WRITING

ACROSS

THE CURRICULUM

Volume III, Number 2

MAY 1986

WRITING ACROSS THE CURRICULUM is published twice during the academic year by the Writing Across the Curriculum Committee of Southern Technical Institute. Free subscriptions are available upon request to interested individuals or institutions. Individual back issues in xerox form are available for \$2.00.

WAC will consider for publication those essays, interviews, reviews, and conference reports which are concerned with the theory or practice of using writing skills as a learning technique in any educational discipline. It will also consider for publication any fictional or nonfictional materials written by either teachers or students which demonstrate the exemplary use of writing skills within any discipline of the curriculum.

Please send submission, including a brief biographical background, to the Editor.

SOUTHERN TECHNICAL INSTITUTE

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EDITOR'S CORNER



By Kristine Anderson

The spring issue of *Writing Across the Curriculum* presents material and articles from across the community. This broad range of material reflects the range of our readership. With each additional issue, our circulation has increased, as has the breadth of letters and articles from both the public and the private sectors.

This issue features a variety of articles reflecting several different perspectives and disciplines. For the first time, we are publishing some material written by a student for other students. The letter from Kathryn Blanton, a Southern Tech student majoring in Electrical Engineering Technology, stresses the importance of developing effective communication skills for career success.

The first group of articles focuses on the importance of writing from an administrative point of view. The short article written by Robert Yancey, Acting Director of the Graduate Studies Program at Southern Tech, emphasizes the need for clear and concise writing in administration. The article by Maurice Chapman, a local hospital administrator, summarizes a speech delivered to Southern Tech students during a Writing Across the Curriculum program. Chapman focuses on the value of developing effective communication skills in business. The article by Thomas Dasher, the head of the English Department at Valdosta State, highlights efforts to establish connections between Writing Across the Curriculum programs at the post-secondary level and programs at the high school level.

The second cluster of articles describes Writing Across the Curriculum programs in place at various institutions and suggests various classroom practices. Susan Morrow's article provides an overview of some of the nation's first Writing Across the Curriculum programs in liberal arts institutions and technical colleges. Bob Wess's article focuses on the on-going goals that have shaped Southern Tech's Writing Across the Curriculum program. Finally, Irving Kosow, a professor of Electrical and Computer Engineering Technology, presents some practical suggestions for incorporating writing into engineering courses.

As always, we welcome your comments and reactions to this issue.

Kristine F. Anderson, Associate Editor of Writing Across the Curriculum Newsletter, coordinates the English/Reading Division for the Developmental Studies Department. She holds the doctorate in Communicative Arts.

LETTERS TO THE EDITOR

Dear Editor:

Please add me to the mailing list for your Writing Across the Curriculum Newsletter.

Capitol Tech is trying to improve students' written and oral work for technical courses. Your Newsletter seems to contain useful suggestions and information.

> Sincerely, Winifred Hayek Chairperson for General Studies Capitol Tech Laurel, Maryland 20708

Dear Editor:

Your Writing Across the Curriculum Newsletter is extremely helpful and we would like to be placed on your mailing list.

Thank you and continued success with the Newsletter.

Sincerely, Larry G. McDougle Associate Dean for Instruction The University of Toledo Toledo, Ohio 43606

Dear Editor:

Please add my name to your mailing list. A friend of mine sent me a copy of your WAC publication. I enjoyed the December '84 copy very much! I hope to share much of the content with my teachers through my Language Arts Bulletin.

> Sincerely, Leo S. Arnold Language Arts Supervisor Boone County Schools Madison, West Virginia

Dear Editor:

Would you please place my name on your mailing list for the *Writing Across the Curriculum* Newsletter? I think it is a very useful publication and I look forward to future issues.

Sincerely,

Elizabeth D. Hammond Stetson Library Mercer University Macon, Georgia

Dear Editor:

I was delighted to read over a copy (Volume II, Number 2) of the *Writing Across the Curriculum* Newsletter. With best wishes, I hope you have continued success.

> Sincerely, Gerald M. Feeney Associate Professor of English Thames Valley State Technical College Norwich, Connecticut

Dear Editor:

Bravo! Bravo! I applaud your efforts to encourage the effective use of the native tongue (and pen).

Though I am not associated with academia, my name was somehow included on your mailing list. Thus, I became aware of your efforts to incorporate writing in all coursework at Southern Tech. I cannot think of a more sensible position for the teachers of this fundamental skill. The mastery of communication is necessary regardless of the primary field of endeavor.

Throughout my academic and business careers, I have been regularly astounded at the low level of writing proficiency displayed by some of my colleagues. Even during my M.B.A. work, I was astonished to find students, and, most regrettably, professors who were unable to write effectively.

The argument that students should not be graded on their composition in courses other than English has always seemed trivial to me. Composition is a skill, not in and of itself, but to be applied in other areas. The logical extension of that argument is that students should not be graded on their mathematical skills in engineering courses.

It will take many years to repair the damage that has occurred because of our refusal to demand good writing in courses other than English. You all have made a step in the right direction. Keep up the good work.

> Sincerely, Gloria W. Thompson Manager, Sales Communication Wrangler Brand Jeans Greensboro, North Carolina

Dear Editor:

We recently received a copy of *Writing Across the Curriculum*. We are very interested in receiving a free subscription to this fine Newsletter.

Sincerely, Tabby C. Bryant Carolina Power & Light Company Raleigh, North Carolina

Dear Editor:

Dr. Joe Cox, Vice President for Academic Affairs, has shared with me his latest issue of *Writing Across the Curriculum*. I enjoyed this issue very much and would appreciate being placed on your subscription list. My mailing address is as follows:

> Dr. Patsy B. Reed Assistant Vice President for Academic Affairs Northern Arizona University Box 4085 Flagstaff, AZ 86011

Dear Editor:

Congratulations on the growing response to your Newsletter, as evidenced by your relationship with the national WAC Network. You are filling an important need in providing a forum through which those of us involved with writing across the curriculum programs can communicate our shared concerns.

