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ABSTRACT

A study investigating difficulties encountered by Chinese graduate students in asking questions in the American classroom, and suggested solutions, are presented. An introductory section describes features of the Chinese educational system, focusing on attitudes toward questioning. The first chapter offers sociolinguistic and pragmatic perspectives on classroom questioning, looking at aspects of the classroom environment that affect student questioning practice. The second chapter discusses categories of questions according to their linguistic form, type and function, and cognitive and affective domains. Chapter 3 reports on a survey of 43 professors from 18 varied academic departments, investigating the kinds of questions professors prefer, their perceived contribution to subject-matter learning, and the impact of questions on classroom atmosphere. In Chapter 4, a pedagogy for teaching non-native English-speaking students how to ask questions in American classrooms is outlined. This chapter includes a sample lesson, additional suggestions for lessons related to specific domain or level of questioning, and suggestions for activities related to asking question and development of classroom community. Appended materials include students' comments on their oral abilities, academic needs (by major field and academic level), notes on cognitive and affective domain questions, and forms pertaining to the faculty survey and sample lesson. Contains 81 references. (MSE)

CHINESE STUDENTS AND QUESTIONING SKILLS IN AMERICAN GRADUATE LEVEL CLASSROOMS

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ABSTRACT

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Upon arrival in the United States, students from the People's Republic of China often have difficulty in asking questions in the classroom. Specific problems and attitudes that Chinese students have in making transition to American graduate level classrooms are discussed. Sociolinguistic knowledge is considered within the social, political, and historical context of the classroom. Problems of pragmatic use are analyzed with regard to inferencing and schematic framing. Questions are categorized according to linguistic form, type and function, and cognitive/affective domain. A questionnaire with response from professors discusses the functions questions perform and their value to learning, their contribution to the classroom atmosphere, and their perceived frequency of occurrence by both native and non-native speakers in the classroom. A sample lesson along with additional suggestions are proposed as effective ways to teach questioning skills.

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I would like to say thank you, Mom and Dad, for your constant desire to do whatever possible in assisting the fulfillment of your daughter's dreams. Thank you, Trisha and Garold, my dearest friends, for having the faith to believe in me and to constantly bolster my confidence even when I have seen nothing but impossibility. Thank you, Dr. Boshard and Mokuaikaua Church for your unending provision of love and support. Thank you, Elissa, my dear friend and classmate, for always "being there." Thank you, Michelle and Ellen, for the fabulous support and encouragement in so many countless ways. Gabriella, you will probably never know how much your never ending "you can do it" friendship has meant to me. Lloyd, how can I ever say thank you for your long-suffering, loyalty, and patience at no matter what the cost through this process. Ann and Rosella, how grateful I have been for your unfailing commitment and enthusiasm. Thank you, Kitty Purgason for your willing and wonderful assistance during the initial structuring of this thesis and to Dr. Purnell for your faithful inspiration to always press higher. Thank you, Betty Chastain, my wise advisor, for your constant availability and your gracious way of always knowing how to solve the problem. Thanks to all of you whose names are too numerous to list, but who, by your faithful commitment, have given me courage that will long live in my heart.

INTRODUCTION

Presently, there are some 43,000 Chinese students from the People's Republic of China studying in American universities (Mann 1990). Oral communication plays an important part in the academic pursuits of these students. Even so, the vast majority arrive in graduate level classes somewhat ill at ease with their abilities in spoken English.

Chinese students realize that asking questions in the classroom is important; however, studies and experience have shown that they consistently do not ask questions in that environment (Yuan 1982). Unable to express their questions, unsure as to how and when to interrupt, and uncertain as to whether the question is appropriate, Chinese, as well as many other foreign students, often find themselves on the fringes of classroom interaction.

Analysis of the Chinese Educational System

The roots of the problems in asking questions are found not only in the linguistic problems of language learning, but also in the broad educational and cultural differences between systems of education. The American system of education is rooted in the Socratic tradition where questioning and skepticism are foundational to the teaching-learning process. This is opposite to the Chinese system of education which is authoritarian and follows in the tradition of memorizing and learning from past significant works.

Moving from the Chinese system of education to the American system of education ensures some very large gaps for students, not only in language but also in cultural understanding as to what is appropriate behavior in the classroom. In the Chinese tradition, teachers are viewed as knowledge imparters (Porter 1983), and students are seen as more or less passive recipients. Contrast this with American educational philosophy which often sees the role of the teacher as a facilitator of knowledge, where students are required to take the initiative and wrestle with personal values in light of the material at hand.

