 1984, p. 70). The process-conference approach involved the instructor working "with the student through a series of drafts, giving guidance appropriate to the stage through which the writer is passing. By putting ideas on paper the student first discovers what he or she knows and then is guided through repeated drafts that amplify and clarify until the topic is fully expressed" (p. 70). The emphasis here is on the instructor guiding the student where the instructor is both the authority and the sole audience.

Moffet (1968), however, notes that it is classmates -- as peers -- who are a natural audience for a student. Students who are provided with the opportunity to habitually respond to and coach each other get insights about their peers' writing, about their own writing, and about the needs of their readers (Moffet, 1968). By working in small groups, students start relying on their peers as reviewers and may be able to overcome communication problems caused by egocentricity, that is, by a writer's inability to look at her writing from a reader's perspective (Elbow, 1973; Herrington & Cadman, 1991; Sargent, 1997). The role of the instructor, then, becomes "to teach . . . students how to teach each other" (Moffet, 1968, p. 196). This understanding of the role of the instructor reinforced our belief that it was necessary to teach students how to interact in their small groups so they could learn how to collaborate (Elbow & Belanoff, 1989).

Our continued search for studies that focused on peer feedback provided us with a large body of literature (e. g., Beason, 1993; Dale, 1994; Elbow, 1973; Elbow & Belanoff, 1989; Freedman, 1992; Herrington & Cadman, 1991; McGroarty & Zhu, 1997; Perry & Collins, 1998; Sargent, 1997; Schriver, 1993; Sitko, 1993; Smith, 1997; Villamil & De Guerrero, 1998). From this literature, we learned that in the majority of studies peer feedback was provided orally, whereas in our classroom, the focus was on written feedback

(e. g., McGroarty & Zhu, 1997; Sitko, 1993; Villamil & De Guerrero, 1998). We also learned that even though peer conferencing was widely practised in the writing classroom, the instructor often remained the audience for resulting drafts and the final product. That is, in addition to the (mostly) oral feedback provided by peers, it was the instructor who continued to read and respond to student drafts.

Only a few studies that we were able to locate explored in depth the practice of teaching students how to use small groups to learn how to write and use peer feedback (Elbow & Belanoff, 1989; Herrington & Cadman, 1991; Sargent, 1997; Sitko, 1993; Schriver, 1993). To our knowledge, peer feedback that results from teaching students how to use each other as intellectual teamwork facilitators (cf. Sargent, 1997) in the writing classroom has received very little attention. More attention has been paid to revisions (Sitko, 1993; Schriver, 1993; Herrington & Cadman, 1991) than to the quality of the peer feedback that results from teaching feedback strategies.

Because information on the effectiveness of teaching peer feedback strategies and on the quality of resulting peer feedback was limited, we decided to conduct our own research as we were developing and implementing our pedagogical approach. In this paper, we present a brief description of our research site, i. e., the engineering communication course we teach; a description and analysis of our first, and unsatisfactory, attempt to introduce peer feedback as a strategy for intellectual teamwork; the design of a new approach to teaching peer feedback; a description of two research studies into the effects of teaching peer feedback in an engineering communication class; and the analysis and interpretation of the results of the studies.

Research Site

In our engineering communication course, we ask students to choose subject matter covered in the engineering courses they are taking concurrently with our course and to use this subject matter as topics for their communication course projects³. In our course, students are required to write documents typical of any engineering project: a formal letter, a project proposal, a progress report, and a completion report. Students are asked to produce multiple drafts of each document, obtain written comments (feedback) from their peers on these drafts, and use this

feedback to revise their work before submitting it to the instructor. Hence, each document produced by each individual student author is a result of collaboration between a number of peer reviewers and that author. By asking our students to participate in the peer feedback process, we hope that such collaboration will promote intellectual teamwork among peers, which will allow for continuous practice necessary for the acquisition of domain-specific communication strategies. In addition, we believe that by creating this opportunity to collaborate, we encourage students to be more self-reliant and thus less dependent on the instructor (cf. Herrington & Cadman, 1991; Sargent, 1997).

Introducing Peer Feedback as a Strategy for Intellectual Teamwork

When we first started teaching the communication course in 1997, our approach to using peer feedback as a strategy to improve writing was to introduce students to document types characteristic of engineering; explain the potential benefits of peer feedback; and provide students with instructor-designed forms to use as a means of conveying their feedback to classmates (Fig. 1). We chose to use feedback forms as they are often used in composition (e.g. Freedman, 1992) and technical communication classes (e. g. Covington & Keedy, 1979). The questions on the forms (Fig. 1) were intended to help students focus their feedback on content, organization, format, and language use in the draft document under review. We asked students to read each other's drafts; write their comments on the forms; and return the draft documents and the completed feedback forms to the writers. We hoped that participation in the course and regular exposure to samples of engineering documents would allow students to be able to address pertinent issues related to the questions asked on the forms.

On review of completed forms and subsequently revised student drafts, we discovered that students' feedback was often generic and shallow, and not helpful for revision. For example, in response to questions related to the appropriateness of content in the document, reviewers would often write, "Content is good," "clear," or "confusing," without providing any explanations or justification. Such feedback led us to believe that the questions on the forms were too broad (e.g. Organization: Is it logical? What is good about it? What could be improved? (See Fig. 1)). In addition, we observed that the

Assignment 1: Letter to Instructor

Content (MAIN QUESTION: Does it include all information requested by the instructor?)	
What is good about it?	What could be improved?
Organization (Is it logical?)	
What is good about it?	What could be improved?
Format (Does it have an appropriate layout?)	
What is good about it?	What could be improved?
Language (Is it accurate?)	
What is good about it?	What could be improved?

Figure 1: Feedback Form.

authors of drafts were experiencing difficulties trying to connect feedback written on the forms to specific parts of their drafts. This observation lead us to conclude that feedback would be more accessible to authors if written directly on the drafts as opposed to the forms which were physically separate from the drafts.

Given these observations, we determined that participation in the classroom and exposure to sample documents was insufficient to help students to use peer feedback as a strategy to improve their writing. It was unrealistic to expect students to collaborate productively simply because they were put into groups and given a task to work on together (cf. Elbow & Belanoff, 1989; Sargent, 1997; Schriver, 1993; Sitko, 1993). To maximize the effectiveness of collaboration among peers -- and, therefore, to enhance the process of student acquisition of domain-specific communication strategies -- instructors must “create and

maintain a demanding academic environment that makes collaboration – social engagement in intellectual pursuits – a genuine part of students’ educational development” (Bruffee, 1984, p. 652). It became clear to us that we had to modify our pedagogical approach.

The Design of a New Pedagogical Approach to Teaching Peer Feedback

In designing a new pedagogical approach we began by trying to address the problems that came to light in our first attempt to teach peer feedback. First, to address the problem of “broad” questions we reconsidered the purpose of the feedback form and redesigned it so that it served as a guideline and geared students’ attention to more concrete problems in drafts. As Elbow and Belanoff (1989) say, “you can’t really take charge of the feedback process if you haven’t learned enough kinds of feedback to ask for “ (p. 2, italics in the original). For example, the revised form contains questions such as “Does the writer provide enough information to justify the choice of the engineering course? Does the writer provide all the information about the [engineering] course that the instructor has requested?” (Fig. 2).

Second, to help authors to connect peer feedback to specific problems in their drafts we moved away from the “fill in the blanks” form. We instructed reviewers to write their feedback directly on the drafts, addressing issues identified in the guideline.