> Sincerely, Dave Davis University Writing Program The University of Utah 345 Orson Spencer Hall Salt Lake City, UT 84112

This paper was written for English 101 class. I missed the seminar on communication that the rest of the class wrote about, so I came up with an alternative topic by using my own experiences with onthe-job communication. All the examples used in this essay are true.



Kathryn Blanton

Kathryn Blanton 1776 Freedom Drive Liberty, GA 30331 November 21, 1985

Southern Tech Freshmen Marietta, GA 30060

Dear Freshmen,

Greetings and welcome to Southern Technical Institute. This letter is directed to all freshmen with no previous field experience. It is especially meant for those of you who are now just drifting through your first English class. You probably think that English is not important to your major. You probably think that you will never use it again after college. Right? Wrong!

First of all, quit thinking of it as just an English class. Start thinking of it as "Written Communication Skills" because once you're out in the field, that's how you're going to use it. Unless you plan to enter the job market as a simple production worker, you are going to have to write a great deal. The higher you move up the corporate ladder, the more you will have to write. Even if you have a secretary, you will have to write sometimes. I am writing this letter to tell you about some of the examples of corporate written communication that I've encountered, and to tell you why it is important to make sure that you use it correctly when your time comes to use it.

You're probably all wondering just who am I to tell you about written communication skills while on the job. I'll answer that now. I have worked two and a half years as a Maintenance Technician at Fotomat's developing plant, and a year at Soundz Music as an Electronic Technician. Now I'll be the first to admit that these positions of employment aren't very high on the corporate ladder. But even at these lowly levels, I had to use written communication to an extent that you probably wouldn't believe.

Here are a few examples. At Fotomat, I had to keep a daily journal. In this journal I had to write about every machine that broke down during my shift, what I did to fix it, and what parts I had to use. Also, every machine had its own journal in which special problems and preventive maintenance had to be duly logged. If a dangerous or unusual problem occurred on any machine, I had to write a report to my supervisor informing her of what had happened and what was done to fix it. If an unusual or very expensive part was needed to fix a machine, I had to write out an order form and an explanation of why I needed it.

At Soundz Music, I had to write all the letters needed to obtain schematic diagrams for all of the equipment. I had to write letters to order parts, or to ask about special problems. Now these are only a few of the many examples of written communication that I had to use while on the job; I could name even more. So you see, even a simple technician writes a great deal while on the job. For my supervisors, who had to turn in written reports on what all of their employees did each day, the pile of paperwork grew even higher. So you can be sure that no matter where you end up in the business world, you will probably use a great deal of written communication. It is a very necessary part of the business world, since no one can listen to and remember everything that they need to know from day to day.

Now that you've faced the fact that there is "English" after a college composition class, let's look at why it is important to do this "English" correctly. First of all, there is the matter of clarity. If your report or order form is full of misspelled words, incorrect punctuation, and other errors, chances are it's not going to be very clear to its intended reader. Some comma and diction errors can completely change the meaning of a phrase or sentence. Such errors can result in your orders not being carried out properly, or your reports being misunderstood.

One example of how an error changed the meaning of a sentence was in this month's *Reader's Digest's* True-Life Joke section. It was about a family who was trying to sell a pony saddle and a bridle. The advertisement had been misprinted to read: "Pony, saddle, and bridle for forty-five dollars." Because of one misplaced comma, hundreds of people called the family to find out why the pony was so inexpensive.

The worst problem that an incorrect business paper will usually cause for you, however, is that it gives other people the impression that you are ignorant. No matter how brilliant you may be, if you hand people a report that is filled with flagrant spelling and punctuation errors, they are going to assume that you are too ignorant to know better. They will probably make this judgment even if they are guilty of making the same errors. I know this is true because I've fallen into this way of thinking myself. Several times I saw mistakes in other people's reports and I thought, "What kind of ignorant person wrote this?" I thought this way despite the fact that my reports were full of similar errors.

So now you see why it is so important to learn written communication skills while in college. You will use these skills over and over again in both your career and your life in general. You must know how to use these skills, and you must learn to use them correctly; otherwise, your papers will not be clear, and you will be considered ignorant. Written communication is a *very* powerful tool that can help you succeed in your career. Good luck in your future college years.

Sincerely,

Kathryn Blanton

Kathryn Blanton Southern Tech English Student

WRITING AND ADMINISTRATION



By Robert T. Yancey

During the 1984-85 academic year, I enjoyed the opportunity of participating in the Regents' Administrative Development Program (RADP). The purpose of the program is to provide meaningful administrative experience to minority faculty who may be interested in competing for administrative vacancies which occur within the University System of Georgia. A secondary objective of the program is to increase the visibility of these minority faculty, both on their own campuses and on other campuses throughout the System.

The RADP was developed in response to the recognition of a dearth of minority representation in significant administrative positions throughout the System. Recognizing that one factor contributing to the small number of minority administrators is lack of relevant supervisory or administrative experience, the Board of Regents created this program as a partial remedy to that situation.

The purpose of this essay is to relate some of my experiences which involved the utilization of writing skills. Of the ten people comprising the first class under the Regents' Administrative Development Program, my nine colleagues were assigned to various colleges, junior colleges, and universities throughout the System. My assignment was to the Central Office of the Board of Regents.