For hundreds of years, the educational mood in China has been to listen and to accept what the teacher says. Do not ask questions; especially do not ask questions that might deviate from "the socialist road" or what the person up front is saying. A combination of authoritarianism and Confucianism affects all decision making and moral training within the definite confines of socialism. These confines leave little room for questioning (Wang 1983; Zhang 1987).

In Confucianist, Imperial China, "texts were memorized mechanically with the belief that years later, as the child matured, appropriate quotes would return in flashes as needed and then would be comprehended" (Scovel 1983, 106). Today, "Confucian emphasis on memorization is still important and in fact primary" in teaching (Porter 1983, 80).

There are over 250,000,000 students studying English in the People's Republic of China today. Grammar translation, memorization, direct, and audio-lingual methods for learning are used by the majority who study English. Although some eclectic methodology is developing in China, most teachers fear using new methods. Chinese teachers fear that utilizing new methods will not serve the needs of students preparing for the all important National Education Examination (NEE). Undergraduates may be turned down from graduate

school and intellectuals may not be promoted to higher positions if they cannot pass the English portion of this or any other such exam (Liu 1988; Li 1983).

Unfortunately, most tests in the Chinese foreign language classroom as well as the NEE are completely written with no listening or oral section (Li 1983). This fact influences the way teachers teach, and it also influences the way students learn. Teachers prepare students for the NEE by teaching intensive reading courses that tend to focus on the discrete points of grammar (Johns 1983). In preparation for this exam and for most of their EFL classes, students prepare with little felt need for oral competence.

It should be noted that within the ESL situation in the U.S.A., there have also been tendencies to test English proficiency solely by written means. In studies done at UCLA (Connolly 1970), it was discovered that there were significant problems in knowing just what oral proficiency is. Oral tests centered around the production of memorized material and most teachers did not teach or test speaking. Though the studies were done in 1970, the findings are significant in that they point to the prevailing lack of attention to oral proficiency at that time. In more recent years there have been efforts to correct this problem through the development of communicative testing theory; however, China and other developing countries are still operating in the same mode of testing and language learning theory prevalent during the early 1970's and before. Changes and even acceptance of change takes a long time. This is also true in the United States where many proficiency tests required for entrance to ESL programs and/or a regular university program (e.g., the English as a Second Language Placement Exam (ESLPE) for UCLA, the New English Course textbook, and the Test of English as a Foreign Language (TOEFL)) still do not adequately measure oral production or proficiency (Farhady 1978).

The cycle of teaching for tests and studying to pass the tests makes it very difficult, if not impossible, for Chinese students to maintain a language learning perspective that includes the development of oral expression within a social context. Many students, before they come to the United States, mistakenly believe that the primary focus of language study should be to absorb as many vocabulary items as possible. They hope to gain enough words to fill in the syntactic blanks of a sentence in order to carry whatever meaning is required for the immediate language task. They do not have within their language learning strategies the reality that English is more than a collection of discrete points. The realization that English is a live language calling for interaction within a social context is too far removed--that is, until they get off the plane in the United States and enter the English speaking academic world.

Attitudes and Problems Toward Questioning

Upon arrival, many Chinese students feel terribly inadequate with their oral communication skills (Hung 1982; Brann 1976). They come out of teacher-student role relationships where the teacher is dominant and the students are submissive. In Chinese classrooms, students are customarily silent. In the transition to the American classroom, they seldom speak because they fear losing face, they fear confrontation, they fear being singled out, and they fear making a mistake. All these things create reluctance to ask questions or participate in class activities. This reluctance creates alienation at a time the students should be overcoming such barriers and should be building strategies for increased learning in the classroom.

In addition, Chinese students face problems using the linguistic forms they have already learned, understanding lectures, and organizing their thoughts. Although they have gained a lot of knowledge regarding linguistic forms in their previous EFL study, usage is weak (Wang 1983). Students lack familiarity with American classroom learning techniques (Yuan 1982) and are not trained to function with appropriate skills in American lecture settings.