Third, to ensure that student collaboration was productive we decided to teach students how to use small groups to learn how to write and use peer feedback effectively. This approach is grounded in the work of Vygotsky (1978) and Rogoff (1990) that showed that in collaboration with experts and peers, learners are often able to achieve goals they are unable to achieve on their own. We hoped that by promoting peer feedback in small groups we would be able to encourage students to draw on each other’s resources; form “a community of status equals: peers” (Bruffee, 1984, p. 643), and rely less on the instructor’s feedback (cf. Sargent, 1997). Because all students in our course come from different years and different departments of the Faculty of Engineering, they share some common discipline-specific knowledge, and they all “start with different degrees of knowledge or hold different perspectives” (Hughes & Greenhough, 1995, p. 535). In addi-

1. Is there a clear sense of audience in the letter? How do you know who the intended reader of the letter is?
2. Is it clear that this is a letter of response? How does the writer make it clear?
3. Does the writer identify the selected engineering course?
4. Does the writer provide enough information to justify the choice of the engineering course?
5. Does the writer provide all the information about the course that the instructor has requested?
6. Does the letter follow conventions for formal letter writing:
 - a. Is the order of the addresses correct?
 - b. Does the receiver's address provide enough information for the letter to be delivered to the receiver?
 - c. Does the sender's address provide enough information so that the receiver's response can reach the sender?
 - d. Is there an appropriate
 - date?
 - salutation?
 - complimentary close?
 - signature block?
 - end notation(s)?
 - e. Does the letter meet all the format requirements outlined in the Instructor's letter of request and the course outline?
7. Is the language of the letter formal and grammatically correct?

Figure 2: Checklist for Feedback on the Letter to Instructor.

tion, as Herrington and Cadman (1991) observe, "reviewing another's draft [moves] students from passive roles of receivers and demonstrators of knowledge to more active roles in shaping their own ways of thinking and writing" (p. 196). In other words, students working in peer feedback groups can serve as intellectual teamwork facilitators (cf. Rogoff, 1990) for one another by drawing on shared knowledge and benefiting from various perspectives represented in their groups.

As we were developing and implementing our new pedagogical approach, we decided to complement our incidental classroom observations by formal research. Our intention was

to collect information on students' attitudes toward peer feedback and to analyze the effect of teaching peer feedback on the quality of comments students wrote on each other's drafts.

Two Studies

Our research⁴ included two distinct but complementary studies. In the first study we elicited student perceptions of peer feedback at the same time as we were introducing students to our new pedagogical approach. We designed feedback questionnaires to gain access to students' perceptions of and concerns about peer feedback (Appendices A and B). The information we gained as a result of the analysis of the feedback questionnaires guided us as we were implementing the new approach. In this paper, we call this study the "Feedback Questionnaire Study."

In the second study, we collected all drafts of course assignments with peer feedback produced by a small group of students. The drafts and final copies of the assignments were analyzed at the end of the term to determine whether the quality and nature of peer feedback had changed over the term. We call this study the "Peer Feedback Study."

Research Methodology

The following sub-sections of the paper present the methodologies of the Feedback Questionnaire Study and Peer Feedback Study.

Methodology: Feedback Questionnaire Study

The participants of this twelve-week (one term) study were twenty undergraduate students from different departments and streams of the Engineering Faculty enrolled in the mandatory communication course. The majority of participants were first- and second year students with some third- and fourth-year students as part of the group.

In this study, we collected and analyzed students' responses to two feedback questionnaires (Appendices A and B). On the first day of the course, without any discussion of peer feedback, we administered the first feedback questionnaire (see Appendix A). The reason we administered it on the first day of classes was to collect information about students' understanding of and attitudes towards peer feedback as based on their prior experiences and not as influenced by our teach-

ing. At the mid-term point (after six weeks of teaching), we administered the second questionnaire (see Appendix B) and then analyzed student responses to the questionnaires to identify concerns about peer feedback at different points in the term, compare them, and modify our pedagogical approach to accommodate them. In our analysis of student responses to the feedback questionnaires, we focused on categories of common student concerns that emerged from the close reading of all questionnaires in the sample.

Methodology: Peer Feedback Study

In this study, we selected a small group of four students from the original group of twenty. We collected and analyzed peer feedback written on drafts of all four course assignments⁵ over the term to assess whether the quality of the feedback changed (cf. McGroarty & Zhu, 1997). Our analysis of these data was conducted at the end of the course. At the end of the term, we compared and analyzed the peer feedback to determine whether its nature and quality had changed over twelve weeks.

Analysis and Interpretation

This section provides the analysis and interpretation of the results of both studies.

Analysis and Interpretation: Feedback Questionnaire Study

The analysis of student responses to the first feedback questionnaire revealed that students had five main concerns about peer feedback. First, students were concerned with their peers' attitudes toward giving feedback. They thought that peers would not take the feedback process seriously (cf. Freedman, 1992). Students also felt that peers might be unclear about their responsibilities and role as reviewers. Second, students questioned the competence of peers to give feedback. They did not think peers would know what elements of writing to address in feedback. Third, students voiced a concern for the need for practice in giving feedback. Fourth, students expressed a need for the instructor's voice. They saw the instructor as the expert and the person marking the assignments and, therefore, felt that they needed instructor feedback in addition to peer feedback. Finally, students indicated

a need for combined written and oral feedback. They thought that each process by itself was incomplete.

As a result of this analysis, we developed a series of pedagogical responses. We responded to the concern about peers' attitudes toward giving feedback by conducting in-class discussions of the roles and responsibilities of peers, trying to instill in our students a sense of responsibility to each other.

To respond to the concern about competence of peers to give feedback, we provided students with guidelines in the form of questions (what we called "checklists") to help student reviewers to identify and address problematic areas in peers' writing (See Fig. 2 for a guideline for the first assignment, Letter to Instructor). "Checklists" were accompanied by oral instructions to ensure that reviewers would focus their feedback on the identified areas and would write their feedback directly on drafts. We also conducted in-class training sessions where small groups of students would examine samples of draft documents written by students enrolled in the communication course in previous terms⁶ and provide feedback on them using the "checklists." Students and instructors would then compare and discuss in plenary the feedback provided by different reviewers.

To satisfy the students' need for practice in giving feedback, we established "prescribed" feedback groups based on the results of a diagnostic exercise conducted on the first day of classes (Artemeva, 2001a, 2001b) and instructor's observations of the class dynamics (cf. Sargent, 1997). In these prescribed groups each student received feedback from two or three peer reviewers. The groups were given class time to comment on each other's drafts. In addition to time provided in the classroom, we encouraged students to use an Internet-based electronic course newsgroup where students could publish drafts and exchange peer feedback⁷. Students were also encouraged to use personal e-mail to exchange feedback on drafts.

To respond to the need for the instructor's voice in feedback, we offered students oral feedback on drafts in class and during office hours and when possible, we provided written feedback by email or through the electronic newsgroup.

We responded to the students' need for combined written and oral feedback by providing in-class feedback sessions, in which feedback written by reviewers on other students' drafts was followed by an oral discussion between the writer and the reviewer.

Analysis of the second questionnaire showed us that at the mid-term point students had three main concerns. The first concern was related to the prescribed feedback groups. Some students felt that their mandatory groups did not function well because of bad interpersonal dynamics, and they wanted to use other classmates for feedback. The second concern expressed by students was related to their confidence level. They questioned their ability to provide useful feedback to classmates. Finally, students indicated that they were not sure if they were using peer feedback optimally.

As a result of the analysis of the second questionnaire we developed another series of pedagogical responses. To respond to the concern about prescribed feedback groups, we allowed students to solicit feedback from classmates outside of their prescribed groups, after they had had six weeks of practice in those groups. We hoped that by having an opportunity to choose their own feedback partners and form their own feedback groups students would be encouraged to collaborate more effectively.

We considered the students' concern about their abilities to give feedback natural given that they had only been working as peer reviewers for about six weeks and responded to this concern by providing more in-class opportunities for continued practice.

Finally, to respond to students' concerns about the optimal use of feedback, we reinforced the importance of an oral discussion in support of the written feedback. We hoped that discussion between the reviewer and the writer would allow for clarification and negotiation of the written feedback and thus enhance the writer's confidence when using the feedback.

In summary, the comparison of responses to the first and second questionnaires indicated that students' concerns were fewer in number at the mid-term point and were quite different in nature. The analysis of responses to the questionnaires suggested that students felt more comfortable with the practice of peer feedback by the mid-term point, which might indicate that our pedagogical responses to students' concerns expressed at the beginning of the term were fairly effective. This analysis also led us to think that by the mid-term point students had started "to buy into" the strategies we had exposed them to and had started seeing peers as possible intellectual teamwork facilitators.

