Comprehension problems of teaching assistants who are nonnative speakers of English: How U.S. students ask them questions and why they may have difficulty answering

Barbara S. Plakans

Iowa State University

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Comprehension problems of teaching assistants who are nonnative speakers of English: How U.S. students ask them questions and why they may have difficulty answering

by

Barbara S. Plakans

A Thesis Submitted to the Graduate Faculty in Partial Fulfillment of the Requirements for the Degree of

MASTER OF ARTS

Major: English

Signatures have been redacted for privacy

Iowa State University
Ames, Iowa

1987
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Table 23. Use of double- or multiple-barreling in the first utterances of Q-units not causing difficulty versus Q-units causing difficulty to proficient TAs
This study investigates the difficulties of teaching assistants who were not native speakers of English when they tried to answer the questions of students, who were native speakers, under conditions simulating a university classroom lecture. Over a thousand questions asked by 18 students during the TEACH test at Iowa State University are examined. Characteristics of the questions have been coded to reveal which were most common and which seemed to cause the most difficulty for teaching assistants having moderate to high proficiency in English. Suggestions are offered to nonnative speaking teaching assistants in how to handle questions and to undergraduates in how to ask more effective questions.
### ABBREVIATIONS USED THROUGHOUT THIS THESIS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tr>
<td>ESL</td>
<td>English as a Second Language</td>
</tr>
<tr>
<td>ETS</td>
<td>Educational Testing Service</td>
</tr>
<tr>
<td>FTD</td>
<td>Foreigner Talk Discourse</td>
</tr>
<tr>
<td>IA</td>
<td>Illocutionary Act</td>
</tr>
<tr>
<td>ISU</td>
<td>Iowa State University</td>
</tr>
<tr>
<td>L&lt;sub&gt;2&lt;/sub&gt;</td>
<td>second language</td>
</tr>
<tr>
<td>NAFSA</td>
<td>National Association for Foreign Student Affairs</td>
</tr>
<tr>
<td>NNS</td>
<td>nonnative speaker</td>
</tr>
<tr>
<td>NNS TA</td>
<td>nonnative speaking teaching assistant</td>
</tr>
<tr>
<td>NS</td>
<td>native speaker</td>
</tr>
<tr>
<td>Q</td>
<td>question</td>
</tr>
<tr>
<td>Qer</td>
<td>questioner</td>
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<td>Q-marker</td>
<td>question marker</td>
</tr>
<tr>
<td>Q-tag</td>
<td>question tag</td>
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<tr>
<td>SPEAK</td>
<td>Speaking Proficiency English Assessment Kit</td>
</tr>
<tr>
<td>SPSSX</td>
<td>Statistical Package for the Social Sciences</td>
</tr>
<tr>
<td>TA</td>
<td>teaching assistant</td>
</tr>
<tr>
<td>TESL</td>
<td>Teaching English as a Second Language</td>
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<td>TEACH</td>
<td>Taped Evaluation of Assistants' Classroom Habits</td>
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<tr>
<td>TOEFL</td>
<td>Test Of English as a Foreign Language</td>
</tr>
<tr>
<td>TSE</td>
<td>Test of Spoken English</td>
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<tr>
<td>WH</td>
<td>interrogative markers who, whom, what, when, where, why, which, how, how much/how many</td>
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DEDICATION

This thesis is dedicated to the memory of Professor Quentin G. Johnson, a wonderful teacher and gentle man. May his enthusiasm for the study of linguistics and the example he gave us of a life well lived be reflected in those of us who were fortunate enough to be his students.
CHAPTER I
INTRODUCTION

In analysing the pragmatics of cross-cultural communication, we are analysing language itself. (Tannen, 1984:189)

Many nonnative speakers of English who are classroom or laboratory instructors have commented on the difficulty of answering questions during or at the end of a lecture. A shifting of linguistic gears is required to change from taking a "long discourse turn," as a university lecture might be described, to comprehending questions of students—near-strangers in many cases—whose speech and thought patterns are unfamiliar. Further complicating the situation is the need to formulate and express without delay an answer in the second language.

To date little has been studied systematically about the questions asked by students who are native speakers (NSs) of English and the problems they present to nonnative speakers (NNSs), such as foreign teaching assistants or instructors. In this thesis I have examined student questions, coded them to reveal the kinds of comprehension tasks they might present to a nonnative speaking teaching assistant (NNS TA), and noted what the sources of observed difficulty might have been.

In addition to advancing the general research goal of new knowledge about second language acquisition, empirical evidence of comprehension
difficulty may be useful in two specific ways: first, to suggest teaching English as a second language (TESL) curriculum material for training NNS TAs in question-handling, and second, to provide guidance to undergraduate students in how to ask questions that can be answered more effectively by NNS TAs.

Data were so abundant that this project could easily have become a large-scale undertaking. Progress was hampered by the absence of any generalized methodology for analyzing questions in spoken discourse, as will be discussed in Chapter II. Since this is a master's thesis, an exploratory investigation is planned and only some of the most salient characteristics of students' questions are examined.

Context of the Problem

At Iowa State University (ISU) prospective teaching assistants (TAs) who are not native speakers of English have been required to take the SPEAK test since July 1984. SPEAK is the institutional version of the internationally administered TEST of Spoken English (TSE), developed by the Educational Testing Service. It is administered in a language laboratory to groups of students who are required to listen and respond to a variety of questions on audiocassette tape. Tapes are later rated by a team of instructors and graduate students from the Department of English.

Not satisfied with the amount or the nature of the information SPEAK provided about examinees, a subcommittee of the English Proficiency
Evaluation Committee at ISU developed an additional mock-classroom simulation called the TEACH test. Piloted in July 1985, TEACH was designed to provide evidence of prospective NNS TAs' ability to communicate in a classroom in their own field of study. The test lasts ten minutes and consists of three parts: (1) A minute to allow the TA to become familiar with the physical surroundings, meet the "class" (two or three student-questioners, two or three raters, a test proctor, and a camera technician), and write a few terms on the chalkboard; (2) up to five minutes to explain some aspect of an assigned topic clearly and in words that an undergraduate class could understand; and (3) three minutes to answer questions about the topic asked by the student-questioners.

The test is designed to create as natural a classroom setting as possible. Some directions are given beforehand to the student-questioners, however, about the method of asking questions (Appendix A). In an attempt to screen prospective NNS TAs who are unaware of U.S. classroom procedures, students ask at least one "classroom culture" question. These questions might contain idioms (e.g., pop quiz, graded on the curve, openbook exam) and are likely to be asked outside the context of the TA's topic.

Questioners are instructed to stop the NNS TA at the end of the five-minute talk and to take turns asking questions. Prearranged decisions include the following: (1) who should ask the first question so there will be no hesitation when the five-minute timer sounds, and (2) who should ask the out-of-context, "classroom culture question" as the
second or third question in the series. Questioners are asked to formulate questions that require more than simple yes/no responses from the NNS TA and not to ask questions more difficult than those of an average undergraduate.

TEACH simulations are videotaped by camera technicians trained and supplied by the university’s Media Resources Center. NNS TAs are asked to sign a permission form allowing these tapes to be used for research purposes.

Data for this study were the questions asked by 18 NS university students in the TEACH test setting. Each question was transcribed from the performances on videotape using normal orthography and the transcription conventions of Brown and Yule (1983b:x-xi) listed in Appendix B.

Method of Analysis

The purpose of collecting these questions was twofold: (1) to examine them by looking at a series of characteristics; and (2) to see to which questions NNS TAs of low, moderate, and high English proficiency had difficulty in responding. These questions were then scrutinized for possible sources of difficulty.

The coding sheet shown in Appendix C was used to examine each question. Eight additional characteristics were later added to the 20 listed on the sheet. Characteristics were divided into three categories: (1) those that provided information on how well the NNS TA performed on both
the SPEAK and TEACH tests, which were taken on the same afternoon and evaluated by the same pairs of trained raters--as well as the author of the present study; (2) characteristics of student questioners--their sex and rate of speech; and (3) characteristics of the actual questions asked, including their length, lexical composition, structuring, syntactic and pragmatic form, relevance, and redundancy. In Chapter III, I will describe each characteristic in greater detail and discuss its importance in determining question difficulty.

Assumptions and Limitations

Initially I had hoped to collect samples of NS students’ questions as "natural speech" in actual classrooms and laboratories where NNS TAs taught. A few visits to recitation sections proved this method of data collection to be time consuming and unproductive. In the classes I observed, undergraduates typically asked only two or three questions during the entire 50-minute period. Sometimes when the NNS TA spoke haltingly and/or had little rapport with the class, students asked no questions at all.

Although the testing situation used for collecting data for this research was not the same as a real classroom, I believe the questions were asked in a style similar to that of the less frequent questions I heard in actual classes. Some of the student-questioners were graduate
students who were TAs themselves and had experience with handling ques-
tions in their own classes. Other student-questioners were undergradu-
ates, whose speech seemed naturally informal. For example, the following
utterances were spoken quickly, ungrammatically, and without a trace of
the characteristics of "foreign talk discourse" (Hatch, 1983:155-158):

(Q-unit 555: Industrial Engineering)

1.1. Q: I was gonna ask. Not all of this is dealing (1)
with say like quality control. Say like you had (2)
in the lay sections so many rejects comin' out. (3)
How would that handle? Er how would that show (4)
up in the ++ in the process (dies out) (5)

(TA explains)

Q: You mean you wouldn't expect, like say after the (6)
lay section, ta see because it would turn within (7)
a certain color? (8)

One decided advantage to the collection of questions from TEACH
data is that the intent of the student-questioners and of the NNS
TAs is generally constrained by the formalized structure of the
test. Questioners are required to ask for information, and TAs need
to respond with information. These intents saved me from some of
the agonizing which discourse analysts normally do when they have to
impose exchange structure on conversational data (see, for example,
An important difference between the testing situation and an actual classroom, however, is in the distribution of power between TA and student. As Wolfson discovered when she sought instances of a particular verb tense through "spontaneous" interviews, "...the distribution of power and/or solidarity among participants in a conversation is always an important determinant of their verbal behavior" (Wolfson, 1976:198). In an actual course, the TA may have control over the students' grades for the semester, or at least influence with the faculty member responsible for the grades. Students will treat the TA with deference if they are concerned about getting a good grade--or at the least, with a degree of wariness if they think he or she might influence the faculty member.

In the case of the TEACH test, however, the NNS TA is being tested and the student-questioners hold the power. As Goody (1978) discovered in anthropological fieldwork, questions can "mean" many things from polite inquiries to commands. The status of questioner and respondent is taken into consideration before either makes an utterance. Instances of pure information questioning are rare in a classroom setting, Goody points out. Frequently students are asking deferential questions of the teacher, and the teacher is asking controlling questions of the students. In the TEACH test, roles are reversed. Student-questioners are asking controlling questions even when they are phrasing them as if they were informational. The subliminal question they are putting to the NNS TA is always "Can you handle the questions of U.S. college students?"
An example of this awareness of power distribution showed up in the following exchange where the NNS TA dared to step out of the simulation and add an aside:

(Q-unit 286: Physics)

1.2. Q: Is there any sort of ah analytical way + of adding (1) vectors (↑) in case I'm not an arc*** (2)

TA: Yes, there is an analytical way, but you're not (3) suppose to know that yet. (4)

(General laughter. Then TA explains)

Another constraint on the "naturalness" of the questioning in the TEACH test is one that complicates all collecting of speech samples: the presence of recording equipment. In his classic study of social stratification of r-lessness in the speech of New Yorkers, Labov (1966) found that some of his best samples of casual speech were collected when subjects interrupted a taped interview to take a telephone call or when the interviewer left the room and the subjects believed they were not being recorded.

Twenty years have passed since Labov's study, however, and in the interim a generation has grown up that is comfortable with all manner of electronic gadgetry--videotape cameras, miniaturized tape recorders, telephone answering machines, and compact disk players. In 1985, the presence of a television camera is not as intrusive to U.S. student-questioners, although it is likely to be to the NNS TA on trial.
The use of videotaped test performances for the present study has allowed for the transcription of a corpus of over a thousand questions uttered by students who were paid to act like students, albeit probably more inquisitive and brighter than most. In the instance of the "classroom culture" question, they may have felt uneasy or artificial. During the raising of questions about the subject matter, for the most part, they seemed at ease. No claims are made that these questions are those that would be asked in an actual classroom. They are, however, questions phrased by students who were trying to speak naturally and to create the tone of an actual classroom situation. I believe the questions were, with a few exceptions, appropriate and natural to the TEACH test as a semi-planned speech event, to use Ochs' (1979) terminology.

In Chapter II, I will review relevant literature on related research. The method of analysis will be discussed in Chapter III. Chapter IV will present the results of data analysis, and Chapter V, possible implications. In two of the appendices, I will provide the primary text for a computer simulation lesson to teach NNS TAs strategies for handling students' questions (Appendix D) and a brochure for U.S. students suggesting ways they can improve communications with their NNS TAs (Appendix E).
CHAPTER II
RELEVANT RESEARCH

For persons who demand rigorous definitions, the term question cannot be defined satisfactorily so as to include the types that they themselves would spontaneously identify as Qs.... Since a common term blankets the complex, however, one is prone to ask whether there is not a common element. Speaking as an amateur psychologist or sociologist rather than as a linguist, I venture to say that a Q is fundamentally an attitude, which might be called "craving"--it is an utterance that "craves" a verbal or other semiotic (e.g., nod) response.... A question appears to be a behavior pattern, and is as real--but as hard to pin down--as other behavior patterns: aggressiveness, deference, anxiety, or embarrassment. No inclusive definition can cover the pattern and at the same time meet the demands of scientific parsimony (Bolinger, 1957:5).

In preparation for the present research study, I reviewed literature concerning (1) the form and function of questions and (2) the difficulties NNSs have in understanding NSs' questions, particularly in classroom settings.
Structural Form of Questions

Celce-Murcia and Larsen-Freeman in The Grammar Book (1983) initially introduced me to the myriad of ways a question can be asked in English. Their bibliography directed me to Quirk and Greenbaum (1973), Stockwell et al. (1973), Culicover (1976), Akmajian and Heny (1975), and Bowen (1975), who have produced detailed theoretical works on the forms and sounds of questions.

A major pre-transformational monograph by Bolinger (1957) divides, subdivides, and further subdivides families of question types. Figure 1 is a diagram of Bolinger's question tree, following out to the "twigs" only the "branch" of the plain yes/no question. Bolinger's two main families, multiple-choice and explanatory questions, although labeled differently, continue to be viewed as the basic question types by grammarians.

Some psycholinguists concerned with semantics and a universal theory of language, such as Katz and Postal (1964), claim that yes/no questions are really WH questions with the Q-marker and WH-word removed. Other common names for basically the same two types are the following:

<table>
<thead>
<tr>
<th>WH questions</th>
<th>Yes/No questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bolinger (1957)</td>
<td>explanatory</td>
</tr>
<tr>
<td>Cygan (1967)</td>
<td>special</td>
</tr>
<tr>
<td>Jespersen (1933)</td>
<td>x</td>
</tr>
<tr>
<td></td>
<td>multiple choice</td>
</tr>
<tr>
<td></td>
<td>general</td>
</tr>
<tr>
<td></td>
<td>nexus</td>
</tr>
</tbody>
</table>
**Figure 1. Question categories with detail for plain yes/no questions (based on Bolinger, 1957)**
Following the practice of Quirk et al. (1972) and Celce-Murcia and Larsen-Freeman (1983), the present study will refer to the two types as WH questions (Where is Sylvia?) and yes/no questions (Is Sylvia there?)

An article by Kearsley (1976) synthesized previous research into "an integrated conceptualization of question asking" and set up useful question types for the present study. Figure 2 shows the hierarchy of structural categories Kearsley uses for questions. Initially he distinguishes between verbal and nonverbal questions. Nonverbal questions can be overt--gestures such as a puzzled facial expression or raised eyebrows--or covert--internally directed questions we ask and answer ourselves. But the nonverbal branch is not relevant to the present study since only questioners' verbal utterances could be recorded.

The other main branch, verbal questions, is divided into direct and indirect. Indirect questions are declaratives that contain an embedded, partial interrogative phrase (e.g., I don't understand what you mean). They require a response even though they lack interrogative markers. Direct questions have one or more of these markers, i.e., rising intonation, inverted word order, and/or one of the WH words known as Q-markers.
Figure 2. Hierarchy of question forms (from Kearsley, 1976: 357)
(i.e., who, what, when, how, etc.). Direct questions are divided and subdivided into a number of other categories, which will be examined carefully in Chapter III and used to classify questions in the present study.

Work by linguists Quirk and Greenbaum (1973) and Leech and Svartvik (1975) predating Kearsley's article took a communicative approach to the study of grammar, including questions. These linguists focused on uses, situations and meanings. Although more helpful to second language learners (L2), their approaches relied heavily on the written rather than the spoken form of language.

**Question Functions**

Sociolinguistics, a branch of linguistics that emphasizes the spoken form, has found question-answer exchanges basic for probing interactions in everyday encounters. Language philosophers Austin (1962) and Searle (1969) were among the first to express doubts about structural linguistics and to discuss speech acts, how people do things with words. Hymes (1972) introduced the concept of communicative competence, and it became reasonable to believe that there were sociolinguistic conventions, or "rules of use," to which speakers and listeners are expected to conform.

Ervin-Tripp (1964), Jefferson (1972), Scheglof and Sacks (1973), Sacks et al. (1974), Mischler (1975), Goffman (1976), Merritt (1976), and
Churchill (1978) have produced books and articles on conversational analysis, looking at the use of speech in everyday situations. In the process, they theorized about the pragmatic functions of questions essential to understanding any interaction.

Their work leads naturally into the area of discourse analysis, a field of extreme complexity even when it examines openings, closings, and turn-taking. Recent books by Brown and Yule (1983a) and Stubbs (1983) have helped in clarifying some ambiguities of the field, which is still struggling without a formalized methodology for interpreting discourse beyond the single utterance. Articles by Hatch and Long, Celce-Murcia, Vander Brook et al., Arthur et al., and Allwright in the collection by Larsen-Freeman (1980) illustrate the potential importance of discourse analysis in the future study of second language acquisition.

Hatch (1983:123) described three discourse sublevels, in an ascending hierarchy, which are helpful in examining data as discourse:

speech act, speech event, and speech situation. .... Imagine a party (speech situation), a conversation during the party (speech event), and a directive within the conversation (speech act). The same speech act could occur in other speech events (e.g., a lecture). And a speech event could take place in different speech situations (e.g., the conversation could take place while jogging with a friend instead of at a party). The
task is to define each level (if they are mutually exclusive) and show how they interlock or overlap.

The obvious function of questions appears to be the elicitation of responses from those to whom they are addressed. On closer inspection, however, a variety of functions becomes apparent. Kearsley (1976) tried to classify questions by their functional intent in addition to the generic intent of eliciting a verbal response from the addressee. He admitted that his classes (shown in Figure 3) are still speculative and not mutually exclusive. He described four major classes:

- **echoic** - Questions that ask for the repetition of an utterance or that confirm the utterance has been interpreted as intended; often a paraphrase of the original question.

- **epistemic** - Questions that seek to acquire information through referential or evaluative means. Referential questions ask for contextual information about situations, events, actions, purposes, relationships or property; evaluative questions seek to establish the addressee's knowledge of the answer (also called "display questions").

- **expressive** - Questions that convey attitudinal information to the addressee independent of the information content; frequently yes/no questions uttered in different tones of voice (e.g., *Aren't you coming?* [surprise, disbelief], *Are*
Figure 3. Taxonomy of question functions (from Kearsley, 1976:360)
you coming or aren't you? [impatient]. You are coming, aren't you? [doubtful]).

- **social control** - Questions that exert authority by maintaining control of the discourse, again independent of the information content. Two subclasses are (a) attentional questions that allow the questioner to take over the direction of the discourse (e.g., Hey, know what?) and (b) verbosity questions that are asked only for the sake of politeness and to avoid embarrassing silences (e.g., at a cocktail party, Have you been in Ames long?).

In their study of the forms and functions of ESL teachers' questions, Long and Sato (1983) selected Kearsley's framework for their analysis, but modified it to account for the differences between social conversation and classroom dialogue. The modifications of Long and Sato included the creation of three subclasses within echoic. These subclasses are as follows:

- **Comprehension checks** - Questions in which the NS tries to establish whether the NNS has understood the previous utterance; frequently tag questions or short intonated questions without a verb.