According to a questionnaire given to both professors and non-native students at Ohio University, asking questions is believed to be important. However, non-native students do not know when and how to interrupt the professor in order to ask a question (Jordon 1983). In another study, Chinese scientists who were interviewed for a study on difficulties in comprehending English science lectures, said they are often not able to organize their ideas and ask questions under the time pressure of a lecture (Yuan 1982). Traditionally, Chinese students hold back in asking questions in class because they do not want to interrupt the professor. Rather than openly differ with the professor, they plan to check with him during the break. Instead of requesting repetition, they make a point to look at the notes of their peers. Chinese students have observed that American students do not seem to mind too much if their (American students) questions are relevant or not; and, furthermore, professors are not bothered by tricky questions or challenges (Wang 1983).

The Chinese scientists, who were interviewed in Yuan's study, gave the following reasons for not asking questions in class (1982, 58-59):

1. "I'm not accustomed to raising questions in the lecture."
2. "I don't want to waste class time."
3. "You see, it always happens that when I was preparing my question, the lecturer changed his topic into the next area. The result was that I didn't have enough time to raise my question."

4. "I don't ask questions in the lecture unless I'm quite sure that my classmates have the same problem. You know, I simply don't want them to laugh at my ignorance if my question is too simple.
5. "I would rather read the textbook some more to clarify my uncertainty of the lecture point after class instead of asking questions in class. This made me feel more comfortable."

If we can generalize from this small sample, part of the reason why Chinese students do not want to interrupt the professor is because they lack an internalized knowledge of the American turn-taking system. They do not know when to interrupt. Chinese graduate students in the Physical Sciences at UCLA were interviewed concerning oral production skills they have difficulty in. When asked about the time to ask a question in an American classroom, four out of the five interviewed replied that a question may be asked "anytime you have a question" (Wang 1983, 57). One said a good time to ask a question would be when the professor comes to an end of a sentence or when referring to his notes.

The vagueness of knowledge about how and when to ask questions in American classrooms combined with the long traditional reticence in asking questions in their own classrooms, creates within most Chinese students a major psychological barrier against asking questions. The predominant, generalized idea: i.e., "ask a question at anytime," indicates they are not at all clear either about acceptable questioning procedures or the functions of questions. Because the option of 'breaking in at any time' is so loosely-defined, Chinese students surrounded by native speaking peers tend to be over-whelmed and give up. It is more comfortable to follow the traditional Chinese way of seeking alternative routes to find out what they need to know rather than

rather than to ask a question in the classroom (Wang 1983). (See Appendix A for further student comment.)

Complicating this issue is a general over-all self-image problem unique to China (Johns 1983; Hudson 1980). All institutions of life in China have experienced some sort of major havoc as a result of the cultural revolution through the 1960's and early 70's--and one of the hardest hit has been education. The overall chaos at that time influenced every level of education; people who were perhaps not fully qualified were placed in teaching positions in the educational system. This practice persisted more or less on into the late1970's. For example, when English became the new foreign language of the nation, replacing Russian as the language of prestige, many Russian teachers suddenly found themselves reassigned to positions as English language teachers (Johns 1983). Over the years, teachers and students have suffered with problems like this. Such confusion and incongruity in education has ored a certain sense of national inferiority.

Chinese students are reluctant to admit that they may have a problem asking questions. In most of the research projects involving students from the People's Republic of China, it was difficult to find students willing to participate in discussions about their problems in studying (Wang 1983; Yuan 1982; Hung 1982; Christison 1986; Tu 1983). This was particularly true of older students. Reasons for this reluctance seem to be largely due to personality, politics, and "face" (Liu 1988).

Professors' informal perceptions of Chinese students are that they are extremely quiet and rarely talk in class (Wang 1983). Therefore, it is nearly impossible for professors to comment on their oral production skills. Chinese

students seldom make appointments with professors; however, when they do, time spent is satisfactory even though their conferences are usually brief.

CHAPTER 1

THE CHALLENGE OF ASKING QUESTIONS WITHIN THE CLASSROOM: SOCIOLINGUISTIC AND PRAGMATIC PERSPECTIVES

Asking questions has been found to be one of the most important skills of oral communication used in the classroom. Questioning for clarification was listed as the third most frequently occurring learning strategy in a study done to identify the range, type, and frequency of learning strategies used by beginning and intermediate level ESL students (O'Malley, Chamot, Stewner-Manzanares, Kupper, and Russo 1985). Furthermore, in a survey conducted among professors it was found that asking and answering questions are indispensable skills expected of students and are the second most frequent reason students speak in the classroom (Wang 1983).

