MinneTESOL
Journal

Minne*TESOL* Journal

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Editorial Policy

The MinneTESOL Journal seeks to pubish articles of importance to the profession of English as a second language in the state of Minnesota. Articles in the following areas are considered for publication: instructional methods, techniques, and materials; research with implications for ESL; and issues in curriculum and program design. Book reviews and review articles are also welcome. Submit manuscripts to the Editor, MinneTESOL Journal, Program in ESL, 116 Klaeber Court, University of Minnesota, 320 16th Avenue Southeast, Minneapolis, Minnesota 55455.

Manuscripts

Manuscripts should conform to the guidelines of the TESOL Quarterly. Submit two copies of each manuscript, along with two copies of an abstract of not more than 200 words.

Advertising

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FOREWORD

The English needs of refugees, English for vocational purposes, and English for academic purposes dominate this issue of the MinneTESOL Journal.

Catherine Robinson addresses the special problems that many refugees have in using English on the job in our first article, "Preparing LEP Students for On-the-job Training." Focusing on the needs of students with very limited English and little understanding of expected behavior in the workplace, Robinson describes some of the language skills workers need and presents classroom exercises designed to help learners acquire those skills.

The same general concerns — English for the workplace and the needs of refugee students — are addressed by John Marston and Adele Hansen in our second article, "Clinically Speaking: ESP for Nursing Students." Marston and Hansen describe the English component of a program which had as its ultimate goal the improvement of health care for Southeast Asian refugees. They focus on the curriculum they developed, materials and methods they found useful, and problems they encountered as they tried to provide their students with the very special communication skills nurses must have both for training and for performing on the job.

Needs assessment in an English-for-academic-purposes program is the subject of Karen Sorensen's article, "Modifying an ESP Course Syllabus and Materials Through a Teacher-planned Needs Assessment." Through a process that included faculty interviews and an analysis of papers written by students in agriculture courses, Sorensen was able to modify her class syllabus to meet the needs of a group of students preparing for advanced study in agricultural fields. Sorensen's description of her research includes examples of specific problems that non-native speakrs may have in writing for a specific purpose at an advanced level.

Colleen Meyers and Diane Erdmann are also concerned with English for academic purposes, particularly with lecture comprehension, in their article, "Using a Sensitive Topic in Teaching Lecture Comprehension." Meyers and Erdmann report

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on the experience of an advanced listening class the with topic of child abuse, arguing that the benefits of using such a sensitive topic outweigh the risks. They include a description of the three-day plan they built around a guest lecture on child abuse, a plan which emphasizes the importance of pre-listening activities.

EN

PREPARING LEP STUDENTS FOR ON-THE-JOB TRAINING

Catherine Robinson

For LEP workers and especially for many Indochinese who have fairly low English skills and little understanding of American culture, initial on-the-job training presents special challenges. This paper briefly discusses the kinds of problems LEP workers experience during training and outlines a set of language functions which can help workers communicate more clearly and easily on the job. Finally, a series of hands-on training exercises is described which can help LEP workers become familiar with the training process and give them the opportunity to use the communication strategies they are learning.

INTRODUCTION

In the past three years the ESL staff at the International Institute of Minnesota has been working to broaden its curriculum to include competencies which prepare students to function successfully on the job. Of special concern have been the needs of Indochinese students, many of whom face the prospect of beginning entry-level jobs with a minimum of English and almost no understanding of the American workplace. In order to assess student needs, a number of sources were used. Of particular help was a survey of employers done by Literacy 85, which identified the types of problems LEP workers have on the job (Literacy 85 1983). Other sources used were articles on the

Catherine Robinson teaches ESL at the International Institute of Minnesota.

language demands which LEP workers face as they first learn
their   job   and   as   they   move   through   different   stages   of
employment (Gage and Prince 1982, Jupp and Hodlin 1978).   Also
useful were needs assessments conducted by the International
Institute for their own on-site VESL classes.
        Analysis of the above material revealed that one of the
most pressing problems LEP workers face is their inability to
communicate clearly during training.   Two behaviors commonly
cause communication problems: 1) workers' failure to indicate to
supervisory personnel that they do not understand instructions and
2) workers' reluctance to ask for help when they are having
problems with their work.   Although LEP workers are generally
efficient once a particular task has been learned, they find it
difficult to deal with even small changes in standard procedures
or   with   other   types   of   redirection.   These   lapses   in
communication not only cause frustration for trainers and workers
alike, but also waste valuable production time.

COMPETENCIES FOR BETTER COMMUNICATION

        In order to overcome the problems described above, students
need to recognize situations where communication can break down
and then learn language which can either help avoid the situation
or overcome a communication problem when it arises.   However,
in working with LEP students, especially Hmong and Cambodians,
we   have   realized   that   it   is   necessary   not   only   to   teach
appropriate language, but also to give students an understanding
of the American work culture and its expectations.   In this
paper, language competencies for improving communication during
training are presented.   The first set of competencies deals with
what workers should do when they don't understand, the second
with asking for help, and the third with coping with redirection.
Following each description of competencies, training exercises for
practice are presented.   In these exercises, which were primarily

designed for beginning to intermediate level Indochinese[1], students are instructed in how to complete simple tasks and must use the competencies learned to communicate with their teacher in order to successfully complete the practice training session. As students participate in these exercises, they gain confidence and experience using new language, become familiar with many on-the-job procedures, and also have an opportunity to put newly learned behaviors to work.

Competencies for What to Do When You Don't Understand
     When workers cannot understand or follow the training process, there are a number of strategies they can use. Asking the trainer to repeat something is especially useful, provided the trainer slows down his speech or paraphrases instructions using simpler words. However, once something has been repeated and workers still don't understand, they must become more specific in their inquiries, by indicating, as clearly as possible, the source of their misunderstanding.

     Example:

     Trainer: Write the name of your native country in the top
                 right-hand corner.

     Worker: Can you please repeat that?
                Please repeat that more slowly.

     Trainer: (Trainer repeats.)

     Worker: I don't understand that.
                I don't understand "native."

     Responding clearly to a supervisor's inquiry about whether

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[1]This level is equivalent to the new Minnesota State
Department Levels 3 and 4.

something has been understood is also extremely important for
good communication. Our sources indicated that supervisors and
lead workers find it especially frustrating when workers pretend
that they understand. "He's always saying 'yes,' but I never
know if he really understands" — this is a common lament of
training personnel. Yet a simple response can let a trainer know
that the worker does not yet understand what to do.

Example:

Trainer: Fold it like this. Do you understand?

Worker: No, I'm not sure. Can you show me again?

Although indicating lack of understanding is of primary
importance while following instructions, letting one's trainer know
that he is being understood also goes a long way toward
improving communication. Saying "Okay" after each step is
explained lets the trainer know that the process is being followed
and that the trainer can continue with the explanation. (At the
same time, of course, it is important to stress to students that
workers should never indicate comprehension if they don't really
understand.)

Example:

Trainer: Put it through here and then around here.
            (Trainer demonstrates.)

Worker: Okay.

Trainer: Then thread from left to right. Any questions?

Worker: No, I get it.

Seeking clarification helps workers make sure that they
have understood. Workers should be encouraged to repeat
important information and to ask short information questions.

Checking that a task has been done correctly also improves communication.

Example:

Trainer: You need one-half cup cleaner and one gallon of water.

Worker: One-half cup cleaner and how much water?

Trainer: One gallon.

Worker: Is this right?   (Worker fills bucket.)

Trainer: Yes.

Training Exercises for Practicing What to Do When You Don't Understand
Before describing this exercise, it is important to remind teachers that training exercises are meant to be used as final communicative activities. New competencies are usually introduced in conversations and, once understood, are practiced individually before doing training exercises in which students are required to use a variety of competencies.
In this training exercise students will need to use the following competencies:

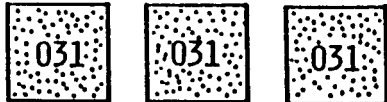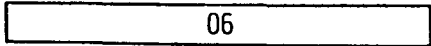-Indicating understanding or lack of understanding

-Asking for information or for a repetition of the demonstration of a task

-Seeking clarification by repeating important information or by asking information questions

-Asking for work to be checked

Materials for this exercise are pictured in Figure 1.[2]   They
include a grid and colored squares which are referred to as an
assembly board and parts, respectively.

Figure 1:   Assembly Board and Parts

In this exercise, the teacher gives an instruction such as
"Put a large black square at B4."   The student's task is to
assemble the board according to the teacher's instructions by
placing the parts in the correct positions.   If, at any time, the
student cannot follow the teacher's instructions, he is to use the

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[2]These exercises and the materials for performing them appear
in Speaking Up At Work (Robinson and Rowekamp 1985), a VESL
text developed at the International Institute of Minnesota.

competencies he has learned to communicate with the teacher in order to successfully complete the task.

Since the goal of this exercise is to teach students to cope in situations where not everything is understood, vocabulary used in the instructions — such as place, connect, remove, center, upper right-hand corner — should not be explained before beginning the exercise. Although most students are accustomed to having vocabulary pretaught, they are quite accepting of this procedure if the teacher emphasizes that in their daily lives, and especially at work, they will often not understand all that they hear and that this practice will prepare for just that kind of situation. It is important that students learn that they can function in situations where there are unknowns, and that they realize that they can complete a task even though they don't initially understand everything.

This exercise can be done with the whole class, but students will get more opportunity to interact with their teachers if small groups are used. The following training segment gives examples of instructions and of the kinds of student responses teachers can expect. Figure 2 shows what the student has produced at the end of the training segment.

Training Segment:

Teacher   Place a large black square at D5.

Student #1:   At D5?

Teacher: Right. Now put a small gray square in the center of A1.

Student #2:   Ann, I don't understand that.

Teacher: Put a small gray square in the middle of A1.

Student #2:   Like this? (Places square in the center of

A1.)

Teacher:	That's right. Now use your long connector and connect the gray and the black squares.
Student #3:	Can you please repeat that?
Teacher:	Use your long connector to connect the gray and black squares.
Student #3:	I don't understand "connec ...."
Teacher:	I want you to use this connector (shows worker connector) and connect the two squares like this. (Shows connecting.)
Student #3:	I see.

We find that many of our students, especially the Hmong, either because of their limited English skills or perhaps because of their cultural background, are somewhat reticent about indicating lack of understanding. For these students, perhaps the most important lesson learned through these exercises is that it is their responsibility to indicate when something is not understood, and that teachers and future trainers will expect this behavior. Continuing to encourage students to use these competencies on an on-going basis in the classroom can also help them internalize newly learned behavior.

Figure 2:   Partially Completed Assembly Board

Board #_____

Competencies for Asking for Help

Once the trainer has explained and/or shown the worker what to do, the worker can begin to work independently. At this stage, asking for help and being able to explain problems are necessary skills. To get help, workers need to get their trainer's attention and then ask for assistance by stating what their problem is or by asking a question.

Example:

Worker: Stan, can you help me a minute?

Trainer: Sure.   What's up?

Worker: I don't know how to change this needle.
            I can't fill out this form.   What do I write here?
            I'm not sure what to do now.
            Do I cut here?

During the trainer's explanation, workers indicate their lack
of understanding, ask for repetitions and seek clarification as
described previously.   They may also want to ask their trainer to
watch them do a task to make sure they understand it.

Example:

Worker: I can't thread this machine.

Trainer: Let me show you.   (Trainer demonstrates.)   Do
            you understand?

Worker: I'm not sure.   Can you show me again?

Trainer: Sure.   (Trainer demonstrates again.)