It is safe to observe that most of my experiences as a "Regents' Fellow" involved meetings and writing. Frequently, those two events were related to each other. For example, the presidents of the system's institutions meet each quarter. The Regents' Fellows attended three of those meetings as a component of our program. Not only did I attend, but I was also assigned the responsibility of preparing the minutes of the meetings. I also prepared minutes of several other kinds of meetings during my participation in the program. In some instances, my notes were merely internal memoranda recounting agreements, assignments, and key points of discussions from staff meetings. On other occasions, the minutes provided such information as that listed above, but were for systemwide distribution.

Perhaps the most significant minutes that I prepared arose from "Productivity Management Reviews." On the occasions of those reviews, I accompanied three Vice-Chancellors (including the Executive Vice-Chancellor) to the campuses of the institutions which were under review. (Each system institution is reviewed on a threeyear cycle.) During these meetings between Central Office staff members and the executive staff of the institutions, discussions are held regarding matters of interest and concern, both to the Central Office and to the institution. The discussions include such matters as curriculum, capital improvements, affirmative action initiatives, budgetary matters, enrollment, and the like. Specific requests and commitments usually arise from these reviews. It is, therefore, critical that the records be complete and accurate.

Moreover, since my supervisor had once been an English teacher, my writing skills were subjected to even greater scrutiny. Eventually, I came to think of my writing assignments as a game, the objective of which was to prepare the assignments for circulation without the need of supervisory revision. Legend has it that no one within the Central Office has ever won that game, and I was no exception. However, toward the end of the program, I came very, very close.

In addition to preparing minutes, I was required to write letters and memoranda to various people both inside and outside the University System. To my great satisfaction, none of my letters was ever edited or corrected. I also did other kinds of writing. On one very exciting occasion, I had the opportunity of introducing my supervisor at a luncheon called "The Hungry Club Forum." The introduction was embodied in a three minute speech that I prepared, using his resume and information that I was able to obtain, informally, from his friends and associates within the Central Office.

Finally, on the last day of the program, I submitted a twenty-five-page report on management and organization efficiency within the Central Office. This report was in response to an assignment to perform a critical evaluation and a management study of the office. My report proved to be the most difficult and challenging of my assignments.

As in any management study or evaluation process, it is just as important to state information correctly as it is to state the correct information. Criticism is hardly ever easy to accept by anyone; the bearer of such tidings always runs the risk of incurring the disfavor of the official to whom he or she reports. Since my supervisor, Dr. H. Dean Propst, had already been selected to become Chancellor, I was particularly sensitive to this responsibility of presenting the right information correctly.

A few days after having submitted my report, I received a three-page response to it. To my satisfaction (and considerable relief), that response was quite favorable. Frankly, I am still somewhat uncertain as to which component of his letter was more satisfying--his very positive reaction to my analysis and recommendations, or his very complimentary observations regarding my writing style.

One thing, however, is very clear and certain: administration involves extensive utilization of writing skills, for these skills are essential to the process of communication and information exchange.

Robert J. Yancey is Acting Director of the Graduate Studies Program and Professor of Industrial Engineering Technology at Southern Technical Institute. He holds the doctorate in Policy and Environment from Northwestern University's Kellogg School of Management.

Writing across the curriculum is a teaching technique which offers the potential for new learning through the very act of writing itself. The following material is an edited transcript of a talk given to 100 students and faculty on Friday, November 8, 1985. Mr. Chapman's presentation was the fourth in a series of talks sponsored by the Writing Across the Curriculum Committee so that students might hear first-hand about the importance of communication skills in management and administration.

EFFECTIVE COMMUNICATION IN BUSINESS



By Maurice Chapman

It is a pleasure to be with you today and to talk about effective communication in business. It wasn't long ago that I myself was attending classes here at Southern Technical Institute. All of you and I are very much alike. We're all students. You attend classes here at Southern Tech everyday, and I attend classes in the business world every day.

Our education will never end, especially the portion that deals with communicating with other people. How communication skills have affected my professional career is what I wish to share with you today. Some of the key components of my talk will be written business communication skills and verbal communication skills.

Written Communication Skills

First of all, we are very fortunate to have the opportunity offered here at Southern Tech to learn the basics of public speaking and technical writing. Without the basics, any success you achieve will take much longer, if it comes at all. The importance of remembering the basics reminds me of my friend Charlie who had purchased a parrot that was guaranteed to talk. Charlie worked with this bird for a week and it hadn't said a word. He went back to the pet store and the store owner told him the bird needed a mirror in the cage and sold him a mirror. Charlie worked another week with the bird and still not a word. This time the store owner sold Charlie a swing, saying the bird probably wasn't happy and needed something to play on. After the third week and still not a peep, the store owner sold Charlie a ladder, saying that maybe the bird wasn't getting enough exercise. That was the last the store owner saw of Charlie until one day they met on the street and he asked Charlie, "How's your bird?" Charlie replied, "The parrot died." "What happened? That was a healthy bird; did it ever talk?" "Yes, it talked just before it died. I found it lying on the bottom of the cage one morning with its feet sticking up in the air and its feathers all ruffled, and it said to me, 'Didn't that pet store have any bird seed?' "

With the basics comes the practice--and practice and practice--before any significant level of competence is achieved. I was fortunate in my career and during my years at Southern Technical Institute to have had a supervisory job with a local engineering consulting firm, at which I was required to write many business letters. When I first started in this particular job, my letters had to be reviewed and approved by my department head before they were released. Many I would write and rewrite, trying to organize my thoughts into a logical pattern. As time went on, with the help of my boss, the letters became easier to prepare and required less time to organize. I had gained confidence in my writing ability.