- **Clarification requests** - Questions in which the NS tries to clarify what the NNS said previously and to require the NNS to furnish new information or recode a previous response;
can be WH or yes/no questions, or even indirect (e.g.,
I don't understand.)

- Confirmation checks - Questions that repeat all or part of the response to confirm that the listener has understood the speaker’s previous utterance; can be yes/no questions or uninverted with rising intonation.

Neither Kearsley nor Long and Sato was dealing with situations like mine, however. Kearsley had collected questions from transcripts of group psychotherapy sessions and from dialogues in fictional stories. In all cases the discourse was NS-NS. On the other hand, Long and Sato were comparing (1) classroom discourse between NS ESL teachers and their NNS students with (2) social conversations outside of class between NS-NNS. In the Long and Sato study the NS teachers were asking most of the questions to get the NNS students to display the English they had learned. These display questions accounted for nearly 51% of all the questions asked by ESL teachers. Meanwhile, in the outside NS-NNS conversations, more question exchanges were taking place than in the classroom, and the most common question type was the referential question (75.6%), seeking new information.

Another study that probed question functions is worthy of mention. Mischler (1975) describes three types of interrogative discourse patterns that he studied in the interactions between adults and children: (1) chaining, used by the initial questioner to extend the dialogue through
successive questions; (2) arching, in which a respondent replies to the first question with a question; and (3) embedding, in which two listeners respond to the initial question. Although he was looking at how sex and age differences affect controlling behavior, Mischler's first two categories are also possible categories for examining NS-NNS interaction in this study.

NS-NNS Interactions

The general research area of NS-NNS exchanges has been a productive one, dating back to Ferguson (1971, 1975) who defined "foreigner talk" as a simplified speech style regarded by NSs as appropriate for use with NNSs. In fact, "foreigner talk," he says, is an imitation of how NSs perceive NNSs' "broken English."

Initially Ferguson focused on the ungrammaticality of foreign talk discourse (FTD)--the me Tarzan, you Jane sort of thing--which has since been proven to be the exception. According to Long (1983a:178), most speech addressed to L2 learners is a "modified but well-formed version of the target [language]." Later researchers have been more interested in the structural characteristics of NS-NNS conversation in which FTD occurs (Hatch, 1983). Some of the ways in which NS-NNS conversations have been found to differ from NS-NS conversations is in the simple and brief conversation topics (Arthur et al., 1980), followed by abrupt topic shifts (Scarcella, 1981), the temporal marking of verbs for present and the discussion of matters in the "here and now" (Long, 1982), and the prevalence
of or choice questions (Hatch 1978), allowing the NNS to choose the answer from several possibilities and making his or her conversational task easier.

Temporal marking of verbs has been a characteristic examined by various researchers interested in foreign talk discourse (FTD). Ferguson (1975) noted as one grammatical simplification the omission of tense markers. Long also included the relative frequencies of present and non-present temporal marking of verbs in his study of questions in FTD. He reasoned that

while NS-NS interaction would not be constrained in this way, adult FTD might be more restricted; although the NNSs were adults, and cognitively fully sophisticated, the more immediate nature of present concerns might make them conceptually simpler and so preferred subject-matter (Long, 1982:139).

But in the 1982 study Long found that NS-NS and FTD both contained more verbs marked for present than for nonpresent time. Although FTD used more present than NS-NS talk, the difference was not statistically significant. Later Long and Sato (1983) included temporal marking in their study of the form and function of teachers’ questions in ESL classrooms to compare their findings with patterns of questioning behavior in NS-NNS conversation outside classrooms. They found that teachers’ speech was marked for present tense significantly more than informal NS-NNS conversation.
In his study of NS-NNS interaction between academic peers, Gaies found evidence "that compared to speech between NSs, NS-NNS interaction is characteristically more oriented in the present" (Gaies 1982:77). In the same study, Gaies (1982) cautiously came to the conclusion that NS discourse modifications are made in accordance with the perceived proficiency of NNS participants. Using NS-NNS pairs of college students with shared classroom experience and equal status, he compared four of the same variables selected by Long (1982). He found less evidence of the FTD features Long noted probably because his NNS subjects had higher English proficiency.

A discussion of the literature on NS-NNS interaction is not complete without mentioning the thorough research review by Eisenstein (1983) and the numerous studies by Gass and Varonis (1984, 1985a, 1985b, 1986) and Varonis and Gass (1982, 1985a, 1985b). In some of their studies the research focus was opposite from mine: they were looking at the NS perception of NNS utterances whereas I have been concerned with NNS perception of NS questions.

Of particular interest is the Varonis and Gass study (1985b:333-335) of miscommunication in NS-NNS conversations, in which the authors introduce a heuristic useful in coding variation in a hearer's interpretation of a speaker's utterance. It provides five ways of keeping an exchange going and can be diagrammed as follows:
Correct response
1. X _______ X - perfect symmetry between intended message (X) and received message (X); conversation continues on a horizontal plane.

2. X _______ X'- hearer is not totally confident about the message she received (X') and feels the need to question it (e.g., X: It's 28 percent. X': It's 28 percent?).

Incorrect response
3. X _______ Y - hearer incorrectly interprets the utterance and does not realize she has misunderstood.

4. X _______ Y'- hearer incorrectly interprets the utterance, but feels the need to question the utterance by repeating what she thought she heard (Y'). Presumably the speaker will understand the hearer and the difficulty will be resolved.

No understanding
5. X _______ 0 - hearer does not understand and might either respond with What?, Pardon?, or Huh? (whereupon the horizontal movement of the conversation comes to a halt until the meaning of the utterance is negotiated) or the hearer may opt for a face-saving move and continue the conversation on another track until the need for clarification becomes paramount.
Lakoff (1973) acknowledges that in addition to general linguistic considerations about the appropriateness of answers, respondents must also be aware of any special factors in the social situation in which they find themselves. She points to the differences—because of the context—that *well* and/or *why* create when either is inserted in an answer.

Long (1983b) claims the modification of the interactional structure rather than of speech (FTD) is more important to comprehensibility in NS-NNS conversations. He suggests 15 devices for modification of interactions—five strategies, or long-range plans for conversation topics; four tactics, or spontaneous, short repairs in conversation when trouble arises; and six that serve both purposes.

More specifically, Long points to these strategy devices used by NSs:

1. relinquishing topic control, allowing NNSs to talk about whatever they can handle;
2. selecting salient topics, oriented to the here and now;
3. treating topics briefly, lightening NNSs' conversational burden;
4. making new topics salient by using frames to introduce new topics, keeping the pace slow, stressing key words, pausing before and after key words, using questions to encode topic-nominating moves, and "decomposing" (breaking complex constructions into simpler phrases); and
5. checking NNSs' comprehension to prevent communication breakdowns.
Tactics described by Long consist of the following:
(1) accepting unintentional topic-switches by NNSs when they misunderstand questions;
(2) requesting clarifications;
(3) confirming the NSs' own comprehension; and
(4) tolerating ambiguous utterances.

Combination strategy-tactics consist of the first four strategies listed above—when they occur after a communications breakdown—plus two more:
(1) repeating own (NS) utterances ("self-repetitions");
(2) repeating NNSs' utterances ("other-repetitions").

Brown's (1978) insights on the use of ethnographic cues by NNS to predict the likely content of NSs' utterances are also valuable. She suggests pre-listening activities for L2 learners that include participatory discussion of the ethnographic features of exchanges the learners are going to listen to (later as part of their classroom activities), who the listeners are, the occasion on which the exchange was produced, and the inevitability of some ambiguity. She believes in downplaying "correctness" so that NNSs are not always trying to comprehend every word.

Other Question Characteristics Examined

Intonational spoken signals by NSs are an area of difficulty for NNS listeners, as Luthy (1983) points out. Since many of these signals
(e.g., hesitation [ə], oops, oh-oh, huh-uh, huh?) have no written correlates, ESL teachers tend to overlook them. L2 learners must "acquire" them, and Luthy demonstrated through an empirical study that foreign students as a group make nearly ten times more errors than NSs in comprehension of these signals.

Another possible source of difficulty, which was examined by Henrichsen (1984), is sandhi-variation, the modification of grammatical forms phonologically because of their juxtaposition. Included are the processes of assimilation, mutation, contraction, liaison, and elision. From his experiment, Henrichsen concluded that for the lower proficiency NNS listener sandhi-variations are a filter between input (the language that surrounds a language learner) and intake (the part which the learner comprehends).

The three interrogative exponents in English were the subject of an article by Cygan (1967), who suggested that ESL learners could identify an utterance in English as a question by looking for the most common exponent. Exponents Cygan targeted were (1) Q-markers—the WH words, who, what, why, where, how, etc., (2) inversion of word order, and (3) rising intonation used as a suprasegmental feature to signal interrogativity.

Cygan looked at the ways these elements could be used singly and in combination in spoken English. He concluded that rising intonation was most useful in distinguishing between various types of questions, but was not the main exponent of a question. Q-markers were also useful in
separating WH from yes/no questions. Cygan (1967:149) recommended that English second language (L2) learners look for inversion as the exponent "distinguishing questions as a class from all other utterance types in general," since inversion occurred both in yes/no questions (with rising intonation) and in WH questions (with Q-markers).

**Framing Mechanisms**

A number of researchers have discussed the frequency of a preface in a conversational move (Edmondson, 1981; Kayfetz and Smith, 1986; Stubbs, 1983). The preface, or opening, serves as a boundary marker, indicating whether the speaker is going to continue with the present topic or shift to something else. As Stubbs points out, "Studying such structural markers therefore provides a direct way of studying an aspect of how people listen to each other: the kinds of abstract discourse structures they listen for" (1983:184).

Stubbs elaborates on subcategories of prefaces including interruptions, which he thinks are an important turn-taking mechanism in certain speech situations. He gives examples of "the various surface markers which typically preface utterances designed to break into the flow of discourse" (1983:186). His characterization includes the following elements:

1) term of address
2) Can I/Could I/I must/let me (i.e., forms of mitigation)
3) self-referential metastatement
4) repetition of the first few syllables

Less studied are the closings used to bring an utterance to an end. Edmondson (1981) refers to such closings as "post exchanges," which he separates into substantive or ritual. Schegloff and Sacks (1973) have examined conversation-closing in detail, but most of their observations do not apply to the questions examined in the present study.

The "Foreign TA Problem"

A growing body of literature concerns the situation at major research universities where the decrease in U.S. graduate students in some scientific and engineering fields is forcing departments to offer teaching assistantships to newly-arrived graduate students from overseas. Articles, books, and dissertations have now been written on communication breakdowns which sometimes occur between these NNS TAs and U.S. undergraduates.

Several studies at UCLA concerned testing and evaluation (Hinofotis and Bailey, 1980; Hinofotis, Bailey and Stern, 1981). A collection of articles published by the National Association for Foreign Student Affairs (NAFSA) examined aspects of testing and training NNS TAs and provided practical advice on dealing with the situation (Bailey et al., 1984). Dissertations (Bailey, 1982; Keye, 1981; Orth, 1982) have been written principally dealing with NS undergraduates' reactions to NNS TAs.
Gillette (1982) undertook case studies of a NS and a NNS TA who taught astronomy classes. She compared their communication strategies and looked for the ways in which communication broke down between the NNS TA and his class. McKenna (1986) examined question dialogues initiated by NS students in lecture classes in the hope of being able to describe to NNS students some strategies that result in coherence. Her purpose was to help them comprehend classroom discourse and make them better able to ask questions in class; she was not concerned with NNS TAs who are called upon to answer questions, however.

A recent report from the Educational Testing Service (Powers, 1985) examined the importance of various listening skills or activities for academic success, the degree to which both NS and NNS encountered difficulties with these skills, and the appropriateness of various means of assessing these skills. Of greatest interest for this study was Powers' table of listening comprehension variables, which were divided into the categories of stimulus-related (vocabulary mode, presentation mode, abstractness, etc.), speaker-related, and context-related (distraction, note-taking, etc.).

Speaker Variables

A final area of concern to the present study was the way in which student questioners' speaking characteristics made their questions more difficult to comprehend. Factors such as sex, rate of speech delivery, intonation patterns, and pauses have been examined by some researchers.
Brend’s research (1975) concluded that white, middle-class American women have greater pitch range and intonational variability than their male counterparts. In England, Pellowe and Jones (1978) and Elyan et al. (1978) found that men use a much greater proportion of falling tones than rising tones, while women generally realize more rising tones.

Richards (1983) discussed factors such as rate of delivery, rhythm and stress, pauses, and speech errors. He provided a useful taxonomy of "micro-skills" needed for particular listening activities. His ideas on designing curriculum materials for teaching listening skills would be useful in designing courseware to help NNS TAs.
CHAPTER III
RESEARCH METHODS

I would propose, however, as a principle for sociolinguistics, that any analysis of speech behaviour will ultimately stand or fall on its success in coming to grips with audio-recordings of what speakers actually say to each other in specific, naturally occurring social settings. (Stubbs, 1983:220)

...methodological difficulties...arose as we got deeper into the business of doing the coding. Our grasp of the issues became more penetrating, but things didn't get better; they got worse. We simply didn't find ourselves cleaning up the details of the coding, as the minor annoyances due to ignorance were swept away. The true facts of what a direct answer is and what a question is never came to light; the phenomena became more puzzling. We found that we were forced into the "ad-hocing" practices that Garfinkel (1967) describes. We had to make practical and theoretically arbitrary decisions to get the coding done. (Churchill, 1978:38)

Subjects

The subjects observed in this study were 18 ISU students who asked questions under TEACH testing conditions of 152 prospective NNS TAs who
took the test at Iowa State University during the period from July 1985 to January 1986.

Student-questioners were equally divided between graduate and undergraduate students enrolled at ISU. Most were majoring in scientific or engineering fields and would have taken 100-level survey courses in which TAs instruct or assist with laboratories and recitation sections. There were nine males and nine females, and all were native speakers of English.

The NNS TAs they queried came from 33 countries and represented 29 language groups. The two largest aggregates came from the Orient (32 from Korea, 26 from the People's Republic of China, and 18 from Republic of China/Taiwan) and from the Indian subcontinent (20). Over 35% were native speakers of Chinese (primarily Mandarin). All had been admitted to the Graduate College, which requires either a score of 500 or higher on the Educational Testing Service's TOEFL, the recommendation of the ISU Intensive English & Orientation Program (if the score was slightly below 500), or a degree from a university where English is used as the medium of instruction. Over 58% of the examinees were being considered for teaching assistantships by four departments: chemistry, physics, mathematics, and statistics. Another 18% came from engineering departments. There were 113 males and 39 females. The length of time they had spent in the United States varied from a few days to many years. Nineteen percent had already had some teaching experience in the United States, although according to data about the previous year's NNS TAs (Plakans and
Abraham, 1985), they were no more likely to score above 200 on the SPEAK test than NNS TAs without any teaching experience.

Data

Questions were the basic unit of analysis in this study. The data file consisted of 1,305 questions from 171 TEACH presentations by 152 NNS TAs. There were more presentations than NNS TAs in the file because of the retesting at the December 1985 test administration of 19 NNS TAs who had not passed the test in the summer and who had been in the remediation program during fall semester.

Questions were rarely uttered without additional framing, which might take the form of prefaces, closing remarks, rephrasings, or repetitions. The core question and the surrounding verbiage that the student-questioner said before the TA made a response will be referred to as an utterance. Usually before the student-questioner had finished a questioning turn, he or she had made several utterances and received several responses from the TA. Each questioning turn taken by an individual student-questioner will be referred to in this study as a Q-unit. The Q-unit designation calls attention to the fact that a student-questioner’s turn consisted of considerably more than just a core question.

There were 654 question-response interchanges between student-questioners and NNS TAs in these 171 TEACH presentations, indicating that the questioners asked an average of 1.995 questions per Q-unit. Within the three-minute question-and-answer period at the end of every TEACH
presentation, there was likely to be three to five separate Q-units. Figure 4 schematizes the structure of a Q-unit using Hatch's (1983) discourse sublevels (described on page 16).

Once in a while the questioner asked two or more questions within a single utterance. For example,

(Q-unit 133: Mathematics)

3.1 Q: What happens then as you start gitting yer, ah, like that's (1) the X to the fourteenth to the square. What happens ta the (2) curve then? Er, what should you expect ta happen? (3)

With this practice, referred to as "double-barreled" questioning, each question was counted as a separate unit in the analysis. Thus the example above was triple-barreled.

Occasionally the timer, indicating the test was over, sounded a few seconds after a question was posed, and the TA chose to make no response. Since these questions were already formed, they have been included in the descriptive analysis, but not in the analysis of answering difficulties.

Analytical Procedures Used

The first research question in the present study involved looking at the form and function NS students' questions took when they were addressed to NNS TAs. Twenty-eight characteristics of each question were coded, entered into a computer file, and manipulated using the SPSSX
Speech Situation: TEACH Test
Speech Event: Student questioning of NNS TAs
Speech Act: Q-unit - Questioning turn of one student-questioner

Utterance 1a within Q-unit:
Q: When you were doing yer yer things up there, you had a C. What was yer C defined ta be? I don't remember.

TA responds

Utterance 2 within Q-unit:
Q: I was wonderin' if you could continue that. Could you show us what the ah + what the number of grams is on the right?

TA explains

aParts of Utterance 1:
Preface: When you were doing yer yer things up there, you had a C.
Core question: What was yer C defined ta be?
Closing: I don't remember.

Figure 4. Structure of a Q-unit with utterances each containing a separate question
statistical package. Characteristics were classified into four categories: identification, performance rating, questioners' traits, and question content characteristics. These categories are listed in Table 1 and explained below. Descriptor code numbers are included in parentheses when characteristics are mentioned throughout the following discussion.

Identification

The first category, consisting of seven characteristics, was established to simplify the process of locating records on NNS TAs in order to include or exclude them from various statistical breakdowns. Characteristic 1 (ID) was the number assigned to each of the 171 TEACH presentations included in the study. Characteristic 2 (EXAM) was the examinee number assigned to each of the 152 NNS TAs the first time he or she registered for the tests. This item provides different information from ID because, as mentioned earlier, 19 NNSTAs were tested twice. Characteristic 3 (REMED) was a binary designator for remediation: 1 for those taking the test for the first time, 2 for those taking the test after one semester of remedial course work. Characteristic 4 (QUNIT) identified each of the 654 Q-units included in the study. Characteristic 5 (UTTER) identified the order of an utterance within each Q-unit. Values ranged from 1 to 8. Characteristic 6 (QUESTION) identified the order of each question within each utterance. Values ranged from 1 to 6. (For a clearer understanding of the Q-unit, utterance, and question-nesting, see Figure 4 on page 36.) Characteristic 7 (DEPT) was the code number of the
Table 1. List of coded characteristics

<table>
<thead>
<tr>
<th>Descriptor</th>
<th>Column</th>
<th>ID Code</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I. IDENTIFICATION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Item number</td>
<td>1-3</td>
<td>ID</td>
</tr>
<tr>
<td>2. Examinee number</td>
<td>4-7</td>
<td>EXAM</td>
</tr>
<tr>
<td>3. Remediation</td>
<td>8</td>
<td>REMED</td>
</tr>
<tr>
<td>4. Q-Unit number</td>
<td>9-11</td>
<td>QUNIT</td>
</tr>
<tr>
<td>5. Utterance number</td>
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<td>UTTER</td>
</tr>
<tr>
<td>6. Question</td>
<td>13</td>
<td>QUESTION</td>
</tr>
<tr>
<td>7. Department</td>
<td>14-15</td>
<td>DEPT</td>
</tr>
<tr>
<td><strong>II. PERFORMANCE RATING</strong></td>
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<td></td>
</tr>
<tr>
<td>8. Difficulty of question to TA</td>
<td>16</td>
<td>DIFFICUL</td>
</tr>
<tr>
<td>9. SPEAK/TEACH rating</td>
<td>17</td>
<td>SPEAK</td>
</tr>
<tr>
<td>10. Avg. of TEACH raters' ratings</td>
<td>18-19</td>
<td>TEACH1</td>
</tr>
<tr>
<td>11. TEACH rating by BSP</td>
<td>20-21</td>
<td>TEACH2</td>
</tr>
<tr>
<td><strong>III. QUESTIONERS' TRAITS</strong></td>
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<td></td>
</tr>
<tr>
<td>12. Questioner's sex</td>
<td>22</td>
<td>SEX</td>
</tr>
<tr>
<td>13. Rate of speech</td>
<td>23</td>
<td>SPEED</td>
</tr>
<tr>
<td><strong>IV. CHARACTERISTICS OF QUESTIONS</strong></td>
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<tr>
<td>14. Total number of words in question</td>
<td>24-25</td>
<td>TOTAL</td>
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<tr>
<td>15. No. of &quot;useless&quot; words in question</td>
<td>26-27</td>
<td>USELESS</td>
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<tr>
<td>16. No. of sandhi reductions(^a)</td>
<td>28-29</td>
<td>SANDHI</td>
</tr>
<tr>
<td>17. Use of introduction/preface</td>
<td>30</td>
<td>INTRO</td>
</tr>
<tr>
<td>18. Use of closing</td>
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<td>CLOSING</td>
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<td>19. Relevance of Q to topic</td>
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<td>20. Grammaticality</td>
<td>33</td>
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<td>21. Verb tense</td>
<td>34</td>
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<td>22. Lexical complexity</td>
<td>35</td>
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<tr>
<td>23. Form of question</td>
<td>36-39</td>
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<td>24. Positive or negative?</td>
<td>40</td>
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<td>25. Presence of question exponents</td>
<td>41</td>
<td>EXPONENT</td>
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<tr>
<td>26. Function of question</td>
<td>42-45</td>
<td>FUNCTION</td>
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<td>27. Extra intonation message</td>
<td>46</td>
<td>INTONAT</td>
</tr>
<tr>
<td>28. Barreling</td>
<td>47</td>
<td>BARREL</td>
</tr>
</tbody>
</table>

\(^a\)Also hand-coded by type.
academic department considering the NNS TA for a teaching assistantship. Twenty-six departments at Iowa State University were included.

