Technical Writing and Beginning ESL Students: A Workshop Approach.

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Many international students who come to the United States to improve their research techniques and their written and oral presentations have little or no training in the English language. Such students might benefit from a program similar to that held at Oklahoma State University (Stillwater) in September 1981 for 12 Ecuadorian technicians. This four-session, 10-hour technical writing workshop was part of a larger program that also included intensive English language study. The workshop was team taught, but in general an English-as-a-second-language (ESL) instructor must have proficiency in the native language of the participants, some background in linguistics and teaching English as a second language, and knowledge of the field of specialization of the participants. Time constraints, the students' lack of proficiency in English, and their apparently low level of technical knowledge all affected what was covered in the workshop. Material was presented on transparencies and handouts in short units; and oral presentations were slowed down, simplified, and translated into Spanish. The results of the workshop were not quantified, but those participating in it felt that it was beneficial to them. (JL)
Internationals come to U.S. universities to learn improved research techniques and improved ways of presenting the results of their research. They are hampered by the fact that they come knowing little or no English and can remain here for only a short period of time. However, a workshop approach to present the basics of technical writing, though it primarily provides theory because the participants are not proficient in writing or speaking English, can be beneficial. A ten-hour technical writing workshop held at Oklahoma State University in September 1981 for Ecuadorian technicians was an example of this approach. It also provided information for the general application of this method and procedures to follow for those wanting to attempt such a workshop.

INTRODUCTION

Some internationals who attend universities in the United States to improve their research techniques and their written and oral presentations of the results of their research frequently come without any, or very little, training in English and can remain in the U.S. for only short periods of time. A technical writing workshop held at the beginning of their study to learn improved research techniques can be beneficial for such persons.
although the information presented must be primarily theoretical. However, material covering the basics of technical writing for persons involved in research (technical writing style, audience analysis techniques, outlines for progress and physical research reports, use of support graphics and visual aids, oral presentations of technical information) can be practical and meaningful.

In this paper, I will discuss a four-session, ten-hour technical writing workshop held at Oklahoma State University, Stillwater, Oklahoma, in September 1981 for twelve Ecuadorian technicians. I will describe the participants, the instructors, the material presented, and the procedures followed. Each section will contain a discussion of the specifics of the workshop as well as general applications and recommendations.

THE PARTICIPANTS

The twelve men participating in the workshop were Ecuadorian technicians who had two-year associate degrees and who were at Oklahoma State University (OSU) for six months to be trained to fill project co-ordinator positions. Employed by INIAP (This translates as National Agricultural Research Institute of Ecuador.), they were in the research branch of the Ecuadorian Ministry of Agriculture, in what would correspond to our Department of Agriculture. Their field of study was agronomy--field crops, particularly potatoes. Although most had considerable practical experience, they needed to learn techniques for doing proper agricultural research: the library literature search preceding an experiment and the procedure for conducting a valid/
reliable experiment. Furthermore, they needed to know how to present the results of their research in written form and in oral presentations. Part of their work involved making reports to the administrators of the extension work they did: In addition, they worked with local farmers, both informally on a one-to-one basis and formally during what were called field days.

Ten of the twelve had no, or very little, training in English. And, when they returned to their country, they would primarily use Spanish. However, they needed English proficiency in listening comprehension and speaking as most of their classes would be conducted by professors who spoke only English. In addition, they needed English proficiency in reading and writing because much of the scientific literature in their field is in English and they would need to use English in their reports presenting their research.

The Ecuadorians were in Stillwater, Oklahoma, for six months (June 1 to November 23). The first two months they studied English intensively at the English Language Institute (ELI). The following two months they spent three days a week at ELI and two days in programs arranged by the OSU Agriculture Department. The final two months they attended classes full time in the OSU Agricultural Program. My workshop was part of the classroom work held at the beginning of the third month they were in Stillwater.

Although hampered by their lack of proficiency in English, internationals such as the ones I have described are usually quite eager to learn. What may be outdated information to us may
be novel to them. What we may consider as basic knowledge concerning the proper procedure for reporting technical research may be completely new to them.