I found, and you will find, that business communications are quite different from essays. While essays are written to a fairly broad audience and intended to entertain and perhaps instruct, business communications are aimed at particular individuals or groups and have a particular practical purpose--that is to inform, analyze, and/or persuade.

Another thing you'll find different about business letters or memo writing is the tone. Tone can be played with in the literary essay, but in business communications tone becomes a serious consideration. If someone has made us angry and we have to respond to them in writing, we certainly don't want our feelings to show up in the tone of the memo or letter to them. We have to maintain our professionalism, especially in written communications.

To illustrate this point, shortly after I went to work for Kennestone Hospital, I received a belligerent memo from another department head criticizing me for not keeping her informed on the status of her construction project. She blamed me for the slow progress of a long-term project. Since she made a carbon copy of the letter for my boss, I felt that I needed to protect myself by responding in writing. I would like to read you my reply and let you be the judge of the tone.

In reference to your memo dated April 2, 1979, please accept my apologies. Project schedules are available to anyone interested enough to ask. As you are aware, I have answered every inquiry you have made to me concerning this project, this being the first. Please feel free to call me about any of your projects. If you ever have a question . . .

And in my defense I also carbon copied the letter and gave a copy to her boss. I'll never know just how far this memo set me back; but I do know it didn't help, and I kept it all these years to remind me of what not to put in writing.

Another experience that is burned into my memory is the time I took on a memo-battle with who I thought at the time was the biggest jerk in the organization. I responded to one of his memos in writing, and knowing this person had a history of never cooperating with anyone, I ended my memo by saying, "Your usual fine cooperation is appreciated." Needless to say, we both ended up in the woodshed over that battle. It was an embarrassing situation that I had to live with, and it took years to rebuild that relationship, due to the sarcastic tone of a written memo.

These are some of the not-so-nice experiences I learned from; they were few and far between, but they were important lessons on how business communications are different from essays.

After I had been at Kennestone Hospital for several years, I designed and implemented a rather successful preventive maintenance program. My boss, Ed Bonn, who is currently the administrator for Windy Hill Hospital, had recognized my writing abilities and encouraged me to write a "How To Do It" type of technical paper for possible publication.

It was easy enough to reconstruct and document all the steps I had taken, and after many weeks of writing and editing and rewriting, I had the first technical paper of my professional career. It was pretty darn good, too, although none of the technical magazines I submitted it to thought so. After the third rejection letter, I put that paper on the shelf and started thinking about another one. Since I had been setting up a productivity monitoring system for my department, I thought, "Here's my chance to be a real success, to have a paper published, to see my name in lights."

I called Professor Larry Aft at Southern Tech, told him of my task, and asked him if he knew of any publications on productivity monitoring for hospital maintenance that I might use as a model. He could find none. Therefore, I had to start from scratch, and like the preventive maintenance program, I decided to try another "How To Do It" technical paper. Professor Larry Aft asked to see my finished product. As a result, it appears as "Appendix D" in his college textbook entitled *Productivity Measurement and Improvement*. Let me tell you: it's a real thrill to see your work in print. Thank you for that opportunity, Larry!

Verbal Communication Skills

The second area of business communication that I wish to talk to you about is one that still scares me to death: public speaking. We get very little classroom experience in public speaking, and it's a skill that is only learned and improved upon by doing. I still feel the tightness in my throat and chest every time I get in front of a group, but it's not as tight and it doesn't last as long.

It was my good fortune, however, to have had the opportunity at Kennestone Hospital to make presentations in the form of "in-service" instruction classes, staff meeting presentations, and management discussion groups. You may not be so fortunate to have an employer that has the time and interest in helping you develop this skill. You may find yourself in a job situation in which the engineers who already have writing and speaking skills will get the promotion and keep moving up the ladder, even though you may know the technical aspects of the job better than they do. I used to use that rationale when I saw someone with less or equal ability moving ahead of me. "Oh, they're always hobnobbing with the boss." But I know now that at least those folks were communicating. They were showing that they could express themselves.

I urge you to communicate with your professors when you have a problem. This, too, is good experience for your future in the business world. I have three stories I love to tell folks about Southern Tech that demonstrate the understanding and caring of the staff. The first is about the late Dr. Fung. I was taking my first calculus course and had failed the first test miserably. After the class period when the tests were returned, I went to Dr. Fung and asked what I should do. I felt as if I had tried my best and failed. I remember his advice very well. He said. "If you're satisfied you've done the very best you can, then maybe you should drop the course. If you think you can do better, then keep trying." His encouragement helped me to try a little harder, and I scored the highest grade on every other test that quarter, earning an "A" for that course.

Another story is about Professor W. Boyd Hinton and a technical writing course, which also included several oral presentations. Our project paper was due the last night of class, and arriving late, I found out that he had collected the papers and dismissed the class. I knew he was planning to leave town the next day, so my only hope was to slip my paper under his office door with a note of explanation and the hope he would understand. I had no idea until the grades were posted that I had gotten the paper in on time.

The third story is about a chemistry final in Dr. Nadella's class. I wanted an "A" very badly and needed to ace the final to make it. The final included a question very similar to a question he had asked on a previous test, except he had reversed the order in which he wanted the items listed. I was the last one to turn in my test and stayed to find out my grade. When Dr. Nadella graded the exam, that question was marked wrong. I had failed to make my "A." When I questioned why it was marked incorrect, he asked me to read it again. I said, "Oh, my God, I didn't read the whole question and assumed it was the same as you asked before." He looked at it again, and because it was exactly correct, but in the reverse order that he had asked, he gave me credit for it and I had my "A".