Performance rating

The second category concerned the evaluation of the NNS TAs on the SPEAK and TEACH tests. Four kinds of testing data were included to provide some assessment of the NNS TAs' proficiency in English, particularly listening comprehension.

1. Characteristic 8 (DIFFICUL) will play a major role as the dependent variable in answering the second research question in Chapter IV: What were the possible causes for NNS TA difficulty in answering questions, other than low English proficiency? Four types of responses used by NNS TAs were observed and coded as follows:

0 - The TA answered the question appropriately and gave no indication of difficulty in comprehending.

1 - The TA was unable to answer the question and either turned his or her attention to another questioner or stood motionless until the timer sounded and the test ended.

2 - The TA said that he or she could not understand the question, and the questioner repeated or rephrased the question two more times before the TA was able to answer. (Having the question repeated once seemed only native-like and was not considered real difficulty.)

3 - The TA gave an inappropriate answer to the question.
This last type included a variety of responses. One common response involved the NNSTA giving a monosyllabic answer (e.g., "yes" or "no") to a question for which native speakers would expect an explanation. These answers were most common among NNS TAs who seemed to be guessing at an answer to a question they did not understand. For example,

(Q-unit 385: Sociology)

3.2. Q: Um, do you give pop quizzes in this class? (1)
   TA: Yeah (smiles) + + Poppies? What do you mean by dat? (2)
   Q: Um, do you give unannounced quizzes? (3)
   TA: In dis class? (4)
   Q: Um hmm. (5)
   TA: Yeah. (No sign she understood) (6)

Decisions as to difficulty were mine based on videotaped observations. No attempt was made to attribute the degree of difficulty each type caused the NNS TAs.

2. Characteristic 9 (SPEAK) was the overall SPEAK/TEACH test results which were reported to the NNS TAs and their departments and which determined their TA duties. Four ratings were possible: (1) certified, (2) conditionally certified, (3) partially certified, and (4) not certified. (See Appendix F for a sample of the report form.)

3. Characteristic 10 (TEACHI) was the average of part scores trained raters gave to the examinees' listening and question-handling performance
on the TEACH test. Scores ranged from 0.0 to 3.0. Scores below 2.0 were assigned to inadequate performances.

4. Characteristic 11 (TEACH2) was the score I gave to the examinee for listening and question handling based on my own observation of the performance on videotape. These scores also ranged from 0.0 to 3.0, with 2.0 as the dividing point between adequacy and inadequacy.

These four items were coded to provide some assessment of all NNS TAs' proficiency in English. Later SPEAK overall comprehensibility scores were also coded for the subset of NNS TAs who had difficulty with questions.

Questioners' traits

The third category concerned the 18 student-questioners. Two features about them were coded: characteristic 12 (SEX) was included because of Brend's (1975) research suggesting that it might correlate positively with extra rising intonation (characteristic 27 in the following category). Characteristic 13 (SPEED) was examined to see if the rate of speech of NS questions contributed to comprehension difficulty for the NNS TAs.

As I transcribed Q-units from videotape, I noted whether they were uttered slowly, rapidly, or at moderate speed. Because this was done
impressionistically without the use of any sort of mechanical measurement, I could only estimate the rate of speed based on how much difficulty I had in keeping up when writing out the utterance.

Question content characteristics

The fourth category concerned 15 features of the 1,305 questions asked during the 171 presentations. The features were selected for analysis either because they had been examined by earlier second language acquisition researchers, or because intuitively I thought examining the frequency of these features might be productive. In some cases they had been suggested to me by J. Anderson (personal communication, Department of English, Iowa State University, November 1985). After describing each characteristic briefly, I will return to several whose complexity required coding protocols.

Characteristic 14 (TOTAL), the number of words in the question, including framing words/sentences preceding and following the question and "useless words" (explained below). Common contractions were counted as one word (e.g., don't); unorthodox contractions were decomposed and their parts counted (e.g., that're for that are or where'd for where did).

Characteristic 15 (USELESS), the number of "useless" words--redundancies, "noise words," such as ah, er, um, enumerated by Carterette and Jones (1974:49), and false starts.
Characteristic 16 (SANDHI), the number of instances of sandhi-variations (e.g., D'you), which were counted in their unreduced form (do you) for characteristic 14 above (cf. Henrichsen, 1984). They were also recorded by hand in order to present a breakdown of the types of variations detected.

Characteristic 17 (INTRO), whether a preface was used to frame a question (cf. Edmondson, 1981 and Stubbs, 1983).

Characteristic 18 (CLOSING), whether a closing followed the question (for example, or what? in the question Is eight pi over seven the coordinate or what? [cf. Edmondson, 1981]).

Characteristic 19 (RELEVANT), whether the question was relevant to the TEACH topic or whether it was the out-of-context "classroom culture question," described on page 3.

Characteristic 20 (GRAMMAR), whether the question was grammatically "well-formed" according to the standards of spoken English as taught in university-level ESL classes. (There were many unclear cases and intuitive decisions had to be made for this characteristic. See Stubbs [1983:89-90] for a concise discussion of the difficulties in judging grammaticality of spoken discourse.)

Characteristic 21 (TENSE), the tense of the verbs in the question. The coding protocol with separate categories for the "pseudo-future tense" and "present tense, extra polite" is discussed on page 46.
Characteristic 22 (COMPLEX), the number of lexically-complex words in the question. This could include slangy or idiomatic phrases (e.g., I'm a little fuzzy on something. Could you explain again...), or technical terms that had not been used by the TA during the five-minute presentation.

Characteristic 23 (FORM), the syntactic form of the question specified by a complex taxonomy synthesized from Kearsley (1976) and Long and Sato (1983). The coding protocol will be discussed later (see page 47).

Characteristic 24 (NEGATIVE), whether the question was phrased positively or negatively.

Characteristic 25 (EXPONENT), the presence of one or more of the question exponents specified by Cygan (1967) and explained on pages 50-51. These exponents are rising intonation, presence of a Q-marker, and inverted word order.

Characteristic 26 (FUNCTION), the pragmatic function of the question specified by a taxonomy described on pages 50 and 52-60.

Characteristic 27 (INTONAT), whether the questioner used extra rising intonation, that is, using it in places other than the common location at the end of a yes/no question.

Characteristic 28 (BARREL), whether an utterance contained more than one question. This phenomenon, which I call "double-barreled" or
multi-barreled" questioning, can leave the TA wondering whether to answer all questions and in which order, if he or she realized that more than one question was asked. Frequently the TA may confuse or combine one question with another.

Complex Items Requiring Coding Protocols

Coding protocols described below were developed for the following question features: characteristics 21 (TENSE), 23 (FORM), 25 (EXONENT), and 26 (FUNCTION).

Verb tense (21 TENSE)

Because of the concern by some researchers with the use of present and nonpresent tense in NS-NNS interaction, the 1,305 NS questions in my corpus were coded for tense. Initially, I distinguished only among three categories: present, nonpresent, and mixed.

After examining all of the questions, I decided to make finer distinctions to allow for comparison with some of Kearsley's (1976) data on question types in psychotherapy sessions and in selected fiction. My system is presented in Table 2.

Code 2 (present using polite could) was added when it became apparent that a common way to phrase an information question less brusquely was to preface it with the modal could and a performative verb (e.g., tell, give, show, explain) as in the following example:
<table>
<thead>
<tr>
<th>Code No.</th>
<th>Definition</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>None</td>
<td>Pop quizzes? (↑) Unannounced quizzes? (↑) (not initial; used as a repeat/rephrasing) (Q-unit 265)</td>
</tr>
<tr>
<td>1</td>
<td>Present (including present perfect and progressive)</td>
<td>&quot;What do I do if I get ta the outside of yer restricted domain, er is this only part of the restricted domain?&quot; (Q-unit 073)</td>
</tr>
<tr>
<td>2</td>
<td>Present using polite could</td>
<td>&quot;Could you give me an approximate number (↑) + for that angle? (↑) Where ya know, if you said maybe like thirty degrees.&quot; (Q-unit 096)</td>
</tr>
<tr>
<td>3</td>
<td>Past (including past perfect and progressive)</td>
<td>&quot;Why did you choose two for that for the sides of those tri*** for those hypotenuses to start with? (Q-unit: 033)</td>
</tr>
<tr>
<td>4</td>
<td>Future (using gonna or going to)</td>
<td>&quot;Iz zat going ta be exactly one liter in that case?&quot; (Q-unit 009)</td>
</tr>
<tr>
<td>5</td>
<td>Future (including future perfect and progressive)</td>
<td>&quot;Will we be able to use our books on the next quiz?&quot; (Q-unit 010)</td>
</tr>
<tr>
<td>6</td>
<td>Conditional</td>
<td>&quot;Wouldn’t you define the inverse sine ta be just that? (↑) Would it make a difference if ya shifted it over? (↑) (Q-unit 019)</td>
</tr>
<tr>
<td>7</td>
<td>Mixed tenses</td>
<td>&quot;If I wanted ta make one liter of a mole solution, right (↑) then I’ll measure out one mole of the solute, right? (↑) (Q-unit 009)</td>
</tr>
</tbody>
</table>
(Q-unit 540: Community & Regional Planning)

3.3 Q: Could you tell me why you want to regulate height of buildings?

Code 4 was also added because of the frequency of going to, gonna, or going ta to convey future action.

The creation of these extra categories did not cover every contingency, however. This example of an obliquely worded, indirect question did not fit easily into the coding scheme:

(Q-unit 003: Mathematics)

3.4. Q: I was jes' gonna ask if you could tell me a general way to convert from radians to degrees.

The questioner embedded one illocutionary act (IA) inside another and a WH question within that:

IA1: I was just going to ask if you...

IA2: Could [you] tell me...

WH-Q: What's a general way to convert from radians to degrees?

I coded this indirect question as 3, past progressive tense, was going to ask, since this was the tense of the main clause, but it was a decision that does not tell the whole story. This example also illustrates nicely both the temporal complexity and indirectness of questions with which NNS TAs must deal.
Kearsley (1976) provided a useful synthesis of question forms using the hierarchical scheme outlined in Figure 2 on page 12. Three of Kearsley's classes—echoic, epistemic, and social control—have some relevance for the present study. Selecting from Kearsley's taxonomy, I developed my own coding scheme, which is presented in Table 3. I added one category to WH-questions, coded 2.1.4.0. It represents the WH equivalent of yes/no 2.2.2.3. No questions in my data fit into Kearsley's categories 2.1.3.0., yes/no embedded within WH question.

The category of specified alternative/or choice (coded 2.2.1.0) presented a problem. A common habit among questioners was to add unfinished or poorly developed or choices to their yes/no questions. For example,

(Q-unit 214: Mathematics)
3.5. Q: Is er any ah advantage as far as like using degrees or (1) radians or one measurement rather than the other er..?↑(2)

(Q-unit 363: Industrial Engineering)
3.6. Q: How er you gonna grade this class? Er we gonna have to (1) have to write papers er homework er what? (2)

(Interestingly, in his answer the TA says he will give "an expected" quiz each week. Someone may have told him about the frequently asked classroom culture question, "Do you give pop quizzes?")
Table 3. Taxonomy of question forms (only verbal)

<table>
<thead>
<tr>
<th>Code No.</th>
<th>Definition</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>Indirect - declarative with embedded partial interrogative phrase</td>
<td>&quot;I didn't follow where you were gettin' this L from down here.&quot; (Q-unit 648)</td>
</tr>
<tr>
<td>2.0</td>
<td>Direct - inverted, Q intonation and/or Q-marker</td>
<td></td>
</tr>
<tr>
<td>2.1</td>
<td>WH or Open - fill-in-the blank or lexical gap--infinite possibilities</td>
<td></td>
</tr>
<tr>
<td>2.1.1.ª</td>
<td>Simple WH - single Q-marker</td>
<td>&quot;Again on that acute, what's the definition of an acute angle? (Q-unit 633)</td>
</tr>
<tr>
<td>2.1.2.0</td>
<td>Complex WH - more than one Q-marker</td>
<td>&quot;How accurate are your testing methods for measuring what happens in real life with, say, bridges? (Q-unit 547)</td>
</tr>
<tr>
<td>2.1.3.0</td>
<td>Embedded WH - WH question with embedded Yes/No question</td>
<td>(No questions of this type occurred in my data)</td>
</tr>
<tr>
<td>2.1.4.0</td>
<td>Uninverted WH - with Q-marker and rising intonation</td>
<td>&quot;Voltages, where?&quot; (Q-unit 535)</td>
</tr>
</tbody>
</table>
2.2 Yes/no or closed - marked by rising intonation - answer is from fixed alternative

2.2.1.0 Specified alternative (or choice) provides acceptable choices

"Ken it be symmetric ta the X axis too (↑) er jes' Y axis? (Q-unit 516)

2.2.2.1 Simple yes/no - formed by an initial AUX

"Would you normally have the control lines running through the building like that? (↑)? (Q-unit 534)

2.2.2.2. Yes/no tag - inverted AUX or Q-tag at end of question

"When we're discussing prestige, ah ++ often times prestige is related + yer position, yer job, right (↑)? (Q-unit 466)

2.2.2.3. Yes/no intonated - declarative with rising intonation

"'N it doesn't matter if say you had a reaction with a liquid and a gas in it (↑)? (Q-unit 291)

---

2.1.1 has been further subcategorized by specific Q-marker:

<table>
<thead>
<tr>
<th>2.1.1.1</th>
<th>2.1.1.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who</td>
<td>When</td>
</tr>
<tr>
<td>2.1.1.2</td>
<td>2.1.1.6</td>
</tr>
<tr>
<td>Whom</td>
<td>Why</td>
</tr>
<tr>
<td>2.1.1.3</td>
<td>2.1.1.7</td>
</tr>
<tr>
<td>What</td>
<td>How</td>
</tr>
<tr>
<td>2.1.1.4</td>
<td>2.1.1.8</td>
</tr>
<tr>
<td>Where</td>
<td>How much/How many</td>
</tr>
<tr>
<td>2.1.1.9</td>
<td>2.1.1.9</td>
</tr>
<tr>
<td>Which</td>
<td>Which</td>
</tr>
</tbody>
</table>
I coded these as 2.2.2.1, simple yes/no rather than 2.2.1.0., alternative/or choice, reasoning that the alternative was not clearly specified. The er..., or what, etc. seemed to be more of a closing, a signal that the questioner wanted the NNS TA to proceed with the answer, but did not want to appear too brusque--or too confident that the question had been well-stated.

Question exponents (25 EXPONENT)

This variable was included because of the research of Cygan (1967), suggesting a means for ESL learners to identify an utterance in English as a question. (See pages 27-28 of Chapter II.) Table 4 provides a list of the eight possible combinations (or absence) of question exponents, which were coded.

Pragmatic functions (26 FUNCTION)

Although I believe the most interesting feature I examined was the functional purpose of each question and its co-occurrence with syntactic form, the function feature was also the most difficult to define and identify. As Churchill (1978) found (see the quotation at the beginning of this chapter, page 32), when one begins to see the complexity of discourse more clearly, generalizations are harder to make.

Problems that arose in coding questions by their functions were (1) the absence of an adequate taxonomy of question functions which could be
<table>
<thead>
<tr>
<th>Code</th>
<th>Definition</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No exponents present</td>
<td>&quot;I notice you have a + part two and three down there, too***.&quot; (Q-unit 358)</td>
</tr>
<tr>
<td>1</td>
<td>Inversion only</td>
<td>&quot;Is zat realistic + or that how they wish it (?was)?&quot; (Q-unit 359)</td>
</tr>
<tr>
<td>2</td>
<td>Q-marker only</td>
<td>&quot;What stops us from getting down there [to absolute zero]?&quot; (Q-unit 382)</td>
</tr>
<tr>
<td>3</td>
<td>Rising intonation only</td>
<td>&quot;So if H over D is approximate, pi over twelve would be okay?&quot; (↑) (Q-unit 395)</td>
</tr>
<tr>
<td>4</td>
<td>Inversion + Q-marker</td>
<td>&quot;When's the last day I can drop this course?&quot; (Q-unit 399)</td>
</tr>
<tr>
<td>5</td>
<td>Inversion + Rising intonation</td>
<td>&quot;Is zis stuff gonna be in our next test?&quot; (↑) (Q-unit 403)</td>
</tr>
<tr>
<td>6</td>
<td>Q-marker + Rising intonation</td>
<td>&quot;Where? (↑) To the specific side where you're going to build?&quot; (↑) (Q-unit 413)</td>
</tr>
<tr>
<td>7</td>
<td>All 3 Exponents present</td>
<td>&quot;Why are those values different down there?&quot; (↑) (Q-unit 444)</td>
</tr>
</tbody>
</table>
applied to these data, (2) the lack of clear boundaries between the fun-
cctional categories I did create and impose on the questions, (3) the mul-
tiple functions many questions served, and (4) the indeterminacy of some
functions.

It might at first seem obvious that the function of questions is to
elicit responses from those to whom they are addressed. But on closer
inspection a variety of functions becomes apparent.

Initially the functional taxonomy by Kearsley (1976) with Long and
Sato modifications (1983) was selected as a model (see Figure 3 on page
18 and discussion on pages 17-19). Table 5 contains the taxonomy used to
code the questions in the present study. There were four types which are
labeled echoic, epistemic, social, and extra-interrogative.

