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ABSTRACT

The selection and use of instructional materials to develop technical writing skills in limited-English-proficient foreign students are discussed. Focus is on the influence of cultural differences in second language learning and the need for instructional materials that accommodate these differences. The first section examines American expectations of second language learners in the classroom, reviews research on acculturation and second language learning, and communication standards in the workplace. The last portion of this section emphasizes the importance of audience analysis in technical writing and suggests that foreign students be taught through comparison of different versions of the same text. The second section presents a rationale for use of supplementary instructional materials for this population, based on rising enrollment and the inadequacy of currently available materials. The third section outlines sample assignments that use the comparative approach to technical writing skill development, two letter-writing exercises and an exercise in formulating topic sentences for paragraphs. (Contains 22 references.) (MSE)

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**Technical Writing and International Students:
Addressing Special Needs With Teaching Materials**

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Technical Writing and International Students: Addressing Special Needs With Teaching Materials

INTRODUCTION

Discussing technical writing, cultural differences, and teaching international students causes two issues to surface. These issues parallel each other in the discussion of what and how technical writing should be taught in the classroom:

- How do we teach international students to conform to American standards?
- How do cultural differences affect the writing of international students?

Discussion of these issues point out the need for changes in the classroom. In meeting the needs of international students in technical writing classes, teaching materials need to be developed that focus on ESL (English as a Second Language) students.

In this essay I present information concerning what Americans often expect of second language learners and how cultural differences influence second language (L2) learners. In addition, I will discuss the issue of audience analysis as it pertains to international students. Emphasis on audience analysis helps show the need for a product approach to technical writing using models and examples in conjunction with the process approach.

AMERICAN STANDARDS FOR ESL WRITERS

ESL Writers/American Standards in the Classroom

Addressing the first issue, several authors note that expectations of international students in America focus on those students being able to assimilate into American culture and producing American-style writing. As an audience, American readers expect several things in the writing they read:

- Generalizations supported by subtopics
- Explanations directly related to the main point
- Indications of the logical links between main topics, subtopics, and subordinated ideas
- Direction in writing style, not digression
- Creation of new ideas, originality is valued
- Recognition of a person's ideas and language as private property (Leki 1992, p. 94).

When ESL writers write in a manner which does not include recognition of the above characteristics, the writing "violates the expectations of native speakers of English" (Leki 1992, p. 102). Violation of reader expectations marks the ESL writing students as nonnative speakers who do not possess native-like proficiency in English.

Difficulties in teaching technical writing to ESL (English as a Second Language) students is certainly influenced by the rhetorical conventions of their own culture. Subbiah (1992) points out, in general terms, that

people from different nations think differently, learn differently, and write differently; their notions of good technical English do not necessarily have to be the same as those of native speakers of English (p. 15).

These cultural differences affect what and how international students learn.

In more specific terms, for example, second language learners from Asia typically write in a much more circuitous manner. In a study of writers from Japan, Korea, China, and Thailand, Hinds (1990) comments that the four language groups have a "common style [which he calls] 'delayed introduction of purpose'" (p. 98). Likewise, Leki (1992) notes that "Speakers of other languages, particularly Asian and Middle Eastern languages, do not necessarily share our admiration of directness and explicitness . . ." (p. 94).

International students, therefore, are not only trying to learn a new language and absorb a new culture, but also attempting to overcome culturally embedded rhetorical styles that influence their writing. A rhetorical style which allows circuitous and writer-responsible writing is typically in direct conflict with American technical writing which prizes being concise and terse.

Understanding Cultural Differences

When second language researchers investigate cultural differences that affect how L2 learners learn, they often use The Acculturation Model (Brown 1980; Schumann 1978a; 1978b; 1978c, cited in Ellis 1985) to explain how the second language acquisition process occurs. The Acculturation Model theorizes that in order to acquire proficiency in a second or foreign language, the student must become fully acculturated into the target culture. Ellis also states this acculturation by second language learners is very important because "language is one of the most observable expressions of culture" (1985, p. 251).

Discussing cultural differences, Stevenson (1983) asserts that rhetoric and language binds us to our own cultures and makes it difficult to change (p. 327). Hsu (1990) echoes this sentiment and adds that writing is not just learning "grammar or syntax; rather [it is] the business of culture. To learn a language is to be acculturated into a thought-system" (p. 4). In turn, learning a second language entails learning the rhetorical system used in that language's writing. If ESL students are not consciously aware that rhetorical systems are cultural, then the job of learning the language becomes much more difficult; and, it accounts for many of the problems nonnative speakers of English have learning the American style of technical writing.