Two years ago, I joined Toastmasters International in order to try to improve my leadership skills and my ability to communicate effectively. I'm still learning and working toward that goal. Talking in front of a group of people was never my idea of a fun time, but now I enjoy it and look forward to each opportunity. I look upon public speaking as a strong exercise in creativity because it forces us to stretch our minds to the utmost in both preparing and delivering speeches.

Let me encourage you, for your own future success, to seek out every opportunity to speak in front of people, whether it is here at Southern Technical Institute, at church, or within your professional organization.

In summary, the ability to communicate effectively is not a gift; it is a wage earned by education, effort, and performance. The essence of communication is participation. The emphasis you put on developing these skills may very well affect just how successful you are after graduation. Some interesting facts that I read recently said that, on the average, one person in ten has what it takes to be a success. These are the self-motivated achievers--the people who lead the other 90% who would like to be successful but who lack the motivation to work for it.

Your being here today tells me you want to be part of that 10%. Good luck to all of you!

Maurice Chapman, a 1978 graduate of Southern Technical Institute in Industrial Engineering Technology, is Director of Engineering and Telecommunications Services at Kennestone Regional Health Care System.

WRITING ACROSS THE CURRICULUM: THE HIGH SCHOOL -COLLEGE CONNECTION

By Thomas E. Dasher

Almost everyone on the post-secondary level has now heard of Writing Across the Curriculum. In Georgia, as part of its agreement with the Office of Civil Rights, the Board of Regents has helped the three Traditional Black Institutions to develop Writing Across the Curriculum programs, and several institutions, such as Southern Tech, Augusta College, and Georgia Southern College, already have programs in place. In addition, the academic committee in each discipline has been asked to form an ad hoc committee on Writing Across the Curriculum to facilitate its development throughout the University System of Georgia in all disciplines.

With all of this interest in Writing Across the Curriculum in higher education in Georgia, there should be a concomitant interest in helping colleagues on the secondary level develop Writing Across the Curriculum programs. As all teachers know, we like to blame those at the preceding level for our students' weaknesses and inadequacies. The focus on the gap among disciplines on any campus has perhaps begun to help bridge that gap; however, we must work equally as hard to bridge the often even wider gap between high schools and colleges. Writing Across the Curriculum thus offers us a wonderful opportunity to establish connections not only on our own campuses, but also between campuses and levels of instruction. Exploring such opportunities should be one of our highest priorities as we continue our attempt to create a true community of academicians committed to using writing to teach better the disciplines they love.

One pioneering effort to bridge the gap between high schools and colleges through Writing Across the Curriculum was the National Endowment for the Humanities (NEH) Institute on Writing, held at Beaver College near Philadelphia in the summers of 1981 and 1982 for five weeks each summer. Directed by Elaine Maimon, teams from fifteen different areas of the country studied the writing process, problem solving, the history of rhetoric, and Writing Across the Curriculum. These teams consisted of a college English teacher, a high school teacher, and a non-English college humanities teacher. They were encouraged to develop projects which would continue the team's work beyond the summer institute.

A team from Georgia Southern (Statesboro) did indeed make that effort, culminating in a large NEH grant to support two summer institutes for high school teachers. The first, held in 1983, was for English teachers; the second, held in 1984, was for high school teachers from across the humanities curriculum. Thus, in southeast Georgia, there are already high school systems beginning to implement Writing Across the Curriculum.

Working with high school teachers, however, does not have to be dependent on outside funding for summer institutes. Teachers in high schools in all areas are curious about this growing movement in education. Even with large classes, several preparations, and extracurricular duties, they, too, are committed to discovering ways to teach their disciplines better. Using writing in the high school classroom to teach history, mathematics, or drafting can be as challenging and rewarding as it is in the college French or technology class. Curriculum directors are usually particularly enthusiastic about setting up Writing Across the Curriculum workshops for in-service days or sessions during the opening of school. Especially now, when state boards of education are placing increased emphasis upon students' writing skills, high school colleagues need support and help. Writing Across the Curriculum can provide that help.

Several points, however, should be kept in mind as we attempt to make the high school-college connection through Writing Across the Curriculum workshops:

1. The administration must understand and be committed to Writing Across the Curriculum; curriculum directors and heads of departments are especially important allies to make before we set up appointments with superintendents and principals.

2. High school teachers have less time for study, paper grading, and planning. Long workshops after school are seldom popular; weekends, too, are only grudgingly surrendered. In-service days, therefore, are the best times for initial half-day sessions. Then follow-up sessions, lasting no more than an hour, held after school throughout the year, can be effective.

3. High school teachers need practical suggestions. The theoretical bases for Writing Across the Curriculum are important to summarize, but writing-to-learn activities, studying sample student drafts, and simulated writing and/or editing workshops can be even more effective.

4. Teachers have little time for committees. Unlike colleges, at which Writing Across the Curriculum should seldom be centered in the English Department, it is especially important that the English Department take the leadership role in high schools. English teachers must build those vital connections with colleagues in other disciplines, and their number and influence in most high schools still make them the natural and practical focus. They will also be better able to coordinate sessions limited to one area such as math and science, areas in which writing too often seems especially tangential to learning the discipline.

Writing Across the Curriculum does indeed offer us challenges to work with colleagues on all levels as we hope to graduate students who are more than barely literate and who, moreover, see the writing process as a vital part of the larger learning process. If we ignore high school teachers, we perpetuate both the problems our students have and our own limitations as members of the academic community. Teachers on every level can benefit from our commitment to Writing Across the Curriculum; to our profession, where writing should be vital in every discipline; and, most important, to our students' ability to communicate their knowledge clearly and effectively.