Echoic questions, following Kearsley’s model, ask for or provide a
repetition, rephrasing or confirmation of a previous utterance to assure
that it has been comprehended and/or interpreted as intended. The cat-
egory of comprehension check, created by Long and Sato, did not occur in
these thesis data, although there were a few examples of clarification
requests (see 1200 in Table 5) and confirmation checks (1300). I added
two categories for which there were many examples--repetition (1400) and
rephrasing (1500). Even when a NNS TA had not had time to give evidence
of having difficulty with a question, many student-questioners would
repeat or rephrase their initial question several times within a single
utterance.
Table 5. Taxonomy of pragmatic functions of questions

<table>
<thead>
<tr>
<th>Code</th>
<th>Definition</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECHOIC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1200</td>
<td>Clarification Request</td>
<td>Oh, that's true? (↑) (Q-unit 614)</td>
</tr>
<tr>
<td>1300</td>
<td>Confirmation Check</td>
<td>No difference? (↑) (Q-unit 619)</td>
</tr>
<tr>
<td>1400</td>
<td>Repetition</td>
<td>[earlier] Will we be studying any of the different tissues in this lab? [TA rambles. Then, Qer again] Will we be studying those later? (Q-unit 469)</td>
</tr>
<tr>
<td>1500</td>
<td>Rephrasing</td>
<td>[earlier] Why does [mitochondria] have two layers? TA: Why does it have two layers? Qer: Why are the two layers important, I guess, is what... (Q-unit 472)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EPISTEMIC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2110</td>
<td>Application</td>
<td>What kinna thing kin ya use this for? I mean, whattaya want a frequency distribution for? (Q-unit 430)</td>
</tr>
<tr>
<td>2120</td>
<td>Elaboration</td>
<td>Is this trend + is this ah an economic trend er is zit caused by increased population er er...? (Q-unit 453)</td>
</tr>
<tr>
<td>2130</td>
<td>Clarification</td>
<td>Back over here [pointing] can you explain or show how you got from that step to the bottom step? (Q-unit 474)</td>
</tr>
<tr>
<td>2140</td>
<td>Hypothesis</td>
<td>Suppose ah instead of S times S plus four as the denominator + you'd had S times S plus four quantity squared as</td>
</tr>
<tr>
<td>2150</td>
<td>Opinion</td>
<td>Could you still use a partial fractions technique to (break up) into three terms? (Q-unit 477)</td>
</tr>
<tr>
<td>2160</td>
<td>Verification</td>
<td>Um fer up there ya have um fast, thermal an’ epithermal. ++ In yer opinion, which would be the best + one type coolant + fer each of these? (Q-unit 572)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Is the + inverse sine the same as one over the sine of one? (Q-unit 017)</td>
</tr>
</tbody>
</table>

**SOCIAL**

| 2171  | Control                        | I had a question about our next test. Are you gonna make it an essay test er will it be fill-in-the-blank? (Q-unit 452) |
| 2172  | Appeal                         | Ken we use notes on the next quiz? (Q-unit 031) |

**EXTRA-INTERROGATIVE**

| 2180  | Disputatious                   | I still don’t understand' how + you can 'figer out the percentage of sumin’...when you don’t know what it’s all made up of. (Q-unit 486) |
| 3000  | Directive                      | Could you write over there? I can’t see. (Q-unit 045) |
| 5000  | Rhetorical                     | Why did you do that? [followed by] Was that because you couldn’t go counterclockwise or what?... (Q-unit 046) |
Epistemic questions request information. Kearsley subdivided the epistemic type into referential and evaluative. Since all questions asked on the TEACH test could be considered evaluative, I eliminated this distinction as not revealing. However, I created six other categories to make more precise distinctions in information-seeking:

1. Application questions (coded 2110) are concerned with how the information presented by the TA applies to some specific, concrete purpose. Such questions frequently begin How do you..., What could you do with..., How would you handle a situation where..., or I've heard of cases where....

2. Elaboration questions (2120) ask the TA to elaborate in more detail about something he or she has said or referred to in the presentation. They differ from the next category, clarification questions, in asking for supplemental information rather than what was already presented. Such questions may begin with Define..., What happens when..., What’s an example of..., Why..., How does this relate to..., Could you describe..., or What other factors are involved....

3. Clarification questions (2130) concern information the TA has already presented, but which the questioner did not hear or comprehend or cannot interpret and so an explanation of "old" information is requested. Such questions may begin Did you say..., How do I know if..., Do you mean that..., Could you explain again..., or What’s the difference between them?
4. Hypothetical questions (2140) ask the TA to relate his or her expertise in the topical area to another hypothetical situation created by the questioner. They were about more abstract relationships than the application questions mentioned earlier. Such questions might begin What if..., Would...? Suppose..., or Would you expect that....

5. Opinion questions (2150) go beyond the TAs' factual store of knowledge on the topic and ask them to give an expert opinion. Such questions begin What's your opinion of..., Which do you feel is best? or What would you do?

6. Verification questions (2160) are frequently restatements of what the TA has just said or doublechecks of what the questioner thinks the TA means. Such questions begin Is it true that..., So you're saying..., So then it is possible to..., or Do I still have....

Social questions (2170) concern the social relationship of the questioner and TA, and rarely occurred except in the "classroom culture" questions. They were subdivided according to which person was the actor in the situation described by the question. In a control question (2171), the TA was acting (Will you let us use formula sheets on the hour exam?), while in an appeal question (2172), the students were central (Can we use formula sheets on the hour exam?)

The extra-interrogative category included all questions that did not fit neatly into the other three categories. In some cases this category
is similar to Kearsley's expressive category (questions that convey attitudinal information independent of their information content), yet in some questions in this study speech acts other than inquiry were being performed. Disputatious questions (2180) occurred when student-questioners could not accept information previously presented by the TA and wanted to argue the point.

Influenced by Ervin-Tripp's (1976) identification of commands in question form, I created a category for directives (3000). This category does not include questions with the "polite" could form (i.e., Could you give me an example of...) discussed earlier (see page 46). Normally these "polite could" questions served a referential function. Instead directives concerned procedures (e.g., Could you speak a little louder? Would you please repeat that last part again?)

Finally, there were a few instances of rhetorical questions (5000), asked for effect and to which no answer was expected or required. These occurred in utterances in which the questioner began in a general way, and after several, more precise rephrasings, allowed the TA to answer:

(Q-unit 046: Mathematics)

3.7. Q: How about pi? [RHETORICAL] (1)
   How accurate do I have to use pi? Ken I use jes' three (2) point one four all the time or do I have ta use a different value? Er what makes a difference in pi? (4)
   (This was counted as five-barreled.)
A problem that arose with each new category was to determine where its boundaries were. For example, the categories elaboration and clarification were used a great deal, and it was not always apparent whether the question dealt with supplemental or previously-covered material, or both. Clarification (2130) of information also had to be distinguished from echoic clarification requests (1200). The latter was reserved for very brief echoings of the TA's preceding explanation, while clarification of information could be an initial question referring back to any earlier part of the TA's presentation.

Verification of information (2160) also tended to overlap with all of the echoic categories (1200-1500). I tried to distinguish questions placed in this category from the others by their length and information content. For example, No difference? would be a confirmation check, while So basically there was no difference between the last formula down there and the first one you wrote? would be a verification of information.

Another problem was the multiple functions some questions served. It was possible for some questions to fit into two or three categories at once. In the following example the questioner tried to draw an answer
from the NNS TA by rephrasing his question three ways. For each utterance, I tried to code the single most important function based on the context:

(Q-unit 110: Electrical Engineering)

3.8. Q: How d'you know which ones are rises 'n which ones are drops? (1) [CLARIFICATION] (2)

(TA is still talking and then has to ask Qer to repeat question)

Q: How d'you decide if it's a rise or a drop? [REPHRASING] (3)

(TA responds)

Q: So how if I were to add more sources, how would I know whether to call them rises or drops? [HYPOTHETICAL] (5) (but could be [REPHRASING])

(TA)

Q: Does that always work the same? [VERIFICATION] (6)

(TA ignores and continues with answer to previous question.)

Naturally, there were Q-units that defied categorization. In some of the cases, where I still had doubts about the classification decisions, I made, as Churchill (1978) says in the quote at the beginning of this chapter "practical and theoretically arbitrary decisions to get the coding done."
CHAPTER IV  
RESULTS

The fact that questions do not look like questions, that yes/no questions are not answered by "yes" or "no," and that answers do not seem to be direct answers to the questions that elicited them suggest to me that our current theoretical ideas about questions and question asking do not correspond very well with questions as they are used in everyday discourse. What is called for, in my opinion, is a more adequate descriptive analysis of question asking in different situations. Of course, descriptive data themselves have no explanatory power, but they do prevent us from getting lost in a jungle of unnecessary theoretical constructs. (Kearsley, 1976:372)

The first question this research sought to answer was about the forms and functions of NS student questions when they were addressed to NNS TAs. Based on the analysis of the data file, the following characteristics of such questions will be examined in search of answers:

1. Length of Q-unit (number of utterances and number of separate questions) using characteristics 4 (QUNIT), 5 (UTTER), and 6 (QUESTION)
2. Length of individual questions (14 TOTAL)
3. Presence of "useless" words (15 USELESS)
4. Use of sandhi-variations (16 SANDHI)
5. Framing of questions with preface and/or closing (17 INTRO and
1. Length of Q-unit (4 QUNIT, 5 UTTERANCE, 6 QUESTION)

Almost 60% of the Q-units (391) contained only one utterance and 28.6% contained two utterances. One Q-unit contained eight utterances due to the verbosity of one of the questioners, whose disorganized questioning style became as easily identifiable as his fingerprints might be to the police. Eighty-seven percent of the utterances within Q-units contained only one question, and 94.7% contained two. The number of questions ranged up to six in one utterance.

Not every utterance contained a question. The questioner sometimes had to make a statement or respond to a question from the NNS TA. Although it was often difficult to tell whether a particular phrase was a
question, the context provided by the TEACH test and recorded on videotape helped in making these decisions.

2. Length of individual questions (14 TOTAL)

The shortest questions recorded were one word long and the longest was 98 words long. The mean length was 16.6 words, the mode, 13 words, and the median, 32 words.

Short questions, as in the examples below, were usually follow-up questions seeking clarification or verification. They were uninverted, and in order to indicate interrogativity, they relied either on Q-markers (as in Q-unit 311) or on rising intonation (as in Q-unit 334):

(Q-unit 311: Home Economics Education)

4.1. Q: Where did you get this yam? (general laughter) (1)
   (TA answers that she got it at an Oriental food store)
   Q: Which one? [2 words] (2)
   Q: Which one? Which store? [2/2] (4)
   TA: Pay... (5)
   Q: Payless? [1] (6)
   TA: That’s right. (7)
Q: What proportion of the next test will cover this material?

TA: I don’t know about that.


TA: Around half.

Q: Around half. Okay.

The two longest questions involved questioners having formulation difficulties. The first example is from a questioner whose style is to repeat words as she thinks about what to say next.

4.3. Q: I'd like to go back an' ask you a question about the average velocity. Um, if you were were jes' calculating the average velocity from that formula delta S, delta T, an' say you you were moving along somewhere and an' say you moved along somewhere and then came back to the + beginning so that that yer delta S would be zero, does that mean that yer you'd come out with average velocity of zero (the rest was inaudible.)
The second example is a questioner who is not following the topical relevance rules and seems to want to display his own knowledge:

(Q-unit 455: Community & Regional Planning)

4.4. Q: I was kinna curious about sumthin’ else. Mexico (1)

City is + called the biggest city in the world (2)

now, I believe, or it’s closing in on that. (3)

TA: What city? (4)

Q: Mexico City. (5)

TA: Mexico City? (6)

Q: And, ah, I guess there are ghettos there that er (7)

jes’ + enormous an’ miny, miny people that are (8)

comin’ inta that city that have no jobs an’ I (9)

don’t believe the city really created that many (10)
good jobs an’ yet ta project the population ta (11)
goin’ to about 35 million by the year two thou- (12)
sand an that. What, whattaya think is causing (13)
pople ta go there? D’ya think it’s jes’ the (14)
need to ah to ah ta or is Mexico’s economy’s so (15)
bad? (16)

(TA replies that she really doesn’t know much about the situation in Mexico City.)

Examples of questions of average length are the following:
4.5. Q: Ah, the formula you have written there + could you(1) explain the symbols in the formula? Would they...(2)

Such questions were more likely to be found in combination with at least one other question, as in this two-utterance Q-unit:

(Q-unit 595: Microbiology)

4.6. Q: Ah, is our grade in this course gonna be based on (1) a curve or a percentage? (2)
TA: On a curve. (3)
Q: Is zat, is zat your policy or the department's? (4)
TA: The department. (5)

3. Presence of "useless" words (15 USELESS)

Redundancies, "noise sounds," and false starts were counted as useless to the formulation of a question. In fact, they might well interfere with its comprehensibility by a NNS TA. Example 4.3 on page 64 provides evidence of the confusion in meaning such useless words can cause. In that example, 14 useless words were counted, over 18% of the total words. Instances included false starts (an' say you you were moving along somewhere...), noise sounds (ah twice, um), and redundancies (the, you, that, yer were all repeated).

Table 6 shows the number of useless words within the 1,305 questions in the file. Although there were 15 instances of questions containing
Table 6. Useless words per question

<table>
<thead>
<tr>
<th>Number of words</th>
<th>Occurrences</th>
<th>Percentage</th>
<th>Cumulative Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>767</td>
<td>58.8</td>
<td>58.8</td>
</tr>
<tr>
<td>1</td>
<td>225</td>
<td>17.2</td>
<td>76.0</td>
</tr>
<tr>
<td>2</td>
<td>116</td>
<td>8.9</td>
<td>84.9</td>
</tr>
<tr>
<td>3</td>
<td>59</td>
<td>4.5</td>
<td>89.4</td>
</tr>
<tr>
<td>4</td>
<td>54</td>
<td>4.1</td>
<td>93.6</td>
</tr>
<tr>
<td>5</td>
<td>25</td>
<td>1.9</td>
<td>95.5</td>
</tr>
<tr>
<td>6</td>
<td>17</td>
<td>1.3</td>
<td>96.8</td>
</tr>
<tr>
<td>7</td>
<td>15</td>
<td>1.1</td>
<td>97.9</td>
</tr>
<tr>
<td>8</td>
<td>6</td>
<td>0.5</td>
<td>98.4</td>
</tr>
<tr>
<td>9</td>
<td>6</td>
<td>0.5</td>
<td>98.9</td>
</tr>
<tr>
<td>10</td>
<td>2</td>
<td>0.2</td>
<td>99.0</td>
</tr>
<tr>
<td>11</td>
<td>2</td>
<td>0.2</td>
<td>99.2</td>
</tr>
<tr>
<td>12</td>
<td>2</td>
<td>0.2</td>
<td>99.3</td>
</tr>
<tr>
<td>14</td>
<td>1</td>
<td>0.1</td>
<td>99.4</td>
</tr>
<tr>
<td>15</td>
<td>2</td>
<td>0.2</td>
<td>99.5</td>
</tr>
<tr>
<td>16</td>
<td>1</td>
<td>0.1</td>
<td>99.6</td>
</tr>
<tr>
<td>18</td>
<td>2</td>
<td>0.2</td>
<td>99.8</td>
</tr>
<tr>
<td>20</td>
<td>1</td>
<td>0.1</td>
<td>99.8</td>
</tr>
<tr>
<td>21</td>
<td>1</td>
<td>0.1</td>
<td>99.9</td>
</tr>
<tr>
<td>50</td>
<td>1</td>
<td>0.1</td>
<td>100.0</td>
</tr>
</tbody>
</table>

1305

$\bar{X} = 1.18$
ten or more useless words, over 58% of all questions contained no useless words, and 93.6% contained three or less. The mean number per question was 1.18.

4. Sandhi-variation (16 SANDHI)

Similar in frequency to useless words were instances of sandhi-variation. There were five instances of questions containing ten or more sandhi-variations, with 45.7% containing no variations, and 92.6% containing three or less. The mean number per question was 1.10 instances. Table 7 contains the frequency distribution.

Table 7. Sandhi-variations per question

<table>
<thead>
<tr>
<th>Number of instances per question</th>
<th>Occurrences</th>
<th>Percentage</th>
<th>Cumulative Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>597</td>
<td>45.7</td>
<td>45.7</td>
</tr>
<tr>
<td>1</td>
<td>367</td>
<td>28.1</td>
<td>73.9</td>
</tr>
<tr>
<td>2</td>
<td>174</td>
<td>13.3</td>
<td>87.2</td>
</tr>
<tr>
<td>3</td>
<td>70</td>
<td>5.4</td>
<td>92.6</td>
</tr>
<tr>
<td>4</td>
<td>48</td>
<td>3.7</td>
<td>96.2</td>
</tr>
<tr>
<td>5</td>
<td>17</td>
<td>1.3</td>
<td>97.5</td>
</tr>
<tr>
<td>6</td>
<td>17</td>
<td>1.3</td>
<td>98.9</td>
</tr>
<tr>
<td>7</td>
<td>7</td>
<td>0.5</td>
<td>99.4</td>
</tr>
<tr>
<td>8</td>
<td>3</td>
<td>0.2</td>
<td>99.6</td>
</tr>
<tr>
<td>10</td>
<td>1</td>
<td>0.1</td>
<td>99.7</td>
</tr>
<tr>
<td>11</td>
<td>2</td>
<td>0.2</td>
<td>99.8</td>
</tr>
<tr>
<td>16</td>
<td>1</td>
<td>0.1</td>
<td>99.9</td>
</tr>
<tr>
<td>22</td>
<td>1</td>
<td>0.1</td>
<td>100.0</td>
</tr>
</tbody>
</table>

1305 \( \bar{x} = 1.10 \)
Perhaps more useful to TESL curriculum developers than the numbers are the specific sandhi forms used. Table 8 contains a breakdown of the most common types of sandhi-variation I perceived. As Brown (1978) and others have pointed out, it is quite possible that another listener—or even the same listener on a different hearing—might detect different variations.

5. Framing questions (17 INTRO, 18 CLOSING)

Although questioners were not instructed to do so, they frequently felt a need to preface their questions and/or to "wind down" at the end of an utterance. Questions were coded for the presence or absence of these phenomena. Over 36% of the time a preface occurred and 20% of the time, a closing. The bar graph in Figure 5 shows the presence and absence of these features, as well as other features still to be described.

6. Relevance of questions to the NNS TAs' topics (19 RELEVANT)

In each of the 171 presentations, at least one questioner asked a classroom culture question that normally seemed irrelevant to the academic topic under discussion. These questions were coded as lacking relevance. Almost three-quarters of all questions were relevant, as shown in the bar graph in Figure 5. The other 25.7% (the classroom culture questions) played an important role in the difficulty some TAs had in responding, as will be seen later.
Table 8. Types of sandhi-variations

<table>
<thead>
<tr>
<th>Unreduced form</th>
<th>Sandhi Variation</th>
<th>Number of Occurrences</th>
<th>Other variations</th>
</tr>
</thead>
<tbody>
<tr>
<td>to</td>
<td>[tə]</td>
<td>151</td>
<td>into [Intə] (8)</td>
</tr>
<tr>
<td>and</td>
<td>[tən] (45)</td>
<td>144</td>
<td>together [təgetə] (1)</td>
</tr>
<tr>
<td>you</td>
<td>[ja] (99)</td>
<td>110</td>
<td></td>
</tr>
<tr>
<td>or</td>
<td>[ər]</td>
<td>109</td>
<td></td>
</tr>
<tr>
<td>your</td>
<td>[jər]</td>
<td>103</td>
<td></td>
</tr>
<tr>
<td>do you</td>
<td>[dəju] (72)</td>
<td>82</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[dəje] (9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[dz'ju] (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>going to</td>
<td>[gan-ne] (74)</td>
<td>78</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[gərn' ta] (4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>for</td>
<td>[fər] (73)</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[fr'] (2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>just</td>
<td>[dzəs'] (49)</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[dzest] (4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[dzIs'] (2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[dzəs'] (2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>can</td>
<td>[kən] (36)</td>
<td>41</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[kIn] (4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[kən] (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>yes</td>
<td>[yəə]</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>verbs ending -ing</td>
<td>[ŋ]</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>have to</td>
<td>[hæeftə]</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

uh huh (1); um, hmm (1)
### Table 8 (continued)

<table>
<thead>
<tr>
<th>Unreduced form</th>
<th>Sandhi Variation</th>
<th>Number of Occurrences</th>
<th>Other variations</th>
</tr>
</thead>
<tbody>
<tr>
<td>is that</td>
<td>[Izaet]</td>
<td>35</td>
<td>is there [Ize] (20); is it [Izit] (13); is this [IzIs] (8)</td>
</tr>
<tr>
<td>of</td>
<td>[ɔ] (20)</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>(noun) is</td>
<td>contracted to</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>are</td>
<td>[əzə]</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>them</td>
<td>[əm]</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>get</td>
<td>[gIt]</td>
<td>11</td>
<td>gotta [gɔtta] (1)</td>
</tr>
<tr>
<td>what do you</td>
<td>[wʌtəə]</td>
<td>11</td>
<td>what do [wata] (4)</td>
</tr>
<tr>
<td>excuse</td>
<td>['skuz]</td>
<td>10</td>
<td>what's a [watsə] (4); what are [wata] (3); what do I [wad'waj] (2)</td>
</tr>
<tr>
<td>because</td>
<td>['kæz] (7)</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>understand</td>
<td>[ənəstæn']</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>kind of</td>
<td>[kaIndə] (8)</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>want to</td>
<td>[wənə] (7)</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>something</td>
<td>[sæmə'ɛn'] (5)</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>suppose</td>
<td>[s'pɔzz]</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>
7. Grammaticality (20 GRAMMAR)

Using intuitive standards, I coded questions on the presence of grammatical "well-formedness" as opposed to less-than-standard usage. As shown in Figure 5, the significant fact was that nearly half (47.9%) of all the questions did not meet my standards for well-formedness. Common errors were sentence fragmentation, absence of referent, disjunction between dependent and independent clauses, and lack of subject-verb agreement.