Worker: Okay.   Can you watch me do it?
            (Trainer observes as worker completes the task.)

Training Exercise #1 for Practicing Asking for Help
        To practice asking for help it is useful to use simple tasks
of two or three steps.   Activities such as running a tape
recorder, loading a stapler, changing batteries, threading a sewing
machine, or running a ditto machine work well.   In this exercise,
students will be practicing the following competencies:

        -Getting the trainer's attention and asking for help
        -Stating the problem
        -Requesting redemonstration
        -Asking the trainer to watch them complete a task

As mentioned previously, it is important to practice individual competencies before attempting the training exercise. In this exercise, stating the problem is the most difficult part and can be practiced by passing out the items which the students will eventually be using for the training exercise and then practicing sentences like these:

     I can't thread this machine.
     I don't know how to change these batteries.
     I can't fill out this form.
     I don't know how to use this tape recorder.

The training exercise consists of having students ask the teacher for help with one of the above activities. Students should then use as many of the new competencies as are needed to learn the activity the teacher is demonstrating.

Training segment:

Student: Excuse me, Ann. Can you help me a minute?

Teacher: Sure. What's the problem?

Student: I don't know how to thread this machine.

Teacher: Okay. First you put the thread here. Then it goes through here and then here. Next it goes under here and you have to pull up like this.

Student: Can you show me that last part again?

Teacher: It goes under here and then you pull up.

Student: Okay.

Teacher: Then through here and here. And now you thread the needle. You have to thread from left to right. Any

questions.?

Student: I think I get it. Can you watch me do it once?

Teacher: Sure. (Trainer observes completion of task.)

Training Exercise #2 for Practicing Asking for Help
        Another activity that workers often need help with is filling
out forms and dealing with paperwork.   Competencies for this
training exercise include:

    -Indicating   that   they   don't   understand   or   can't   read
    something

    -Asking what to write or put in a particular place

    -Asking how to spell a word

    -Asking if they should sign a form

        To help students practice these competencies before doing
the exercise, we use the cue cards which appear in Figure 3. A
student points to the item on the card and uses one of the
competencies to elicit necessary information.   For example, the
student points to <u>marital</u> and says: "I don't understand this
word."

Figure 3
Cue cards and responses

Cue card   Student response

| Marital status | or   I don't understand this
                      or   What does this (word) mean?
                                  I can't read this.

| ___?___ | or   What do I write here?
                                 What do I put here?

| S-O-L-D-I-E-R | How do you spell soldier?

| (signature) | Do I sign here?

        Once students have mastered this language, they are ready
to do the training exercise.   In the exercise, students use the
list of supplies shown in Figure 4 to fill out the accompanying
supply request.   As in the previous exercises, the teacher should
give the students a minimum of explanation.   For example, it is
not necessary to preteach new vocabulary on the supply list or
to explain abbreviations or particular numbers on the supply
request form.   Students are responsible for getting this
information from their teacher and should be encouraged not to
speak to other students during the exercise.   The biggest

challenge for teachers during this exercise is to wait patiently
for students to realize that they cannot complete the work
without getting assistance. Students will be working at their
own pace and will only ask about the items which they do not
understand.

Figure 4:   Supply list and supply request

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        ┌──────────────────────────────────┐
        │         SUPPLY LIST              │
        │  2 needles, #260                 │
        │  1 spool thread, #032, green     │
        │  1 zipper, #021, orange          │
        └──────────────────────────────────┘
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┌──────────────────────────────────────────────────────────┐
│              SUPPLY REQUEST FORM                          │
│      # _____        Dept. _____           │
│   Amount      Item name      Part #          Color        │
│   _____   _____   _____   _____     │
│   _____   _____   _____   _____     │
│   _____   _____   _____   _____     │
│   __/__/__                 _____             │
│                            (signature)                    │
│                            _____             │
│                            (signature)                    │
└──────────────────────────────────────────────────────────┘
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Training Segment:

Teacher: Please use this supply list to complete the supply
              request.   Please ask me if you have any questions.
              (Students begin working.)

Student #1   Ann, can you help me a minute?

Teacher: Sure.

Student #1:   What do I write here?   (Student points to the blank

after #.)

Teacher: You write your employee number.

Student #2:   Ann, what do I put here?   (Student points to the
              blank after "Dept.")

Teacher: Write your department.

Student #2:   How do you spell "production"?

Teacher: P-R-O-D-U-C-T-I-O-N .

Student #2:   Okay, thanks.

(Students continue working.)

Student #3:   Ann, what's this number? (Student points to "#260.")

Teacher: That's the part number.   You write it here.

Student #3:   Like this?   (Student writes in the number.)

Teacher: That's right.

Student #2:   Do I sign here?   (Student points to first signature
              line.)

Teacher: Yes.   You sign there and the supply room clerk signs
              on the bottom line.

Student: Okay.   Thanks.

     As in the previous exercises, new language as well as new
behaviors are being practiced here. Students must be encouraged
to take the initiative when they need help. They need to realize
that supervisory people are usually willing to help and that

ignoring problems and not asking for help can cause personal as well as production problems.

Competencies for Coping with Redirection

Redirection involves giving new instructions related to the current task a worker is doing, or giving instructions about other tasks which must be completed at a particular time. To cope with these kinds of situations, workers may need to use some of the strategies already discussed. Although it is virtually impossible to know what specific interruptions workers will encounter, it is useful for workers to be familiar with general vocabulary used for describing changes in procedures and with vocabulary for indicating the sequencing of tasks.

Common vocabulary for describing changes might include words such as substitute, change, and instead of. In the example below, notice how the worker indicates lack of understanding and seeks clarification.

Example:

Trainer: You'll have to change these. Use black squares instead of white.

Worker: Sorry, I don't understand.

Trainer: Take off the white squares and put black ones.

Worker: Black and no white, right?

Trainer: That's it.

In order to communicate clearly about the sequencing of tasks, workers must have a clear understanding of adverbs of time. During redirection, it is also important that the worker be able to state clearly when he will finish a current task and when a new task will be started.

Examples:

Trainer: Are you finished?

Worker: I'll be done in about 5 minutes.

Trainer: When you finish, I want you to bus tables 3 and
            7.

Worker: Okay.   (Worker finishes current task and then
            buses the tables.)

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Trainer: Jim, before you do the tables, get me some
            glasses from the kitchen.

Worker: How many?

Trainer: Eight.

Worker: Okay.   (Worker gets glasses and then buses the
            tables.)

Training Exercise for Practicing Redirection
    Before beginning this training exercise, it is necessary to
give students some practice understanding the sequencing of
tasks.   In this exercise, the teacher should have four to six
simple tasks available for students to do.   Props such as
filecards, brooms, rags and cleaners should be available for
students to use as they perform tasks such as putting cards in
alphabetical order, putting cards in numerical order, sweeping the
floor, erasing the blackboards, cleaning the windows.

The teacher should direct the students in the following manner:

Example:

Teacher: Phon, please put these cards in alphabetical order
            by last name.

Student: Okay.

Teacher: Sam, clean that window.

Student: Okay.

Teacher: Phon, when you finish that, clean this blackboard.

Student: Okay. (Phon completes cards and then does the
            blackboard.)

Teacher: Sam, before you finish that, get me the broom.
            (Sam stops working on the window and gets the
            broom for the teacher. He then goes back and
            completes the window.)

Once students have done the above practice, they can
attempt the training exercise which includes the following
competencies.

-Use strategies such as indicating lack of understanding,
requesting repetition, and using clarification to make sure
that redirection instructions have been understood

-Ask for help if written instructions are not understood

-Indicate when a current task will be completed and when a
new task will be started

-Understand when current and new tasks should be
completed

For this training exercise, students use the assembly board and parts seen in the first exercise (Figure 1). They will be working from the coded assembly plan in Figure 5, which designates the number of each part that must be placed on the board. As students work to complete their boards, the teacher will move among them and indicate changes that they should make on their boards and also direct them to do different tasks. The activities previously used to practice the sequencing of tasks can be used for redirection. Whenever necessary, students should use previously learned competencies to get help with their work.

Figure 5
Coded assembly plan and partially
completed assembly board

Board # 306

	A	B	C	D
1	021	031	041	
2	04	04	03	
3	041	021	031	
4		04		
5	03 03			031

Board # 306

	A	B	C	D
1	021	031	041	
2	04	04		
3				
4				
5				

Training Segment:

Student #1: Is this right?   (Student places part 021 at A1.)

Teacher: Yes, that's right.
             Keng, have you finished row 2?

Student #2: Not quite.

Teacher: When you finish it, I want you to put these cards in
             alphabetical order by last name.

Student #2: By last name?

Teacher: Right.

Student #2: Okay.   (Student completes row 2 and then does the
             cards.)
             I finished the cards.

Teacher: Thanks.
             Shoua, you'll have to change C3.   Substitute a black
             square instead.

Student #3: A black square?

Teacher: Right.
             Ana, please change the order in row one.   Put
             white-gray-black instead of black-gray-white.

Student #4: I don't understand that.

Teacher: You   have   to   change   these   two.   (Teacher
             demonstrates.)

Student #4: I see.

Besides offering students useful practice dealing with redirection, this exercise teaches the important lesson that being flexible on the job is essential. Students need to understand that it is unusual for workers to be able to sit and do one job all day. They need to realize that the workers who are successful are those that can cope with changes and be redirected easily.

CONCLUSION

For our students, the most important function of these exercises is as a model of appropriate on-the-job behavior and as a vehicle for practicing this newly learned behavior. In our classes, we attempt to help students acquire the confidence that, although they may not know as much English as they would like, they can still cope in situations where communication is difficult. We also try to help students understand that to avoid speaking English by pretending that something has been understood, or by not asking for needed help is self-defeating because it can alienate supervisors and coworkers and because the opportunity to use and to improve one's English is lost. It is often not easy for many of our Indochinese students to take the initiative and use these new competencies when it is appropriate. For these students, training exercises, combined with constant reinforcement of competencies during other classroom activities, can be a first step in equipping students with the communication skills and the sense of responsibility they will need during on-the-job training.

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CLINICALLY SPEAKING:
ESP FOR REFUGEE NURSING STUDENTS

John Marston and Adele G. Hansen

This article describes the English component
of a project aimed at training licensed
practical nurses.   Included are a brief
description of the training program, a more
detailed description of the ESL curriculum,
and a discussion of materials and methods.
Finally, problems confronted during the
project are discussed, among them the
scarcity of suitable materials, the need for
communication between the technical staff
and the ESP staff, and the lack of an
appropriate   means   of   measuring   the
students' progress.

EARLY DEVELOPMENT OF THE PROGRAM

Since 1975, Minnesota has been one of about a dozen states
most actively involved in programs for the initial placement of
refugees, and in the late seventies waves of secondary migration

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from around the United States brought even more refugees to the
Twin Cities of Minneapolis and St. Paul. This strained social
service capacities. Health care facilities found themselves beset
with large numbers of non-English-speaking clients who knew
little about American medical practices. In an effort to solve
the communication problem, a network of refugee interpreters
was organized. However, the use of interpreters was seen as a
temporary measure and there remained the long-term problem of
how to educate the refugee population about American health
care attitudes and practices. Health care providers agreed that
part of the answer would be the hiring of bilingual health care
professionals; but few qualified individuals were available.
Although a large number of area refugees had formerly been
health professionals or paraprofessionals, a series of factors
inhibited those individuals from entering health care training
programs. Among those factors were limitations in English
language proficiency and in financial resources.
        Dr. Amos Deinard of the University of Minnesota Department
of Pediatrics (UMDP) began exploring the idea of organizing some
type of training program which would aid those refugees in
redeveloping their health care skills, ultimately in order to help
the refugee community at large. Together with the American
Refugee Committee (ARC), a locally-based non-profit agency,
UMDP submitted a proposal for funding such a program to the
Department of Health and Human Services. A group of Southeast
Asian refugees were to be retrained as Licensed Practical Nurses
(LPNs). The two sponsoring agencies would recruit students,
provide up to one year of education, and assist trainees first in
obtaining licensure and then in finding employment. At the same
time, ARC submitted a second proposal -- a request for Targeted
Assistance funds from the Hennepin County CETA office. ARC
proposed a Health Occupations program which would assess, train,
and place thirty area refugees within an 18-month period.
        The proposals for training or retraining health professionals
had as their overall goal the eventual placement of bilingual
professionals in area health care facilities. The funds were
forthcoming and the projects combined to form one program, the
first of its kind in the United States.