The difficulty of learning the American style of technical writing can be reflected by examining the difference in business letters as shown by Jenkins & Hinds (1987). They examined business letters written by American, French and Japanese writers. In their study of the letters' rhetoric, they found that

American English business letter writing is reader oriented, French business letter writing is writer oriented, and Japanese business letter writing is nonperson oriented, reflecting an overall tendency to frame communication in terms of the relationship between people rather than in terms of the people (p. 330).

This cultural variation means that nonnative speakers of English have a culturally embedded rhetorical style that is difficult to break away from. Learning a new rhetorical style, then, according to the Acculturation Model of second language acquisition, requires second language learners to acquire another culture in order to become proficient in the use of the language.

ESL Writers/American Standards in the Workplace

International students or nonnative speakers of English who remain in the United States as professional people must also learn to communicate using the American style of technical writing. The case of Mai-Chung (Pearson 1983) points out difficulties nonnative speakers of English have

when they enter the American workforce. In this case, Mai-Chung was hired for her technical expertise and *did not have any technical writing skills* (p. 384, emphasis added).

Pearson states:

non-native technicians and professionals currently employed in American business and industry . . . are discernibly handicapped by their lack of proficiency in the highly specialized technical writing skills required by their work (p. 385).

The importance of this situation is summed up in Pearson's call for more instruction in audience analysis (p. 397); audience analysis is of primary importance in correctly addressing the reader of technical writing. In similar circumstances, another study also reports that nonnative speakers are often hired for technical knowledge, not writing ability. However, the nonnative speakers soon discover that they are also expected to be proficient technical writers (Belcher 1991, p. 105).

A major writing flaw of these inexperienced ESL technical writers is their inattention to their reader/audience; this deficiency must be corrected in the classroom. Good writing requires attention to the intended audience. In technical writing, the importance becomes even more important. Technical documents that do not address the needs of their audience or, perhaps, address the wrong audience, fail to communicate their message. In the case of technical documents, such as owner's manuals or operating

instructions, failing to communicate clearly can have legal implications. When a document's purpose fails, readers become frustrated and the communication process breaks down.

The issue of audience analysis is further complicated by the fact that cultural differences affect the *manner* in which ESL writers address their audiences. Foreign technical writers must be more aware of the needs of their American audiences; failure to address the correct audience can have serious effects. One area of concern is the number of inferior foreign produced documents that accompany imported goods. Because of the quantity of imported goods, these inadequate documents "may pose hazards to American consumers" (Weymouth 1990, p. 146). Weymouth also contends that many foreign companies underestimate or "do not recognize the importance of quality documents when marketing their products" (p. 147).

Some of the writing problems, besides audience analysis, that ESL writers have in the workplace consist of:

- Problems with subtechnical vocabulary
- Common words used technically
- Acronyms and abbreviations

(Pearson 1983)

- Conversational rhetoric in informal documents
- Rapport building strategies with colleagues

(Belcher 1991)

Writing deficiencies possessed by nonnative speaking professionals also cause miscommunication problems in the

workplace. The inability of nonnative speakers to produce technical documents with native-like proficiency is often judged as a reflection of their technical knowledge and proficiency as an expert in their field. Because of this, nonnative speakers are often misjudged professionally by their native speaking peers on the basis of their writing skills (Belcher 1991, p. 105). This, in turn, often prevents them from using their technical knowledge for making positive contributions to the companies and organizations they work for.

Because of the increasing numbers of students from abroad, Jenkins & Hinds (1987) state that

[a]s more and more students become involved in ESP, it is essential that they be made aware of the differences which exist in business writing across cultures. Only when students become aware of these important but subtle variations will they be able to communicate effectively across cultures (p. 343).

As previously noted, Subbiah (1992), Leki (1992), and Hsu (1990), state that foreign students, indeed, do not approach their writing in the same manner as Americans. Rainey (1990) adds to this by saying communication problems often occur between teachers and students because of this attitude. Students, in attempting to overcome these cultural differences in writing and communicating with teachers, become frustrated and are not able to produce "respectable technical reports" (p. 131). And that is the

goal of technical writing teachers--to produce writers who can write well for business and industry.