8. Verb tense (21 TENSE)

Using the coding protocols outlined in Table 2 (page 45), a ranking of present or nonpresent verb tense in each of the 1,305 questions was possible. Nearly 71% of the time present tense was used, 22.5% of the time nonpresent was used, 1.8% of the time verb tenses were mixed, and five percent of the time no verb was present. Perhaps this is not surprising since most of the time the TAs were talking about "general truths," and the questions addressed aspects of these. Finer distinctions between tenses are made in Table 9.

9. Lexical complexity (22 COMPLEX)

Deciding whether a particular word or phrase would be complex and potentially difficult for a NNS TA was not always an easy decision to make. Normally I chose to count ambiguous or slangy words and idiomatic expressions. Instances of the student-questioners using multi-syllabic
Table 9. Frequency of verb tenses

<table>
<thead>
<tr>
<th>Tense type</th>
<th>Number of Occurrences</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No verb</td>
<td>65</td>
<td>5.0</td>
</tr>
<tr>
<td>Present, standard</td>
<td>816</td>
<td>70.5</td>
</tr>
<tr>
<td>Present using could</td>
<td>104</td>
<td></td>
</tr>
<tr>
<td>Past</td>
<td>72</td>
<td>5.5</td>
</tr>
<tr>
<td>Future, standard</td>
<td>107</td>
<td>11.2</td>
</tr>
<tr>
<td>Future using going to</td>
<td>39</td>
<td></td>
</tr>
<tr>
<td>Conditional</td>
<td>79</td>
<td>6.1</td>
</tr>
<tr>
<td>Mixed tenses</td>
<td>23</td>
<td>1.8</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1305</td>
<td></td>
</tr>
</tbody>
</table>

Table 10. Instances of lexical complexity

<table>
<thead>
<tr>
<th>Number of instances per question</th>
<th>Occurrences</th>
<th>Percentage</th>
<th>Cumulative Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>826</td>
<td>63.3</td>
<td>63.3</td>
</tr>
<tr>
<td>1</td>
<td>402</td>
<td>30.8</td>
<td>94.1</td>
</tr>
<tr>
<td>2</td>
<td>66</td>
<td>5.1</td>
<td>99.2</td>
</tr>
<tr>
<td>3</td>
<td>10</td>
<td>0.8</td>
<td>99.9</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>0.1</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>1305</td>
<td>(\bar{x} = 0.435)</td>
<td></td>
</tr>
</tbody>
</table>
"hard" words were rare. Normally if they used any technical terms, these terms had been used by the TA during the five-minute presentation, and therefore I assumed they would not be difficult. In over 63% of the questions, I judged the vocabulary to be simple and straightforward. Table 10 contains a frequency distribution of instances of lexical complexity.

10. Syntactic form (23 FORM)

Over 60% of all questions were in yes/no form, 36% were in WH form, and 3.7% were in indirect form. What is interesting about this is that student-questioners had been instructed (see Appendix A) to ask information (i.e., WH) questions.

Among the subcategories simple yes/no was the most common (41.8%), while tag questions were relatively rare (1.6%); WH questions most commonly began with What (43.2%), How (26.2%), Why (11.7%), or How much/How many (9.3%), and rarely with Who (0.2%), Which (2.0%), When (2.4%), or Where (5.0%). Table 11 contains a frequency distribution of the question forms (which were identified in Table 3 on pages 48-49).

Only 1.6% of questions used the tag form, and none of the 21 instances followed the pattern usually taught in ESL classes (e.g., It's a small sample, isn't it?). Table 12 contains a list of the five kinds of tags that occurred and an example of how they were used. (The popular tag of a decade ago, ya know?, did not occur.) With such a small number
Table 11. Distribution of question forms

<table>
<thead>
<tr>
<th>Categories</th>
<th>Frequency of categories</th>
<th>Subcategories</th>
<th>Frequency of subcategories</th>
<th>Category percentage</th>
<th>Cumulative percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect</td>
<td>48</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WH</td>
<td>470</td>
<td>Simple</td>
<td>461</td>
<td>36.0</td>
<td>39.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Complex</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Uninverted</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes/no</td>
<td>787</td>
<td>With or choice</td>
<td>70</td>
<td>60.3</td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Simple</td>
<td>546</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>With tag</td>
<td>21</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Uninverted</td>
<td>150</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 12. Kinds of tag questions

<table>
<thead>
<tr>
<th>Tag</th>
<th>Occurrences</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>right?</td>
<td>14</td>
<td>Like in yer drawing, right? (↑) (Q-unit 955)</td>
</tr>
<tr>
<td>okay?</td>
<td>4</td>
<td>Say if I added more ahm ++ salt to this deal, okay? (↑) (Q-unit 196)</td>
</tr>
<tr>
<td>doesn’t it?</td>
<td>1</td>
<td>The parabola represents a section of a cone, doesn’t it? (↑) (Q-unit 463)</td>
</tr>
<tr>
<td>wouldn’t there?</td>
<td>1</td>
<td>There would have to be a period after that, wouldn’t there? (↑) (Q-unit 609)</td>
</tr>
<tr>
<td>You do, huh?</td>
<td>1</td>
<td>(↑) (Q-unit 270)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>21</td>
<td>1.6% of all question forms</td>
</tr>
</tbody>
</table>
of instances, however, the patterns may only represent individual idiosyncrasies of the 18 student questioners.

11. Positive/Negative (24 NEGATIVE)

Questions were coded for the presence or absence of negative markers. Only 4.2% had negative markers, as shown in Figure 5. The 55 cases of negativity were also examined to see if there was a correlation between negativity, form and function of questions. The majority of negative questions were in yes/no form (53.6%); the functions for over 63.7% of negative questions were either disputatious (38.2%) or verification (25.5%).

12. Combination of question exponents (25 EXPONENT)

Cygan's (1967) three question exponents, discussed in Chapter II, were inversion, Q-markers, and intonation (see Table 4 on page 51 for examples of them in combination). Questions were coded for the presence and combination of these exponents to see whether Cygan's hypothesis about their usefulness to NNS in predicting interrogativity applied to the TEACH data. Indeed, inversion was the most common exponent, occurring alone or in combination 78.6% of the time. The other two exponents (intonation 44.9% and Q-markers 38.1%), however, were also prominent. Table 13 contains the rank order of possible combinations.
<table>
<thead>
<tr>
<th>Exponents</th>
<th>Code No.</th>
<th>Occurrences</th>
<th>Percentage</th>
<th>Cumulative Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inversion + Q-marker</td>
<td>4</td>
<td>390</td>
<td>29.9</td>
<td>29.9</td>
</tr>
<tr>
<td>Inversion + intonation</td>
<td>5</td>
<td>358</td>
<td>27.4</td>
<td>57.3</td>
</tr>
<tr>
<td>Inversion only</td>
<td>1</td>
<td>234</td>
<td>17.9</td>
<td>75.2</td>
</tr>
<tr>
<td>Intonation only</td>
<td>3</td>
<td>173</td>
<td>13.3</td>
<td>88.5</td>
</tr>
<tr>
<td>Q-marker only</td>
<td>2</td>
<td>52</td>
<td>4.0</td>
<td>92.5</td>
</tr>
<tr>
<td>All exponents present</td>
<td>7</td>
<td>44</td>
<td>3.4</td>
<td>95.9</td>
</tr>
<tr>
<td>No exponents present</td>
<td>0</td>
<td>43</td>
<td>3.3</td>
<td>99.2</td>
</tr>
<tr>
<td>Q-marker + intonation</td>
<td>6</td>
<td>11</td>
<td>0.8</td>
<td>100.0</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>1305</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
13. Pragmatic functions (26 FUNCTION)

As could be expected, most questions (70.8%) fell into the epistemic/referential category. The others, in descending order, were echoic (14.3%), social (12.6%) and extra-interrogative (2.2%). Within the epistemic category, over 43% of the questions were classified as elaborations, which was more than twice as many as the next most common classification, clarification (18.6%). Table 14 contains a frequency distribution on all of the functional categories (which were identified in Table 5 on pages 53-54).

14. Extra rising intonation signals (27 INTONAT)

In this research project, 99 instances were found of extra rising intonation in 1,305 questions, only 7.6% of the total, as shown in Figure 5 (page 72). Of the 99 instances I perceived, 45 were uttered by female questioners (15% of all female utterances) and 54 by male questioners (also 15%). It seemed that extra intonation in this study was more idiosyncratic than sexually differentiated. A single female questioner, for example, who continuously used extra intonation, might have accounted for a major portion of the female instances. A male questioner, who inserted not only rising intonation, but a tag (right?) throughout his utterances was also a prime user. An example of his speech style illustrates what I mean by extra rising intonation:
Table 14. Frequency of pragmatic functions

<table>
<thead>
<tr>
<th>Categories</th>
<th>Frequency of categories</th>
<th>Subcategories</th>
<th>Frequency of subcategories</th>
<th>Category percentage</th>
<th>Cumulative percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECHOIC</td>
<td>187</td>
<td>Clarification request</td>
<td>1</td>
<td>14.3</td>
<td>14.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Confirmation check</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Repetition</td>
<td>91</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rephrasing</td>
<td>89</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EPISTEMIC</td>
<td>924</td>
<td>Application</td>
<td>111</td>
<td>70.8</td>
<td>85.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Elaboration</td>
<td>399</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Clarification</td>
<td>172</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hypothesis</td>
<td>80</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Opinion sought</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Verification</td>
<td>151</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOCIAL</td>
<td>165</td>
<td>Control</td>
<td>97</td>
<td>12.6</td>
<td>97.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Appeal</td>
<td>68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXTRA-INTERROGATIVE</td>
<td>29</td>
<td>Disputatious</td>
<td>27</td>
<td>2.2</td>
<td>99.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Directive</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rhetorical</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4.7. Q: I got one other little question on 'at. Does 'at (1)
   + I assume that hundred 'n sixty-seven milli-
   meters that that's the vapor pressure of the (2)
   amount of water (3) + in the air pressure, right? (4)
   Or the proportion of it, right? (5) Okay, (6) Okay,
   what happens if that's saturated? (7) Or what (8)
   happens if the air's not saturated?

15. Double-barreling (28 BARREL)

   The practice of asking more than one question within one utterance
appeared slightly more frequently than extra rising intonation throughout
the Q-units. The phenomenon, which I call "double barreled" questioning,
is illustrated below. The questioner piles one question on top of an-
other. In this case the Indian NNS TA (SPEAK score: 300) responded as a
native speaker might by apologizing for not "hearing" the question and
signaling for a repetition or clarification. The questioner then led the
NNS TA through a series of questions that gave him no difficulty.

4.8. Q: Back to yer first equation + fer finding alpha, (1)
   okay? D'you hafta recalibrate or eh can does any-
   thing happen so that RO 'n TO don't correspond any-
   more? (2) Ya know, your original? (3) In other words, I assume where da those come from? Are (4)
Double barreling, or multi-barreling, occurred 11.1% of the time. Table 15 gives a breakdown of the times multi-barreling (double-barreled up to six-barreled questions in a single utterance) occurred. The results of whether this feature—or the others already mentioned—caused difficulty to NNS TAs in answering—will be discussed in the next section.

Indications of Difficulty

The second question this research sought to answer concerned the possible causes for NNS TA difficulty in answering questions, other than their low level of English proficiency. After looking at the videotapes of all of the 654 Q-units in this data file, I assessed 113 Q-units (17.3%) as having involved some difficulty for the TA. Three types of evidence of difficulty were noted: (1) the TA was unable to answer the question, (2) the questioner had to repeat or rephrase the question two or more times before the TA was able to answer, or (3) the TA gave an inappropriate answer (see breakdown in Table 16).

Some of these 113 instances of difficulty involved the same TA. The total number exhibiting difficulty was actually 75 of the 152 NNS TAs. Thirty-three of these 75 are of interest here. They are the NNS TAs who demonstrated English and teaching proficiency and were "certified" or
<table>
<thead>
<tr>
<th>Number of questions per utterance</th>
<th>Occurrences</th>
<th>Percentage</th>
<th>Cumulative Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>177</td>
<td>13.6</td>
<td>13.6</td>
</tr>
<tr>
<td>1</td>
<td>984</td>
<td>75.4</td>
<td>89.0</td>
</tr>
<tr>
<td>2</td>
<td>108</td>
<td>8.3</td>
<td>97.2</td>
</tr>
<tr>
<td>3</td>
<td>30</td>
<td>2.3</td>
<td>99.5</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>0.2</td>
<td>11.1%</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>0.2</td>
<td>99.8</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>0.1</td>
<td>100.0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1305</td>
<td></td>
<td>( \bar{x} = 1.010 )</td>
</tr>
</tbody>
</table>

Table 15. Number of instances of double- and multi-barreling
Table 16. Frequencies of not difficult and difficult Q-units as evidenced by responses

<table>
<thead>
<tr>
<th>Code</th>
<th>Response</th>
<th>No. of Q-units</th>
<th>% of Q-units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(Not Difficult)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>No difficulty</td>
<td>541</td>
<td>82.7</td>
</tr>
<tr>
<td></td>
<td>(Difficult)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>No answer</td>
<td>18</td>
<td>2.8</td>
</tr>
<tr>
<td>2</td>
<td>Request for 2 or more repeats</td>
<td>21</td>
<td>3.2</td>
</tr>
<tr>
<td>3</td>
<td>Inappropriate answer</td>
<td>74</td>
<td>11.3</td>
</tr>
<tr>
<td></td>
<td>Total difficult</td>
<td>113</td>
<td>17.3</td>
</tr>
</tbody>
</table>
"conditionally certified" on SPEAK/TEACH for classroom assignments. These ratings were those reported to the student and major department using the form in Appendix F. It is assumed that their difficulty with questions was caused not by deficiencies in English or lack of subject knowledge, but rather by the questions themselves.

Forty-three Q-units proved difficult for these proficient TAs. In the analysis which follows features of these Q-units are compared with those of Q-units that did not cause difficulty.

At this point in the present study I shifted from examining features of all questions (within utterances within Q-units) to examining features that either applied to the first utterance in the Q-unit or to the entire Q-unit. Only first questions were examined because the videotapes indicated that TAs' difficulties followed a pattern: they would become enmeshed in comprehending the initial question and miss the rest of the utterance. I hypothesized that by examining data on the first question in the Q-unit I was more likely to find the specific features that caused significant difficulty.

One feature applied to the entire Q-unit: relevance to the topic (19 RELEVANT). This characteristic was most frequently seen in the classroom culture questions, (e.g., Do you give pop quizzes?), probably because they were not related to the academic topic the TA had discussed. Relevancy was assigned globally because the entire Q-unit was either relevant or not. This feature was examined to see if it occurred more
frequently in the 43 Q-units causing difficult to proficient TAs than in
the 541 Q-units that did not cause difficulty.

Five other features were examined to see if they occurred more fre-
quently in the same 43 first utterances than in the 541 no difficulty Q-
units:

1. Question framing (17 INTRO and 18 CLOSING)
2. Grammaticality (20 GRAMMAR)
3. Positive or negative form (24 NEGATIVE)
4. Extra intonation signals (27 INTONAT)
5. Double barreling (28 BARREL)

These features were selected from all the characteristics observed
because frequencies suggested that they might be significant.

Chi-square tests were performed on these features to compare their
observed frequencies with expected frequencies, the frequencies that we
would expect simply by chance (if the independent variable had no
relationship to the distribution). Seven four-celled, joint contingency
tables (Tables 17-23) were constructed. Dependent variables were the
presence or absence of the particular feature; independent variables were
(1) occurrence of the feature in the 43 initial questions (or Q-units)
that caused difficulty to the proficient TA subset; and (2) occurrence of
the feature in the 541 initial questions (or Q-units) that did not cause
difficulty.
The feature of relevance is strongly related ($\chi^2 = 33.482$, $p < 0.000$) to question difficulty (see Table 17). Irrelevant questions occurred much more frequently in the Q-units where there was difficulty (62.8% of the time) than in Q-units where there was no difficulty (22.7%).

Statistical analysis (see Table 18) weakly suggests that use of an introduction may also be related to question difficulty ($\chi^2 = 3.578$, $p < .059$). In first utterances with no difficulty, introductions were used slightly less than half of the time (47.5%), while in first questions in the difficulty subset, introductions occurred only one-third of the time (32.6%). In irrelevant questions in the difficulty subset, introductions were used less than one-quarter of the time (23%). A chi-square test of irrelevant questions with and without introductions did not prove to be statistically significant ($\chi^2 = 0.949$, $p < 0.33$).

Other features were not significantly related to difficulty. These results will be examined more carefully in the following chapter.
Table 17. Presence and absence of relevance in Q-units not causing difficulty versus Q-units causing difficulty to proficient TAs

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Row Pct.</th>
<th>Column Pct.</th>
<th>Relevant</th>
<th>Not Relevant</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
<td>418</td>
<td>123</td>
<td>541</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>71.6</td>
<td>21.1</td>
<td>92.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>77.3</td>
<td>22.7</td>
<td>96.3</td>
</tr>
<tr>
<td>Difficult for</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>16</td>
<td>27</td>
<td>43</td>
</tr>
<tr>
<td>proficient TAs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.7</td>
<td>4.6</td>
<td>7.4</td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>37.2</td>
<td>62.8</td>
<td></td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>3.7</td>
<td>18.0</td>
<td></td>
</tr>
<tr>
<td>Total</td>
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<td></td>
<td></td>
<td></td>
<td>434</td>
<td>150</td>
<td>584</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>74.3</td>
<td>25.7</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note. $\chi^2 (1, N = 584) = 33.482$, $p < 0.000$.

Table 18. Presence and absence of introduction in the first utterances of Q-units not causing difficulty versus Q-units causing difficulty to proficient TAs

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Row Pct.</th>
<th>Column Pct.</th>
<th>Present</th>
<th>Not Present</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not difficult</td>
<td></td>
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<td></td>
<td>257</td>
<td>284</td>
<td>541</td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>44.0</td>
<td>48.6</td>
<td>92.6</td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td>47.5</td>
<td>52.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>94.8</td>
<td>90.7</td>
<td></td>
</tr>
<tr>
<td>Difficult for</td>
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<td></td>
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<td>14</td>
<td>29</td>
<td>43</td>
</tr>
<tr>
<td>proficient TAs</td>
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<td></td>
<td></td>
<td>2.4</td>
<td>5.0</td>
<td>7.4</td>
</tr>
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<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td>5.2</td>
<td>9.3</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>271</td>
<td>313</td>
<td>584</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>46.4</td>
<td>53.6</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note. $\chi^2 (1, N = 584) = 3.578$, $p < 0.059$. 