THE INSTRUCTORS

I led the workshop with Steve Moore, the Director of the Project and the one responsible for co-ordinating the participants' classroom work. I've experience teaching university-level technical writing as well as doing technical writing and editing in a non-academic environment. I also have limited experience in linguistics and teaching English as a second language (TESL). Steve is an OSU graduate agronomy student who has moderate proficiency in Spanish. He had studied Spanish as an undergraduate, and he completed an intensive ten-week Spanish program during the summer just before he began directing this project.

The instructor for workshops for beginning English as a second language (ESL) students needs:

1. to have proficiency in the native language of the participants (at least listening comprehension and speaking proficiency), or, as in this case, to team teach with someone who does,

2. to have some background in the fields of linguistics and TESL, as I do, or have access to someone who does, and

3. to have knowledge of the field of specialization of the participants, or to team teach with someone who does, although having this knowledge is not as essential as
having the first two qualifications listed.

A bit more needs to be said about the second qualification given. Knowing something of the cultural expectations of the participants can help the instructor establish rapport with them. For example, certain body movements or gestures not offensive in our culture may be offensive to those from another one. Also, knowledge of TESL techniques helpful with beginning ESL students, can greatly facilitate communication in what at best is a very difficult situation. For example, an instructor needs to know to present material both visually and orally, to paraphrase using synonyms, to use basic vocabulary, and to slow down his rate of speech although not to talk down to the participants.

MATERIAL PRESENTED

Session 1. Thursday, Sept. 10, 2 - 4:30

Technical Writing
  A general definition
  Various writing styles compared
  Examples of items involving technical writing
  Some attributes or characteristics of technical writing

Audience Analysis
  Expert
  Layman
  Operator

Technical Writing Style
  Diction or words
  Sentences
  Paragraphs

Session 2. Tuesday, Sept. 15, 2 - 4:30

Formal Reports
  The proposal
  Physical research reports
  Feasibility reports
  Summaries/abstracts
  Progress reports

Technical Writing Style
  Other matters
Session 3. Thursday, Sept. 17, 2 - 4:30

Numbering Systems/Captions
Support Graphics
   Tables (informal and formal)
   Figures
      Graphs (bar, line, pictographs)
      Charts (pie or circle, organizational flow)
   Diagrams/drawings
   Photographs
   Samples

Session 4. Tuesday, Sept. 22, 2 - 4:30

Oral Presentations
   Preparation
      The presentation
         Voice/movement/other
         Visual aids
      An outline
      Matters to be evaluated
   Technical Writing Style
      Some exercises
   Question Period

The preceding outline indicates the material presented at the various sessions. Ten hours did not provide sufficient time to cover all that Steve and I originally thought should be covered. The participants wanted the parts on support graphics and oral reporting expanded to two sessions, instead of being covered more briefly in one session. Moreover, English proficiency was not as great at the time of the workshop as we had earlier anticipated it would be. Accordingly, discussion of some of the material was not practical: information concerning definition, description of a mechanism, description of a process, instructions, and classification was omitted. Also, writing exercises on technical writing style were done for only a short time. The students may have found the sections on graphics and oral presentations of most value, in part because such material may be more easily understood by a person with limited proficiency in
English.

I had anticipated that the general material on technical writing might not be of great interest and that it would be necessary to cover the material very briefly. However, what I thought to be basic, simple information turned out to be a great revelation to them. They were also quite intrigued by the audience analysis techniques that I presented. Analyzing an audience and then adapting the written and oral presentations accordingly was a new approach. Although all the information listed for Session 2 (Report Writing) was covered, most of the time was spent on the outline of a physical research report and the progress report. The participants wanted detailed explanations of what went into the different sections. The final two sessions were devoted to support graphics and oral presentations.