Analysis and Interpretation:

Peer Feedback Study

As explained above, in the middle of the term students were given an opportunity to solicit feedback from classmates outside of their prescribed groups. Although some students decided to solicit feedback outside of their original prescribed feedback groups, others preferred to remain with their original feedback partners. The four student participants in the Peer Feedback Study chose to remain with their original feedback partners.

After reading and comparing all the feedback written by the four students over the term, we defined our unit of analysis as a meaningful instance of feedback. A meaningful instance of feedback might be presented in the form of a single word, a phrase, a complete sentence or a passage. For example, the comment “Double space” addresses a problem of format (spacing) and is presented in the form of a phrase. The comment “Look at spacing in text, I don’t know if you’re required to follow it” also addresses a problem of format (spacing) but is presented in the form of a sentence. Each of these comments would be counted as a separate meaningful instance of feedback addressing the same problem, that is the problem of format.

Once we had defined our unit of analysis and compared feedback on all the drafts, we were able to group meaningful instances of feedback under the following categories: local context, content, organization, language, format, writing process, advice, and evaluation (for rules of inclusion for meaningful instances of feedback in each category, see Fig. 3).

When studying peer feedback written on drafts of each of the four assignments, we counted how often the meaningful instances of feedback belonging to each identified category occurred per assignment, or, in other words, we calculated the frequency of the occurrence of instances of feedback in each category. Figure 4 demonstrates the change of the relative number of instances of peer feedback in each category from assignment to assignment.

Thus, Figure 4 demonstrates that in their comments on drafts of the first assignment (a formal letter to the instructor), students focused on issues of format, language, and local context, while issues of content and organization received less attention. Given that the assignment sheet (“Instructor’s Letter of Request,” see Appendix C) asked students to present

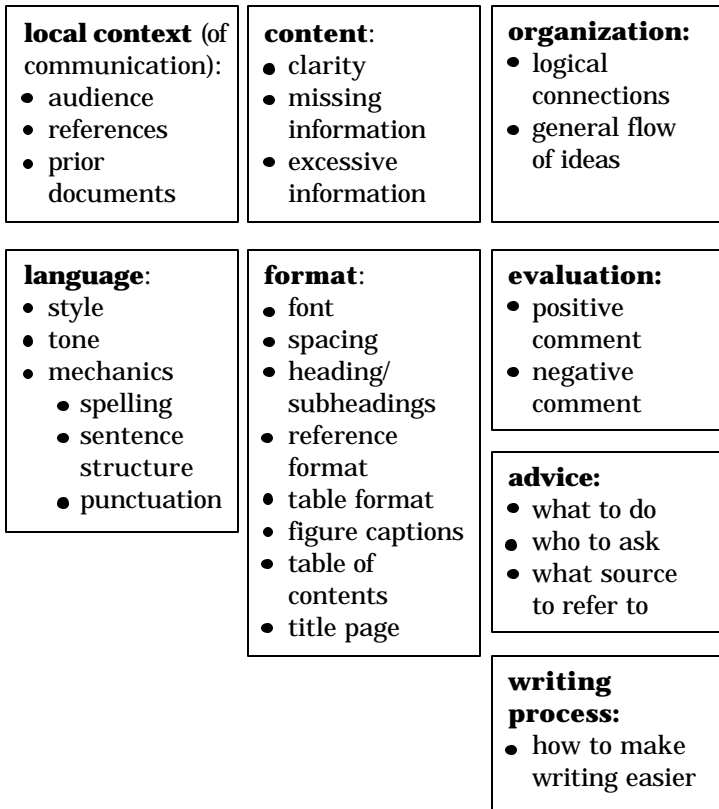


Figure 3: Categories of Peer Feedback and Abbreviated Rules of Inclusion.

specific information pertinent to their projects and modeled an order in which this information could be presented, we hoped that students might attend to these issues in their feedback. In addition, no meaningful instances of feedback providing advice, evaluating the document, or commenting on the process of writing were found on drafts of the first assignment.

On the other hand, our analysis of peer feedback written on drafts of the last assignment (a completion report) showed that compared to assignment one, issues of local context and format received much less attention at the end of the term, while content, organization, and language were addressed more often. In addition, the new categories of advice, evaluation, and writing process appeared in student feedback as the term progressed (Fig. 4).

Assignment 1 – Letter to Instructor

Assignment 2 – Project Proposal

Assignment 3 – Progress Report

Assignment 4 – Completion report



Figure 4 : % Meaningful Instances of Peer Feedback vs. Categories of Peer Feedback on Each Assignment

The analysis of the frequency of meaningful instances of feedback in each category, therefore, showed that over the term there was a shift in the focus of peer feedback (Fig. 4). The focus of feedback shifted from issues of local context and format on the first assignments (e. g., “signature missing;” “refer to instructor’s letter” [local context]; “Double space;” “Look at spacing in text, I don’t know if you’re required to follow it” [format]) to issues of organization and evaluation on later assignments (e. g., “Might flow better if background were moved in front of purpose” [organization]; “Good problem statement, too long though” [evaluation]). This shift in focus to issues of organization reflects a growing student awareness of the readers’ need to be “guided” through writ-

ten technical documents. The appearance of feedback in which students evaluate each other's work suggests the growing level of confidence and comfort in peer interaction. This growing level of comfort may be a result of students working together in feedback groups. Students get to know each other and each other's writing, which leads to more relevant and profound feedback, which could result in more substantial revisions.

The changes we observed in the focus of peer feedback differed from the results of the majority of previously published studies we are familiar with. Most of the studies demonstrated that students' comments focused mostly on spelling, punctuation, and sentence structure and did not focus on organization or provide evaluative commentary (e.g. Beason, 1993; Freedman, 1992; McGroarty and Zhu, 1997). In our study, students also commented on language issues in their feedback on all four assignments; however, they provided a significant amount of feedback that addressed a variety of other issues (Fig. 4). This difference may be an outcome of our pedagogical approach of teaching students how to use small groups to learn how to provide peer feedback and of practising this process with them (cf. Herrington & Cadman, 1991; Sargent, 1997). This difference may also be a result of providing reviewers with guidelines in the form of questions ("checklists") to help student reviewers to identify and address problematic areas in peers' writing.

In addition to the findings presented above, we discovered that the four students in the small feedback group we studied were developing their own strategies in providing feedback to each other. These strategies were developed in addition to those taught and practised in the classroom. One of the strategies developed and used by students was to provide an end commentary to summarize and clarify feedback written throughout the draft⁸.

The following is an example of one such end commentary provided by one group member on a draft of the completion report, in which another group member evaluated materials that could be used as firewalls in cars:

Your last 2 sections are confusing!! In 5 you say that aluminum and steel are good but then in 6 you say steel is the best. Maybe you should combine 5 & 6. I assume that you are saying which material is best in the conclusion. You might add a section on what

real firewalls in cars are made out of. I don't know if you have info on that, just a suggestion. Also make sure that with everything that you say you relate it back to your purpose. I found that in section 3 you were just listing off properties of metals, and not saying a lot on how those properties related to firewalls. Maybe at the first of section 3 you could list off what properties are needed in firewall material and then say how each metal meets or fails those needs. I hope this is helpful, thank you for editing my report!!

We believe that the development of the “end commentary” strategy on the part of the group is indicative of students adopting the role of intellectual teamwork facilitators for one another. As a result of their group work students seemed to develop a sense of responsibility to each other and for each other's writing and became better collaborators (cf. Sargent, 1997). They began to take responsibility for each other's writing product, thus realizing that writing is a social rather than individual endeavor, and developed a strategy that worked for them.

The results of our analysis of peer feedback in one feedback group over the term allowed us to conclude that the nature of students' feedback did change. The analysis also allowed us to see that students were taking their own initiative in developing feedback strategies. The fact that students began to evaluate peers' work and came up with their own feedback strategies as the term progressed indicated the growing levels of competence and confidence in peer interactions in feedback groups.