Table 19. Presence and absence of closings in the first utterances of Q-units not causing difficulty versus Q-units causing difficulty to proficient TAs

<table>
<thead>
<tr>
<th></th>
<th>Present</th>
<th>Absent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Frequency</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Percent</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Row Pct.</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Column Pct.</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not difficult</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>119</td>
<td>422</td>
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<td>20.4</td>
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<td>92.6</td>
</tr>
<tr>
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<td>22.0</td>
<td>78.0</td>
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</tr>
<tr>
<td></td>
<td>93.7</td>
<td>92.3</td>
<td></td>
</tr>
<tr>
<td>Difficult for</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>proficient TAs</td>
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<td></td>
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</tr>
<tr>
<td></td>
<td>8</td>
<td>35</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>1.4</td>
<td>6.0</td>
<td>7.4</td>
</tr>
<tr>
<td></td>
<td>18.6</td>
<td>81.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6.3</td>
<td>7.7</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td>127</td>
<td>457</td>
<td>584</td>
</tr>
<tr>
<td></td>
<td>21.8</td>
<td>78.3</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note. $\chi^2 (1, N = 584) = 0.269, p < 0.604.$

Table 20. Standard and nonstandard grammaticality in the first utterances of Q-units not causing difficulty versus Q-units causing difficulty to proficient TAs

<table>
<thead>
<tr>
<th></th>
<th>Standard</th>
<th>Nonstandard</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Frequency</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Percent</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Row Pct.</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Column Pct.</strong></td>
<td></td>
<td></td>
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<tr>
<td>Not difficult</td>
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<td></td>
<td>290</td>
<td>251</td>
<td>541</td>
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<td>49.7</td>
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<td>92.6</td>
</tr>
<tr>
<td></td>
<td>53.6</td>
<td>46.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>91.2</td>
<td>94.4</td>
<td></td>
</tr>
<tr>
<td>Difficult for</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>proficient TAs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>28</td>
<td>15</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>4.8</td>
<td>2.6</td>
<td>7.4</td>
</tr>
<tr>
<td></td>
<td>65.1</td>
<td>34.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8.8</td>
<td>5.6</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>318</td>
<td>266</td>
<td>584</td>
</tr>
<tr>
<td></td>
<td>54.5</td>
<td>45.6</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note. $\chi^2 (1, N = 584) = 2.128, p < 0.145.$
Table 21. Positive and negative in the first utterances of Q-unit not causing difficulty versus Q-units causing difficulty to proficient TAs

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Positive</td>
<td>Negative</td>
<td>Total</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Not difficult</td>
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<td>16</td>
<td>541</td>
<td>92.6</td>
<td>89.9</td>
<td>2.7</td>
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<td></td>
<td>9.9</td>
<td>2.7</td>
<td>92.6</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>97.0</td>
<td>3.0</td>
<td>92.4</td>
<td>100.0</td>
<td>97.0</td>
<td>3.0</td>
</tr>
<tr>
<td>Difficult for proficient TAs</td>
<td>43</td>
<td>0</td>
<td>43</td>
<td>7.4</td>
<td>7.4</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>568</td>
<td>16</td>
<td>584</td>
<td>100.0</td>
<td>97.3</td>
<td>2.7</td>
</tr>
</tbody>
</table>

Note. \( \chi^2 \) not valid; one cell has a count of less than five.

Table 22. Use of extra rising intonation in the first utterances of Q-units not causing difficulty versus Q-units causing difficulty to proficient TAs

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
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<td>Extra</td>
<td>Normal</td>
<td>Total</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>55</td>
<td>486</td>
<td>541</td>
<td>92.6</td>
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<td>9.4</td>
<td>83.2</td>
<td>92.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10.2</td>
<td>89.8</td>
<td>92.9</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Difficult for proficient TAs</td>
<td>6</td>
<td>37</td>
<td>43</td>
<td>7.4</td>
<td>7.4</td>
<td></td>
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<tr>
<td>Total</td>
<td>61</td>
<td>523</td>
<td>584</td>
<td>100.0</td>
<td>10.5</td>
<td>89.6</td>
</tr>
</tbody>
</table>

Note. \( \chi^2 (1, N = 584) = 0.611, p < 0.435. \)
Table 23. Use of double- or multiple-barreling in the first utterances of Q-units causing no difficulty versus Q-units causing difficulty to proficient TAs

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Row Pct.</td>
<td>Column Pct.</td>
<td>Normal</td>
<td>Double or Multiple</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Not difficult</td>
<td>454</td>
<td>87</td>
<td>541</td>
<td>77.7</td>
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<td>77.7</td>
<td>14.9</td>
<td>92.6</td>
<td>83.9</td>
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<td>43</td>
<td>6.3</td>
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<td>proficient TAs</td>
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<td>1.0</td>
<td>7.4</td>
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<td></td>
<td>86.1</td>
<td>14.0</td>
<td></td>
<td>7.5</td>
</tr>
<tr>
<td>Total</td>
<td>491</td>
<td>93</td>
<td>584</td>
<td>84.1</td>
</tr>
</tbody>
</table>

Note. $\chi^2 (1, N = 584) = 0.135, p < 0.714.$
... We have to instill in them [NNSs] the confidence to listen like a native speaker, sampling the speaker's utterance and matching it against their predictions. Such a listener is not thrown into a panic if the speaker says something he hasn't quite heard properly; he merely makes a sensible prediction, or supposes that if it were important the speaker would have said it with more emphasis (with greater articulatory precision, louder and longer) and carries on listening. Far too many foreign students, obsessed by the notions of correctness instilled in them by common teaching (or testing) techniques, panic as soon as they fail to understand something and stop listening to everything that follows. It may be that the 'prediction and sampling' technique which I advocate will sometimes lead them to misinterpret. So, after all, do native speakers--I suspect far more than we ever imagine or need to check up on. We all get by with a rough fit with reality. (Brown, 1978:181).

In this project I have examined the form and function of questions that native-speaking student questioners have asked nonnative-speaking teaching assistants in the context of the TEACH test. The purpose was to find some patterns in the features I chose to examine. This was an exploratory study, in that I had few clues from earlier research as to what
patterns I might find. Perhaps the most useful aspect of this research was the evidence it provided for abundance or scarcity of particular features in actual spoken English.

I also looked at the questions which gave difficulty to NNS TAs with moderate to high English proficiency (as inferred from their inability to answer, their need for several repetitions of a question, or their inappropriate response). The purpose was to see which features occurred more frequently in these "difficult" questions.

In this chapter I propose to examine the findings that seemed most significant and to conclude with some suggestions for ways to improve question-and-answer exchanges between NNS TAs and their students.

The strongest conclusions I have reached during the slow process of transcribing and coding all of the data for this study are (1) how very different spoken and written English are, and (2) how difficult it becomes to classify discourse segments larger than single phrases. The structure of the TEACH test did solve the problem of whether an utterance was a question, an issue discourse analysts sometimes agonize about. The intent of asking questions was predetermined; questioners were paid to ask questions and instructed in how to do so. Yet they did some surprising things while endeavoring to follow these instructions.

First of all, they did not usually ask simple, information-seeking, WH-questions such as What forces act on a falling body? Sometimes they
rambled as they formulated their thoughts, used sentence fragments, dis- 
guised questions as statements, or softened the directness of questions 
with, for example, Could you tell me what forces act on a falling body?

There was great variability in the length of questions (item 14, 
TOTAL). False starts and insertion of "useless" words (15 USELESS) did 
not occur as often as I had expected. Only 24% of all questions con-
tained more than one useless word and nearly 59% contained none at all. 
I do not know why this was the case. Among the first questions of the 
difficulty subset of proficient TAs, the instances of useless words were 
even fewer (less than 19% contained more than one useless word and 71.7% 
contained none).

Perhaps my hunch about the carelessness of student speech was over-
blown. Or perhaps questioners were subtly using foreigner register. In-
stances where many useless words were uttered seemed to occur in the 
questions of two particular questioners, who have been mentioned before. 
One began to ask questions while his thoughts were disorganized (see ex-
ample 4.7 on page 82), and the other seemed to have a speech disorder 
involving stammering (see example 4.3 on page 64).

Although for the most part, questioners did not speak in the stilted 
fashion of foreigner talk register, their use of sandhi-variations (16 
SANDHI) was not great. The types of sandhi variation they used (see 
Table 8 on pages 70-71) had the same three features Henrichsen listed as
"very common to spoken English" (1984:104). These features were (1) contraction (gonna, wanna, hasta), reduction (d'you, 'scuse) and assimilation (is there [Izər], is this [IzIz]). Sandhi features showed up most frequently in verbs and pronouns. Although little empirical research has been done to investigate the effect of sandhi-variation on the comprehensibility of English input, Henrichsen found that the higher the proficiency of NNSs, the less effect sandhi-variation had on their comprehension. It seems likely that the NNS TAs in this study were at a high enough level of proficiency not to be troubled by sandhi.

A phenomenon of interest and importance was the outer structure of the question. This might consist of a preface (17 INTRO), which occurred in 36.6% of all questions, and/or a closing (18 CLOSING), which occurred in 20.5% of them. The preface and closing seem to serve different functions, however. The preface was used by questioners who realized intuitively that a topic boundary needed to be marked and some priming was in order before they posed their questions. On the other hand, the closing appeared to be an attempt to clarify a question that the questioner perceived either as ill-formed or as possibly confusing. I believe the practice of prefacing questions would be a good habit for NS students to cultivate, as is suggested later in this chapter.
Irrelevant Question Problem

The absence of prefaces may have contributed to the difficulty that proficient NNS TAs had with irrelevant, classroom culture questions (19 RELEVANT). Reviewing the Q-units where difficulty occurred, it is evident that the blurting out of the classroom culture question with no preface stunned even the NNS TAs with high or moderate proficiency. In the 27 Q-units of this type, questioners provided structuring for the first question in nine of the cases (34.6%)--five prefaces, three closings, and one case of both preface and closing. The rest (18), without framing, were verbatim from a list of classroom culture questions created for the TEACH test (see Appendix G). In six instances they were simply *Do you give pop quizzes?*; in three instances, *Do you give partial credit for quiz problems?*; and in two instances, *Is this course a prerequisite for higher-level courses?* or *How much of this material will be on the next quiz?*

Clearly the irrelevant, classroom culture question was the feature which caused significant difficulty to this subset of NNS TAs, particularly when it was not framed. Topic identification has been shown to be a major stumbling block for beginning L2 learners, according to Hatch (1978). Initially, NNSs must comprehend the content words. In the case of classroom culture questions about pop quizzes or grading on the curve, the NNS TA is left trying to puzzle out what these key vocabulary words mean in the present context. The TA may try to bluff by giving as brief
an answer as possible, as in the poppies example (3.2 on page 39b). Or he may try to incorporate the misunderstood content words into the context of the explanation he has just presented. One math NNS TA, when asked whether she used plus-minus grading, assumed that the student was asking about an equation on the chalkboard that included pluses and minuses. The TA proceeded to review the significance of this equation rather than to explain her grading policy.

Using their world knowledge to predict what information might be asked in a particular question, NNS TAs were sometimes led astray. That is, they anticipated the likely nature of a question about to be asked and instead were asked something unpredictable that was not relevant to the subject at hand. This pattern is evident in the responses by the proficient NNS TAs. Eleven of the 27 TAs who had difficulty with classroom culture questions thought they understood the question and answered promptly and inappropriately. For example, in answer to the question D'you give pop quizzes? one TA said he did, but he would let the class know ahead of time so they could come prepared. It was obvious he did not know what pop meant.

Eight of these TAs did not rush to respond to a question they did not understand, but instead asked for a clarification. Five said Pardon?, two said What?, and one said I'm not sure I understand your question. Five others repeated content words from the question, giving themselves a little more time to figure out what the question was. After the questioners responded to these queries with a rephrasing, repetition, or
verification, the TAs then followed up by answering incorrectly, or by requesting more repetitions (exceeding the limit of one repeat as a non-native indication of difficulty). The following is an example of a determined TA who refused to give up until he comprehended:

(Q-unit 057: Zoology)

5.3 Q: Is zit possible that I ken switch to an audit in this course? (1)
TA: Pa'don? (2)
Q: Ken I switch to an audit in this course? (3)
TA: No, I don't understand.... (4)
Q: Audit the course? (5)
Q: (starting over) Can I switch to audit in here or.... (6)
TA: I don't understan'. (7)
Q: Okay, like ah audit, in other words, take not fer credit? (8)
TA: Take the course not fer credit jes' sit in here. (9)
Q: Is zat possible in this course? (10)
TA: I dunno. Maybe I should ask the Department of Zoology. (11)
I'm not the boss.

Another, less confident, had to give up:

(Q-unit 301: Chemistry)

5.4 Q: Do you give pop quizzes in this class? (1)
TA: Pa'don? (2)
Q: D'you give unannounced quizzes? (3)
TA (takes a long pause and stares at the chalkboard):
   Pa’don. I didn’t catch... (smiles). (4)
Q: Would you, would you, f’r instance, give give a, ya
   know, come inta class an’ give a quiz without telling
   us beforehand you were gonna give us a quiz? (5)
TA (stares at chalkboard for 17 seconds, smiles): I
   didn’t catch yer question. Sorry. (turns to take
   another question). (6)

This suggests that the classroom culture question on the TEACH test
may be as much a test of the listening sophistication of NNS TAs--whether
they can override incorrect expectancies--as it is a test of their
knowledge of classroom culture. As a result of this thesis research,
directions to student questioners before the TEACH test have been
modified. Questioners are now instructed to assist the NNS TA by provid-
ing a preface to all classroom culture questions--the way some ques-
tioners intuitively had done all along. For example, the "pop quiz"
question might be phrased: **I have a question about your testing policy.
Do you ever give pop quizzes?**

**Improving NNS TAs’ Answering Performance**

Based on the occurrence of question features and careful observation
of 171 videotapes, some suggestions for ways NNS TAs could improve their
question-handling ability seem possible:
1. Any prior knowledge NNS TAs may have of U.S. classroom behavior should be drawn upon. This is what Richards (1983) would call the "university classroom script." A script is an individual's memory of typical episodes that happen in a specific situation. With a script it is possible to interpret language likely to occur in that situation. The presence and absence of some of the coded features can provide some clues to NNS TAs about the classroom script. For example, students will frequently ask an information question in a "softened" yes/no form, such as the polite could. They will probably (1) use present tense because they are discussing the here-and-now, (2) express themselves in fairly simple vocabulary, and (3) ask for an elaboration about something that has already been presented.

New NNS TAs might also benefit from receiving a glossary of classroom terms that are frequently used by undergraduates to discuss testing, homework assignments, and grading policies.

2. Questions that are likely to be asked about a topic can be anticipated before class. As Jones (1986) noted, expectations on the part of both interlocutors in an encounter play a subtle, but important role in what is exchanged. There are ways to get NS students to ask the questions the NNS TA thinks should be asked--and that the NNS TA knows how to answer. One strategy might be to write on a side chalkboard before class a short list of questions pertinent to the topic. After the NNS TA's presentation, he or she might ask for students' questions, and if none is
raised, might ask the class if they believe they now know the answers to the list of questions.

3. Answers should be appropriate to the situation. The one word yes or no used by NNS TAs, when they were trying to fake an answer to a question they did not understand, was obvious because of its inappropriateness. Native speakers feel intuitively that No is too blunt an answer to a question such as Do you allow us to use a formula sheet for exams? The speaker needs to provide a few words of explanation.

The same is true of affirmative answers to questions such as Do you give pop quizzes? The NNS TA needs to learn to elaborate when making a stern or unpopular pronouncement in order to develop rapport with the students.

4. Question-and-answer exchanges are dialogues between interlocutors, not "long turns" by the TA, like lectures. The NNS TA may need to ask for a repetition of the question, or may have to ask the student one or more questions before being able to provide an appropriate answer. As we have seen with the proficient NNS TAs who had difficulty, the questioner may not be following Grice's maxim (1975) about being informative, concise, clear, and relevant. Ungrammaticality or irrelevance of a question may make it difficult to comprehend. NNS TAs must never be afraid to ask to have a question repeated. NS teachers know that to respond to a question with a request for clarification is natural. If the NNS TA does not understand the question after it has been repeated, he or she could try
several tactics:

a. The TA could repeat the question as he or she heard it or ask the student a question in return, such as Did you say "what is the square root of Y"? or Was that problem 7 on page 92 or...?

b. The TA could admit that he or she does not understand and ask the student to meet him or her at the end of class or during office hours.

c. The TA could ask if someone else in the class understands and can answer the question or can rephrase it.

5. Some TAs feel they lose face if they do not know the answer to a question. One way to handle this situation is to be honest and say, "That's a good question. In fact, it's too good for me. I'm going to have to check up on it and come back with an answer for you next class. Let me just make a note here to myself about looking it up." I do not believe American students see that as a loss of face for the NNS TA. The person who asked the question will feel pleased that she has asked a tough question--and one that the TA treats as important.

6. TAs should try to give the impression that they care whether their students are learning. If the students do not ask questions, the TA can ask them questions. For example, at the end of a complicated problem the NNS TA might ask, "Who would like me to explain this over again?" Then he would wait at least five or ten seconds and make eye contact with the class.
When a student asks a question, it should be treated as important. It should never be put down or treated as stupid or trivial. I have heard NNS TAs on videotape say, "I already explained that." The subliminal message is "My explanation was perfectly good, and you weren't listening." Possibly the first explanation was not adequate, and the questioner is the only person brave enough to admit confusion. Other students may be equally confused. If there is not enough time to repeat a complicated explanation during the class period, students should be invited to come to the TA's office hour at a specified time.

7. As Varonis and Gass (1985b) point out, the most serious kind of miscommunication is when the NNS misunderstands the question and proceeds to answer something that was not asked. This embarrassing situation can be avoided if the NNS TA, using repetition and questioning of the questioner, is certain that he is answering the right question. If he thinks he may be going astray, he always can ask "Is that what you wanted to know?" or "Does that answer your question?"

Improving NSs' Questioning Techniques

It is apparent from examining student questions that there are some ways in which students can make their TAs' job easier:

1. Questioners need to think before starting to ask a question. They could write down questions as they think of them during the lecture or demonstration—or even earlier, when they are reading their homework. That would make their questions more coherent and grammatical.
2. Questions should be brief. NSs should not indulge in the verbosity or slanginess they use with another NS. A question with several parts can be "decomposed," to use Long's term (1983b). The first part can be asked, and the TA can respond to it before the questioner moves on to the next part. It may be necessary to lead the NNS TA one step at a time through a complicated question.

3. NS students should try to speak a little slower and enunciate clearly if their NNS TA seems to have trouble understanding. I am advocating the weak form of foreigner register. As Long (1983a) found, some modification in speaking is sometimes necessary for clear communication to occur between NS and NNS.

4. Questions should be framed with a preface. This is especially important when a topic change occurs. It helps the NNS to anticipate the change if the speaker specifies, I'd like to change the subject and ask you about....

5. When the NNS TA does not seem to comprehend a question, the NS questioner should first try repeating it without changing the words. The TA may not know a key content word. If the student immediately rephrases the question, the comprehension problem for the NNS TA may only be compounded. The next step is to try repeating the key words for the TA. Finally, rephrasing can be tried. But a pause between each step will give the TA a chance to translate what has been said, if that is necessary.
6. When the questioner refers to something on the chalkboard or in the textbook, it helps to give specific directions. Instead of saying About that four down there..., it is better to point and say On the left, the fourth equation that begins \(X\) times \(Y\) squared (pause, give TA a chance to find the right place). I have a question about the four there....

7. If the NNS TA does not answer a question adequately, the student should go and see him or her during office hours. NNS normally are better able to communicate one-to-one. The student must be very direct and say "I didn’t understand your explanation for...." If the TA cannot give an adequate answer, the student should go to the faculty supervisor for the course about the problem. Departments need to know when students and NNS TA are not communicating.

Appendices D and E are attempts at packaging the previous sections of advice into usable form.

**Ideas for Future Research**

Question-and-answer exchanges between NSs and NNSs is an area with many possibilities for future research. It would be interesting to compare 1986-87 TEACH testing, in which NS questioners "framed" the classroom culture question, with the 1985-86 TEACH data used in this thesis research to see what, if any, difference occurred in the irrelevance feature.
Another area of research might involve using the taxonomies of question form, function, and exponents, plus other features such as negativity and grammaticality, to examine NS-NNS question exchanges in real classrooms or other contexts. Or a "micro" approach might be used to scrutinize a single question feature within the present dataset to see if it occurred more frequently in certain contexts.

Finally, the responses of NNSs to NS questions were treated only superficially in the present study. These responses are also very important to examine in a comprehensive study of NS-NNS questioning exchanges.

The present study was conceived as an exploration into hearing and analyzing how NSs actually asked questions of NNSs in a specific setting. The most obvious difficulty feature turned out to be the classroom culture question which did not fit TA's expectations even when their English proficiency had proved to be high or moderate on another test (SPEAK). Based on this thesis research, modifications have already been made in the TEACH testing procedures, and in the future further attempts will be made to refine the test. It is hoped that ideas presented in Appendices D and E may also evolve into material that will contribute to better communication between NNS TAs and the students they teach.
BIBLIOGRAPHY


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APPENDIX A

DIRECTIONS TO STUDENT-QUESTIONERS
TEACH is a test designed to supplement the SPEAK test and to provide evidence of prospective teaching assistants' ability to communicate in a classroom in their own field of study. TEACH attempts to identify what specific aspects of teaching are likely to present problems for the new teaching assistant (TA) who is not a native speaker of English.

TESTING PROCEDURES

The test lasts ten minutes for each TA. TEACH consists of three parts: (1) A minute or two to allow the TA to become familiar with the physical surroundings, meet the "class" (two or three student questioners, two raters, test proctor, and technician), and write a few terms, formulae, etc. on the chalkboard; (2) up to five minutes to explain some aspect of an assigned topic clearly and in words that an undergraduate class could understand; and (3) three minutes to answer questions about the topic asked by you and the other student questioners.