The Minneapolis Area Vocational Technical Institute (MTI) was contracted to develop a special practical nursing program to meet the needs of a refugee population. The program would follow the same course of study as the school's regular LPN program, but classes would be offered late in the afternoon and in the evenings to accommodate those refugees already holding full-time jobs. Because UMDP and ARC recognized that the refugees' language proficiency might cause problems in their technical studies, an English as a Second Language course was added to the technical curriculum. The Minnesota English Center (MEC), which organizes ESL programs at the University of Minnesota, was contracted to provide a component of English for nursing science.

Notices about the program were distributed to social service agencies and refugee organizations. Sixty-one refugees indicated an interest in the program. MEC helped to develop an initial screening interview to assess potential candidates' language proficiency. The interview consisted of several questions, some of a general nature, others more specific, about educational background and technical experience.

The candidates were then given the Minnesota Battery, a series of language tests consisting of the Michigan Test of Aural Comprehension (forms 1-3), the Michigan Test of English Language Proficiency (forms G and H), and the Minnesota Composition Test. In order to assess the general educational background of the candidates, MTI administered three additional tests: the Structure Test of English Language (STEL), the Gates-McGinnity Test of Reading Comprehension, and the MTI Math Test, a general math test consisting of 24 problems in basic math.

On the basis of all the test results, but with particular weight given to the Michigan Test of Aural Comprehension, the students were divided into two proficiency groups. The upper group of students had STEL scores above 500 and Michigan Aural Comprehension scores above 70 (List and Deinard 1984:4).

IMPLEMENTATION OF THE PROGRAM

In March, 1984, forty-two students began a one-month intensive academic program to further determine their scholastic abilities. In addition to Lao, Hmong, Vietnamese and Cambodian refugees, the group included three Eastern European and two Ethiopian refugees. Courses in medical terminology, reading, math, and ESL were offered four hours per evening, five nights per week. At the conclusion of this pre-vocational program, the students were individually evaluated by the staff. The staff determined that all of the students were capable of studying in the nursing program, although several students were identified as having limited English proficiency. At this time, students were redistributed in the two groups in an effort to maintain a more consistent level of language ability within each group.

The nursing program was structured so that the first quarter of instruction consisted of an introduction to nursing principles and practices, a clinical experience in a long-term health care facility, and a three-week nursing assistant course. Plans were for all the students to complete the nursing assistant course and obtain nursing assistant certification, even though some of the students might not be able to master the academic materials needed to complete the practical nursing program.

MTI requires that its regular LPN students either possess a high school diploma or pass a high school equivalency exam (GED) before admission. At the request of program sponsors, this requirement was suspended with the condition that the refugees would have to possess this credential before graduation. The ESL instructors were asked to incorporate GED practice material into the language curriculum.

In April, 1984, thirty-three students began the practical nursing program. (Nine of the original group had chosen to study elsewhere.) Their course of study began with one hour of English and three hours of technical coursework per evening, four nights per week. The English instructors decided to spend two hours per week on special purposes English with the remaining two hours spent on developing skills needed to pass the GED. The first clinical experience was scheduled to begin midway

through the first academic quarter.

Although the technical materials used in this program were the same as in the school's regular LPN curriculum, technical instructors modified their lectures to meet the needs of students with limited English. Lectures were simply presented, and all medical terms were written on the blackboard to assist in note-taking, ensure correct spelling, and reinforce pronunciation.

Testing technical knowledge was a problem at first. MTI requires all its LPN students to pass departmental standardized tests with a score of at least 80%. When the technical coordinator observed that the first test was very difficult for the refugees because of language complexities and American cultural references, the students were allowed as much time as they needed and were permitted to use an English dictionary during the following two tests. As the students grew more proficient in test-taking, the dictionaries were eliminated and time limits reinstated.

At the conclusion of the first quarter, the staff met to evaluate the students again and to assess the effectiveness of the program. It was noted that the group with the higher language proficiency was progressing at a much faster pace. Several members of the lower proficiency group had language-related problems which caused concern among the technical faculty. At this point, several of the lower-level language students were told that they could not continue in the LPN training program. They were given the option, however, of entering a three-week home health care aide training program, which would give them further job opportunities.

The staff also noted at this time that the rigorous schedule — academic classes every evening, with clinical experience on weekends — was creating a sense of "burnout" on the part of the students, many of whom already held full-time jobs. For this reason, the schedule was revised for the second quarter so that the students would only work at the clinical site on Thursday evenings and alternating Friday evenings or Saturdays. This change in schedule resulted in an extension of the length of the program. Instead of a year, the course would now take at least one and a half years to complete, in comparison with 46 weeks

for full-time MTI day students.

        As the second quarter began, a total of eighteen students
were still enrolled in the program. The higher proficiency group
received only one hour of language instruction per week, although
the lower group continued to study English one hour each night.
The clinical experience shifted to a surgical ward of a large
metropolitan hospital.

        The third quarter brought a reduction of English hours for
the lower group. They met two hours per week, with class time
spent on sharpening communicative skills. The higher group was
given the option of a one-hour language tutorial each week.
This would be the last quarter of English.

THE ENGLISH CURRICULUM

        Needs assessment is an integral part of ESP curriculum
planning.   Widdowson divides needs into two categories:
process-oriented needs — what the learner needs to do to acquire
the language — and goal-oriented needs — what the learner
needs to do with the language once it is acquired (1981:2). As
we planned our curriculum, we tried to obtain information about
both types of needs.   We interviewed nurses and nursing
instructors in an effort to learn more about the language of
nursing, both in training and on the job. We surveyed nursing
texts and manuals our students would be using, looking for
recurring structures and styles.   We also looked for ESP
resources which would help in our task.   Because the English
instructors would also be working with GED skills, we talked to
local adult education teachers who had experience teaching GED
material to students with limited English proficiency. We also
secured a GED practice test and GED review materials.

        Since our students were under the special constraint of
having to study for the GED at the same time as they were
studying technical material, we planned a two-part curriculum
including a GED component and a medical English component.
We also planned to separate the traditional four skills: the
receptive skills of reading and listening would be taught primarily

in the GED component, and the productive skills of speaking and writing would be taught primarily in the medical English component.

The emphasis in the GED component was more on language skills than on GED content materials. Those materials were used mainly as samples of English through which we could teach reading and listening. We hoped that exposure to the materials in this way would itself be preparation for the GED.

The medical English component was intended to give the students a facility with the kinds of grammatical structures and styles they would come into contact with in their nursing classes and to prepare them for the kinds of speaking they would have to do in their training and on the job. There was also a need to prepare the students for the special writing skills needed for "charting" — the writing of medical records referred to as charts. Schneller and Goodman (1983:2) estimate that as much as 20% of a staff nurse's work time is spent on writing, and much of this writing is chart writing. Moreover, charting is a difficult skill which must be taught even to native speakers. Charts are written not only with a specialized vocabulary, but in a specialized style. Techniques for charting have become more complex within the last several years as the traditional style of charting — "narrative" charting — has been partially replaced by "problem-oriented" charting. In this latter form of record-keeping, the nurse is asked to distinguish between the patient's subjective observation of his or her own condition and the nurse's own objective observations. The nurse must also give an assessment of what the observations mean and what kind of care is needed. Styles of charting vary from institution to institution, and the nurse must have a certain flexibilty within a system which is itself changing. The essentials of charting are, again, part of the nursing curriculum itself, and certain aspects of charting — the accuracy of what is written in terms of the condition of actual patients — can only be taught by nursing instructors. But we felt that we could be helpful in developing in the students a sense of vocabulary, style, and grammatical accuracy for charting. Later, we will give examples of materials we used to teach English for charting.

The curriculum for an ESP class might be expected to have as a specific component the teaching of technical vocabulary. Our curriculum, however, did not give a major emphasis to medical vocabulary. We did emphasize vocabulary in our work with charting (to be discussed further in the section on materials and methods), but we felt that our students' need to learn medical vocabulary was to a great extent met by the nursing curriculum itself. We found a greater need for us to spend time on the kinds of sub-technical vocabulary (for example, assemble, position, and record) that was equally an element in the writing of the students' nursing texts, but which a nursing instructor might not feel the need to explain.

CHANGES IN THE CURRICULUM

As we taught the class, our curriculum changed in a number of ways. First — as might be predicted — we found it impossible to maintain the separation of skills. In particular, the instructor of the medical English class, which was to have focused on speaking and writing, found that reading was too central to the medical English needs of the students to be ignored. The class came to rely heavily on an English for special purposes text, Nucleus: Nursing Science (Kerr and Smith 1978), which is organized around a series of reading passages. The instructor also found it helpful to work occasionally with passages he had selected from the nursing textbooks that the students were using; the prose in these texts was often very difficult for the students.

Second, there was more of a grammatical focus to the curriculum than we had planned. It is hard to make generalizations about the academic level of the students, but many of them had a background in English only in survival-skills English classes, not the type of classes aimed at academic preparation that students who are studying technical English generally have. This meant that, in addition to learning technical English, there was often a need just to learn English, and we worked on grammar in order to build a foundation on

which we could later build more technical language skills. Sometimes we adapted materials designed to teach grammar and gave them a more medical focus; other times we simply used standard language materials to teach grammatical skills.

Lastly, our curriculum changed in that we came to feel the need for an expanded curriculum aimed at the speaking needs of the students. In general, the understanding among language teachers of the speaking skills needed in nursing is still very limited, and much more study will eventually have to be done. Maybe the most obvious need was that of exercises designed to help students learn to make small talk, a skill which, for the low-level students, proved particularly difficult. We tried to include communicative activities in the form of role plays, informal question-and-answer sessions, and practice built around open-ended questions ("What would you do if...?") which the students were asked to complete and answer. (This activity was based on material in Jones and von Baeyer 1983.) Students were also asked to give short, spontaneous talks about particular problems they had had the previous week.

In an effort to familiarize students with the types of topics that could be used for small talk, we asked them to read newspaper articles and listen for news reports about the various artifical heart recipients. This proved to be a very effective teaching tool. It was an on-going story that was of interest to our students, and we could use tapes of the news reports for listening exercises. The news articles themselves could be used for reading practice. The stories also provided examples of the type of nontechnical medical language which we wanted our students to recognize.

MATERIALS AND METHODS

We would now like to discuss some specific examples of materials we developed for the project and methods that we found useful. In most cases, the materials and methods reflect our search for communicative frameworks relevant to a medical context that the students recognized through which we would be

able to practice specific forms and functions.   We will organize
the discussion according to selected teaching points: questions,
spatial   relationships,   relative   clauses,   procedural   description,
requests, and the language of charting.