Belcher's discussion of teaching technical writing to nonnative speakers in a corporate setting includes the fact that she used a

pool of documents . . . [as] guides in the rhetorical and grammatical problem-solving that the students often confronted when producing less technical documents. Such models are especially valuable for nonnative speakers, whose knowledge of appropriate semantic formulas may well exceed their ability to make accurate lexical and syntactic realizations of them (Olshtain & Cohen 1990, cited in Belcher 1991, p. 114).

The "pool of documents" Belcher mentions were meeting notes and personal progress reports. Using models such as these are a method of showing nonnative speakers how their writing and rhetoric contrasted with that of native speakers. In this study, the problem was not with the vocabulary in the technical sense, but vocabulary that was "used to regulate social relationships (softeners or gambits)--for example, the language of requests, apologies, and other speech acts . . ." (p. 107).

Models of technical writing from a specific discourse community (such as the corporate documents discussed above) also identify format conventions used by that community and help ESL writers develop strategies for producing technical writing that is more native-like. In fact, the documents of

an experienced nonnative speaker were used as examples that the other nonnative speakers could emulate. This use of a successful nonnative speaker's writing has the potential of being very effective in showing ESL writers how their writing needs to change.

Another method, proposed by Leki (1990), suggests "recasting." In this method, native speakers rewrite sentences or paragraphs and then allow the nonnative speaker to study both versions. This leads to a process approach that allows ESL writers to write, revise, and edit using their native counterparts' writing for a model. The use of a native speaker's model helps nonnative speakers of English discover the differences that exist in their own writing and that of native speakers. Although this method can be time consuming, it points out the usefulness of using models for technical writing instruction.

RATIONALE FOR SUPPLEMENTARY MATERIALS

Numbers of International Students

The numbers of international students attending Oklahoma State University necessitate adding to instructional materials that are currently being used in the teaching of technical writing. Figure 1., on the next page, shows the total number of international students attending Oklahoma State University.

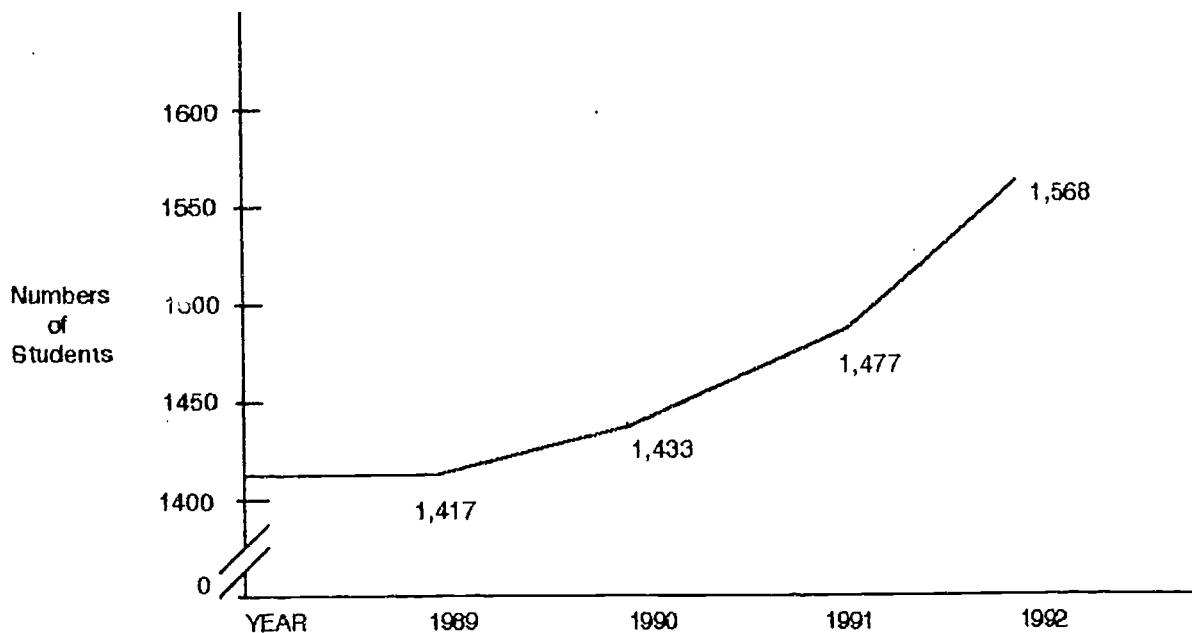


Figure 1. International students enrolled in academic programs, 1989-1992
Oklahoma State University, main campus

Source: Office of International Student Services, Oklahoma State University

As Figure 1. shows, there is a steadily increasing number of international students on the Stillwater campus. Increasing numbers of nonnative speakers will require additional instructional materials in order for the university to maintain high standards of instruction.