Thomas E. Dasher is Associate Professor of English and Head of the Department of English at Valdosta State College. The author of Faulkner's Characters: An Index to the Published and Unpublished Fiction, he previously taught at Georgia Southern College at which he directed the 1983 GSC/NEH Institute for high school English teachers.

WRITING ACROSS THE CURRICULUM AT SELECTED LIBERAL ARTS AND TECHNICAL COLLEGES

By Susan Roberts Morrow

The concept of Writing Across the Curriculum (WAC) evolved from James Britton in 1975. Basic to all theory of WAC are the principles and concepts from psychology, including those of Lev Vygotsky, James Bruner, and Jean Piaget. By applying psychological principles to composition instruction, James Britton provides the link between the field of psychology and English. An overview of this theoretical base for WAC has been presented in *Writing Across the Curriculum* Newsletter, (May 1984): 2-3. A number of liberal arts and technical colleges have implemented Writing Across the Curriculum programs in various forms. Some of these pioneer colleges include Beaver College, DePaul University, Georgia Southern College, Temple University, Michigan Technological University, Purdue, and Massachusetts Institute of Technology. The WAC programs at these institutions will now be examined.



Liberal Arts Colleges

Beaver College in Pennsylvania offers a Cross-Disciplinary Writing Program in the freshman year. The courses are taught by English faculty but clustered around such content area courses as psychology, sociology, and economics. Thus, students in the freshman writing courses experience reading and writing in different content areas. The program is headed by Dr. Elaine Maimon, the Associate Dean for Curriculum Research, and Dr. Bracy, Chairman of the English Department. The Writing Center provides graduate consultants for students who need additional help outside the classroom. The program is sponsored by a grant from the National Endowment for the Humanities.

At DePaul University in Chicago, a Common Studies Program has been in effect since 1980. Professor Kristine Garrigan is the Common Studies Coordinator for the Writing Component. The history and English courses are sequential in nature. All freshmen are required to take an eight-hour World Civilizations course along with a four-hour composition course that deals with history material. Faculty members from both departments provide syllabi for their sections. English 112 is taken in a block with History 101, and English 113 is taken with History 102; thus, students read and write in a discipline and become proficient in a designated area. There are other blocks available; a student chooses the block according to interest and major area of concentration. The program provides students with a foundation for DePaul's core curriculum: Liberal Studies.

Georgia Southern College also has a very active WAC program. The key to its successful program seems to be the faculty-development workshops held every quarter to inform instructors of the theory behind WAC, what WAC is and is not, and how to implement writing in all content areas. The college also has received a grant from NEH. Dr. Tom Dasher, who presented a paper, "Developing Writing Across the Curriculum," at the Writing Across the Curriculum Conference at Georgia Southern College in 1983, is the former head of the program. The Georgia Southern College program not only educates the college faculty about WAC, but also incorporates the WAC concept in the teacher-training program in the school of education, and further provides local high schools with information about WAC by offering frequent workshops.

Temple University has a Freshman Interdisciplinary Studies Program which involves team teaching. Judith Scheffler's "Composition with Content: An Interdisciplinary Approach," which appeared in *College Composition and Communication* 31 (1980): 51-56, summarizes Temple University's program. Instructors from the content areas come into the English classrooms at least once a week and share the responsibility of teaching writing in a particular area. Students become acquainted with the various demands of writing in different disciplines.

Technical Colleges

Two engineering colleges, Michigan Technological University and Purdue University, both have extensive WAC programs. MTU's thrust is on faculty-development writing workshops between guarters for two to four days and on summer workshops for new faculty. Dr. Art Young currently heads this program. The workshops for all disciplines immerse the faculty in the process of writing. The faculty are required to write some of their own assignments and to keep a journal of the writing strategies they use for each task. Each instructor keeps both a personal journal and a content-area journal. Fulwiler states that journals are a safe place to fail and are a means of personal discovery. Through a content journal, concepts are explored and new ideas emerge. The instructors then take their new understanding of the composing process (which perhaps they had previously taken for granted) back to the classroom. For a further overview of writing workshop ideas, Randall Feisinger's "Cross-Disciplinary Writing Workshops: Theory and Practice," [College English 42 (1980): 154-156] summarizes various workshop approaches.

In Engineering Education 73:4 (January, 1983): 311-313, Muriel Harris, Editor of Writing Lab Newsletter at Purdue University, describes how the technical engineering faculty and the English faculty can work together to achieve a common goal: graduating an engineer who can write. At Purdue the engineering faculty members have identified certain weak areas in the students' writing in engineering classes. These areas include clarity, conciseness, content, grammar, style, mechanics, organization, format, and concern for audience. If an engineering student finishes the first two English courses with a D or below, he must take an engineering course taught through the English Writing Center. All the areas are in modules and tutors are available to work with these students. These students, by the way, cannot take technical writing until the designated modules are completed. The English department, the Writing Center, and the engineering faculty work closely together to monitor the progress of the students and to identify areas for future work.

Perhaps the most established WAC program in the country began twenty-nine years ago. Massachusetts Institute of Technology implemented a WAC program in 1957. Charles Sides, in "Twenty-five Years of Writing Across the Curriculum at MIT," *Liberal Studies Educator*, 51 (1982-1983): 9-14, describes the success of WAC at MIT. The Technical Writing Cooperative began in the Mechanical Engineering Department and in 1976 the School of Engineering made the co-op writing instruction a requirement in all eight schools of engineering. With this mandate, a writing instructor from the English faculty provided instruction as part of the technical courses, for lab reports, papers, and any other technical writing which might occur in any given discipline.