Conclusion

The purpose of this paper is to describe and discuss an effective pedagogical response to a problem of teaching domain-specific communication strategies in classes with high enrollment. High enrollment is of particular concern in communication courses, in which students need to continuously interact with each other and their instructors to acquire and improve communication strategies. The high student-to-instructor ratios make it necessary to develop a pedagogical approach that is conducive to effective collaboration among peers and, therefore, facilitates intellectual teamwork. The communication course for engineering students we discuss

in this paper has a student-to-instructor ratio that often reaches 130 to 1. The pedagogical approach developed in response to the course problems was to teach students how to write and use peer feedback effectively in order to improve their writing.

The two studies reported in this paper were undertaken as part of a longitudinal research project into the role and place of peer feedback in an engineering communication classroom. The Feedback Questionnaire Study was conducted to help us fine-tune our new pedagogical approach so that it met the needs of students. The Peer Feedback Study was conducted to assess whether the nature and quality of peer feedback, in the context of the new pedagogical approach, changed over the term.

The results of our study demonstrate that most students' perceptions of peer feedback changed significantly over the term. Our research also shows that the nature of peer feedback changed: for example, the focus of peer feedback shifted from issues of local context and format to organization and evaluation. The shift in focus to organization seems to demonstrate a growing student awareness of the readers' need to be guided through written technical documents. The appearance of feedback in which students evaluated each other's work reflected students' increased confidence as reviewers. In other words, the students felt more comfortable in their role as intellectual teamwork facilitators. As students worked in small peer feedback groups, they got to know each other and each other's writing, and their feedback became more profound and potentially more useful for revisions. This increased comfort level within feedback groups led to more collaboration and reliance on each other, which, in turn, led to less reliance on the instructor. The growing level of confidence in and comfort with the peer feedback process was reflected in students' changing perceptions of the process.

The results of our study demonstrated that our pedagogical approach was effective in helping students produce more sophisticated and relevant feedback. These results could be viewed as indicative of the beginning of understanding on the part of students that writing is truly a social intellectual pursuit.

When looking at feedback to assess the changes in its nature over a term and analyzing the second set of questionnaires to identify changes in students' concerns about peer

feedback, we became aware of problems related to the interpretation and use of peer feedback. In this research, we did not explore the effect of peer feedback on revision. In other words we did not analyze students' revisions made in response to peer feedback in order to learn if writers were interpreting and using feedback optimally. Further research is needed to understand how students interpret peer feedback and whether they use it optimally in revising their draft assignments.

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Endnotes

¹The term *domain-specific communication* strategies encompasses communication strategies acquired and used both in a disciplinary classroom and in the workplace within one's profession.

²For a detailed discussion of the course, its philosophy and theoretical foundation, and description of assignments, see Artemeva, Logie & St. Martin (1999).

³In this paper, we present only a brief description of the engineering communication course we teach at a Canadian University. For a detailed discussion of the course, its philosophy and theoretical foundation, and the actual assignments, see Artemeva, Logie & St. Martin (1999).

⁴The longitudinal study was approved by the University ethics committee in 1998, and all participants gave informed consent.

⁵A formal letter, a proposal, a progress report, and a completion report.

⁶Only assignments supplied by those students from previous terms who gave a formal permission to use their work in our classes (with all personal identifying information substituted by fictional names) are used as samples.

⁷The computing service at the university automatically creates an electronic course newsgroup for each undergraduate and graduate course. The newsgroups are used in conjunction with common newsreader programs such as Netscape Newsreader or Outlook Express or with an internally set up university network (for a more detailed discussion of the use of electronic course newsgroups in the communication course, see Artemeva, Logie & St. Martin [1999] and Artemeva [2000]).

⁸It is important to note that the instructor who taught the four students in this study did not practise this strategy.

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Appendix A First Feedback Questionnaire

General Information:

The purposes of this questionnaire are 1) to obtain your thought on “feedback” and 2) to get you thinking about feedback. Please complete the questions below in the space provided.

Questions:

1. What do you think “feedback” is?
2. What do you see as the purpose of feedback?
3. Have you received oral or written feedback on school assignments? Oral _____ Written _____
4. What do you like best – oral feedback or written feedback? Why?
5. Have you had any problems with written feedback on assignments? Explain.
6. Is peer feedback useful? Why? Why not?
7. How do you think feedback could be made more useful for students?

Appendix B Second Feedback Questionnaire

General:

Now that you have been working in “feedback groups” for several weeks, please complete the following questionnaire.

Questionnaire:

1. How do you feel about “prescribed” feedback groups? Please provide both positive and negative comments if possible.
2. How do you use the feedback you receive from your peers?
3. What do you see as the value of feedback? Please explain.
4. Do you find feedback difficult to give? Why? Why not?
5. Do you find feedback difficult to accept? Understand? Why? Why not?
6. How has feedback influenced the way you write? Please explain.

Appendix C.

Assignment sheet for the assignment “Letter to Instructor.”

School of Linguistics and Applied Language Studies
Carleton University
1125 Colonel By Drive
Ottawa, ON
Canada
K1S 5B6

September 24, 1998
Faculty of Engineering
Carleton University
1125 Colonel By Drive
Ottawa, ON
Canada
K1S 5B6

Dear Engineering Student:

Please inform me about the details of the Engineering course you have selected as the focus of your work in the communication course. I am specifically interested in the title of the course, course number, your professor’s name, number of labs/problem analysis sessions (if there are any), course assignments, exams/tests, and any additional details you are able to present.

Since your response will be considered as a formal assignment, please follow one of the letter formats presented in class or in the textbook. After you have written the first draft of the letter in class, you will be asked to discuss it with your classmates and exchange comments. You will need to consider all the comments and revise your draft at home.

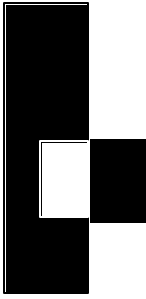
After the necessary number of revisions, edit the letter and submit it to me in the next class along with all the drafts and comments. Please do not exceed the required maximum number of words (125). This number does not include the sender’s and receiver’s addresses, date, salutation, complimentary close, signature block and end notations.

If there are any questions you would like to clarify, please do not hesitate to contact me at nartemev@ccs.carleton.ca or by calling 520-2600 ext. 7452.

Sincerely,

[instructor’s signature]

Natasha Artemeva
23.100 Instructor



Assignments Across the Curriculum: A Survey of College Writing

Dan Melzer
Florida State University

In “The Future of Writing Across the Curriculum: Consensus and Research” (1993), Chris Anson traces the history of research in Writing Across the Curriculum, from early evidence of writing across disciplines that was mostly anecdotal to current research that emphasizes case-study and ethnographic methods. Anson approves of recent qualitative WAC research that has moved beyond “anecdotes, testimonies, and reports from colleagues,” but he also calls for more large-scale research into disciplinary writing (p. xvi). In “Where Do We Go Next in Writing Across the Curriculum?” Robert Jones and Joseph Comprone (1993) also ask for “research that will tell us what is actually going on in academic discourse communities” (p. 63). Some of the richest data for this kind of WAC research to date has come from case studies and ethnographies involving a handful of courses or students (see Sternglass 1997; Walvoord et al. 1991; McCarthy 1987; Herrington 1985), but with the exception of studies of high schools (see Britton 1975; Applebee 1981; Parker 1985), there is little large-scale research into the kinds of writing being assigned outside the college composition class. One way to investigate questions about disciplinary writing on a larger scale than ethnography is to collect and analyze one of the fundamental pieces of classroom discourse: writing assignments.