The current lack of instructional materials for ESL learners in the technical writing classroom is not difficult to see. At Oklahoma State University, the textbooks used to teach technical writing contain little or no information about rhetorical differences. The textbooks, of course, are by reputable authors who are distinguished in their field. There is simply not the space or time, however, to include large amounts of information about cultural differences in technical writing.

Students in the College of Engineering or the College of Business are required to complete ENGL 3323 (Intermediate Technical Writing) as a core requirement for their major. As Figure 2., below, points out, there is a fairly consistent number of international students enrolled in the Colleges of Engineering and Business. With the steadily increasing numbers of international students enrolling at Oklahoma State University, these figures should remain constant.

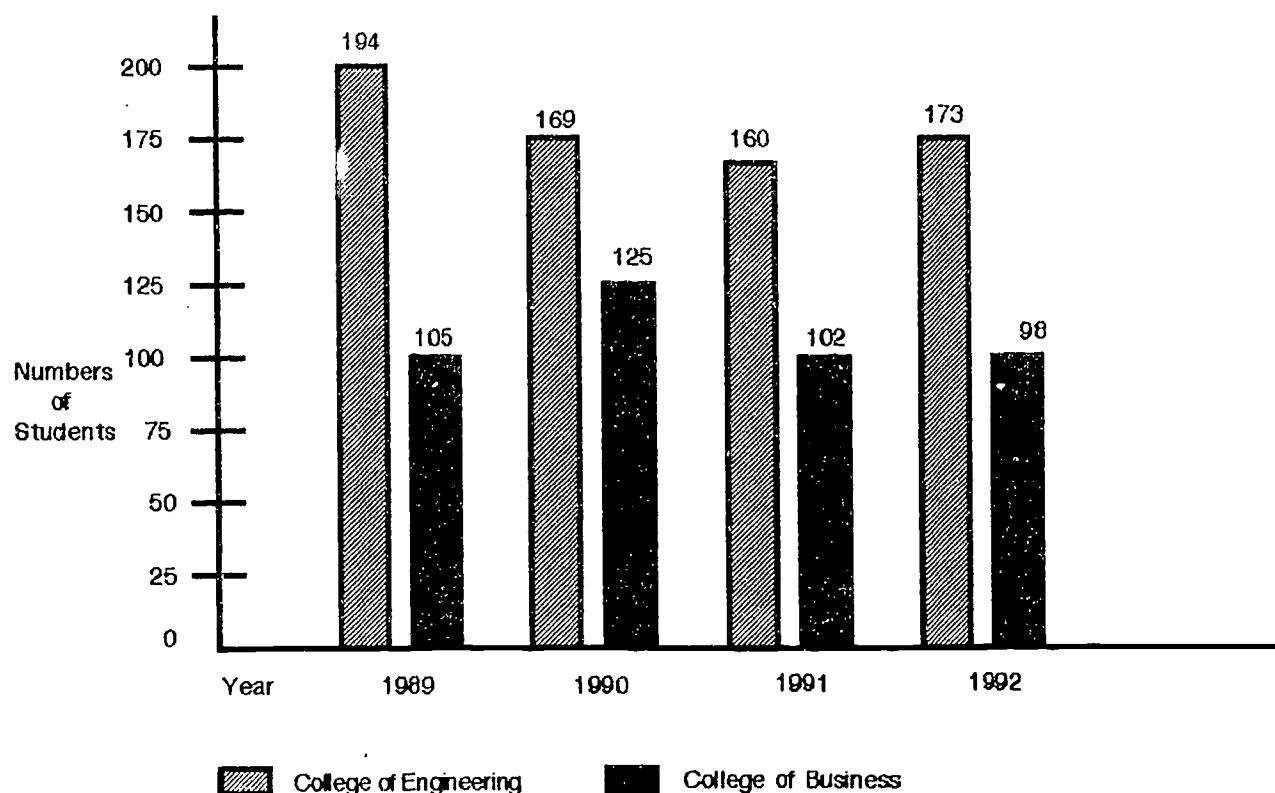


Figure 2. Juniors and Seniors (International Students) enrolled in the College of Engineering and the College of Business.