Questions

At   the   very   beginning   of   the   program,   we   worked   on
question   formation.   After   reviewing   the   rules   for   question
formation and practicing them in simple exercises, we tried to
establish a link to situations in which nurses ask questions in
their   work.   We had the students role-play a situation in which a
nurse takes a patient's medical history.   First we went over a
simple dialogue representing the situation.   Then the students
worked in pairs.   One student was given a standard medical
history   card — the   kind   found in   a   clinic — with   information
filled in to represent an imaginary patient.   That student assumed
the identity of the patient, and the other student, playing the
role of the nurse, took the medical history of the "patient,"
filling the information in on a blank card.   In the process, the
"nurse" had to use most of the different question forms in order
to complete the blank medical history card.

Spatial Relationships

Our work on descriptions of spatial relationships likewise
aimed ultimately at finding contexts where the skills the students
were   developing   could   be   made   meaningful.   We   started   by
reviewing the meanings of various prepositions.   In a nursing
class the medical English instructor observed, the techniques for
working with blind patients that were being discussed gave him
an idea for an information gap exercise.   The students were
divided into groups of three, and one student in each group was
given a picture of a tray of food as it might be given to a
patient (see Figure 1).   The student was then given the task of
describing the position of different items on the tray as though
describing it to a blind patient.   The other students were asked
to draw a picture of the tray as the student described it to
them.   In actual work with blind patients, a nurse will often
describe the position of food on a round plate by telling the

patient what hour the food would be at if the plate were a
clock, saying, for example, "Your potatoes are at four o'clock
and your beef is at seven o'clock." The students were encouraged
to do this, but they were also encouraged to use different
prepositions to describe the position of other items on the tray
or items on a rectangular plate.[1]

Figure 1
Drawing for practicing spatial description
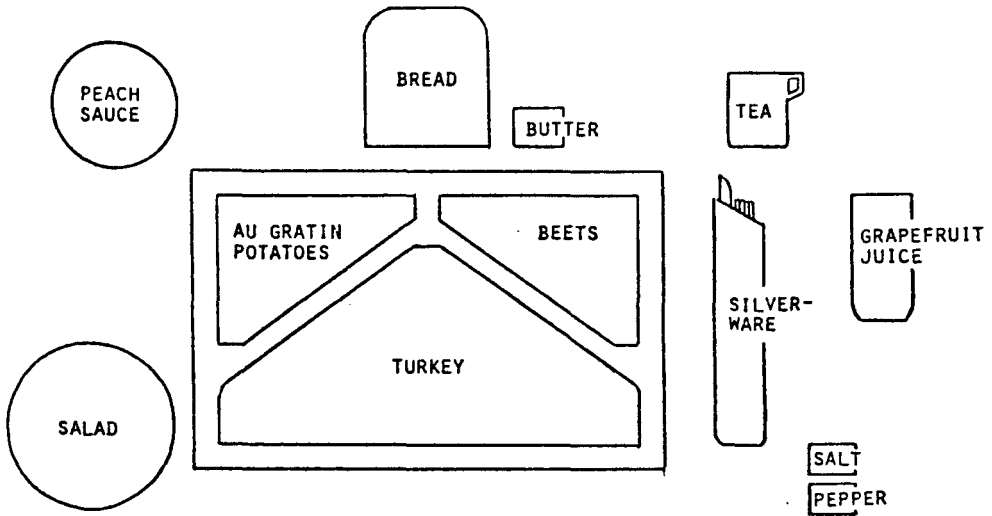
[1]In actual work with a blind patient, a nurse might be able
to avoid some of this verbal interaction. One student, who
was working as a nursing assistant, said that when she
served food to blind patients, she simply took their hand
and moved it to the positions of different items in order to
let them know where they they were. We do not claim that
an item practiced in an English class will always be the
most practical solution to a nurse's communication needs.
Nevertheless, the kind of verbal interaction that the stu-
dents practiced is something that could easily be part of
their communication.

We also did more traditional exercises relating to spatial relationships by working on the meaning of passive constructions such as is located, is divided, is connected to, is found, and is enclosed by/in. The students were encouraged to use these in descriptions of medical instruments and supplies. The more advanced students were given a passage from an anatomy textbook with constructions of this kind deleted, and were asked to fill in the appropriate term.

Relative clauses

The students worked with relative clauses in several situations. Relative clauses were used in the course of practicing definition formation. They were also used in more communicative exercises patterned after exercises described by Nelson (1984). In one such exercise, the student is asked to respond to a question that requires a choice of some kind:

You gave breakfast to one patient at 7:00. You gave breakfast to another patient at 9:00. It's 12:00 now. Which patient should you give lunch to first?

Possible responses to the question would include "The patient I gave breakfast to at 7:00" and "The one who had breakfast first." Another example:

One woman has high blood pressure. One woman has low blood pressure. Which woman has a greater risk of heart attack?

The student might respond with "The woman who has high blood pressure." By the nature of the questions, the students were encouraged to practice the formation of different kinds of relative clauses; but at the same time they were asked to make a meaningful choice, a choice that depended on information they had been studying in their nursing classes.

Another exercise relied on the same principle. In this exercise, the students were given a list of sentences about different patients:

One patient's blood pressure is usually high.
One patient refused her medication.
One patient left for surgery at 2:00.
etc.

The students were asked to consider how a nurse would interact with each of the patients and to write brief narratives such as the following:

At 8:00 the nurse took the blood pressure of the patient who usually has high blood pressure. It was a little lower today.

The patient who left for surgery wanted a bath. The nurse gave him a bath and helped put his things together.

Because of the way the information about the patients was presented in the list of sentences the students worked with, they were encouraged to use relative clauses in their narratives when they needed to distinguish among the patients.

In both of these exercises, we did not necessarily want the students to use relative clauses in all of their responses, but we wanted them to realize that in some cases it would be natural to use such constructions. We hoped to establish the link between grammatical form and communication relevant to the nursing context.

Procedural Description

We worked in a number of ways on teaching the students to describe procedures, both in writing and in speaking. We were able to rely heavily on visual aids we found at MTI. A simple transparency showing the four steps in cleaning a bed pan was used repeatedly to practice different ways of describing procedures — with third person subjects, with imperatives, and with passives — and to practice different ways of expressing the time relations within a procedure. MTI also has a series of in-house videotapes illustrating some basic nursing procedures.

Using the tapes without the accompanying soundtrack, the instructor asked the students first to explain the procedure and then to create their own dialogues for each situation.

An example of another sort of "raw material" for English lessons frequently found in the students' technical materials is a checklist, similar to the one seen in Figure 2. Such checklists are used at MTI by the technical instructors to test the students on their clinical skills. The lists give indications for various procedures without actually writing each step in standard prose. We felt that if our students could transform such a checklist into a written description of a procedure, then the students probably understood the kinds of things we were trying to teach. (We did find that this was a very difficult task for the students, and we had to explain very carefully the style of writing in the checklists.)

A different kind of activity has as an advantage the fact that the students were actually required to successfully convey the steps of a procedure to another student. The activity made use of two tape recorders. We divided the class into two groups. Each group listened to a different tape — one a simple description of a nursing procedure and one a simple description of a physiological process. Each group was told to listen to the tape until they felt that each person in the group was prepared to repeat the transcription in his or her own words. Then, each student was paired with a student from the other group, and each student was asked to teach the procedure or the process to the person he was paired with. Finally the students returned to their original groups and, as a group, tried to reconstruct the description the other group had listened to. An exercise like this is an exercise in listening as well as speaking, and an exercise in remembering technical material conveyed to the students in the target language.

Requests

There are many different ways in which a nurse must interact with people. One of the most common situations occurs when the nurse must make a request. We asked a nursing

Figure 2
Material from the Minneapolis Technical Institute
nursing curriculum that was adapted for practicing
procedural descriptions

MINNEAPOLIS TECHNICAL INSTITUTE
HEALTH OCCUPATIONS

CHECKLIST: Blood Pressure
                                            _____
                                                    Student
OBJECTIVE: Obtain correct reading of
           client's blood pressure

PROCEDURAL STEPS	SATIS-FACTORY	CRITERIA FOR MAKING JUDGEMENT
1. Preparation		Washed hands per accepted procedure Assembled equipment: sphyg-momanometer, stethoscope, alco-wipes, paper, pencil/pen
2. Prepare client		Introduced self to client Identified and informed of procedure
3. Maintain safe environment		Positioned client in chair/bed Assessed proper arm to use Positioned arm, palm upward Cleansed stethoscope ear tips with alco-wipes before use
4. Read blood pressure		Located brachial artery Wrapped cuff snugly 1-2" above elbow Centered bladder of cuff over brachial artery Inflated cuff rapidly to 150-160 mm for lab experience Opened control valve and ...

instructor to supply a list of situations where a nurse might make
requests, and we later asked the students a similar question. We
wanted our students to be aware of the different ways it might
be appropriate to word a request. For example, the form of
request might vary depending on the person the nurse is
addressing. The nurse might request a physician to write an
order for a physical restraint or to examine a patient. The
nurse might ask another nurse to help lift a patient or to give
advice about a patient. The nurse also makes requests of
patients — asking them to lie down, or not smoke — and of
patients' guests — asking them to step outside while medication
is being administered. Sociolinguistic factors play an important
role in determining the wording of the requests. We discussed
the various forms of requests with our students and we tried to
use role plays to simulate situations like those above, to practice
those different forms.

The Language of Charting

As we noted previously, the language used to keep medical
records is very precise. Word lists, similar to the one in Figure
3 were supplied by the Health Occupations Program at MTI. We
spent class time reviewing these word lists in preparation for
later work on charting. On the left side of the list in Figure 3
is a word for a physical phenomenon that the nurse might
observe, usually the nontechnical word for it. On the right side
is the term which would be used for charting this phenomenon.
What we would like to point out is that many times the
vocabulary on the left would be just as unfamiliar for our
students as the vocabulary on the right. For most of our
students, the word flabby is no easier than the word flaccid;
undernourished is just as difficult as emaciated. So we were
faced with the task not only of teaching them the charting
vocabulary but of making clear to them that this vocablary is not
always appropriate when they are talking to a patient, or, in
fact, in most contexts other than charting.

Figure 3
MTI material related to charting

Concerning	Factor to be charted	Suggested term to use
Abdomen	Hard, board-like Soft, flabby Blown up Hurts when touched	Hard, rigid Flaccid, relaxed Distended Sensitive to touch
Appearance, general	Thin and under- nourished Fat	Emaciated Obese

Amounts	Large amount
	
	Moderate amount
	
	Small amount
		Profuse, copious,
		   free, excessive,
		   measured amount
		Moderate, measured
		   amount
		Small amount, scanty,
		   slight, very little,
		   measured amount

Appetite	Very fussy about
	   foods, refuses to
	   eat many foods
	Eats all food served
	Eats very little
	
	Loss of appetite
	Refuses to eat
	
	Eats only small amount
		Has definite likes and
		   dislikes concerning
		   food
		Appetite good
		Appetite poor (State
		   exactly what is
		   eaten)
		Anorexia
		Refuses food (State
		   reason)
		Appetite fair

Attitude (mental)	Not interested in
	   surroundings
	Has "don't care"
	   attitude
	Doesn't believe
	   anything said
		Indifferent
		
		Apathetic
		
		Suspicious,
		   distrustful

(etc.)