The American Language Institute at the University of Southern California conducted a study of their students' assessments of what academic skills they expected to need in order to successfully complete their studies (Ostler 1980). Sixteen academic skills which might be required in various majors were listed. Students were asked to circle only those skills which they might need at the time and which they expected to need in the future in order to complete their academic objectives. The data were computed and sorted according to: a) Needs According to Major, and b) Needs According to Class Standing.

Needs According to Major. The students in the survey represented twenty-seven different majors which were classified into ten categories. Six of the categories--Business, Education, English, Urban Studies, Public Affairs, and Music--have corresponding university departments. All other majors were

grouped into Humanities, Soft Sciences, and Hard Sciences. Students who did not give their major or who listed American Language Institute as their major were classified under ALI.

The three greatest needs students felt they had were reading textbooks (90%), taking notes in class (84%), and asking questions in class (68%). The most significant findings for this paper on asking questions were in regards to oral skills. Four oral skills were included among the total sixteen skills. They were: giving talks in class, performing in panel discussions, discussing issues, and asking questions. Of the four oral skills listed, students in seven out of the ten majors indicated that asking questions was the most important oral skill. (See Appendix B for the entire list of academic needs according to major and their corresponding scores.) Listed below are the oral skills and their corresponding scores.

Asking questions in class - 68%

Discussing issues in class - 45%

Giving talks - 41%

Participating in panel discussions - 35%

Needs According to Class Standing. Responses regarding the sixteen academic skills were also classified into four categories: the first and second year students, third and fourth year students, master's students, and doctoral students. Students in three of the four categories indicated that asking questions was the most important oral skill needed. In the fourth group, doctoral students, asking questions (80%) was equal to giving talks (80%). On the whole, graduate students ranked asking questions higher (80%) than undergraduate students (60%). (See Appendix C for the complete list of academic needs according to class standing and their corresponding scores).

The ability to ask competent questions in the classroom includes both sociolinguistic knowledge and pragmatic factors related to language use. If such sociolinguistic knowledge and pragmatic usefulness can be captured and described for the purpose of constructing strategies for asking in-class questions, then language learners who have access to such strategies can more quickly adjust to new classroom environments where questioning is expected to take place.

A Sociolinguistic Perspective

The American university graduate level classroom contains a social group that has intricate channels for questioning. Both students and professors have certain expectations concerning the rules for how questions should be asked and answered. The rules governing the questioning process are most often not consciously thought about. They are acted upon through long familiar, almost instinctive behavior that arises out of years of experience integrating American culture and education. The foreign student who arrives in an American university graduate level classroom without extended exposure to American methods of teaching and learning thus has major gaps in experience to overcome in order to enter the classroom interactive process.

Students at all levels of education in American classrooms are usually given the general directive to ask questions. In order to participate competently in this interactive process, a student must be able to interpret what is going on in the classroom around him/her (Mehan 1980). This includes knowing on what occasions certain behavior is appropriate and when it is not appropriate. For the foreign student with little experience in the American classroom, getting the

instructor's attention at the appropriate time during a lecture or bidding for the opportunity to ask a question in a smaller group seminar session can create a certain amount of confusion. The foreign student is not aware of what kinds of questions would be welcomed nor does he/she know which ones might generate some sort of negative response either from fellow classmates or the teacher.

For the native speaker of English, such questions of how to accomplish the language task of asking questions in class almost seem superfluous, somehow redundant, and certainly not necessary. However, for the non-native speaker, the task of deciding how to pose his/her question and understanding the function of that question within the immediate social context is, at least in the beginning, rather overwhelming.

The fine nuances regarding the sociolinguistic rules of the classroom for the native speaker of English begin to be learned as early as elementary school. Elementary school classrooms have certain lists of rules that are general statements, e.g., "no running in class" and "respect others' property." However, these lists do not inform students on how to apply general statements to specific situations, e.g., "running is acceptable on the way to recess, but not on the way to reading circle." Nor do they tell the students how to cope with different rules prescribing behavior for the same situation, e.g., "not running" versus "leave the room quickly in case of fire." Nevertheless, in spite of lack of instruction on these fine aspects of following the rules, students learn them well.

Non-native speakers who have not had a long exposure to such situations in which to learn such culturally implicit rules are clearly at a disadvantage (Mehan 1982). One foreign student reduced the information in his question to one word. The lecturer had just finished a discussion of the

process of lateral plosion in articulation. After some negotiation between the lecturer and the student, the one word question was expanded.