Source: Office of Institutional Research, Oklahoma State University

The numbers of international students enrolled in the College of Engineering and the College of Business also affect the numbers of students enrolled in ENGL 3323. Figure 3., below, shows the number of international students enrolled in Intermediate Technical Writing. The number of students, however, in each section is not very large.

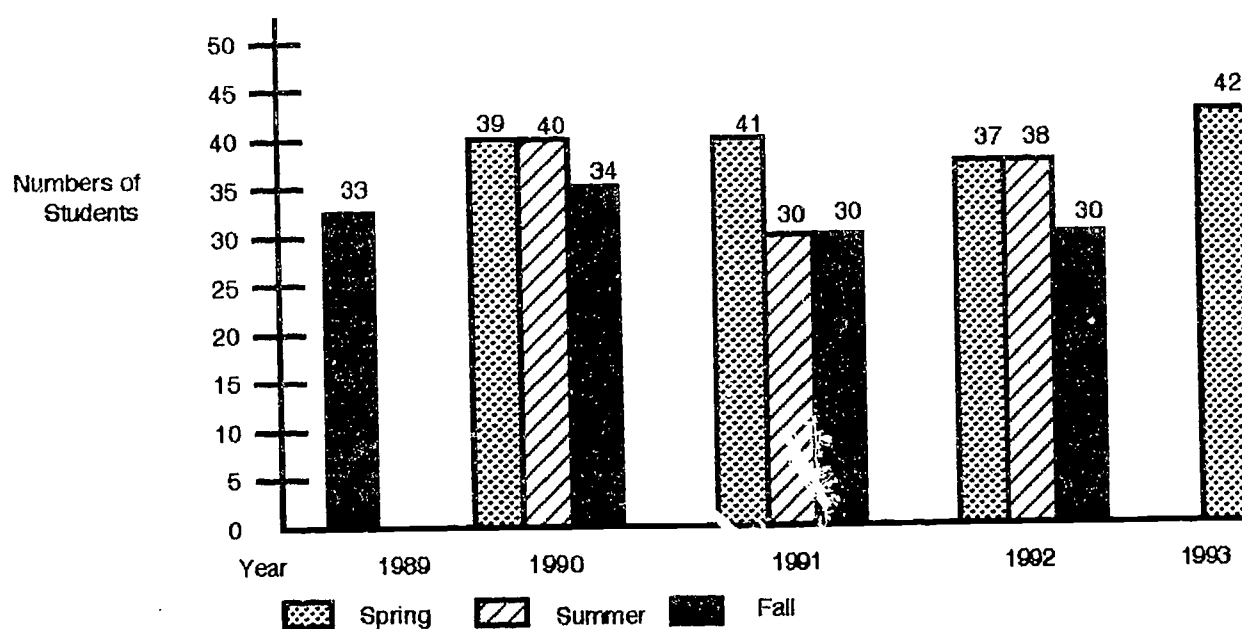


Figure 3. Numbers of international students enrolled in ENGL 3323
Source: Department of English, Oklahoma State University

A further breakdown of these figures shows that for the final three semesters shown in Figure 3., the following number of sections were offered for ENGL 3323:

- Summer 1992--10 sections
- Fall 1992--22 sections
- Spring 1993--25 sections

Dividing the numbers of international students enrolled in

the above sections by the number of sections yields an average of less than two students per class for the spring and fall semesters; the summer semester averages approximately three to four students per section.

Current Teaching Materials

The textbook, *Technical Writing: A Reader-Centered Approach*, by Paul V. Anderson makes no mention of cultural differences. Anderson relates that he had not considered writing an ESL supplement; he did say, though, that the idea was "very interesting" (personal communication, July 14, 1993). This particular textbook is used for ENGL 3323, the technical writing class that almost all international students enroll in. The number of international students enrolled in ENGL 3323 points out the need for additional materials to assist technical writing instructors.