The design of a co-op consists of a meeting with the sponsoring department, the writing instructor, and participating faculty members. Goals and objectives of the courses are discussed, and ways in which the technical writing cooperative can be used in each class are designed. Next, a lecture on writing is presented to students during their first introductory lab course. Second, three other lectures in advanced lab courses are planned, and an evening session is available for students. The students have the same writing instructor throughout their course work, and help from the Writing Center is available for necessary tutoring. Many other options also exist in this typical co-op design.

Participation in the program is optional for students, but it is required that all departments in the School of Engineering make it available for students.

The following table provides the percent of students in each technical department who experience a co-op while attending MIT.

TABLE 1

PERCENT OF CO-OP STUDENTS PER DEPARTMENT*

Civil Engineering (Water Resources)	74%
Mechanical Engineering	88%
Materials Science Engineering	84%
Computer/Electrical Engineering	87%
Chemical Engineering	100%
Ocean Engineering	94%
Aeronautic and Astronautic Engineering	91%
Nuclear Engineering	89%

This program is individualized so that engineering students can meet their own needs in communication for each of their courses. It has been so successful for the past twenty-nine years that it is now being implemented in the School of Science by hiring another writing instructor.

In summary, many unique features have led to these programs' effectiveness and longevity. Support from the institution's administration has been a key element for their success, as has been adequate institutional funding and outside grants. Other characteristics for successful programs at these colleges have included regular facultydevelopment writing workshops, adequate faculty training, and close communication between English and technical faculties. Another common aspect of these programs has been the full use of a Writing Center to support WAC.

With a combination of these key features, any college campus can develop an effective, ongoing program of Writing Across the Curriculum and thus can promote writing as a means of discovering meaning, developing critical thinking, and promoting learning.

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WAC GOALS AND METHODS: A PERSPECTIVE

By Robert C. Wess

I have been asked repeatedly, by collegues on and off campus, to describe the expected outcomes of Southern Tech's Writing Across the Curriculum (WAC) program. This is a crucial task: all important to the direction, effort, and success of a WAC program. Therefore, I would like to suggest several goals which Southern Tech's Writing Across the Curriculum Committee has



agreed upon as our "List of Objectives for a Successful Writing Across the Curriculum Program" at Southern Tech:

1. Awareness and sensitivity to the importance of writing and speaking skills for students' personal and professional success.

2. Use of writing and speaking skills as methods of teaching and learning in all disciplines and courses.

3. Increased interdepartmental cooperation in preparing and teaching classes and in sharing course materials.

4. Confidence and competence in controlling language, whether written or spoken, on the part of all students, regardless of their major.

5. Higher level of student thinking skills, gained

through using writing as a tool for thinking in such diverse activities as anticipating, summarizing, imagining, questioning, rehearsing, problem-stating and problem-solving.

This list is sequential and interactive. With awareness by faculty and students, the use of writing and speaking skills in all courses across campus would follow. An increased use of writing and speaking, in turn, would generate more cooperation among the various college departments. If practice enhances facility, both in thought processes and in writing, then this awareness, practice, and interdepartmental cooperation would plausibly result in higher student achievements in their language and thinking skills.

As with any WAC program, Southern Tech's program has a number of needs that must be met to maintain its effectiveness. The following are the most pressing:

1. Workshops for faculty.

2. Orientation programs for new faculty.

3. New sources of funding for existing programs, especially for faculty workshops and Newsletter development.

4. On-campus seminars led by faculty who use writing successfully as a teaching and learning tool in their own classrooms across the curriculum.

5. Development of a library file of Writing Across the Curriculum materials for each discipline.

6. Maintenance and evaluation of ongoing programs.

These goals and needs, of course, are designed for Southern Tech. Some of you may disagree; others may want to expand on them and include needs of your own. I invite all readers to share your views on the goals or needs of a successful WAC program. As Editor of this Newsletter, I promise to publish as many viewpoints as possible.

Robert Wess holds his doctorate in American Literature from the University of Notre Dame. Besides serving as WAC editor, he also teaches courses in composition and literature at Southern Technical Institute. This essay was originally presented at the First Annual Conference on Classroom Communication at Georgia Southern College, Statesboro, Georgia, on May 4, 1984.

INTRODUCING WRITING IN THE ENGINEERING CURRICULUM

By Irving Kosow

Let me begin with a few prefatory remarks regarding my own educational background so that you can better understand why I shall take certain positions and hold certain views. I never regarded myself as a typical engineer. Prior to entering college, I had the usual four years of mathematics, the year of physics and the year of chemistry. But I also had four years of Latin and one



year of Greek. To make matters worse, my undergraduate degree in engineering was at a School of Engineering in a College of Liberal Arts and Sciences. To obtain an engineering degree of 145 credits, I had to fulfill all the requirements of the College of Liberal Arts and Sciences. This meant taking history with history majors, English with English majors, and math in competition with math majors.

Enough of my personal experiences. Let's talk about introducing writing into the engineering curriculum. Believe me, it's not easy to convince engineering faculty to incorporate writing in their courses. Engineers are by training and preselection (self-selection if you will) essentially problem solvers. But despite their problem-solving orientation, paradoxically enough, incorporating writing into the coursework is one problem that has not been adequately solved on most engineering campuses in this country and abroad. Don't think, however, that engineering teachers are not aware of this. They are. Unfortunately, writing is not highest on their list of priorities. There are also other reasons as well and we should examine them.

While undergraduate engineering, math, and physics students are required to write in their humanities courses, the requirement for written work disappears almost totally in major elective courses in math, physics, and engineering. The homework, the quizzes, the final examinations are almost exclusively devoted to the solution of problems having high mathematical content. Consequently, when you talk to engineering teachers about introducing writing into the technical curriculum, these are but a few of the responses:

"There isn't any time for it in our crowded curriculum." "If they can't solve problems, how can writing help them?"