In addition to a technical vocabulary, charting also requires a particular style of writing. Take, for example, this sample of narrative charting supplied by the technical coordinator:

> 6/14/81   10 a.m.   very listless.   Speech is quite slurred and is difficult to understand.   Appetite poor. Needs assistance c A.D.L.'s.   Just wants to be in bed.   Has no interest in anything.   Talked to daughter Gloria and gave her complete report of condition.   It was also mentioned to daughter the possibility of skilled care.
>
> B. Smith, L.P.N.

The chart differs from standard prose in a number of ways. It incorporates abbreviations; it deletes the subjects of sentences; it sometimes deletes forms of the verb be; and it deletes possessive pronouns and articles. We are tempted to say that it incorporates many of the deviations from standard usage that were characteristic of our students' mistakes, except that, because of the deletions, verb endings become especially important to the meaning.

After reviewing the rules for this charting style, we gave the students sets of individual sentences and asked them to change them into charting style. For example, the student would transform a sentence like "At 10 a.m. the patient was very listless" into "10 a.m. very listless." Later, we gave the students an entire passage in standard prose and asked them to turn it into the kind of writing they would use for charting. (We found similar exercises in a text, Writing Skills for Nurses (Schneller and Goodman 1983) that we were able to adapt for use with our students.)

When the students began charting in their clinical experience we noticed the tendency to adopt charting abbreviations and language in other writing contexts. We never totally succeeded in weaning them of this habit. On one occasion, we turned the exercise around and asked the students to change an example of charting into standard prose. We still feel that it is important not only to teach medical English skills

with the technical orientation but to teach students to recognize when these styles are appropriate and when they are not.

PROBLEMS

Some of the difficulties we faced are common to situations where English for special purposes is taught: scarcity of suitable materials, the absence of scheduled time for interaction between English teachers and technical staff, the absence of suitable assessment tools, and the limitations of a situation where students regard the language class as less important than other classes. But our problems were also colored by our specific situation and the fact that our project was the first of its kind. We felt that we were exploring new territory; we made original mistakes, and we learned from them.

Scarcity of suitable materials

American publishing companies have only recently recognized the need for ESP texts, so the choice of ready-made materials was not large. While there are several English-for-medicine texts available, most are designed for students preparing to become physicians. (For a review of available texts oriented toward nursing, see Krochmal 1984.) Because our students had limited English proficiency, such texts were generally not suitable for class. The text we settled on, Nucleus: Nursing Science, is a British text aimed at intermediate-level students. The text is well-organized notionally and has many charts, diagrams and illustrations. It helped provide a frame for our curriculum, and it provided useful reading passages which helped orient our students to the style of technical textbooks; but it only partially met our needs.

More and more as we worked on the project, we were impressed with the complexity of the communication skills a nurse must have. The role of the nurse is sometimes described as attending to the needs of the patient as a whole person, as compared to a doctor, whose role is merely to diagnose and treat illness (Brink 1976). This means that in some respects the

communication skills a nurse must have are greater than those a
doctor must have. Part of the function of nurse is to translate
medical information into terms that the patient can understand.
This means that the non-native speaker studying nursing is
learning at least two registers: the register of medical discourse
and the register that the nurse must use when explaining
something to the patient. Some of the materials developed for
our project represent an attempt to explore ways of teaching the
oral skills which nurses need to develop. We feel the need for
more understanding in our field of what, in language learning
terms, these needs are and how they can be taught.

Difficulty of communication with the technical staff

It is partly because of the lack of ready-made materials
that the lack of communication between technical and language
instructors becomes an issue. We had desks in the nursing
office, so there was a chance to ask nursing professionals about
technical information, but due to differences in our schedules
communication between language and technical instructors was
not always possible. In addition, there were several technical
instructors involved in the project at any given time, and this
made it even more difficult to share information.

We tried to deal with the problem in several ways. A
simple change of cubicle assignments in the office helped to
make nursing instructors more accessible when they were present.
The ESP instructor periodically attended technical classes in
order to expand his knowledge of the vocational curriculum.
Once the students started their clinical training, English classes
were held at the clinical site, and we found that this gave us a
better perspective on the details of the clinical practice our
students were participating in. On one occasion, an ESL
instructor visited a nursing station and observed as far as privacy
laws permitted.

Beginning in the middle of the first quarter, we held
regularly scheduled meetings with the nursing program
coordinators and representatives from the sponsoring agencies.
At these meetings, it was possible to discuss special problems
which individual students had encountered. The meetings helped

give us insight into the communication needs of specific students and a better sense of the kinds of interactions that took place in the clinical setting.   We strongly recommend that any program where there are both technical instructors and language instructors have regularly scheduled time for interaction among the staff.

Limitations of students' basic English skills

Some of the difficulties we faced teaching English had to do with the fact that we were working with refugees whose background in English was limited to survival-skills English.   We felt that our lower-proficiency language students, especially, lacked a solid foundation in English, and this affected the kind of material we were able to present to them.   One thing that this meant was that the length of time originally scheduled for English classes had to be extended.   A more serious problem, though, was that, in the estimation of some of the instructors, the lower-level students often tended to learn things — what they were being taught in nursing classes as well as what they were being taught in the English classes — by rote, without a real assimilation of what the materials meant.   For example, several of our lower-level students seemed to have memorized the dialogues we had used in class to present communicative language skills.   They then used these dialogues when they interacted with patients.   Their clinical supervisors remarked that their English skills seemed very "wooden" and they they communicated little emotion.

Perhaps the fact that as refugees our students had had more practical experience of life than most university students had something to do with the fact that they were sometimes puzzled or impatient with the more academically oriented materials.   They seemed to want materials that were concretely learnable (such as lists of verbs, and clear and distinct rules of grammar) and did not always seem to understand the purpose of activities oriented more toward skills than knowledge, or learner-centered activities which asked them to generate original responses for the class.

Student fatigue

Fatigue on the part of the students was often a factor. Besides pursuing a very stiff academic schedule, our students often held full-time jobs and also tried to maintain families. We believe this will often be the case when students are refugees. In any ESP program there will be a tendency for the students to give priority to their technical classes over their language classes, and the time constraints on our students aggravated this problem. From the beginning of the program, we recognized the need to limit the amount of homework we assigned; but we didn't feel that it was in the interest of the students to avoid homework completely. The students regarded their nursing coursework as extremely important, and while they realized language class was also important, they gave priority to their technical studies. Sometimes the students' English homework was incomplete and other times, even though the students completed their homework, they indicated their frustration about their lack of time to do it well.

Lack of a suitable assessment tool

The question of assessment will pose a difficult problem in most situations where ESP is taught. Standard tests, which measure proficiency in "general English" do not really test what has been taught in the Special Purpose classroom. On the other hand, teacher-made tests may not give program administrators scores which they regard as valid.

This question became one of our biggest problems. We gave the students the Minnesota Battery — the test they had taken before starting the program — at the beginning of the second quarter, and although the results were instructive and helped give the students a feeling of making progress, we were conscious that this in no way assessed their ability to use language as nurses. Another assessment tool, the GED, was built into our program as a requirement, but this was not an assessment tool we were happy with. As ESL instructors we argued that the cultural bias of certain sections of the GED — in particular the social science section — kept it from being a valid measure of the academic skills of the refugees. We found that to ask a

student to study history while in the midst of an intensive vocational training program was a distraction and a source of anxiety. The vocational school argued that, since their other nursing students are required to pass the GED, it would be unfair to waive that requirement for a special group unless we could find an equally valid alternative. The issue was discussed at length and a compromise was eventually reached whereby our students were required to pass only the science and math sections of the GED, which they all did.

Part of our dissatisfaction with using any standardized test stemmed from the fact that such a requirement seemed to imply to students that preparing for and passing such a test is adequate preparation for the English skills they will need as nurses, which is in no way true. There still remains the more general need for a test that will adequately assess the language skills of nursing students.

CONCLUSION

We encourage others in our field to continue exploring how language is used in various professions in general and in the field of nursing in particular. Development of an ESP curriculum entails a considerable commitment of time: time is needed to meet with technical experts, time is needed to create materials which focus on the needs of a particular group of learners, and time is needed to develop valid assessment tools. Yet this investment of time is worthwhile, as it enables language learners to concentrate on their very specific needs.

Although the language component of our project is now completed, the students are continuing their intensive technical studies. The higher-proficiency group is preparing for the Minnesota Board of Nursing examinations in late 1985; the lower-level group will take the exams in 1986. Their strong commitment and capacity for hard work promise success on the exams and in their eventual careers as nurses serving the community. Their success will be evidence of an equally strong commitment on the part of the sponsoring agencies and

educational institutions that have worked together to make the program achieve its goals.

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MODIFYING AN ESP COURSE SYLLABUS AND MATERIALS THROUGH A TEACHER-PLANNED NEEDS ASSESSMENT*

Karen Sorensen

A teacher-planned needs assessment was used to modify the syllabus of a university-level ESP course aimed at preparing students for academic work in the field of agriculture. The needs assessment included faculty interviews and an analysis of student papers written for agriculture courses — an analysis which included an examination of the agriculture instructors' written comments on student papers. The ESP teacher determined not only what type of written work the students would be required to do in their academic work but what particular aspects of this work might be expecially difficult for non-native speakers of English.

A concern with the specific reasons which learners have for studying English, and the purposes for which they will use their language skills, has given rise in the past 20 years or so to an emphasis on specialized English courses in ESL/EFL programs. The development of courses in English for specific purposes (ESP)—English for academic purposes, English for business and economics, and English for science and technology, to name but a few—has been accompanied by an increasing sophistication in the means of assessing the needs of the learners, and a growing controversy over the manner in which such needs assessments

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should be applied to curriculum design.   Hutchinson and Waters
(1980:1) have noted, for example, that "there is a disquieting
trend towards isolating needs analysis from other aspects of
teaching and learning." The complexities of conducting and using
needs assessments have, they claim, made the analysis of
learner's needs a specialist's affair and have, in effect, lessened
the role of the classroom teacher in planning ESP courses.

This paper will show how a teacher-planned needs
assessment was used to modify an ESP course syllabus and how
the specific information obtained in that needs assessment was
used to develop materials which differ significantly in form and
concept from the materials previously used in the course. It is
not my intention to propose here yet another "model" for course
design, but rather to show that interested classroom teachers can
still find needs assessment a manageable and effective approach
to solving curriculum problems.

THE BASIS FOR A NEEDS ASSESSMENT

The view of needs assessment as a tool which facilitates
curriculum design has generally implied that the needs assessment
precedes the development and teaching of the course.   In
Mackay's model for ESP syllabus design (1981:137), for example,
needs assessment would be considered an "information gathering
instrument."   It is seen only as a part of the initial process of
curriculum design.

This view tends to downplay the value of conducting a
needs assessment after the design of a course has been decided,
or after it is found that an established course does not meet the
needs of the students.   Yet if curriculum design is seen as an
ongoing process, needs assessment has special merits.   It can be
specific, and therefore easy to administer; it can involve the
teacher and the students, who have an immediate practical
interest in improving an unsatisfactory situation; and it can, in
providing a clearer definition of the problem, point to appropriate
solutions.

The needs assessment to be described below was conducted

in response to a syllabus problem in an advanced English for science and technology (EST) course.   Though the course had been offered a number of times before, this was the first time the course was taught primarily to graduate students, and to students in one major field—agriculture.   The textbook for the course, Writing Scientific English by John Swales, was chosen based on the ability level and range of interests of students in previous courses.   After less than three weeks of use in this course, the text was found to be inadequate.   The students demonstrated that they had already mastered its sentence-level exercises (which were predominant in the book), and had little difficulty in writing the simple experimental descriptions called for.   Moreover, as they became aware that, as a group, they had very similar interests—interests which the content of the book did not emphasize—they became increasingly reluctant to work with the book.