The technical writing instructor, however, cannot afford to teach to individual international students. This causes some of them to be left behind in the flurry of activity that occurs in the course. With a designated number of assignments to produce in 16 weeks, there is simply not time to meet the needs of the few and sacrifice the needs of many. Therefore, supplementary materials need to be developed that enable those students to develop an awareness of the cultural differences that exist in writing styles.

A call to develop instructional materials is expressed by Constantinides (1984) when she says "more contrastive analysis of scientific and technical writing in other languages" (p. 142) is needed. The analysis called for by Constantinides can be extremely helpful in the technical writing classroom. In a discussion of writing in general, Leki (1991) states the importance of contrastive analysis: when conveyed to L2 student writers, the findings of contrastive rhetoric often produce instant enlightenment about their writing in English, as students suddenly become conscious of the implicit assumptions behind the way they construct written ideas and behind the way English does (p. 138).

Presenting these differences justifies the need for specific materials directed at nonnative speakers of English; creating instructional materials for international students in technical writing classes follows the maxim that Johns & Dudley-Evans (1991) note in their discussion of teaching English for Specific Purposes: creating such materials requires "an identifiable group of adult learners within a specific learning context" (p. 298). International students in technical writing classes (see Figure 2., above) qualify as such a group and require materials that are not commonly found in technical writing textbooks or supplementary materials currently available to technical writing programs.

SUGGESTED TEACHING MATERIALS

In order to assist L2 learners in acquiring a culturally different writing style, models and methods must be used that reflect the "reader-based" prose Flower (1979) speaks of. Study of these models will allow second language learners to study the manner in which American business writing is done. Jenkins & Hinds assert that "models are essential in the ESP [English for Specific Purposes] genre to which business writing clearly belongs" (1987, p. 342).

Using models stresses the product approach to teaching writing, contrary to the trend of using the process approach that has gained prominence in recent years. However, it does not eliminate process approach writing from the technical writing classroom. Kaplan (1990) reinforces this by asserting that "every process results in some sort of a product, and every product is the outcome of some sort of process" (p. 13). Regardless of the approach used to teaching writing to ESL students, it is the responsibility of the writing teacher to provide instruction that shows ESL students what American audiences expect in a communication (Leki 1991, p. 138).

Using models to teach international students an American style of technical writing can help overcome the quality deficiency found in technical documents produced by ESL writers. Stevenson (1983) believes technical writing teachers short-change their international students if they do not require them to write for a wide range of audiences.

In his study of Japanese technical writers, Stevenson found "that they were largely unfamiliar with the concept" (p. 324) of audience analysis. This finding demonstrates the importance of informing nonnative speakers about what Americans expect from a technical document. When American educated foreign students return home, they should be able to write for a variety of audiences, including Americans.

Explanation of Assignments

The following pages contain an example of assignments I believe will help international students understand the differences between their writing and that of native speakers of English. The first assignment (p. 20) is a letter of introduction. These letters, from ENGL 3323, were the first writing sample picked up by the teacher. One letter is written by a native speaker and the other was written by an international student. Both letters were written in the Summer 1993 term at Oklahoma State University.

The purpose of this assignment is to allow ESL students to compare the writing of a native speaker with that of a nonnative speaker. Class discussion would precede and follow the reading of the letter.

The second set of assignments (p. 25), deals with the concept of "audience." In the first part of the assignment, students are asked to write a letter to a friend asking about a job opening that was advertised in the newspaper.

The letter can be as long as the student wants. All they have to do is write to their friend and ask for information about the job.

The second part of the assignment asks the student to write a letter of application to the company whose job listing was advertised in the newspaper. This letter is to be no more than one page in length. The student is to introduce himself to the personnel manager and ask for an interview. Upon completion of both letters, students will discuss the differences in the two letters and how it affects what they write. This exercise, although somewhat simplistic, is intended to show students how a different audience affects the writer's style and tone.

A third set of assignments (p. 26) deal with the directness that many international students find confusing and difficult to master. Two paragraphs without a topic sentence are presented. The goal is for the students to write a topic sentence for each paragraph by themselves and then compare it to their classmates' answers. Variation is expected in the answers, and desirable. The variation shows students how information can be misinterpreted without a guiding statement of purpose.

Letter writing assignments are from the course packet for ENGL 3323. The letter of introduction, however, has been dropped from the syllabus and is no longer included in the list of assignments. Use of the letters for the purpose of teaching international students sheds a different light

on their reasons for being written. They serve as a model of both native and nonnative speakers' style of writing. In addition, they serve as an example of business letter format which is used by technical writers.