A list of assigned topics for the mini-lectures was suggested by each of the departments in which these TAs expect to teach. The Graduate College chooses from the topics and lends the TA a copy of the textbook or laboratory manual in which the assigned topic appears. The TA has a day or two to prepare for the test. A typical university classroom is used for TEACH videotaping.

INSTRUCTIONS TO STUDENT QUESTIONERS

Your task as a TEACH student-questioner will be twofold:

(1) To help the TAs feel at ease;

(2) To simulate an undergraduate classroom by listening to each presentation and responding with appropriate questions and comments during the final, three-minute question and answer period.

The following general guidelines may help you carry out this assignment:

1. Acknowledge the foreign TA's presence in a friendly fashion when s/he enters the room. As in an actual classroom, you should be seated--about one-third of the way back from the desk. Also try to sit about two or three seats apart from the other student questioners or raters.

2. Two-minute warm-up: Before the mini-lecture, two minutes are devoted to familiarizing the TA with the timing procedures and allowing her/him to write terms or formulae on the chalkboard before beginning.

* TEACH, ©, 1985, Iowa State University
3. Five-minute mini-lecture: When signaled by the test proctor, the TA will begin his/her mini-lecture. During this initial period DO NOT ask questions about the content of the mini-lecture. We want to allow the TA adequate time to demonstrate his/her speaking and teaching skills without possibly being rattled by questions.

During these first five minutes of the test session you are only allowed to ask two questions, if the situation calls for either of them:

(1) Would (or could) you please speak a little louder?

(2) Would (or could) you please repeat that?

4. Question and answer period - A warning tone will sound when the TA has only one more minute to lecture. When two tones sound, the questioning should begin. Stop the TA by raising your hand and begin to ask appropriate questions (see examples on page four). If possible, avoid asking Yes-No questions that do not require the TA to speak. When you ask a Yes-No question, plan to follow it up with "Why is that?" or "Could you please explain why?" so that the TA will have to respond with more than just a simple "yes" or "no".

Do not make your questions more difficult than those a typical undergraduate might ask. The objective is not to grill the TA, but rather to assess his/her ability to handle ordinary classroom questions. In addition to asking content questions, either you or one of the other student questioners must ask one Classroom Culture Question (see explanation on page four).

SUGGESTIONS FOR FORMULATING QUESTIONS

1. During the mini-lecture, jot down questions to ask later based on what the TA says.

2. Decide before each mini-lecture which student questioner will ask the Classroom Culture Question. Also decide ahead of time who will ask the first question at the beginning of the question and answer period so that that person can stop the TA immediately and begin the questioning when the timer rings at the end of the five minute mini-lecture.

3. Take turns asking questions so the TA will have to deal with several different accents, speaking rates, and styles of speaking.

4. Three minutes is not long, so you and the other questioner(s) may only be able to ask a question or two apiece. Please ask questions that are simply worded and to the point, avoiding those which might elicit long, elaborate responses.

5. If you raise your hand to ask a question and the TA does not see you or call on you, do not hesitate to interrupt politely with a phrase like "Excuse me, but I need some information to understand this point"--or some other excuse.
6. Allow the TA adequate time to answer each question, but if it seems that his/her answer is rambling on too long, do not hesitate to ask the next question. Do not allow the TA to spend most of the three minutes on a single question.

PRETEST PREPARATIONS

1. Before coming to your first test session, you might want to stop in Media, Room 002, in the basement of Parks Library. A videotape with some examples of TEACH sessions is on reserve there. It will be listed on a page (marked "TEACH Tape" in the reserve book on the table at the left of the checkout counter. Fill out a blue checkout slip with the call number, take it to the counter, present your ID card to the library assistant, who will give you the tape and a headset for watching and listening to the TEACH tape on one of the videocassette players. Do not hesitate to ask for help in using the equipment if you haven't played a tape there before. You are welcome to look at the entire tape, but probably one or two mini-lectures will give you a good idea of the questioning procedures.

2. When you arrive in Room 302 Pearson Hall at 12 noon of testing day, an array of the textbooks—or photocopies of lesson, in some cases—will be spread out on the tables for you to examine. Copies of the agenda for each of the testing rooms will be available for you to pick up. The agenda will list the department and the subject for each mini-lecture you will hear. In the half-hour before the testing begins, you will have a chance to look at the textbooks (or lessons) to be used in the room to which you have been assigned. You will be paid for this hour of preparation time, and we hope you will review the material carefully.

AFTER THE TEST

1. Before leaving Pearson Hall, please fill in an "Employee Wage-Hour Report" form and give it to Barbara Plakans or the test proctor in your testing room so that you can be paid for your time. These forms will be available in 302 Pearson when you pick up your agenda for the afternoon.

2. There will also be a sign-up sheet for future TEACH test dates. If you are willing to continue to serve as a student-questioner, please fill in the future dates when you think you will be available. There will also be a sheet for prospective questioners, if you would like to recommend a friend. The Graduate Office will contact prospects at a later date.
QUESTION TYPES

The following lists were prepared to give you some ideas about the form questions may take. We want them to be in your own words, said as naturally as you can. If the TA does not understand your question, please repeat or rephrase the question just as you would for a native speaker of English who didn't comprehend.

YES-NO QUESTIONS (best avoided, unless you ask for some explanation)

- Is \( y^2 = 2x + 1 \)?
- Does the slope level off at point B?
- Are those coefficients always constant?
- Can the remaining potential energy be measured at that point?
- Is mercury always in a liquid state?
- Can the fraction \( \frac{61}{15} \) be simplified?
- Are the angles of an equilateral triangle also equiangular?
- Does a photon act like a particle or a wave?

CONTENT OR WH-QUESTIONS (ask these)

- What forces act on a falling body?
- Why is every equilateral triangle also equiangular?
- When can a solar eclipse be observed?
- Where did you say the x variable should be placed?
- How did you arrive at that solution?
- In the fraction \( \frac{4}{5} \), which number is the denominator?
- Who developed the Long Wave theory of economic change?

CLASSROOM CULTURE QUESTIONS (ask one of these)

- How much of this material will be on the next quiz?
- Do you grade on the curve or by straight percentage? Is that your policy or the department's policy?
- Is this course a prerequisite for higher level courses in this department?

Other examples, including some new ones, will be available on test day. The purpose of this question is to help the raters (1) determine whether the TA is familiar with the vocabulary and procedures in a U.S. university classroom, or (2) if the TA is not familiar, is s/he able to reply in an appropriate manner (e.g., "I don't know right now, but I'll check with my supervisor and let you know at the next class meeting.")
APPENDIX B

TRANSCRIBING CONVENTIONS

The following transcribing conventions will be used in this thesis. They primarily follow patterns used by Brown and Yule (1983b: x-xi).

An aim of this thesis is to draw attention to the differences that exist between spoken and written language. The transcriptions are numbered in sequence in the chapter in which they occur (1.1, 1.2, 2.1, etc.). Each line also is identified by a number on the right in parentheses--(1), (2), etc. Speakers, indicated on the left at the beginning of their utterances, will either be "Q" for questioner or "TA" for nonnative speaking teaching assistant.

Each transcribed extract is presented in normal orthography. The detail presented in the transcription (particularly detail which is difficult to interpret) may vary from one discussion to the next, since particular transcriptions are presented for different purposes. Words and pauses were transcribed as I heard them. It is perfectly possible that an attentive listener may produce a different version if he or she undertook a detailed transcription. This should not occasion concern, but merely draw attention to the fact that there are often different possible interpretations of the blurred acoustic signal.
Pauses are represented thus:
- a very brief pause
+ a short pause
++ a long pause

Overlapping between speakers is represented between vertical lines in this manner: |     |

Omitted portions are represented by: ...

Unclear parts which I have guessed are represented by: (?   )

Parts where the speaker fails to fill in are represented by: ***

Rising intonation is represented by: (↑)
APPENDIX C

CODING SHEET USED TO ANALYZE Q-UNITS
<table>
<thead>
<tr>
<th>Question</th>
<th>Q-Unit No. of Q-Units</th>
<th>THE TA (fill out for 1st Q-Unit only)</th>
<th>Overall SPEAK/TEACH test results (1=pass, 3=not pass, 4=conditional pass, 5=partial)</th>
<th>Average rater's TEACH score on listening/Q handling [part scores: ]</th>
<th>BSP's rating on listening/Q handling [part scores: ]</th>
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</thead>
<tbody>
<tr>
<td>1. ______</td>
<td>Exam No. Dept. Topic</td>
<td></td>
<td></td>
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<td>2. ______</td>
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<td>5. ______</td>
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<td>____</td>
<td>____</td>
<td>____</td>
</tr>
</tbody>
</table>

Comments by raters or me:

---

THE QUESTIONER

6. ______ Sex (M=male, F=female) 7. ______ Rate of speech (1=slow, 2=avg., 3=fast)

Other comments re delivery:

---

**QUESTION CHARACTERISTICS**

8. ______ No. of words in question (see protocol re word counting)
9. ______ No. of "useless" words (see protocol re what is useless)
10. ______ No. of instances of sandhi
11. ______ Use of introductory statement (1=Yes, 2=No) Quote:
12. ______ Relevant to TEACH topic? (1=Yes, 2=No)
13. ______ Grammatical? (1=Yes, 2=No) specify:
14. ______ No. of lexically complex words in question
15. ______ Form of question (see table 1 for taxonomy)
16. ______ Presence of question exponents (see table 2 for exponent combos)
17. ______ Function of question (see table 3 for taxonomy)
18. ______ Conventional intonation? (1=Yes, 2=No) If no, diagram:
19. ______ Answering process straightforward? (1=Yes, 2=No) If no elaborate:
20. ______ No. of times question was phrased (1=once, 2=twice, etc.) by (Q=questioner, TA=examinee)

**SUBSECTION FOR REPHRASINGS, ELABORATIONS, ETC.**

<table>
<thead>
<tr>
<th>Q-Unit</th>
<th>1</th>
<th>2</th>
<th>3</th>
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<td>4.17</td>
<td></td>
</tr>
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</table>

Comments on exchange and possible reasons for difficulty:
REVERSE SIDE OF CODING SHEET

TRANSCRIPTION OF Q-UNIT _______ FOR EXAM NO. _____
Department__________________ Topic ____________________________
APPENDIX D

CURRICULUM MATERIAL FOR TA QUESTION HANDLING

The following script was prepared as a class project during Fall Semester 1986 for English 589B, Computer Assisted Language Learning.
Q and A

Questions and Answers

Practice in answering questions

for International Teaching Assistants

INTRODUCTION

The following questions were really asked by students at Iowa State University. This lesson will try to make you more aware of ways to answer classroom questions. Remember: most of the time there is no single "right" answer. Question-answering is an interactive process. The teacher and the student are both contributing toward the communication of ideas. Think of questions and answers as a game for two rather than as a solo performance by you.

Press RETURN to continue

INSTRUCTIONS

The questions are meant to be heard, not seen. You will be asked to listen to the tape-recorded question before seeing it. Questions were recorded by real students trying to talk as naturally as possible.

Press RETURN to continue

Next you will select an answer and see what the student might respond after it. A comment about this response then follows. You can examine student responses for any of the TA answers.
When you have examined all the responses that interest you, press RETURN to proceed to a general summary of the question. When you press RETURN again, you will go on to the next question.

QUESTION UNIT I: Vague referent, indirect question

Situation: The TA has just described basic cell structure, using drawings on the chalkboard of the double helix of DNA and a diagram of a cell.

Press RETURN to continue

Press the PLAY button on the tape recorder to hear the first question. If you would like to hear it again, press STOP, then REWIND for several seconds, and press PLAY again.

After you have listened to question <<s,index>> as many times as you wish, press RETURN on the terminal keyboard to see the first question in written form.

#I-1-1-1

Question 1: "You have like, I dunno, two different shapes there. I mean, one of 'em is this blob with the line through it an' one of 'em is a long one. Are those two different kinds of protein? Or what are they?"

Press RETURN to continue

Definitions: Which of these words would you like defined? (Enter letter)

a. blob, b. dunno, c. 'em, d. like, e. an', f. none of these

(Student inputs letter and depending on letter, sees one of the following:

a. blob - a drop or small round mass, like a drop of paint from a brush
b. dunno - reduced form of "don't know"
c. 'em - reduced form of "them"
d. like - for example
e. an' - reduced form of "and"

(When student presses "f," he goes on to TA ANSWERS)

-----------------------------------------------

TA ANSWERS

Choose one (enter number). When finished, enter "5".

1. I'm not sure which shapes you mean.
2. Could you repeat your question?
3. I don't know. What is "blob"?
4. Yes, they are.
5. (No more answers, please)

(Depending on which number student enters, he sees one of the following responses)

-----------------------------------------------

STUDENT RESPONSE to answer:

1. I mean the one down there on the right with the line through it. (points)
   (This response clarifies what part of the drawing she is asking about.)
2. Ah, are those two shapes, are they two different kinds of protein or what?
   (This student doesn't ask clear questions. Having this question repeated may not help much. It may be better to "decompose" the parts of it [see answers 1 and 3])
3. Blob is like, ah, well it's like that shape down there on the right (points).
   (Well, now at least the TA knows what she is talking about. Maybe he'll need to ask her another question, such as "And the other shape was this long one?" [TA points])
4. Okay, then which is which?

(The TA only answered the first question. The student wants more information. It's the TA's turn to explain what kind of protein each shape represents.)

(When student enters 5, program goes on to summary)
SUMMARY for Question 1

A characteristic of student questions is that they may not state clearly what it is that they refer to. You may not know which drawing on the chalkboard to clarify. When you are uncertain about a word or what drawing they are talking about, ask them a question. You want to make sure you know what their question is before you begin answering it. Get students to repeat or point to or define their terms. All of this gives you more time to think about your answer.

Now go on to the next question...

First listen to the tape recording of question <<s,index>> until you understand it.

Press RETURN to continue

#2-2-2-2

Question 2: "I don’t follow where you were gittin' this L from down here."

Press RETURN to continue

DEFINITIONS:

a. don’t follow - do not understand
b. gittin' - reduced form of "getting"
c. down here - near the bottom of the chalkboard
d. indirect question - a statement that needs an answer
e. where’d - contracted form of "where did"

TA ANSWER:

1. What is the question?
2. I already explained that. It comes from the carbon ring.
3. The L came from up here (points to first diagram). Were you able to follow that part of the explanation?
4. This is too complicated to explain here. Could you come to my office hour tomorrow?
STUDENT RESPONSE:

1. Where’d you get that L from? (points)

(The student has changed an indirect question to a direct question. That should make it easier to answer.)

2. (silence)

(Student feels he has been criticized for not listening. Maybe the TA’s explanation wasn’t clear to others in the class—but they were afraid to speak.)

3. Yes, but you lost me when you wrote the next formula.

(Now you know what you need to repeat and clarify.)

4. Oh, it’s not that important, I guess.

(Some students don’t think their questions are important enough to attend TAs’ office hours. They are more likely to come to his office either before a test when they don’t understand something or after it if they have done badly.)

SUMMARY for Question 2:

The statement ("I didn’t follow where you were gittin’ this L down here.") is an example of an indirect question. The direct question would have been "Where did you get the L...?" Many English speakers like to "soften" their questions with a lead-in like the previous example or like "I’m confused. Could you tell me again where you got that L?" Don’t hesitate to ask students to repeat. Just say "Tell me again what confuses you" if you didn’t comprehend the last half of their question.

QUESTION UNIT II: Non sequitur, unfamiliar vocabulary

Situation: In recitation section for the history of western civilization the TA explains the importance of Napoleon Bonaparte to European social and political development.

Press RETURN to continue
First listen to question «s,index>> on the tape recorder until you understand it.

Press RETURN to continue

#3-3-3-3

Question 3: "Is zis gonna be on the next test?"

DEFINITIONS:

a. is zis - "is this" when spoken rapidly
b. gonna - reduced form of "going to"
c. stuff - slang for "information"
d. er - reduced form of "or"
e. rephrase - say something differently the next time

TA ANSWERS:

1. Excuse me?
2. What about the next test?
3. Highly possible. If I spend this much class time on something, it's probably going to be on a test.
4. I don't know. I haven't decided yet.

STUDENT RESPONSES:

1. Is zis gonna be on the next test er...?
   (Having the question repeated may help the TA comprehend and gives her time if she needs to translate. If it doesn't help, she should ask again.
2. Is zis stuff gonna be on the next test?
   (The student rephrases the question slightly. If the TA doesn't understand, she should ask again.)
3. (silence)
139

(This answer may sound a little harsh, but it is decisive.)

4. When will you decide?

(Students always want to know about tests. TAs can expect more questions until they get specific about the time, content, and how tests will be graded.)

-------------------------------------------------

SUMMARY on Question 3:

U.S. students worry a great deal about grades. Good grades mean a good average and a good record that will give them an advantage in finding a job or getting into a good graduate or professional school. As a TA, you can expect to be asked many questions about tests, grades, and the "rules" of your class. It will help if you have thought about these things ahead of time and asked people in your department about the policies. As a TA most of the time you are only required to follow your department's policy, not create new policy.

Press RETURN to continue.

-------------------------------------------------

Listen to the tape recording of question <<s,index>> until you feel you understand it.

-------------------------------------------------

#4-4-4-4

Question 4: "Um, Napoleon was, ah, born in Italy but he was famous in France. He was a French politician. (↑) Where's Waterloo? What country is it now located in?"

-------------------------------------------------

DEFINITIONS:

a. um - fills a space while speaker thinks what to say next
b. ah - no meaning, a filler
c. (↑) - indicates the speaker's voice tone rises
d. Waterloo - battle where British defeated Napoleon
e. politician - someone active in politics and/or government

-------------------------------------------------

TA ANSWERS:
2. Waterloo is in Belgium. We haven’t talked about it yet, but why do you suppose Napoleon was defeated there?
3. Napoleon was born on the island of Corsica. It became part of France before his birth; his parents were Italian.
4. Waterloo? I’m not sure what country it was in at that time. The map of Europe has been redrawn many times.

STUDENT RESPONSES:

1. I wondered where Waterloo was.
   (Rephrasing helped to pinpoint the student’s question.)
2. I don’t know, I just wondered how it fit in.
   (The TA has to work hard to build a good relationship with students so they will feel comfortable talking in class. Don’t expect answers to every question you ask them.)
3. (silence)
   (The TA didn’t answer her question, probably because the question didn’t follow logically from the first two statements about Napoleon’s birth and career.)
4. I thought it might be England.
   (At this point the TA needs to look up the answer and report back. History TAs are supposed to know about dates and places.)

SUMMARY of Question 4:
The questioner in this case did not prepare the TA for the question she eventually asked. In fact, she misled the TA into believing her question was going to be about the connection between Napoleon’s birthplace and his later career, then switched to a geographical question. This question presents a double problem: The TA must first recognize the real question, and then comprehend its actual meaning. It is important to understand the question before trying to answer it. The TA should ask the questioner, "Is that what
you were asking about?" or "Am I answering your question?"
before a long explanation.

Press RETURN to continue

---------------------------------------------

QUESTION UNIT III: Double-barreled, negative and "or"
choice questions

Situation: The physics TA has just finished explaining the
lab problem for today, which concerns centripetal force.
She asks that homework from the previous lab be handed in.

Press RETURN to continue

---------------------------------------------

Listen to the tape recording of question <<s,index>> as many
times as you wish.

Press RETURN to continue

---------------------------------------------

#5-5-5-5

Question 5: "I hafts work nights an' quite often I won't be
able to hand my homework in on time, an' I was wonderin' if
you'd still accept it (\^) or if I'm going to be penalized
for that. (pause) Will you take off points fer that?"

Press RETURN to continue

---------------------------------------------

DEFINITIONS:

a. hafts - reduced form of "have to"
b. an' - reduced form of "and"
c. hand in - turn in, delivery to the TA
d. penalized - suffered, in this case, got a lower grade
e. fer - "for" in rapid speech

---------------------------------------------

TA ANSWERS:

1. Yeah, sure. It's no problem. If it's all done by you,
it's no problem.
2. Maybe you'd better see me at the end of the hour.
3. I'll take off 5 points for every day it's late. You'd better try to get your homework done ahead on the weekend.
4. Homework is worth 10 percent of your grade. It probably won't affect your grade if you can't turn it in every time.

-----------------------------------------------------

STUDENT RESPONSES:

1. You mean you won't take off points if it's late?

(The TA has confused the student by switching from negative to positive. The question was whether the TA would take off points. The answer is "Yes, I will" or "No, I won't."
2. Okay.