The students, however, did express concern that their writing skills were too limited for the work they had to do in agriculture courses.   Although, as Schmidt (1981:200) notes, students' intuitions about their learning needs are not always accurate, it seemed reasonable in this case to place some credence in them.   These students were not engaged in pre-academic English study, but were studying EST concurrently with graduate courses in their specialties.   They were already competing academically with native speakers of English.   Clearly, they needed to be exposed to materials which would provide them with the skills they needed in order to succeed in their academic courses.

Of the published materials available, there are a number of advanced ESL texts which now feature technical passages as reading exercises, but very few which attempt to develop technical writing skills.   Typical writing exercises in these books require students to write paragraphs based on tables and/or model paragraphs (Mountford 1977:81) or to "summarize (given) instructions in note form" (Mountford 1977:98).   An exercise commonly used to elicit a longer response is one which requires an extended description, for example:

> Describe in an orderly and accurate way an instrument
> or piece of apparatus which is used in the science you
> are studying.   Then prepare clear and detailed
> instructions for its use, employing diagrams where
> necessary. (Ewer and Latorre 1969:83)

The preparation for these exercises is essentially a set of
grammar drills emphasizing one or more particular structures.

Exercises of this type are useful in refining grammatical
skills and in providing practice in certain rhetorical patterns, but
the extent to which they adequately prepare students for the
kind of writing that is required in courses in their field of study
has not been documented.   In order to determine what type of
materials might bridge the gap between the writing skills stressed
in EST classes and the writing skills required in academic classes
in the field of agriculture, I needed to know more about the
requirements in my students' classes.

As mentioned above, EST materials, and course syllabi in
general, have traditionally been based on an assessment of the
learners' needs conducted before the class is offered.   The
syllabus and text for the specific course under consideration here
had been determined prior to the decision to offer the course on
the campus of the College of Agriculture, a decision which was
favorable to the enrollment of agriculture students rather than
engineering or liberal arts students.   Here was a case, then,
where an established course was not meeting the specific needs
of its students—a case where a needs assessment was seen to be
useful as a corrective tool.

Various methods of conducting a needs analysis for an ESP
course have been delineated in the literature.   Mackay (1981)
stresses the value of a procedural model for the development of
an ESP syllabus.   He relies on "structured interviews" with both
professors and students for his initial assessment tool.   Schmidt
(1981) has offered a cogent argument for the implementation of
case studies as a means of needs assessment.   The value of this
approach, she asserts, lies in their being "in-depth" studies
conducted "over a period of time" (Schmidt 1981:2).   Munby
(1980) presents an elaborate outline of the procedures to be

followed in a formal needs assessment, and Frederickson (1978) cites Taylor's conceptualization of "Needs Theory" in a detailed flow-chart of curriculum development planning stages.

The latter two approaches may be of considerable value to curriculum designers working with a copious amount of lead time, and a variety of resources in setting up a course program, but for classroom teachers looking for solutions to particular problems and working under less than ideal circumstances their complexity eclipses their utility. The approaches described by Mackay and Schmidt, on the other hand, appear less formidable. It should be noted that both appoaches were based on responses to particular situations. Each approach represents an application of available resources in solving an existing problem. It would appear that it is not the unswerving application of one approach that matters as much as the familiarity with a variety of possible approaches and the application of the approach, or combination of approaches, which best suits the specific teaching situation. The approaches which I followed in my needs assessment incorporate some of the suggestions offered by Schmidt and Mackay, but were generally less rigid, due to the pressures of time and the in-process nature of the study.

PROCEDURES

Student Questionnaire

On the first day of class I had distributed a questionnaire to the students in order to gather information on their linguistic and academic backgrounds and their interest in studying EST. Although at the time I had not intended the questionnaire to be part of a formal needs assessment, the information requested and received through it provided a good base from which to begin my study.

The survey revealed the two previously-mentioned significant facts: that the class was composed chiefly of graduate students, and that all students had majors in agriculture or closely related fields. Moreover, it identified the academic courses they were enrolled in and the instructors of these courses. A significant

number of my students were enrolled in one or more of five
courses:

- Agronomy: Field Crops
- Plant Pathology for Advanced Students
- Plant Physiology: Survey
- Economics of Agricultural Production
- Statistics

Each course represented a core requirement in a particular
specialty area in the College of Agriculture.

Faculty Interviews

When problems with the course text and syllabus began to
surface and it seemed that a more formal needs assessment would
be necessary, I decided to contact the instructors of the above-
mentioned courses, and so entered into the "structured interview"
step in my needs analysis. This was the most informative and
rewarding portion of the study. The instructors were without
exception extremely cooperative, honest, and objective about the
reasoning behind their course requirements, analytical with regard
to the cognitive skills necessary to fulfill these requirements, and
sensitive to the needs and problems of their foreign students. It
would certainly have been possible to gather the essential facts
on course requirements from the printed syllabus distributed in
each class, but it would have been difficult, if not impossible, to
learn what specific problems the foreign students had in fulfilling
the written requirements of these courses without interviewing
the instructors.

During the interviews I asked the instructors for a copy of
their course syllabus and discussed the course requirements with
them, with specific attention to the problems of their foreign
students. Since my students had cited writing as a major
problem, I specifically examined the course writing requirements.
The writing requirements for the five courses which I surveyed
are outlined below:

Agronomy: Field Crops

A group discussion problem evaluated on the basis of both an oral and a written report. The written report: two to three pages including the approach used in analyzing the problem, an assessment of the situation presented in the problem, and proposals for obtaining more information.

Plant Pathology

Four reports (each two to five pages) evaluating four distinct "disease situations." Each report to include a selection of a likely pathogen or incitant, a description of the information needed to thoroughly analyze the problem and an explanation of why such information is important.

Plant Physiology

Selection of a journal article to analyze/critique in a 15-20 minute oral presentation.

Economics of Agricultural Production

(1) A written review and critique of three studies using theoretical concepts discussed in the course, or

(2) One paper on a relevant problem.

Statistics

> Written reports on lab experiments applying
> statistical methods to data sets.

The amount of written work required in two of the courses, Statistics and Plant Physiology, was acknowledged by the instructors to be minimal. Since I had decided to limit my study to an assessment of the written work required of my students, I was able to focus my attention on the work assigned in Agronomy: Field Crops (henceforth, Field Crops), Plant Pathology, and Economics of Agricultural Production (EcAP). An examination of the writing requirements for these courses revealed one common and salient feature: the mention of a "problem."

Students in Field Crops are responsible for analyzing a given "problem," "collecting information and data" which they feel are needed "to tackle the problem," and writing a report in which their "proposed solution to the problem is stated." The written report on the problem has to include a statement of the approach used in analyzing the problem, and a proposal of where the information necessary to solve the problem might be obtained.

The written report required in Plant Pathology is broken down into four parts. In Part A the students are asked to select a "disease situation" (subsequently defined as a "description of an actual plant disease problem"), consider the symptoms described, decide on the most probable pathogen or incitant, and "indicate why that type of pathogen or incitant is a 'likely candidate'." They are instructed next to "discuss the environmental conditions, cropping practices, cultural practices, and other factors that...must be considered" and to explain why they judge these factors to be important. In Part B the students must describe the materials and methods they would use to "determine the true cause of the problem." Part C asks the students to "identify the pathogen that is responsible for the disease situation and explain" (instructor's emphasis) how they reached their decision. In Part D the students must summarize the problem and "recommend control measures."

Students in EcAP are given a choice between writing an "evaluation of three studies" or writing a paper on a "relevant problem" in which they will "hopefully obtain hard data relevant to the problem." The approved format for handling either choice includes (1) a statement of the problem, (2) a statement of objectives and "formulating hypotheses," (3) methodology procedures, (4) a description of the data used, (5) the presentation of the "analytical results of the study, including implications and conclusions," and (6) a "general evaluation of the study."

In the interviews with the instructors I asked whether they could make any generalizations concerning the quality of work submitted by their foreign students: did non-native speakers of English seem to have special difficulty with any parts of the problem-solving assignments? In reply, two instructors expressed concern over the difficulty some foreign students seem to have in "posing" a problem. The instructor of the EcAP course noted that his students are sometimes surprised when asked "not just to do a problem but to set it up," and the students in Plant Pathology, who are given a set of data, encounter difficulties because they "must come up with questions." The instructors in general indicated that the students have the greatest problem with the "how" and "why" parts of their reports, that is, in responding to requests to "indicate why a certain solution was chosen," "explain why these factors are judged important," or "explain how you reached your decision."

This concern with the process employed to arrive at a solution to a problem seems to place a special emphasis on the students' ability to formulate a logical argument in writing. Did this mean, then, that errors in grammar (and perhaps even in content) would be tolerated so long as the students' writing displayed a certain logic? The instructors agreed that logic was more important than grammatical correctness.

Their agreement on this supported my intuition that a course text laden with mechanical grammar drills was not the best preparation my students could have for these classes. But before I could make any changes in my course syllabus or materials I needed to know more about what was meant by

"logical" thought, and to what extent the instructors' statements
about its importance in relation to grammatical correctness were
true.
        When asked to explain what, in their estimation, constituted
logical or rational thought, the instructors could only make broad
references   to   the   use   of   the   scientific   method   or   the
presentation of information in an "organized fashion."   These
explanations   were   helpful,   but   too   broad   to   be   of   use   in
evaluating or creating EST materials which might provide practice
in this area.
        Lackstrom's analysis (1981) of the logical argumentation in
discussion problems in EST offered more specific insights.   (One
of the model discussion problems analyzed by Lackstrom is
reproduced in the Appendix.)   Lackstrom has proposed that the
model answer to discussion problems in EST is in the form of a
logical argument which he characterizes as a deductive syllogism.
He describes the structure of such an argument as consisting
essentially of a "governing principle," which acts as the major
premise of the syllogism, "relevant facts," which are applied to
the governing principle (as minor premises), and a "conclusion,"
which is "the logical consequence of the principle plus the facts
brought to bear in the course of the argument."   In order to
understand and form a logical argument there must be added
(between the governing principle and relevant facts) statements
which assert the relationship of the principle and the facts—
statements which apply the facts to the principle.   Lackstrom
claims that these "statements of applicability" cause particular
problems for students.   He does not, however, offer any data
showing how students fail in composing these statements.
        Since the discussion problems which Lackstrom presented
differ somewhat (in both their scope and the task they present)
from the type of problem which students in the agriculture
courses had to solve, it was not possible to directly apply his
analysis to the reports required in these courses.   His analysis,
however, did provide a framework in which to work.   His
suggestion that particular facets of logical argumentation are
especially difficult both conceptually and linguistically (Lackstrom
1981:25) encouraged me to investigate what particular problems

foreign students might have with logical argumentation in their reports in agriculture courses. I decided to examine a small sampling of student papers to see whether I could identify any problems similar to those Lackstrom had suggested. Since I would be working with papers which had already been corrected by the instructor, I would, at the same time, also have the opportunity to observe how grammatical errors were treated by the instructors.

Analysis of Student Papers

The papers which I examined (three written by non-native speakers and one by a native speaker) were provided by the instructor of the Plant Pathology course, and were judged by him to be representative of those submitted by the class as a whole. The report consisted of four parts. Although each part was submitted independently for evaluation, it was expected to form a complete unit. For the purpose of this paper I will focus on only one part (Part A) of the report, the part on which both native and non-native speakers received the lowest grades. Students A, B, and C are non-native speakers; Student D is the native speaker.