The process approach can be integrated into any of the exercises by allowing nonnative speakers to revise their writing. For instance, the "recasting" method that Leki (1990) speaks of can be used as a method for helping second language learners improve their writing.

Letter of Introduction: Assignment

You will write a letter introducing yourself to your instructor. You do not need to limit your letter entirely to these five points, but be sure to include the following:

- What is the purpose of the letter?
- What is your major and, if appropriate, minor? Why did you select these areas? What kinds of problems would you like to solve when you are employed later?
- What kind of job do you want after graduation? Can you give a job description? What kinds of communication skills will you need for that job?
- What other communication courses have you taken in college (freshman composition, speech, other)?
- Why did you take this course? What specific areas do you want to work on?

Letter of Introduction: Outline

Introduction

- Identify why you are writing this letter (topic/purpose)
- State the topics you will cover (plan of development)

Body

- Answer questions one through five in the course packet
- Follow the plan of development

Conclusion

- Ask the reader to take some form of action with the information you've given.

On the following pages are two letters, from the same class, which were written in response to the assignment. Read them and write down any differences you can find about how the writers completed the assignment.

- What is the most noticeable difference in the letters?
- What do you think causes this difference?

707 South Gray
Stillwater, OK 74074
June 14, 1993

Ms. Terry Zambon, Assistant Director
Technical Writing Program
Oklahoma State University
401 Morrill Hall
Stillwater, OK 74078

Dear Ms. Zambon:

I am writing to inform you of my reasons for enrolling in ENGL 3323; in addition, I wish to give you background information about myself (including past employment), my educational goals, and my employment goals for the future.

Before returning to college in 1989, I worked as a welder-fitter for 10 years in the Oklahoma City area. My jobs included working in a shop building pressure vessels for oil refineries (4 years), building road-building equipment (4 1/2 years), and building oil field drilling equipment (1 1/2 years).

While working as a welder, I enrolled in a Spanish language class at South Oklahoma City Community College. In the course of those language classes, my instructor invited me to visit his evening ESL class. During the first visit, he asked me to tutor an adult; for the next year I served as a tutor to adult Hispanics and my "class" grew to about a dozen students. Following that, I helped organize ESL classes at a Spanish-speaking church and also tutored in that program for another year.

I returned to college in January 1989 decided to return to college and graduated from the University of Science and Arts of Oklahoma in December of 1990 with a B.A. in English and teacher certification for secondary schools. In the spring of 1991, I applied for admission to graduate school at O.S.U. and was offered an assistantship. Moving to Stillwater in June of 1991, I began my M.A. in Teaching English as a Second Language (TESL).

Upon graduation, I hope to teach in a junior college ESL program or an adult education program that also stresses ESP (English for Specific Purposes); ESP includes business and technical writing. My ability to teach ESL in a junior college setting will be complemented by the addition of the knowledge I gain from taking this tech writing class and teaching tech writing in the fall semester.

I see the addition of Tech Writing to my resume as a complement to the TESL coursework and teaching experience I've already completed. I enrolled in your class in preparation for teaching technical writing in the fall semester. Besides becoming familiar with technical writing techniques, I am interested in the day to day instruction of technical writing content. Specifically, I am interested in your teaching methods, visual aids, lesson plans, grading criteria and day to day handling of the material and students.

Sincerely,

Frank Willoughby

522 Wentz Hall
Stillwater, OK 74077
June 14, 1993

Ms Terry Zambon
Assistant Director
Technical Writing
401 Morrill Hall
Stillwater, OK 74078

Dear Ms. Zambon:

With my pleasure, I would like to give you some information with which you could assist me to be an excellent technical writer. I think that this is a good opportunity for me to introduce myself to you and help you to know about my personal academic background and career goal, and understand the reason for taking this course.

I am an international student from Korea. Since my childhood, I have thought about what I was going to be, but it was not easy to decide. I have changed my mind so easily with my circumstances. When I entered a university in Korea, I finally decided that I would like to be an electrical engineer. As a freshman, I enjoyed my Korean style university life. But I wanted to know more about my major field with more experiments and better facilities. Also, I wanted to learn English as my second language for the age of international competition. Those are why I am studying here for an electrical engineering degree.