"Now the engineering department is being asked to do the work of the English department in addition to math, physics and chemistry. Where will it end?"

"Problem-type questions are more objective and easier to grade than essays."

"Why must I re-orient my course content and teaching approach, not to mention quizzes, final exams, etc., because English teachers at the elementary, secondary, and college level can't do their jobs properly?"

If these comments sound hard-nosed, they are. Engineers are no-nonsense characters who "tell it like it is." They don't pull their punches. They are trained to be realists because they deal with reality on a day-to-day basis.

So while there is little incentive to introduce writing

into lecture/theory courses, there exists some impetus for improving writing skills in lab courses. Most of the articles in the *Journal of Engineering Education* dealing with writing usually refer to a laboratory of a designcourse setting. In such courses, the usual writing formats are laboratory reports, engineering case studies and/or the use of laboratory notebooks (journals). If English teachers are going to offer courses in technical writing, they should know these three formats intimately. The remainder of this presentation is devoted to these three formats.

Laboratory Reports

The usual format of a lab report includes a report cover, a table of contents, a tabulation of observed and calculated results, some typical sample calculations, graphical results, answers to specific questions, conclusions and discussion. Only in the answers to specific questions, conclusions and discussion is there opportunity and latitude for original writing in essay form. I say "original" writing with tongue-in-cheek. When the same experiments are used year after year in the same laboratories, most lab teachers begin to see the same "original writing" term after term.

There is the apocryphal story of the engineering teacher who wrote on the cover of a student's report:

When I first submitted this report ten years ago, it was completely original and I felt of such quality to deserve an A. But my professor only gave it a C. Now resubmitted without change after ten years, I'm giving you an A for *astuteness* in selecting a report that was really worth an A, but I'm also giving you an F for *effort* in failing to submit an original report of your own. So your overall grade is C. After all, why should you earn more than I with less work?

Engineering Design Case Studies

Almost all engineering students take a course in engineering design in their senior year. They are required to select or are given an engineering design problem. As a result of their work in the solving of this problem, they are often required to build their design and test the degree to which the design meets the original design specifications. Included with the design is the engineering case study, another form of technical report.

In the case study, the author-student describes the various alternative designs to meet the design specifications and why these alternatives were rejected. This discussion invariably includes the engineering compromises and so-called tradeoffs which had to be made in the final design. A detailed discussion of why a particular design approach was selected, how the design was developed, what problems were encountered along the way, and how the prototype was built and modified to its final form, are included and described. Also described is the evaluation and testing of the final design. Finally, the case study usually concludes with recommendations for improvement of the existing design, with an eye to economy and mass production of the product, as well as possible alternative designs which may be the subject of future case studies.

It's not difficult to see that in contrast to laboratory reports, the engineering design case study involves more discussion and more writing of an essay nature. Usually the student prepares a rough draft for the design professor who suggests modifications in format, in approach, and in terminology. The final case study represents a written history from the beginning to the end of the project and contains diagrams, charts, drawings, an engineering analysis, possibly an economic analysis, and recommendations regarding feasibility for production. The engineering design case study calls for a much higher level of writing skill than a laboratory report. It is almost on a level with the thesis in terms of writing demands and intellectual qualities.

The Laboratory Journal

While not as formal as the technical report or the engineering case study, the laboratory journal is an excellent writing vehicle in its own right. Most laboratory journals are hard-cover, prebound notebooks, $8^{1/2}$ " x 11", containing about 150 sheets of blank cross-section paper. The cross-section paper enables the students to make rough graphical notes, diagrams, drawings and/or tabulations. If there are any psychologists reading this essay, I might also suggest that the lab journal is a projective technique device since the student also may include cartoons and doodles. Consequently, the journal is much like a personal diary in which the student is freely recording his reactions to his laboratory work, including any normal and/or serendipitous observations and ideas that occur to him.

The following advantages could be cited for the use of journals as an instructional device over the non-use of journals:

1. Students get more writing practice in their chosen field without the more formal pressure of having to do a required essay.

2. The journals provide the teacher with more complete information as to techniques used in the lab, how the material learned in lectures is applied in the lab, to what extent the text is used by the student, etc.

3. When formal laboratory reports are required, the students using journals for a record of their results tend to produce more coherent, more complete and better organized reports.

4. The journals enable the lab instructor to gain a better insight into how the student reacts to the lab experience and what progress he is making in comprehending the various experiments he is required to perform.

5. Best of all, the journals provide a written and ongoing dialogue, as well as a more positive rapport between the teacher and the student.

6. Finally, journals serve as additional evaluation tools for student grading as well as record-keeping devices for the instructor.

CONCLUSIONS

Clearly, in the use of technical reports, case studies, and the laboratory journals, the role of the engineering teacher is completely different from that of the traditional English teacher. For example, only the engineering teacher of a particular discipline knows enough about his field to respond, guide, and make entries in the student's journal in a way that creates an intellectual dialogue between teacher and student.

Via the use of journals, the engineering teacher's role changes from dispensing knowledge to passive students into an active give-and-take situation which stimulates student investigation and involvement. It is a device that encourages student performance, growth, and eventual understanding of engineering principles.

In effect, the journal entries by the student initiate the learning process. The teacher's comments not only sustain it, but, by suggesting new areas of investigation or possibilities previously untried, they advance the learning process still further. Further, because journal writing is devoted to content, the student is less concerned about grammar and rhetoric during the writing process. As a result, he or she writes more with less fear of being graded in writing. In short, the journal provides motivation to write, as well as the advantage of using writing as a learning device in an engineering discipline.

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INTERFACE '86

Tenth Annual Humanities and Technology Conference October 23-24, 1986

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