The task of the students in Part A of the report, as mentioned before, was to identify the likely pathogen in a given "disease situation." They were given the symptoms which marked the situation and were expected to use both that information and information obtained in the lectures, text, and literature to establish one agent as the cause of the situation, and to state why this agent was the likely cause.

Since I wanted to check the instructor's attention to both grammatical mistakes and logical flaws, my analysis of the reports was concerned with identifying two types of problems: those related to grammar and those which were related to logical argumentation. The former were easily identified; most were sentence-level errors: incorrect article usage, lack of subject-verb agreement, and faulty sentence structure. One sentence fragment and two run-on sentences also occurred. All of these errors were found in the non-native speakers' papers. None were corrected or commented on by the instructor. Errors in word

choice, punctuation, and spelling occurred in both the native and non-native speakers' papers. Of these, the only spelling error which the instructor corrected was one made by the native speaker: "funjii" for "fungi."

While this indifference to grammatical mistakes may be said to represent only one instructor's grading customs, these findings do confirm that particular instructor's actual adherence to his stated policy. Also, they lend support to the possibility that the instructors who expressed a similar attitude, and perhaps even other instructors, would regard grammatical mistakes with the same leniency. It would be useful to have more data on this from other instructors in agriculture.[1]

What is significant, however, is that the comments which the instructor made on the students' work generally did not occur where grammatical errors occurred, but were related principally to information gaps in the students' presentation of their arguments. The questions and comments which the instructor wrote on the non-native speakers' papers were generally concerned with three main problems:

(1)   the mentioning of a fact without showing how it applied to the given situation,

(2)   the ignoring of facts which did not fit into a convenient generalization, and

(3)   the elimination of a class of factors as possible disease agents because of the characteristics of a particular member of the class.

Examples of these problems are given below, first in simplified analogies, and then in the form in which they appeared in the students' papers.

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[1]That the instructor did not correct the grammatical errors is not to say that he was not at all affected by them in assigning grades—a separate study could be devised to test this more accurately.

(1) <u>The mentioning of a fact without showing how it applied to</u>
<u>the given situation.</u>   An example would be the case where, in
diagnosing the death of a patient, a doctor states that a certain
poison is a likely cause of death because it causes death in
ducks, without specifically mentioning whether the poison has
been shown to have the same effects on humans, or if ducks and
humans are vulnerable to the same poisons.

Student A states that bacteria could be considered as the
cause of the disease situation, and mentions one bacterium as
being responsible for the symptom "birds eye spots" in tomatoes.
This example is unchallenged by the professor: it refers clearly
to a symptom—spots—which appears in the disease situation and
to the specific plant under discussion: tomatoes.   In another
paragraph, however, the student states:

> Psdeudomonai phaseolicola causal agent of halo blight
> of bean,

which draws the comment:

> How does this apply?

He has (a) not identified this agent as a bacterium; (b) not
alluded to the presence of the halo symptom in the problem; and
(c) not made any connection between disease agents or symptoms
in bean and tomato plants. In other words, he has not made any
statement which applies this fact to the general situation
described.[2]

Student A's failure to make a "statement of applicability" in
relating the fact he presents about halo blight in beans to the
given disease situation seems to provide some support for

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[2]In order to realize the effect of the omission of this
"statement of applicability" it is helpful to refer to the
example of the logical argument which appears in the
appendix.

Lackstrom's assertion that such statements can cause difficulty
for students.

(2) The ignoring of facts which do not fit into a convenient
generalization.   As an example, consider the case of a doctor
who, in diagnosing the death of a patient, posits strangulation as
the cause, based on his observation of bruises around the
patient's neck.   In doing this, he ignores the evidence of a bullet
wound in the patient's chest.

In his report, Student B states:

> Fungi and viruses seem to be considered as causal
> agent of these symptoms,

which elicits the questions:

> Why viruses?   Do they normally cause such symptoms?

The student's argument for viruses includes the citing of two
viruses which cause fruit spotting but the instructor notes:

> But what about the leaf (and) stem symptoms?

The student has disregarded two facts given in the situation in
making his generalization.

(3) The elimination of a class of factors as possible disease
agents because of the characteristics of a particular member of
the class.   An example of this would be a doctor's ruling out
poison as the cause of a patient's death because one particular
poison causes internal bleeding and no internal bleeding was
observed.

Student C takes one symptom (necrotic spots) and notes
that it can be caused by three general categories of agents:
bacteria, fungi, and abiotic incitants.   He then mentions one more
symptom (halo chlorosis) and notes that it can be caused by two

of those agent categories (bacteria and fungi). He therefore
(correctly) eliminates one category: abiotic incitants. (It is
interesting to note that he does not, however, make this
elimination explicit.) He then names a specific fungus which
does not cause one of the symptoms (halo) and makes the
conclusion:

> So, causal organism is possibly bacteria...

He has used a fact associated with a specific member of a class
and has applied it to all other members of the class. This
mistake implies a misunderstanding of the relationships of
different class members to each other, that is, what makes them
form a class, and what makes them form distinct members of that
class.

The native speaker, Student D, progresses along the same
line of reasoning as Student C, proposing fungi, abiotic incitants,
and bacteria as causes, based on one symptom, and eliminating
abiotic incitants when another symptom is considered. She does
not, however, further narrow down the possibilities. Instead, she
(a) cites (in the form of questions) the specific disease situation
facts she would need to know to do this, and (b) makes it clear
how she would apply these facts in making a generalization
regarding the pathogen. The following example illustrates this
device:

> I would like to know the pattern of infection.
> (a)   Is it localized around infection centers indicating a
>   spread of infection
>
> (b)   which is common with bacteria.

The instructor's comments on the native speaker's paper do
not reflect a concern with the three problems identified above,
but are principally requests for more detail in the facts stated.
For example, Student D's statement that

>   Bacteria...usually need warmer temperatures and high
>   humidity...

elicits the comment:

>   (warmer temperatures) than what?

Both the native and non-native speakers' papers, then, drew criticism for omitting certain information. The majority of comments in the non-native speakers' papers were directly related to problems in the students' formulation of a logical argument. There were, in addition, comments which reflected the instructor's concern with a lack of thoroughness in the students' reports. For example, in Student B's paper the instructor notes:

>   What else can cause necrotic spots?
>   Bacteria
>   Abiotic - chemicals like herbicides.

And on Student A's paper:

>   Why did not (sic) exclude or not consider abiotic
>   incitants like chemicals, etc.?

In a follow-up interview with the instructor, he emphasized that this problem of "overlooking evidence" prevented the students from making the "thorough evaluation of the various aspects of the problem" which was required.

The analysis of the argumentation in the papers allowed me to isolate, then, some specific problems which some non-native speakers had in completing a written assignment in an agriculture course, an assignment which is typical of courses in this field of study. The students, as might be expected, had problems with grammar; however, this was found to be of little consequence in the communication of their ideas. The analysis of the papers suggests that the inability to set forth a logical argument (a problem described by the instructors in the interview stage of this needs assessment) is related, in at least one kind of

problem-solving activity, to the failure to express relationships between facts and to form accurate generalizations.

CONCLUSION

The use of an error analysis of student writing in a special field, and the consideration of the point of view of the specialist teacher are not traditional steps in an ESP needs analysis project.   Generally, in the "Developmental Stage" (Mackay 1981:137) an "authentic" example of the genre, such as a model report written by a native speaker, is examined and analyzed for particular linguistic structures and functions. This particular variety of language then forms the "special English" on which materials and course syllabi are based.

Including an error analysis of student papers in this needs analysis was, however, useful in at least two respects.   First, it prevented me from focusing exclusively on the linguistic structures in a model report.   Had I done so it is likely that I would have, as in traditional needs assessments, identified certain grammatical, rhetorical, and organizational structures as important and devised materials which emphasized these structures.   But I would have had no way of knowing that correctness in these structures is less important to specialist teachers than the logical structure of the text.   Analyzing the student papers, and seeing the logical shortcomings identified by the instructor, focused my attention on the kind of argumentation expected in reports in agriculture.

The instructor's comments and corrections on the papers guided my analysis allowing me to focus on the particular problems perceived by a specialist in the subject.   Even more useful than this, however, was the follow-up interview I had with the instructor.   At that time I was able to check my analysis and clarify points which fell between our specialty areas.

On the basis of this needs assessment, then, I was able to determine the type of written work students in university-level agriculture courses are expected to produce; moreover, I learned what particular aspects of this work might cause difficulty for

non-native speakers of English.   Using these two pieces of
information I was able to adjust the course syllabus and to begin
designing materials which both focused on the kind of work my
students would be required to do in their specialty and provided
practice in the skills which they would need in order to complete
this work.   Realization of the need for practice in selecting and
organizing data, posing problems, and drawing conclusions, for
example, suggested the design of a data-gathering research
project in which the students would work together collecting
data, forming hypotheses, and writing a report on their findings.
The emphasis in this activity was placed on logical argumentation
rather than on grammatical accuracy, although the students did
receive practice in the grammatical and rhetorical structures
which contributed to the expression of their arguments (for
example, practice in making comparisons and using words such as
since and therefore to make conclusions explicit.)
        Designing materials which would develop the students'
ability to express relationships between facts and form accurate
generalizations proved to be a challenging task which could not
be completed within the academic quarter.   However, having a
better understanding of the thought process involved in
performing the problem-solving activity—knowing, in a sense, some
of the building blocks of the process—helped me tremendously in
determining how other materials might be used to develop this
skill.   For example, it would seem practical, in doing checks on
reading comprehension, to use multiple choice questions in such a
way that the relative value of each alternative is debated and
the "whys" and "why nots" of the students' choices are actively
discussed.   It seems likely, too, that cloze exercises could be
used to develop problem-solving skills.   In these exercises
students are presented with "data" and must supplement the data
with other facts they know (generalizations they have been able
to make regarding English usage). The students must decide what
data to eliminate, what clues are useful, etc., and form a
conclusion.   If the students are encouraged to argue, and state
why they make certain choices, and if as much attention is
placed on the process of obtaining the correct answer as on the
answer itself, then it seems likely that they will develop an

awareness of the kind of argumentation expected in problem-solving exercises.

This paper has shown how the information obtained in a teacher-planned needs assessment was instrumental in making necessary modifications in the design of a course, and in designing the type of materials which could be used in a course with the specific purpose of preparing students for academic work in the field of agricuture. While a number of refinements could have been made in the procedures followed, the assessment as it was conducted (under a variety of constraints similar if not identical to those incumbent on most classroom teachers) did prove to be a practical and effective curriculum design tool.

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APPENDIX

The Logical Argument in EST
as Presented in a Model Discussion Problem
(an example reproduced from Lackstrom, 1981)

Statement	1	The question of whether our universe is
of the	2	actually "pulsating" or "hyperbolic" should
Problem	3	be decidable from the present rate of its
	4	expansion.
Statement	5	The situation is analogous to
of Appli-	6	the case of a rocket shot from the surface
cability	7	of the earth.
	8	If the velocity of the rocket
	9	is less than seven miles per second—the
	10	"escape velocity"—the rocket will climb
General	11	only to a certain height and then fall back
Principle	12	to the earth...On the other hand, a rocket
	13	shot with a velocity of more than seven
	14	miles per second will escape from the earth's
	15	gravitational field and disappear in space.
	16	The case of the receding system of galaxies
Statement	17	is very similar to that of an escape rocket,
of Appli-	18	except that instead of just two interacting
cability	19	bodies (the rocket and the earth) we have an
	20	unlimited number of them escaping from one
	21	another.
Related	22	We find that the galaxies are
Facts	23	fleeing from one another at seven times the
	24	velocity necessary for mutual escape.
	25	Thus we may conclude that our universe
Conclusion	26	corresponds to the "hyperbolic" model, so
	27	that its present expansion will never stop.