I want to work for an automobile company in Korea after graduation to compete with the famous Japanese manufacturers. To accomplish this goal, I need more knowledge, research and, especially skill of technical writing to write out reports of my research and to communicate with my fellow workers and all employees.

I have too many required semester credit hours to graduate, so I have not had a chance to take a course to learn technical communication. I know that I am a poor English writer and have weaknesses in all areas, and I could not find the best way to improve my writing skill. But I know my writing should improve to accomplish my future job successfully.

I hope that you come to know well my purpose of studying here and myself from this letter. I also wish that my writing skill will improve gradually by taking this course. With your great support, I think that I can achieve my wishes well.

Sincerely yours,

Wo Duc Li

Friendly Letter/Letter of Application/Audience Analysis

Write a letter to a friend of yours asking for information about a job listing you saw in the newspaper. Your friend works for this company and is well acquainted with its operations. He also speaks highly of the company and is happy working there. Your letter can be any length--there is no minimum or maximum length.

Next, write a letter of application to the same company, knowing you might get the job. You know that an opening exists, but your reader knows little or nothing about you until reading your letter. Be factual and do not make unrealistic claims or offers. This letter must be type-written.

After both letters are written, lay them side by side. Take a blank sheet of paper and answer the following questions.

- Is the format of the letter different?
- How are the salutations/greetings different?
- What is the difference in tone of the two letters?
- How are the writing styles different?
- Are there differences in the way sentences are written?
- Are the complimentary closings different? In what way?
- What is the most noticeable difference in the two letters?

When you have finished answering the questions, compare your answers to your classmates' answers. Were their answers different from yours? If so, how do you account for the differences?

Topic Sentence Assignment

The paragraphs below do not have a topic sentence. Your task is to write one for them. After you have written the topic sentence for your paragraph, compare it to your classmates' answers.

1. _____

Fortunately, of the many customers to whom credit is extended, perhaps less than 10 percent ever need reminding of their indebtedness. but for those few who do not pay promptly, you should design a series of letters that ask for payment with increasing insistence. Once the bill is overdue, probably four letters will do: an initial friendly reminder; a second friendly reminder; a tactful, insistent reminder; and a final demand. These letters can be spaced about three or four weeks apart.

2. _____

The buttons on the mouse enable you to tell Word for Windows when the mouse is correctly positioned on a menu, text, or a command. When you press one of these mouse buttons, some action occurs depending on the location of the pointer.

Discuss, with your classmates, the differences in answers.

- Who do you think had the best topic sentence? Why?
- How is your topic sentence different from your classmates'?
- What caused these differences?

After a sufficient amount of discussion, the teacher can write the original topic sentences on the chalkboard. Discussion can then continue as to what the original writer intended and what occurs when topic sentences are absent.

CONCLUSION

The role of technical writing instructors at Oklahoma State University is rarely perceived as being a position that requires knowledge of second language learners. However, in order to meet the needs of students as professionally as possible, teaching materials need to be devised and written that help teaching assistants instruct their ESL writers in American-style technical writing. The approach I have suggested uses models of technical writing from native speakers as well as nonnative speakers.

Using models (the product approach to writing), although looked down upon by many, remains a viable alternative to teachers who are concerned about the quality of their teaching methods. Not only must technical writing teachers instruct students in the techniques of good technical writing, they must also be able to pass on information concerning rhetorical differences between the writing of native speakers and nonnative speakers. In addition, cultural differences (e.g., circuitous vs. direct approach to the main idea) can also be pointed out through the use of models.

Second language learners in the classroom and in business and industry demand that teaching methods change in the classroom. Materials that address the language and writing needs of ESL writers need to be developed so the quality of technical writing instruction can be maintained. The necessity for proficiency in technical writing exists

not only in the classroom but also in business and industry. Numbers of nonnative speakers of English who are working in American businesses or deal with American businesses are steadily increasing.

In order to meet the future communication needs of business and industry, technical writing instructors must educate nonnative speakers in a manner that qualifies them to write effectively for their American employers and also write effectively to American audiences. The use of models to show how the rhetorics of different cultures vary is one way to begin educating nonnative speakers writing in their second language. The examples of assignments I have given are only the beginning of a more comprehensive set of teaching materials yet to be developed. At the heart of the matter, however, is the intent to educate ESL writers and train them to be effective technical writers.

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