PROCEDURE FOLLOWED

The ten-hour workshop was divided into four two-and-a-half hour meetings. The first met on a Thursday, the second and third on the following Tuesday and Thursday, and the last one on the subsequent Tuesday. The times were selected to fit into my schedule and that of the students. However, it turned out that the arrangement was a good one. After discussion with Steve, I prepared an outline of what material we thought should be covered in the workshop. After the first session, it was obvious that some material would need to be presented sooner than I had planned, some eliminated, and some expanded. For example,
since these men had to submit progress reports and physical research reports to their administrators and would be writing an even greater number of these reports when they assumed responsibility as project co-ordinators, they wanted information about the proper formats and procedures to use in writing the reports. At the same time they were very interested in simple visual aids and oral communication of technical material because they spent much of their time working with the farmers in their country trying to improve farming methods and increase crop productivity. They face resistance from the farmers in applying new methods in agriculture and want to be able to convey their knowledge as effectively and as clearly as possible. They needed to know audience analysis techniques for the expert, layman, and operator to help them with their administrators and the farmers they work with.

It was helpful to have four days between the first and second sessions to allow for needed changes. During the second and third sessions that came close together, I tried to present what I felt to be the most essential information. The four-day break between these sessions and the final one gave me time to determine the most important material not yet covered and to select the most effective way of presenting the material. The longer break before the final session again allowed for changes to be made according to what the participants indicated they wanted.

I used transparencies outlining and/or summarizing everything presented. Occasionally, I put additional material on the blackboard. Originally, I had planned to have handouts of the
material contained on the transparencies not distributed until the end of each session, or even at the end of the workshop. That way the students would be more apt to try to understand my oral presentation than to rely on the written handout. (Steve wanted me to conduct the sessions in English. My workshop was to serve as another way of increasing their English proficiency, and he didn't want to just translate what I was saying.) Nevertheless, Steve felt that, though not normally recommended, it would be best to distribute the handouts as the material was covered. Then the participants would have my oral presentation and his Spanish paraphrase supplemented by the transparencies and the handouts. His work with the students had indicated the weakness of their English listening comprehension.

I presented the material on the transparencies in short units of thought. Then Steve would paraphrase my remarks in Spanish. Although Steve had the handouts, he found it helpful to jot down my key ideas as I talked. The students asked questions, through him, as needed. Having copies of the material to be covered before the sessions gave him opportunity to think of examples relevant for these particular men and to be sure that he knew the necessary Spanish vocabulary.

Besides using the transparencies and handouts, I adapted my oral presentation: it was necessary to slow down greatly the rate of my delivery, to keep my sentences quite short, to use both simple words and synonyms, and to paraphrase frequently. Steve's illustrating major points with examples relevant to their field facilitated their understanding the material.
We relied greatly on immediate feedback from the students. Although, as I indicated earlier, there was revision of my original general outline of what material was to be presented at each session between sessions, there was also constant revision during the sessions. Sometimes Steve and I would decide almost as I conducted the workshop the order of the major units. It was necessary to be prepared to present any of the major information whenever the time seemed appropriate. I had to be flexible and well prepared.

About halfway through each session, there would be a fifteen-minute break for the participants. During this time Steve and I often made changes in what was to be covered during the time remaining. Usually, I would continue the workshop past the four-thirty ending point. However, no matter what was being covered nor how much the participants were interested in the information, five o'clock marked the end of the session.

CONCLUSION

Following my workshop, the participants worked on an individual research project. Most of them wrote a written report presenting the results of their project, and all but two gave oral reports. Ideally, I should have evaluated both reports and conducted a follow-up session, but in this case it was not possible to do so. At the end of the workshop, the Ecuadorian technicians indicated that they benefited from the experience, but no quantitative data was gathered to verify their subjective appraisal. Nonetheless, I strongly encourage qualified instructors'
to use this workshop approach for internationals whose English proficiency is weak and who will be able to attend an American university for only a short period of time. Through workshops such as the one I gave at Oklahoma State University, internationals can learn the basics of presenting technical/scientific research in written and oral reports.