Comments: In the argument presented above, note how the
"related facts" in lines 22-24 are connected to the "general

principle" (lines 8-15) by the "statement of applicability" (lines
16-21). "Galaxies" are mentioned in the statement of the facts,
"a rocket" in the statement of the general principle.   Both
statements refer to "escape" (and) "velocity." The intervening
statement of applicability relates the two statements by making a
direct comparison between "a receding system of galaxies" and
"an escape rocket."   The importance of this statement in the
logical argument can be seen by reading lines 8-24, omitting lines
16-21.

USING A SENSITIVE TOPIC IN TEACHING LECTURE COMPREHENSION

Colleen Meyers and Diane Erdmann

A sensitive topic can be used effectively in an ESL class. This paper reports on the experience of an advanced listening class with the topic of child abuse. Included are a discussion of the risks of using a sensitive topic, suggestions for minimizing the risks, a justification for using a sensitive topic, and a description of the way in which the authors approached the topic with their students.

The idea of using controversial topics in the ESL classroom is not new; many teachers use controversial topics, ranging from relatively "safe" topics, such as working mothers and the role of the elderly in society, to very sensitive topics, like homosexuality and abortion. It is probably correct to say that teachers have traditionally chosen topics that fall on the "safer" end of the continuum. We decided to try a somewhat risky approach with our students by choosing a topic which falls on the more controversial end of the spectrum. We contacted an expert on the topic of child abuse in the United States and invited him to speak to our advanced listening comprehension class at the University of Minnesota. This paper reports on our experience with that topic.

Before describing the lecture and the activities that we built around it, we will first address three questions: 1) What are some of the risks involved in using such a topic? 2) What can we do to minimize the risks? 3) If it is such a risky venture to use a very sensitive topic, why do so at all?

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THE RISKS OF A SENSITIVE TOPIC

One possible danger of using a topic like child abuse in the classroom is that students will become embarrassed and 'clam up.' Because this topic might be taboo in many societies, open discussion of it — especially in a class with both males and females — may cause some students to withdraw. Another possible risk is that of increasing the sense of alienation students may already feel from American society. Ideally, exposing students to aspects of American society will help them understand the culture better and thus make them more willing and able to interact with members of the culture; however, the danger also exists that our attempts may backfire and actually end up distancing our students by fostering negative feelings about American society.

MINIMIZING THE RISKS

Even though there are risks involved, there are ways we can minimize those risks. With any potentially risky topic, it is important to consider the characteristics of the class. One step is simply to consider the backgrounds of the students in relation to the topic. What countries do the students come from and how do their societies view the topic under consideration? (Answers to the latter question may require some library work or interviewing.) The teacher might also want to survey the students, formally or informally, as to whether they would be willing to deal with the topic in class. Another consideration is the amount of trust and rapport among the students and between the students and the teacher. A sensitive topic would probably work better toward the end of the quarter, at a time when good rapport and a high level of trust are likely to have developed and when the class atmosphere is likely to be more relaxed and open. In our particular case, we took up the topic in the ninth week of a ten-week course with a group who had done a lot of small group work and who seemed open and willing to discuss this type of topic.

Finally, the way of presenting the topic can make a difference. "Easing into" the topic — letting the students know the choice of topic well in advance and not dealing with the most sensitive areas of the topic at the very beginning — can minimize risks. Attempting to maintain an objective tone can also help. For example, the instructor can minimize personal bias and subjectivity by relying on outside sources, such as a guest lecturer, for information.

WHY USE A RISKY TOPIC?

If a topic like child abuse is so risky, why use it at all? The benefit, we feel, far outweighs the risks. Students are often aware of such topics through the media or through conversations with Americans or with other students, but may feel uncomfortable discussing them, either because the topic is taboo in their own culture or because they don't know how to discuss such a topic appropriately in English. By choosing such a topic for the classroom, we can give students experience dealing with a difficult topic in a supportive atmosphere of trust and minimal risk-taking. This experience may make them more willing to enter into conversations outside the classroom; it will, in any case, enable them to discuss the topic more knowledgeably.

PREPARATION FOR THE LECTURE

The day before the lecture we did a preparatory lesson on the topic of child abuse. The all-encompassing goal of the lesson was to give the students an orientation, or frame of reference, from which to listen to the lecture. This goal encompassed three objectives: (1) to find out what students already knew about child abuse and to give them some background information, (2) to get the students to come up with their own questions regarding child abuse, and (3) to get students thinking about issues related to child abuse.

The idea behind the larger goal was that if students have

prior knowledge of a topic, they will probably find it easier to understand new information on the topic. Furthermore, if they have questions about that topic, they will have a clear purpose for listening to discourse about the topic, which may also help understanding and retention. As an additional bonus, a preparation session may make it possible to clear up misconceptions students may have about the topic, misconceptions that could inhibit understanding.

At the beginning of the preparatory lesson, we told the students that one section of the blackboard would be reserved for writing questions about the topic that the students might come up with during the course of the lesson. We told them that this would be in preparation for listening to a live lecture on the next day. We encouraged them to think of questions, explaining that if they knew what questions they wanted answered while they listened to the lecture, they would know what to listen for and would perhaps understand more of what they heard.

After informing students of the question format, we asked the students if they knew what child abuse was. There was a lot of discussion at this point. Some students had accurate ideas of what child abuse was, and we used their input to create a general definition of child abuse: "touching a child as a man and wife might touch (sexual abuse) or harming a child physically (physical abuse)." One student brought up the area of child labor, but we decided not to include this in our definition because we wanted the students to focus on "closeted" forms of abuse which were of greater current interest.

We then asked if anyone had heard about child abuse in the news recently and if they had, what they had heard. Some had heard about a series of reports of child abuse in a small Minnesota town which had been in the news for several months; others had heard about some cases of child abuse in day-care centers which had sprung up in the news just prior to our preparatory session. One student, a journalism major, brought out a clipping on child abuse from his briefcase. Another student volunteered that there had been only one account of child abuse in his country and that it had been a case of incest; therefore,

he felt that his country was immune from child abuse — or that it wasn't talked about. Some students agreed with him in the sense that they felt child abuse was generally a Western problem; however, others felt that it was more of a global problem and thus a problem in their countries too.

Throughout this discussion, students raised questions which we wrote on the board. We did not attempt to answer any questions. When a student stated an opinion or reflection on the topic, we asked if the student could make a question out of the statement; we did not comment on the statement ourselves. In this way, we tried to put ourselves in the position of guiding the students' thinking processes rather than serving as experts on the subject. Several times this technique resulted in very good questions, including "What is the difference between abuse and discipline?" and "What is done to help the victims of child abuse?"

Next we prepared the students quickly for a taped radio news account about child abuse legislation, and then played the tape. This gave the students some practice listening to discourse about child abuse in addition to giving them new information about the subject. The report was from that morning's broadcast, emphasizing that child abuse was a current topic of concern. After listening to the report, the students were eager to discuss the issue further and to raise more questions which we added to those already on the blackboard.

For a final discussion segment, we divided the students into small groups, using discussion questions from a prepared discussion sheet as a guide. There were five questions:

1.   What responsibilities do you believe a parent must carry out when raising a child? What legal responsibilities does a parent have in your country?

2.   In your culture, how is a child expected to behave with adults?

3.   How do you think the use of drugs and alcohol might affect a parent's ability to relate to a child and carry

out parental responsibilities?

4.   The lecturer on slavery talked about human rights and
      inequality among people.   Do children have rights?
      How might human rights issues influence society's
      attitudes toward child abuse?

5.   Remembering the videotape about the University of
      Minnesota research on identical twins, do you think
      there might be hereditary or environmental influences
      on child abuse?   What would those influences be and
      why would they influence child abuse?

(The last two questions referred to topics from earlier class
sessions.)   As it turned out, students did not get very far with
the prepared discussion questions, but they did actively talk
about the topic.   Finally, we reconvened as a large group and
shared insights from the small group discussions.   For homework,
the students were instructed to read and think about the
questions on the prepared discussion sheet, as well as the
questions they had come up with as a class, and to prepare to
use these as a guide for listening to the next day's lecture.

THE LECTURE

We planned a full 45-minute period for the lecture; this
allowed for a 40-minute lecture and a brief question-and-answer
session at the end.   The lecturer, a social worker from Family
Service of Greater St. Paul,   began with some statistics and a
historical perspective on child abuse.   He proceeded to discuss
distinctions among the concepts of child neglect, child abuse, and
legitimate discipline of children.   He spoke of recent changes in
society — its structure and its values — and related these
changes to child abuse.   He ended by listing several factors (for
example, alcohol abuse) which seem to be associated with a
higher risk of child abuse.
It should be noted here that the lecturer was not aware of

the questions the students had formulated on the previous day; he was simply asked to discuss whatever he thought was relevant to the topic of child abuse. As it happened, most of our students' questions were in fact answered. We want to emphasize, however, that the point is not for the students to formulate questions which the lecturer will inevitably answer. Whether the questions are actually answered is of secondary importance. More important are the process of formulating questions in advance and the purpose for listening that the questions provide. (Of course, it would be discouraging for students if none of their questions were answered, but there are ways of minimizing this risk. One way is to choose a narrow enough topic to that the lecturer is almost certain to answer at least some of the students' questions. Another is to give the lecturer the questions beforehand and ask the lecturer to try to address them during the lecture.)

After his lecture, the speaker asked for questions from the students. His talk had generated a lot of interest, so the students did have questions, ranging from questions about statistics to questions about attitudes toward child abuse.

FOLLOW-UP TO THE LECTURE

The day after the lecture, we asked the students to form groups for discussion. We distributed a handout based on the lecture. The first section of the handout posed questions such as these:

How did child abuse laws develop?

What is the difference between discipline and abuse?

The lecturer described three types of behavior that fall under the cover term "sexual abuse." What are they? Give an example of each.

What changes in attitudes over the past 20 years have

led to an increase in reporting child abuse?

Using their notes from the lecture, the students discussed these questions in their groups. The purpose of this activity was to help the students to self-assess how well they had understood the lecture and to get them to focus on some of the cultural values surrounding child abuse in this society.
     The second part of the handout, intended to initiate a second phase of discussion, was less limited to the factual content of the lecture. It raised two questions:

   What does the information in the lecture tell you about
   American cultural values?

   Should society step in and protect abused children, or
   is the family a "sacred" institution that should police
   itself?

Discussion of these questions also took place in groups, with ideas from each group to be shared later with the rest of the class. It was hoped that these questions would encourage students to synthesize information and to share opinions about issues such as the individual's rights versus government intervention and the role of punishment in child-rearing. The discussion went well; the students realized that a "should" question such as the one above has no simple answer. They became aware of the paradox between the emphasis that American society places on individual freedom and responsibility and the increasing role of society in stepping in and protecting the rights of minors while at the same time overruling those of parents.

CONCLUSION

     It is our hope that this paper will serve as a model for designing ESL activities based on other current and controversial topics. Other lectures on aspects of American society could be

handled in a similar manner by following the same general format that we followed: choose a controversial topic suitable for your particular group of students; prepare students by getting them to look at different ways of viewing the topic and by discussing the relevant values and attitudes in operation in their own cultures and in what they've observed here; guide them in approaching the topic by encouraging them to formulate questions that will provide a purpose for listening; and provide them with a follow-up discussion in which they have an opportunity to synthesize information from the lecture and to share opinions about the topic.

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