In order to inquire more expansively into disciplinary writing, researchers at the college level have studied writing assignments and analyzed rhetorical features such as writing aims, audiences, and genres. This research has been conducted either via solicited sample assignments (Rose 1983) or surveys asking instructors to describe their assignments (Eblen 1983; Bridgeman and Carlson 1984; Harris and Hult 1985). Although these surveys allow for broader speculation

than naturalistic studies of a handful of courses, they don't come close to achieving the kind of breadth of assignments and courses that can be found in Britton's 1975 study of high school writing in England or Applebee's 1981 study of American high-school writing. Anson (1988) points to another problem with these surveys: "Because most surveys are responded to by choice, even a relatively good return may still represent a skewed sample" (p. 12). As Anson points out, instructors filling out these surveys may exaggerate the importance of writing or the variety of writing in their classes, either to put themselves in a positive light or to attempt to give the researchers what the instructor thinks they want.

This essay will present the results of a study that looks to address the need for both a large-scale study of college writing and an unsolicited sample: a textual analysis of the aims, audiences, and genres of nearly 800 writing assignments from across the college curriculum at forty-eight institutions, collected via course websites on the Internet. The study emulates Britton's and Applebee's research by exploring the nature of writing across disciplines on a broader scale than has yet been attempted at the college level, and at the same time it looks to avoid the problems of teacher self-reporting found in previous WAC surveys.

Research Methods

My primary research method is a textual analysis of 787 writing assignments from undergraduate courses in forty-eight institutions in four categories: state universities, regional colleges, liberal arts institutions, and two-year colleges. I collected these assignments from the Internet, through a search of departmental and course websites. In order to aim for an arbitrary sample, I visited institutional websites through an index of the home pages of all accredited universities, regional colleges, and community colleges in the United States, which is found at www.utexas.edu/world/univ/. This index is organized by state, and I visited each state and selected the first institution that provided access to course websites. I collected assignments in courses within four broad categories: hard sciences, social sciences, business, and humanities. I did not collect assignments from first-year writing courses, since this data is not relevant to the study.¹

My focus for analysis is the rhetorical features of the assignments, outlined in Figure 1.² Borrowing from prior re-

search into writing assignments across disciplines, I divide the rhetorical features into three categories: aims, audiences, and genres. My aim and audience categories are based in large part on Britton's. Britton divided writing into three different "functions," which correspond to different points on the rhetorical triangle of writer (the expressive function), text (the poetic function), and audience (the transactional function). Transactional assignments ask students to inform or persuade an audience; for example, a book review, annotated bibliography, or editorial. Expressive assignments are informal and exploratory, with minimal demands for structure and the self as audience. Freewrites and personal journals are typical expressive assignments. Poetic writing is imaginative, with the focus on the text itself as an art form. Poems, stories, and plays are common poetic assignments. Based on Timothy Crusius' (1989) critique of Britton's categories, which Crusius feels lack a place for informal writing for an audience beyond the self, I added one more category, "exploratory." Like expressive assignments, exploratory assignments are informal and focus on exploring ideas, but the audience is public and the form is usually more structured than expressive assignments. The type of academic journal assignments I discuss later in this essay—journals that ask students to explore ideas in a conversation with peers and the instructor—are typical exploratory assignments.

Aims
Transactional
Informative
Persuasive
Expressive
Exploratory
Poetic
Audiences
Teacher
Student to Instructor (General)
Student to Examiner
Self
Peers
Wider Audience
Informed Audience
Novice Audience
Generalized Reader
Genres
Short-answer exam, term paper, journal, lab report, etc.

Figure 1: Rubric for Analysis

I divide the audience categories into the self, the teacher (which is further divided into “Student to Examiner,” in which the student provides the “correct” information to the teacher, and “Student to Instructor [General],” in which the student engages in a dialogue with the teacher), peers, and wider audiences. Often assignments have multiple audiences and aims. Like Britton, I coded for the dominant aim when more than one aim was evident. However precise these aim and audience categories may appear, they are not absolute, as Crusius emphasizes in his critique of Britton’s study. Coding an assignment is, finally, a subjective act. Britton, for example, trained a group of experienced researchers to code each essay, but even they agreed on the aim of only two out of every three assignments.

Britton conducted his research prior to the growth of genre studies, and Crusius suggests another needed addition to Britton’s categories: genre. Genres, which are more concrete than aims and take on forms and purposes that, as Aviva Freedman and Peter Medway (1994) point out, are “stabilized-for-now,” include short-answer exams, term papers, journals, and lab reports. Genres can be difficult to deduce from just the structure of the discourse act itself, partly because genres often blur, and partly because understanding genre requires social context. As Carolyn Miller (1994) argues, “A system of classification for forms of discourse should have some basis in the conventions of rhetorical practice” (p. 23). Although I do have some sense of the social context of the genre through class materials on the Internet, any conclusions I make about genre must be qualified by the fact that this study does not include classroom observation of “genres in action.”

Because it doesn’t include classroom observation, this project cannot provide the kind of information from instructor/student interaction and examples of student writing and instructor response that are the hallmarks of ethnographic qualitative research; information such as classroom discussion about the writing assignments and written teacher response. Along with Anson and Jones and Comprone, however, I would argue that the need for large-scale research into college writing that will complement the work of ethnographers is overdue. What follows are the results of just such an analysis.

The Aims of Writing: An Overview

Both Britton and Applebee found that transactional writing, and especially writing to inform, dominated in the assignments they collected. Sixty-three percent of Britton's samples were transactional, with the informative function accounting for 62% of transactional writing. Seventeen percent of assignments were poetic, and only 5% were expressive. Transactional writing was even more predominant in Applebee's research. Surveys of college courses by Sherwood (1977), Eblen (1983), and Bridgeman and Carlson (1984) reveal similar results: writing to transact, and in particular, writing to inform, was the dominant purpose.

My research shows results similar to prior studies, as Table 1 outlines. Of the 787 assignments I collected, transactional writing makes up 84%, and most transactional assignments (73%) are informative rather than persuasive. Although a significant amount of the writing is exploratory (13%), poetic writing and expressive writing are almost non-existent. I'd originally planned to investigate the differences in writing purposes between disciplines and between introductory and upper-level courses, but I quickly realized that there are no significant differences. In every discipline and at each level in my study—from introductory courses to senior seminars—writing to inform is the dominant aim.

The Transactional Aim: Informative and Persuasive Assignments

Much of the informative assignments in this study ask students to display the “right” answer or the “correct” definition to the instructor through a recall of facts. Typically the required information comes from lecture material or the textbook, rather than the students' own experiences. These exam questions illustrate this point:

In your textbook, Steven Smith describes three different roles legislators might play in representing their constituents. List and describe each of these three.

Describe the major factors causing changes in food consumption (see chpts. 1-4) and describe the marketing channel for a chosen commodity (see chapter 12).

From my outline on earthquakes, explain the 'effects' of earthquakes.

Aim	Number of Assignments	Percentage of Total
Informative	574	73
Persuasive	90	11
Expressive	2	.02
Exploratory	117	15
Poetic	9	.05

Table 1: Distribution of the Aims of Writing

Short-answer and essay exams make up 23% of the assignments, and the majority of informative writing is for an audience of “teacher-as-examiner.”

Often this examiner role is further emphasized in the assignment sheet. For example, according to the assignment sheet for an exam, one instructor of environmental science is looking for “phrases and sentences that show me what you know about a topic.” An instructor of international business goes so far as to tell his students that “the answers should be composed to inform the reader. In the end, I am the reader, so you are writing to inform me.” A sociology instructor includes in his assignment sheet an explanation of essay response marks, including the symbol “?” for “Do you really think so. I doubt it”; “??” for “Are you serious?”; “x” for “This is not correct”; and “No” for “You have badly misinterpreted the reading. I’m unhappy.”

Assignments that have a persuasive aim often begin with the kind of summary or explanation found in informative writing, but they require students to go one step further and argue a position, as these instructions for a review of an environmental article illustrate: “Do give a brief summary of the paper in your review, but DON’T stop there. You should also undertake some analysis—DO some original thinking of your own!” A social science instructor uses similar language in her welfare policy assignment: “The purpose of this paper is to stimulate your thinking about ‘social or distributive justice.’ You are to develop you own position on this topic. Specifically, what principles should guide government in determining what to guarantee its citizens?” The key words here are “stimulate thinking” and “develop your own position.”