(A good way to handle special cases is to see them after class. Many students have jobs these days--about $x\%$ of the students at ISU have jobs.)
3. (silence)

(This is a strong position which informs the students that the TA expects them to do their work on time.)
4. So how many assignments can I miss before it hurts my grade?

(When a TA says there are exceptions to a rule, students will want to know all the details. Be prepared to explain.)

-----------------------------------------------------

SUMMARY on Question 5:

This was an example of a "double-barreled" question. The student first asked an or choice question followed by a "reversed" question--reversed in that "No" was a positive answer and "yes" was a negative one. The TA might not comprehend this distinction and might answer "Yes, it's no problem." The TA in choices 2, 3, and 4 avoided yes or no, which is often wise when the question is double-barreled (asks more than one question) and the answer might be misinterpreted.

-----------------------------------------------------

Listen to the tape recording of question <<s,index>> as many times as you wish.
Question 6: "D'you (clears throat), 'scuse me, d'you give pop quizzes? (ʌ)"

TA: What?
"D'you give, ah, pop quizzes? Unannounced quizzes?"

Press RETURN to continue

DEFINITIONS:

a. D'you - reduced form of "Do you"
b. 'scuse me - reduced form of "Excuse me"
c. pop quiz - a quiz the students do not expect
d. (ʌ) - indicates rising intonation
e. unannounced - not telling the class earlier

TA ANSWERS:

1. You mean examinations or those kind of thing?
2. What are pop quizzes? I don't know that term.
3. No, I'll always tell you a week ahead of time when there's going to be a quiz.
4. Yes, I do.

STUDENT RESPONSES:

1. Yeah.

(It would have been better to let the student define "pop quiz," since it is a particular kind of exam.)

2. A quiz that we're not expecting, that we didn't prepare for. We come to class and bam, there's a test.
(That explanation should help the TA comprehend and answer.)

3. (silence)
(That's what the student wanted to hear.)

4. How often d'you give them?

(The answer was too brief. Students will demand more details.)

-------------------------------------------------------------

SUMMARY on question 6:

There are terms used by students that are not known to other English speakers. TAs quickly learn the meaning of these terms. But when you are new, don't be afraid to ask to have terms explained. If one student doesn't explain the term very well, ask some of the other students to help you. Or get someone to write down the term for you so that you can consult a friend or fellow TA who can explain.)

Press RETURN to continue

-------------------------------------------------------------

QUESTION UNIT IV: When students correct the TA's mistake and when students get off the subject

Situation: In a recitation section for Freshman Chemistry, the TA finishes explaining some formulas and asks, "Do you have some questions about this before I erase it and go on?"

Press RETURN to continue

-------------------------------------------------------------

First listen to the tape recording of question <<s,index>> as many times as you wish.

Press RETURN to continue

-------------------------------------------------------------

#7-7-7-7

Question 7: "I've a, a problem with the first example you did. (↑) Where, where, ah, there's a hundred total grams an' I can't remember the exac' numbers but there's like twenty-eight, sixty-seven, somethin' else. If I were ta take your formula there an' divide, if I got the percentage fer the first one, if I divided thirty-eight by a hun'erd, I git zero point two eight percent, not twenty-eight percent."
Press RETURN to continue

DEFINITIONS:

a. exac' - reduced form of "exact"
b. twenny - reduced form of "twenty"
c. somethin' - reduced form of "something"
d. hun'er'd - reduced form of 'hundred'
e. git - "get" spoken rapidly

TA ANSWERS:

1. Oh, yes. I'm sorry I forgot to put one hundred here (corrects formula on chalkboard). Thank you for noticing.
2. (TA puts "100" in the formula on the chalkboard, which corrects his mistake) Any other questions?
3. I'm glad you're paying attention and noticing when I forget something (adds "100" to the formula on the chalkboard).
4. Twenty-eight percent is the correct answer.

STUDENT RESPONSES:

1. (silence)
(This TA is able to accept correction graciously. Students will respect his honesty.)
2. (silence)
(This TA doesn't like to admit he was wrong. But he did what was necessary to correct his mistake.)
3. (silence)
(This answer suggests the students do not pay attention. The TA corrected his mistake, though.)
4. But don't ya need 100 in the formula to get 28%? Otherwise it's 0.28%.
(The TA didn't see his mistake and the student had to correct him. This makes the TA look worse than if he had re-checked his work the first time the student asked about it.)
SUMMARY on Question 7:

No one likes to make a mistake in front of people he or she is trying to teach. Some TAs are afraid they will "lose face," that the students will doubt their authority. But everyone makes mistakes. Admitting them and accepting corrections graciously is usually a better strategy than trying to pretend you are never wrong.

Press RETURN to continue

First listen to the tape recording of question <<s,index>> as many times as you wish.

Press RETURN to continue

#8-8-8-8

Question 8: "I got one other little question on 'at. Does 'at, I assume, is zat hundred 'n sixty millimeters that the vapor pressure of the amount of water (perimental), in the air pressure, right? (experimental) or the proportion of it, right? (experimental) Okay, what happens if it's saturated? (experimental) or what happens if the air's not saturated? What would happen then?"

Press RETURN to continue

DEFINITIONS:

a. 'at - reduced form of "that"

b. is zat - reduced form of 'is that'

c. 'n - reduced form of "and"

d. right? - reduced form of "Is that right?"

e. saturated - to fill completely

TA ANSWERS:

1. At this point you mean? (points)

2. I think your question is off the subject. Saturation phenomenon is not quite relevant to boiling point depression.
3. Could you wait an' ask your saturation question in a couple weeks when we get to that in the book?
4. Do you want to know if the air's saturated or not? You asked so much I don't know where to start explaining.

STUDENT RESPONSES:

1. Yeah, say if the air's not saturated.
   (The TA did a good job following this mixed-up question and pinpointing the student's question.)
2. Are you gonna talk about it later?
   (The TA was rather harsh with the student, even though he was right about the question being off the subject. He might have told the student to ask his question again, as in choice 3.)
3. Okay.
   (The TA believes it's better to postpone this topic rather than to risk confusing the other students. Also it is not clear that the questioner has "thought out" his question.)
4. I want to know what happens when the air's saturated.
   (The TA succeeded in getting the student to rephrase the question into a more answerable form.)

SUMMARY on question 8:

This is an example of "extra rising intonation." The questioner goes up to a higher tone at the end of every phrase, not just at the end of yes-no questions. Again the TA has to deal with a question that doesn't pertain to the topic for the day. Such questions should be treated as important even if they are inappropriate to answer at that time. Students need to be encouraged to ask questions and not simply to accept what they read and are told. This is how they get involved in educating themselves.

Press RETURN to continue
QUESTION UNIT V: Rephrasings, verification

Situation: The math TA has just finished explaining the difference between degree and radian measurement. He assigns some trigonometry problems as homework.

Press RETURN to continue

First listen to the question <<s,index>> on the tape recorder as many times as you wish.

Press RETURN to continue

#9-9-9-9

Question 9: "How about pi? How accurate do I have to use pi? Ken I jes' use three point one four all the time or do I have ta use a different value? How many decimal places do I use?"

Press RETURN to continue

DEFINITIONS:

a. accurate - careful and exact
b. ken - "can" in rapid speech
c. jes' - reduced form of "just"
d. ta - "to" in rapid speech
e. whatta - "what do" in rapid speech

TA ANSWERS:

1. Are you asking me to specify what I want you to use for pi?
2. What did you use for pi in your last math course?
3. Three point one four or 22/7ths is fine.
4. Pi is the ratio of the circumference of a circle to its diameter. It is impossible to give it an exact decimal value.

STUDENT RESPONSES:
1. Yes, if you would, please.

(The TA very successfully rephrased the student’s five-barreled question into one manageable question.)

2. Three point one four.

(The TA hopes to find out math department policy from the students. This is not a very safe way to do so, because freshmen may come from many different high schools.)

3. Thanks.

(The TA provided all the information the student really wanted.)

4. So whadda we do on tests and in homework?

(The TA did not comprehend the student’s question. It would have been better if she had asked for a clarification from the student before proceeding to answer.)

Summary on question 9:

Some students are so worried their questions won’t be understandable that they rephrase them several times before they even give the TA a chance to answer. This student phrased her question five different ways. In this situation the TA is probably safest in trying to rephrase the question (as he did in choice 1) and checking its accuracy with the student before proceeding with an answer.

Press RETURN to continue

First listen to the tape recording of question <<s,index>> as many times as you wish.

Press RETURN to continue

#10-10-10-10

Question 10: "D’you have any idea why they divided the circle into 360 degrees? Why didn’t they divide the circle into 400 degrees?"
DEFINITIONS:

a. d'you - reduced form of "do you"
b. they - unclear reference, the inventors of geometry?
c. inta - "into" spoken rapidly
d. Babylon - ancient kingdom in the Middle East
e. double-barreled - firing two questions at once

TA ANSWERS:

1. No, I don't know.
2. That's a good question. I believe it has something to do with the Babylonian numbering system. I'll have to look it up and let you know next time.
3. A degree is (real explanation--I need to find)
4. It's just one of those measurements like 12 inches in a foot or 16 ounces in a pound. It's too hard to change now.

STUDENT RESPONSES:

1. (silence)
   (The TA answered honestly, but without much concern about the student's curiosity.)

2. Okay.
   (The TA praised the student for thinking of a hard question, which will please the student. The TA must not forget to look up the answer later.)

3. I see.
   (Very nice when a TA has this kind of information, but it is not really necessary.)

4. (silence)
   (The TA is not very curious. This response suggests that the students had better be satisfied with the way things are and not ask too many questions.)
SUMMARY on question 10:

No matter how long you have been a teacher, there will always be questions for which you don't know the answers. Showing a willingness to search for more information is a good way to make your students feel that their questions are important to you and that seeking answers and being curious are worthwhile.

CONCLUSION

The 10 questions presented in this lesson were selected because they represent some of the problems with which a TA must deal when handling undergraduates' questions. These comprehension problems include:

- questions which refer vaguely to something on the chalkboard
- indirect questions
- complicated, mixed-up and "double-barreled" questions
- questions that assume knowledge of classroom procedures and vocabulary.

Examples were presented of TAs who used various strategies. Let's review some of these strategies and add to the list:

1. Any previous knowledge TAs may have of U.S. classroom behavior should be used now that he/she is a teacher.

2. Questions that are likely to be asked about a topic can sometimes be anticipated before class. The TA could write a list of these questions somewhere on the chalkboard before class. Later the TA could ask the students if they can answer these questions. The TA should provide a long pause so that students might ask questions they are uncertain about.
3. TAs may need to ask for a repetition or clarification before answering a question. This is frequently necessary when a question has been poorly phrased the first time. It is important to comprehend the question before trying to answer. Answering a question that was not asked is worse than not comprehending the real question right away.

4. Questioning and answering should be an exchange of ideas between TA and student, not a "long turn" like a lecture for the TA. Answers need to be appropriate to the questions.

Press RETURN to continue

5. TAs should treat their students' questions as important and worthy of thoughtful answers. If students don't ask questions it doesn't always mean they understand. It may be necessary to ask them questions.

For example at the end of a complicated problem, the TA can ask "Who would like me to explain any of this over again?" Then the TA must wait 10 to 15 seconds so students will know that it's really appropriate for them to ask questions.

Press RETURN to continue

Answering questions and exchanging ideas can be the most interesting and important part of teaching. Learning to anticipate questions and to encourage them is useful in many situations.

THE END
APPENDIX E

BROCHURE FOR UNDERGRADUATES

The following copy has been prepared for a proposed brochure to be distributed by the SPEAK/TEACH Program at the beginning of Fall 1987.
draft of proposed brochure to undergraduates

Front cover: collage of national newspaper clippings re foreign TAs --subliminal message: this is not just an ISU concern

American higher education has been under siege for a decade. The tight job market has created a demand for specialized education particularly in business, engineering, and high tech fields. Many of the best undergraduate students in those fields are no longer continuing for a Ph.D. nor becoming professors. They are siphoned away by high-paying jobs in industry.

Meanwhile, the low salaries of current professors are causing them to leave the academic field in record numbers. More graduate students from overseas are being admitted to the university to fill the slots left by fewer U.S. graduate students and faculty. Although these international students are usually well qualified, they may still be struggling to master spoken English.

During the past eight years, complaints about the language proficiency of international teaching assistants (ITAs) from students, their parents, and state legislators led to a university-wide spoken English proficiency requirement in 1984 at Iowa State University. New TAs who are not native speakers of English must pass two screening tests, called SPEAK and TEACH, which assess their speaking, listening, question-handling, and classroom teaching ability. Those who do not pass these
tests are required to complete coursework and be retested before the Graduate College will certify them to lead recitation sections or teach classes.

Although the creation of this testing program four years ago has greatly curtailed the number of complaints, it is still possible to find dissatisfied undergraduates and frustrated ITAs who are not getting along with each other.

As Michael Welsh of the University of South Carolina said at a national meeting of university administrators, "There is much more to this problem than learning to speak intelligible language. ...there are cultural differences that lead some ITAs to expect unquestioning submission from their students, to act with unyielding authority.... The undergraduates expect something much different from their instructors. These different sets of expectation often result in severe communication breakdowns."

In the training program for ITAs who do not pass SPEAK and TEACH, the culture of the U.S. classroom, what students expect and how to deal with problems are some of the topics that are discussed--in addition to clear speech. The "communication breakdown" between undergraduates and their ITAs is also the topic of this pamphlet, which is intended to suggest some ways undergraduates can try to get along better with ITAs.

1. Frequently graduate students who have come from half a world away to study at ISU must meet higher admission standards than their counterparts
from the United States. ITAs are very knowledgeable in their major field, and some undergraduates have even said that the best TAs they ever had were not native speakers of English (see clipping on the back cover). Consider ITAs as a doubly valuable resource: they know the subject they teach very well and they provide an accessible way for you to learn about a different culture. The future of the United States is dependent upon our understanding the rest of the world—socially, politically, and economically. In many cases, today's ITAs are tomorrow's foreign leaders.

2. But TAs are students, too. They are not paid to be full-time college instructors. They are only learning to be teachers at the same time they are carrying nearly as many credit hours as you, doing research toward a master's or Ph.D. degree, and trying to live on a limited income from their assistantship. Pressures on ITAs may be even greater since they are far away from home and are trying to deal with an alien culture. Try to put yourself in the shoes of ITAs and imagine what they are experiencing.

3. You cannot assume that ITAs already know the kind of informal English most of us speak. They are still getting used to our accents just as you are getting used to theirs. This takes time, and while your ears and theirs are adjusting, you can make things easier by talking a little slower, enunciating clearly, and avoiding slang. Also listen carefully and realize it may take a few weeks for you to get used to some of their speech patterns.
4. When you ask questions of your ITA, try to plan ahead, think what you want to ask, and introduce the question, particularly if you are about to change the subject. For example, instead of blurting out "Is zis gonna be on the next test?", say something like, "I'd like to ask you something about the test next week. Is it going to include the material we covered today?"

Some students try to ask the TA five questions at once, and this usually results in confusion and only a partial answer. If you really need to ask several questions, think ahead how you can break them up. Then ask the ITA only the first question; if he or she answers that to your satisfaction, proceed to the next, and so on until you have led the ITA through your questions.

5. When an ITA does not understand your question, don't give up and say, "Never mind." Repeat the question over again--at least two more times. If the ITA still does not understand, try to rephrase the question using simpler terms. Avoid slang. If the ITA still looks puzzled, offer to ask your question again at the end of the class. Please don't give up. You can also try asking the TA during his or her office hours. If communication problems persist, go to see the course supervisor or the chairperson of the department. Give them specific examples of the kinds of questions you have asked and what the ITA has said and/or done in response. It is important that you receive the education you and your parents are paying for; do not allow yourself to become frustrated and lost in the midst of a hard subject because of a communication problem.
6. On the other hand, do not make the mistake of expecting that your ITA--or any other college instructor, for that matter--is going to educate you. Getting a college education is a combination of paying attention in class, reading and thinking about assignments, studying for tests, planning ahead and budgeting time wisely.

The communication problem between undergraduates and ITAs is complex and requires patience and understanding on the part of everyone involved. Many people at ISU are concerned about improving the situation through testing, training, and careful monitoring. We hope you will join in this effort by trying to practice some of the ways suggested in this pamphlet for getting along with ITAs.

Back cover: Article about successful math ITA
APPENDIX F

REPORT FORM USED FOR SPEAK/TEACH RESULTS

The following two-page form, modified each semester depending upon the courses offered, is sent by the Graduate College to TAs who have taken the SPEAK and TEACH tests and to departments that are considering them or have offered them teaching assistantships. Lack of certification does not prevent anyone from holding an assistantship; it does limit the type of duties they may perform.
SPEAK/TEACH TEST REPORT

Examination Date: January 8, 1986

Name: 

Examination No.: 86-024

Major Department: History

Soc. Sec. No.: 301-76-7387

Departments to receive report (possible sources of assistantship): History

YOUR TEST RESULTS:

XX CERTIFIED You have met all of Iowa State University's requirements for nonnative teaching assistants. It is strongly recommended that during the first semester that you serve as a teaching assistant you take the course listed on the back of this form.

CONDITIONALLY CERTIFIED Based on your scores, your speaking and teaching proficiency are adequate to allow you to serve as a discussion or recitation section leader under the close supervision of the course instructor. The Graduate College requires that during the first semester that you perform these TA duties you take the course module(s) listed on the back of this form.

PARTIALLY CERTIFIED Based on your scores, your speaking and teaching proficiency are adequate to allow you to serve as a laboratory assistant or to work on a one-to-one basis with students. The Graduate College requires that during the first semester that you perform these TA duties, however, you take the course module(s) listed on the back of this form and be retested for full certification.

NOT CERTIFIED Your scores do not meet the Graduate College's requirements. This does not prevent a department from considering you for a position such as grading or setting up equipment for a laboratory, which does not involve speaking and teaching proficiency. To meet Iowa State University's requirements for certification it will be necessary for you to successfully complete the course modules on the back of this form.

Your major department and the other department(s) listed above will receive notification of your test results. You should contact them concerning the possibility of an assistantship. Certification by the Graduate College does not guarantee that a department will be able to offer you an appointment. Please see the other side of this report form for information about courses and course modules recommended or required of teaching assistants.
Based on your results:

XX  It is strongly recommended that you enroll in Curriculum 511, the Teaching Assistants Orientation Seminar (TAOS), which provides professional help in developing and improving teaching skills. (Contact the Instructional Resources Center, N31 Quadrangle, 294-6840, for more information.)

It is required that you take and pass the course module(s) listed below during the first semester that you perform your assistantship duties. Retesting will not be necessary.

It is required that you take and pass the course module(s) listed below during the first semester you perform your assistantship duties. If you want to be fully certified by the Graduate College, you must be retested on SPEAK and TEACH.

___ Speaking
___ U.S. Classroom Skills
___ Other, specifically _______________________

If you are assigned to more than one module, you may take all of them this semester. To add any of these course modules to your schedule, contact the ESL office, 326 Ross Hall on January 14. Information about time, place and credits for the modules will be provided and you can also obtain a form for adding the appropriate course(s) to your schedule.

George G. Karas
Associate Dean
Graduate College

cc: History
APPENDIX G

CLASSROOM CULTURE QUESTIONS

1. How much of this material will be on the next quiz?
2. In our next quiz will you grade on the curve?
3. In our next quiz will you grade by straight percentage?
4. Do you give partial credit for the quiz problems we do?
5. What weight is assigned to one quiz in the total course grade?
6. Will the next test be an open-book exam?
7. Will you be giving plus-minus grades in this course?
8. Can I be excused from class next week? I've got to go to the doctor.
9. Is this course a prerequisite for higher-level courses in this department?
10. Can students test out of this course if they want to?
11. How many credit hours does this course have?
12. Can my roommate audit this course next semester?
13. Because of extenuating circumstances I can't come to class for the next two times. Is that okay?
14. Next class period I need to go to the doctor. Do I need a written excuse?
15. Why don't you give us a take-home exam for the final?
16. Do you give pop quizzes?
17. Will you give us a handout to help us prepare for the final exam?
18. Is there a definite due date for our final project?
19. Why does this department assign students so much busy work?
20. Will you post the scores of our next test?
21. Do you expect to give a lot of midterms?
22. Is the lesson you gave today mentioned in the syllabus?