Since the persuasive aim is aligned with the “audience” component of the rhetorical triangle, it’s not surprising that many of the assignments with a persuasive aim provide students with a hypothetical audience beyond the instructor. In an application letter assignment, a management communications instructor writes: “Note that your application letter is an ‘argument’; that is, it tries to persuade the reader to act in alignment with your aims. A proposal is written to persuade an audience to act favorably on a solution to a documented problem.” This connection to an audience is seen again in an essay for an international business course in which students must “recommend an action based on argumentative claims” and “provide a rationale for your recommendations to the management team at a company.” Only 27% of transactional writing in my study asks students to write for the wider rhetorical situation often found in persuasive writing.

The Expressive Aim

Only two assignments in my research call on students to produce expressive writing. These assignments are both “freewrite” essay drafts written to an audience of the self, with the goal of invention. Both of the expressive assignments are ungraded. Other than these two freewriting drafts, only one assignment even mentions expressive writing. A British poetry instructor assigns a poetry analysis paper with the ultimate aim of persuasion, but he does tell students to “do some exploratory or ‘free’ writing to loosen up, establish your own voice, and identify the core of your argument.” As these examples illustrate, expressive writing can be used to help students find a voice, discover arguments, and relate ideas to their own experiences. Toby Fulwiler (1982) argues that “expressive writing is the primary means we have of personalizing knowledge” (p. 4), a sentiment shared by Britton and Applebee. The lack of expressive writing in my research further points to the limited range of purposes students are given for their writing in the classes in my study.³

The Exploratory Aim

The dominance of informative writing to teacher-as-examiner in my research is similar to the results of previous studies. Where my findings differ from prior research is the number of exploratory assignments. Most assignments in my

study that ask students to “explore” for an audience beyond the self are journals, and the number of journal assignments, 106, roughly corresponds to the number of exploratory assignments. Previous researchers, from Britton to Applebee to Rose to Eblen, found that exploratory writing—and the genre of the journal—was rare. In my research, however, exploratory journals and their computer age equivalent, the electronic discussion board, are a common phenomenon.

The instructors in my research see exploratory writing as a way to encourage students to invent arguments, make connections, reflect on personal experience, and take risks. The following quotes from journal assignments illustrate this use of exploratory writing:

The journal is a space for you to investigate your own thoughts, reactions, and feelings on particular art ideas and art works. I'm asking you to make connections between what you are learning and what you have already experienced.

Think of it as a conversation in writing, or as pre-talking analogous to the pre-writing you do for papers. Our goal is not to produce expertly crafted individual treatises, but to develop the ability to think, respond, and communicate through writing. Your contributions should be informal, spontaneous, informed, and impassioned.

Treat the e-mail messages as an opportunity to express freely your own thoughts, opinions, observations, and questions. You may also use them to float preliminary ideas for your essays. Because they are informal you needn't be overly concerned with structure, organization, and rhetorical polish.

I found that exploratory writing is being assigned across disciplines. The previous passages, in fact, are from journal assignments in courses in art history, British poetry, and environmental studies, respectively.

The Poetic Aim

Britton found that each year students progressed through the British public school system, they did less and less expressive and poetic writing. Perhaps this is doubly true as students go from high school to college in America. Although

Britton found that 17% of the writing in his research was poetic, my sample contains only three assignments whose dominant aim is poetic: a play monologue in an introduction to theater course, an imaginative description of a natural setting in a nature literature course, and a retelling of an ancient myth in a Western humanities course.

Beginning with Janet Emig's (1971) *The Composing Processes of Twelfth Graders*, researchers who have investigated student writing habits in school and out of school have found that in their self-sponsored writing, students are more likely to write for expressive and poetic aims. WAC theorists such as James Moffett (1968) and Art Young (1982) argue, in Young's words, that "the creative impulse is central to the development, understanding, and application of knowledge" (p. 78) Both Moffett and Young see creative writing as a valuable way for students to make connections with disciplinary content. They would argue that the students who write a monologue in the introduction to theater course or an ancient myth in the Western humanities course gain a new appreciation of those forms. Moffett and Young would view the lack of poetic writing in my sample as once again speaking to the limited uses teachers make of writing.

The Audiences for Writing

Both Britton and Applebee found that most of the assignments they collected were written for the teacher, most commonly the teacher-as-examiner. Eighty-six percent of Britton's samples were written for the teacher, and in 48% of those the teacher played the role of examiner. In Applebee's study, 55% of school writing was directed at the teacher-as-examiner. As Table 2 indicates, the percentages in my study are similar to Britton's and Applebee's. In 83% of the assignments, the teacher is the audience for student writing.

Just as I was curious if upper-level courses in my research require less informative writing than freshman surveys courses, I wondered if students write for audiences beyond the teacher—and especially the teacher-as-examiner—as they move from introductory courses to upper-level courses in their major. I speculated that the junior and senior-level courses in my sample would

require students to write in disciplinary genres aimed at a wider readership than just the instructor; for example, readers of disciplinary journals or grant committees. But just as

informative writing dominates at all levels of instruction in my study, the dominant audience for the assignments at all levels of instruction is “Student to Examiner.” In the following discussion I look more closely at each audience category.

Audience	Number of Assignments	Percentage of Total
Student to Examiner	542	69
Student to Instructor (General)	112	14
Self	25	3
Peers	50	6
Wider Audience: Informed	37	5
Wider Audience: Novice	13	2
Wider Audience: Generalized Reader	8	1

Table 2: Distribution of the Audiences for Writing

Student to Examiner

Coding assignments to the teacher as examiner wasn't difficult: nearly one out of every three assignments is directed to a stated audience of the teacher-as-examiner. The 29% of assignments that fall into this category roughly coincide with the percentage of assignments that are short-answer and essay exams. This prevalence of the stated audience of Student to Examiner was true of both the introductory survey courses as well as senior seminars. Although classroom observation may have revealed instructors acting as a “coach” or engaging in a dialogue with students before the exams or in their response to the exams, thus complicating this category, in most cases the assignment description revealed that the instructor was looking for a “correct” answer.

Student to Instructor (General)

In most of the assignments I placed in the “Student to Instructor (General)” category, there’s evidence of a dialogue between instructor and student. Assignments that I placed in this category are often done in stages, with the instructor collecting and commenting on a draft of the essay. The instructors that comment on drafts appear to be trying to establish a dialogue with students that place them in a “coaching” rather than an “examining” role. This passage from a political science assignment is representative:

The writing assignments are designed to assist you in developing your writing skills. For the term paper listed in your syllabus, you will first submit a draft to me. I will review your essay and suggest ways to improve the argument and style. These comments will raise questions, suggest changes, and provide you with a valuable resource for revising your material for the final draft. You will then submit both the original draft and the final paper.

Some of the assignments with the audience of Student to Instructor (General) are ungraded. For example, a few of the instructors in my research ask students to do a brief “freewrite” the first week of class, with students discussing their goals and hopes for the course. In one of these freewrites, a computer programming instructor asks students to write a letter about themselves in order to help him get a sense of his students as learners: “Tell me of your strengths, weaknesses, goals, and fears. Discuss your worlds and how your roles in those worlds might affect your performance in class.” The goal of this assignment, according to the explanation in the assignment description, is to help the instructor modify the course to meet the students’ needs. It’s important to stress, however, that assignments like these are rare in my collection.

Self as Audience

In my study, there are only two general types of assignments written for the audience of the “self”: a self-assessment written at the beginning or end of the course, or an assignment that requires students to relate the content of the course to their own lives. An “Assessment of Learning Reflection Memo” for a business writing course is an example of an assignment from the first category. In this memo, stu-

dents write an ungraded self-assessment in which they are asked to reflect on how the course has improved their professional development. A self-evaluation assignment from an environmental studies course also requires this kind of reflection on self. As the instructor writes in his description of the assignment: “This is your education, you must be an active participant in it, and it is only you who can determine its value to you, through self-evaluation and reflection.”

An example of the second type of writing for the self comes from an anthropology course. Students compare their diet to that of a caveman, partly to “analyze the nutritional quality of the diet of a hunter gatherer,” and partly to “analyze the nutritional quality of your own diet” and “give you a broader perspective on the relative quality of your own diet.” These are the kind of assignments that Fulwiler (1982) feels can “personalizing knowledge” (p. 4) and “represent our experience to our own understanding” (x). In the courses I surveyed students were not often called upon to relate course content to personal experiences and interests.

Peer Audience

In both Britton’s and Applebee’s research, writing to peers was negligible. Considering the results of previous studies, the fact that 6% of the assignments I collected have the stated or implied audience of peers is significant. Although this percentage isn’t necessarily impressive compared to the number of assignments written for an instructor audience, it certainly isn’t negligible.

It’s not surprising that courses that use what Paulo Freire (1970) disparagingly refers to as the “banking” method, where instructors “deposit” information to students through lectures and then test them for the information on exams, rarely require writing to peer audiences. It seems that instructors who require writing to a peer audience do so in order to take the emphasis off of the “teacher-as-examiner.” In an American history course, for example, students write a series of research essays that have to be “credible to both peers and instructors.” The culmination of the essays is an in-class presentation where students explain the results of their research to peers. A number of instructors use electronic bulletin board “journals” as a space for writing to peers, and this emphasis on writing to peers is reinforced by assignment sheets that

described these journals, as one British literature instructor says, as “a conversation in writing.”

Wider Audience

In sharp contrast to assignments written to the teacher-as-examiner, assignments written to a wider audience almost always provide students with a rhetorical situation and a genre. This is especially true of assignments in the Wider Audience: Informed category. Some of the audiences students write for in this category are company CEOs, Democratic Party organizers, and readers of the *New England Journal of Medicine*. Usually these rhetorical situations mirror the kind of writing students will encounter in the workplace. For example, the management course assignment that asks students to “provide group recommendations as if you were a consulting team offering suggestions on how to improve management practices,” and the finance course assignment that instructs students to “assume that you are just hired as a CFO for a major corporation. The CEO would like you to review some of the major financial decisions for the company.”

The majority of assignments written to audiences like company CEOs or readers of academic journals introduce students to disciplinary and professional writing by requiring them to write in specific genres. Many of the assignments in the Wider Audience: Informed category are professional genres like résumés, application letters, memos, and feasibility reports. Rather than simply summarizing articles for the sake of displaying knowledge to a teacher-as-examiner, these assignments ask students to summarize for a specific audience, in a specific genre.

Writing Genres: An Overview

Previous large-scale studies of the genres assigned in courses across the curriculum—most notably surveys by Charlene Eblen (1983) and Jennette Harris and Christine Hult (1985) of a single university and Brent Bridgeman and Sybil Carlson (1984) of thirty-six institutions—have shown that instructors claim to assign a variety of genres, both academic and professional. Despite this variety, however, these surveys also reveal a dominance of two genres: the short-answer exam and the term paper. The most common writing task among the teachers Eblen surveyed was the essay test,

which made up 55% of the assignments. The “research paper” was second, at 26%. In Harris and Hult’s survey, the research paper made up 27% of assigned writing, and the essay exam accounted for 62%. Bridgeman and Carlson also found that despite the variety of genres teachers claim to assign, the research paper and the exam made up a significant majority of all assigned writing.

My results are similar to previous studies in that a variety of genres are assigned, as Table 3 indicates. Besides the well-known genres of exams, research papers, journals, abstracts, and lab reports, there are summary/responses, feasibility reports, reviews, and business letters. In the category of “other,” there is an ethnography, a real estate contract, a press release, a landfill report, and a business plan, to name a few genres.

Despite the apparent variety of genres, however, nearly a quarter of the instructors in my research assign short-answer exams—usually a mid-term and final exam. For the majority of these instructors, the exam is the only assigned writing. In the following discussion, I look more closely at the three most popular genres: short-answer exams, journals, and term papers.

Short-Answer Exams

In my discussion of aims and audiences, I’ve already mentioned some of the features that are typical of short-answer exams across disciplines: questions that require memorization and recall of facts, instructors in the role of teacher-as-examiner looking for “correct” answers, and an emphasis on covering material rather than engaging in critical thinking or problem solving. Essay exams—although still emphasizing the role of teacher-as-examiner—are more apt to challenge students to go beyond regurgitation of lecture and textbook material, and ask them to make comparisons, evaluations, and arguments. In their survey, Harris and Hult (1985) found that the essay exam was common. Only 1% of all “testing” in my sample, however, is in the form of essay exams. Most exams consist of short-answer questions that require only a few sentences of explanation.

Genre	Number of Assignments	Percentage of Total
Short-Answer Exam	184	23
Journal	106	13
Term Paper	50	6
Summary/Response	29	4
Lab Report	29	4
Abstract	16	2
Review	15	2
Essay Exam	11	1
Feasibility Report	7	1
Self-Evaluation	7	1
Business Memo	6	1
Business Letter	6	1
Other	22	3
No Recognizable Genre	300	38

Table 3: Distribution of Genres

One pattern I noticed in both the short-answer and essay exams is the extraordinarily broad scope of questions that are supposed to be answered in a few sentences or—in the case of in-class essays—an hour or less. This fifty-minute American history exam is representative:

Write on one of the following two questions:

- 1) It is argued by some that the Soviet-American Cold War from 1947 through 1991 was inevitable given the results of World War II and the ideological conflict between the two countries. Evaluate that argument.
- 2) Discuss the impact of American liberal democratic values on American national security policy during the Cold War.

In another American history course, students have an hour to answer four in-class exam questions, each of which could be the subject of a dissertation in history. The essays ask students to:

Discuss the evolution of the American Republic from 1782-1789.

Discuss the ratification of the Constitution and the forces that promoted its adoption.

Discuss the expansion of the United States from 1800-1850.

Discuss the developments and events that led to America's Civil War.

The short answer exam questions from a global environment course also present students with an overwhelming task. In only a few sentences, students need to explain, “What is the environment?” “How does science work?” and “What is economics?” Perhaps this is one reason the word “exam” has negative connotations for most students—a fact that a gothic literature instructor implies when he says of exams in his course: “We inflict two.”

Journals

Like Harris and Hult (1985), I found that students were frequently asked to write in journals. Of course, there are different types of journals written for different purposes, as an environmental studies instructor mentions in a journal assignment sheet:

A learning log is more than a personal journal or documentation of work done, it is a tool to help you integrate your thoughts on your course work, readings, research efforts, and personal experiences. This will hopefully help you clarify your ideas and future goals through synthesizing your background.

Although there are no “personal” journals in my collection, in the sense of journaling as diary writing or freewriting, most of the journal assignments are informal and exploratory, as I mentioned in my analysis of assignments written for an exploratory aim. Journals are more or less the only genre in my research that allow students to test ideas and take risks, to use personal experience, and to respond to peers. As Ann Berthoff (1987) says, “Journals provide students with the opportunity to think, wonder, speculate, question, and doubt—in their own terms and in their own language—without fear of penalty for not having a right answer” (p. 217).

Because I associated journals with first-year writing courses before I began this study, I was surprised to find that 13% of the assignments in my sample are journals. Although this might not seem like a significant amount, with the exception of Harris and Hult (1985), prior surveys of college writing reported very little use of journals. Perhaps the influence of WAC pedagogy is reflected in this increase. It seems as though technology could also play a role in how common journals are, since over half of the journals in my research are assigned for electronic bulletin boards or class listservs.

Term Papers

Richard Larson (1982) argues that the “term paper” or “research paper” cannot be classified as a genre, since research writing varies to such a degree from discipline to discipline. I agree with Larson that it’s difficult to classify research writing, and to some extent I am using the label “term paper” artificially, as a convenient way to classify a broad range of research writing. However, I also found that fifty assignments in my research are given the name “Term Paper” or “Research Paper” by instructors, and that these assignments have similar features in terms of purpose, audience, and breadth. Or rather, that there seemed to be two categories of research papers.

A useful classification for my analysis of the research papers in my study comes from Robert Davis and Mark Shadle. Davis and Shadle (2000) divide research papers into two major categories: “modernist” and “alternative.” The modernist research paper is the “traditional” research paper. It’s informative in aim, logical, thesis-driven, and objective. Modernist research papers value “detachment, expertise, and certainty” (p. 417). The purpose of a modernist research paper is “not making knowledge so much as reporting the known” (p. 423). A research paper from a psychology course contains many of the features Davis and Shadle would call “modernist”:

Research Paper Guidelines

Purpose: The purpose of this project is for the student to 1) become familiar with a particular area of research activity in the field of human development, 2) by learning referencing techniques for this discipline, 3) glean information from the primary psychological literature, 4)

summarizing this information clearly in a written report, and 5) practicing the format of scientific writing in this discipline.

Format: The format of the paper is a term paper about research, not an original research report. Each paper presents a summary of a single article.

Evaluation: The grade is based on content and form, including:

Organization of the paper as a whole and of each section, adequacy of the summaries and interpretations of literature, the explication of controversial issues when appropriate, your conclusions and defense of your conclusions, grammar, punctuation, neatness, listing and citing of bibliographic references.

The grade will be lowered ten points for each of the following:

- errors in citation format
- errors in reference format
- failure to use APA format (title page, margins, running head, page header, font, spacing, left justification)
- excessive spelling, grammatical or punctuation errors
- inaccurate information

This is a “term paper,” not an “original research report”: students “glean” and “summarize” information. The evaluation criteria are focused mostly on the correctness of information, citations, and grammar.

Perhaps a religious studies instructor from my research provides the best description of the way alternative research writing differs from the modernist term paper. In a handout on writing essays, this instructor writes:

Remember when you were in grade six and your teacher told you to write a report on such and such or so and so, and you went to the library, opened up the encyclopedia, and tried to put the information into your own words? You should be past that now. A university essay is not a standard report that uses a few more books!

Alternative research writing values the creation of new knowledge, and not just “amassing of brute facts,” in Robert Connors’ words (1997).

Compositionists from Larson to Davis and Shadle have bemoaned the staying power of the traditional term paper, so I fully expected that the majority of term papers in my research would fit Davis and Shadle’s modernist category. I was surprised to find that the religious studies instructor is right, as far as the research writing in my collection: the majority of research and term papers are closer in spirit to alternative than modernist research writing. Take, for example this research project from a sociology course:

Final Projects

There are two options for the final project, individual projects that deepen your understanding of the social movement you have been analyzing in your class papers, and collective projects that examine a new case to broaden your understanding of the theoretical questions we have examined. Individuals who choose the first option will be expected to write a longer research paper tying together the shorter exploratory papers into a tighter argument and adding to it by examining more documents or more secondary literature.

Further tips:

There are many ways to write a sociology paper. Judging from your papers this semester, all of you have an intuitive grasp of the elements of a good social science project. For those of you who would like a checklist, the following describes the elements sociologists try to incorporate into their papers:

1. A puzzle or question and the context that makes it theoretically interesting.
2. Review of two general sociological theories.
3. Discussion of at least two opposing topical explanations presented by area specialists you locate through your own library research on the movement.

4. The argument you plan to evaluate and how you will do so.
5. A conclusion in which you explain what further research would need to focus on, followed by a list of references

The goal of this research project is not to report the known, but to “deepen” and “broaden” the students’ own understanding. Students begin with “a puzzle or a question.” The form of the paper introduces students to disciplinary writing, which requires more than just amassing of facts.

The instructions on many of the term paper assignment sheets echo this sociology assignment’s insistence on personal exploration and argument. A philosophy instructor tells students, “A genuine research paper grows out of a genuine question about something.” In an assignment sheet for a British poetry research paper, the instructor writes: “Advocate your own interpretation in dialogue with others. Speak...in your own voice. I am looking for lively, precise, and incisive analyses that teach me something new about the works you discuss.” This emphasis on voice and a personal connection to the topic means that in the term papers in my research, students can “bring their own knowledge, experiences, and linguistic resources into their learning and writing as they also work to learn academic genres,” as Ann Herrington (2000) recommends.

Conclusions

It’s disheartening that the aims and audiences for writing in my college-level study conducted in the year 2002 are as limited as those in Britton’s and in Applebee’s studies of high schools conducted over twenty years ago. The great majority (84%) of the assignments are transactional. Nearly a quarter of the writing done in the courses I researched are informative, short-answer exams to the teacher-as-examiner. In the assignments I examined, students have almost no chance to use writing to explore their own ideas in deeply personal ways for an expressive aim, or to shape language creatively for poetic purposes: a situation WAC theorists and practitioners have been working against for the past twenty years.

My results, however, are not quite as bleak as Britton's and Applebee's. One piece of good news is that exploratory writing makes up a far larger percentage of the assignments in my study than it has in previous studies. Although the students in the courses I researched may not encounter expressive assignments—writing tasks that allow them to freewrite, brainstorm, and explore ideas with only the self as audience—they at least get to engage in a more public form of exploration, often to a peer audience in the form of journals. Another interesting finding from my study is the predominance of alternative research writing. Very few instructors in my study assigned traditional term papers, where students merely report on existing knowledge in a logical and linear fashion. More common research projects were ethnographies, business plans, position papers, and hypertext projects. Often the instructors who assign these alternative research projects, as well as the instructors who assign journals, are involved either directly or indirectly in WAC, which leads me to end on a final note of hope.

Although much of what I'd had to say about the assignments in my research has been a critique of the limited aims, audiences, and genres for writing, I noticed an encouraging pattern. The instructors in my research that assign the widest variety of writing, and that provide students with interesting and complex rhetorical situations rather than just the traditional lecture/exam format, are often teaching in writing-intensive disciplinary courses, or as part of a team-taught course with an English department faculty member. Many of the instructors who assign journals participate in WAC workshops or are part of a WAC-influenced series of First-Year seminars, and they often cite WAC theorists such as Toby Fulwiler and Art Young in their journal assignments. Although my research leads me to conclude that college students write for limited audiences and purposes, even as they progress through their majors, WAC has certainly had a positive influence on many of the instructors in my study. The prevalence of exploratory writing in the form of journals, the increase in writing to peer audiences, the dwindling influence of the traditional term paper—all point to the influence of WAC, and the importance for college writing of the WAC movement's continued growth.

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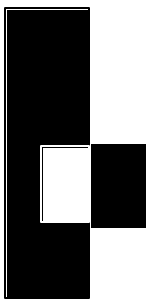
Endnotes

¹The Internet makes this kind of collection of a large amount of assignments expedient, but it's not without its own problems. Although the assignments I collected were not given voluntarily, as they were in similar studies of writing across disciplines, the fact that instructors published their assignments on the Internet means that they are aware of at least the possibility of a more public audience. Instructors who use class websites could be considered "early adopters" of technology, and it's possible that their assignments might be fuller or more explicitly laid out than the assignments of instructors who are not using websites. It's also likely that some instructors posted more formal assignments on the Internet and explained less formal, more exploratory or expressive assignments in class. Despite these problems inherent in my study, I feel that the advantage of studying a large sample of assignments that is not given voluntarily outweigh the disadvantages of collecting data from the Internet.

²This essay summarizes one chapter from my dissertation, "Assignments Across the Curriculum: A Study of Writing in the Disciplines," Florida State University, 2002. The broader project includes an analysis of the procedures, rationale, and evaluation criteria of the assignments, as well as interviews with selected instructors.

³Although informative writing is clearly dominant in the courses I examined, I'd hesitate to assert that expressive writing is close to non-existent in these courses. Many expressive

assignments are in-class freewrites that aren't presented on formal assignment sheets, so expressive writing may not be mentioned on a course description or syllabus. Classroom observation, had it been a part of my study, may have revealed more cases of expressive writing.



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