"(Is) saddle (an example of lateral plosion)?"

The student needed to be taught not to reduce information this way. It should be noted here that at times native speakers do reduce information in questions just as much; however, they do so without loss of coherence (McKenna 1987).

ESL/EFL teachers realize, to a certain extent, the needs foreign students have in asking questions and endeavor to prepare students by telling them that they will be expected to ask questions when they get into regular university classes. However, there is very little actual preparation done beyond the introduction of the basic wh-questions of who, what, where, when, and how. Such minimal preparation does not provide foreign students with the socio-cultural knowledge necessary to ask competent questions. Therefore, they usually walk into a regular university classroom with very few strategies on how to accomplish the task of asking questions and often feel at a loss as to how to proceed.

It should be noted that most Chinese students have been taught the basic linguistic forms of question types, and they usually have some knowledge of the functions of questions. However, such functions tend to be limited to the daily life settings of shopping and activities on the street or in the home, rather than the classroom setting. When it comes to the classroom, they have very little real knowledge of the many functions of questions and the important role they play in classroom interaction.

Social, Political, and Historical Context Within the Classroom

Perceiving the social context of the classroom and understanding the role that functions play in asking questions is important for the non-native speaking student. Socialization and identity within the classroom community is influenced by the larger society of which it is a part (Mehan 1980). The classroom community contains the same complex rituals of personal relationships based on "the moral code which dominates cultural folkways, mores, and irrational sanctions" that we see in the larger society (Waller 1932).

Education in China today is a curious blend of socialism and Confucianism. Top administrators in Chinese education say that education must be socialist with the following Chinese characteristics as follows:

1- Socialist education in China should be directed by Marxism-Leninism and Mao Zedong thought. Education should have communist thought, world outlook, and moral qualities. And, as well, it should be armed with advanced scientific knowledge.

2- Socialist education should be adjusted to the development of a socialist economy.

3- Socialist education should be based upon the equalities of minorities.

4- Socialist education should insist upon the "Four Cardinal Principles," namely sticking to the socialist road, to the party's leadership, to the people's democratic dictatorship, and to Marxist-Leninist-Mao Zedong thought (Zhang 1987).

Therefore, it can be seen that educators are constrained by political and governmental forces to produce students who will conform without question to the ideals of socialism. These ideals dominate all aspects of education and

influence relationships between administrators, teachers, and students; between students and students; and between students and their work.

In socialist China, the highest honor comes to the one who does not assert himself, who remains modest, who holds his own ambitions in check, and who follows the socialist road. He serves those who are above him in position and power and endeavors to reverently internalize their wisdom. Learners learn by imitation and memorization with little appreciation for speculation and criticism. They are bent toward restraint, and they refrain from asking questions in the classroom. Asking a question may be an embarrassing sign of weakness indicating that the learner has not yet mastered the essence of what is to be learned. Furthermore, the Chinese student must take care that he does not cause the teacher to lose face by asking a question regarding something that the teacher may not know.

By way of contrast, within democratic American society, the individual and his freedom to question is idealized. The one who climbs the ladder of success and competition in daily life or in education tends to receive recognition. The ideal learner is one after the Socratic tradition with an ever inquiring mind that is not afraid to question and challenge.

Because historical, cultural ideas of the Chinese and American educational systems are antithetical, Chinese students transferring to the American system of education are faced with a bewildering array of choices to make, some of which are opposed to everything they know about correct classroom behavior. The familiar choices once made in the Chinese classroom are now confusing and odd due to the new and different sociolinguistic elements related to the use of English as a second language in the American classroom. Chinese graduate students who were interviewed in their first year of study on

an American campus said that these cultural differences were the greatest barrier to oral participation in the classroom (Wang 1983).

Because what takes place within the American classroom is so different from what takes place within the Chinese and many other foreign classrooms, Chinese and other foreign students encounter wide ranging challenges. They must not only face the obvious challenges of academics within the context of a second language, but they must simultaneously face struggles related to personality and presentation of self. They must be able to display their knowledge in a credible way that can be interpreted by their native speaking classmates and their professor (Mehan 1980). And they must cope with cross-cultural challenges in personal commitment and loyalty to family and country.

Chinese and many other foreign students who find themselves in like circumstances do want to conquer these challenges; however, because they often feel very much outside the American system, they tend to take a position of social distance. They maintain that their purposes for study are instrumental and not necessarily for entry into American society. This position is one of safety with an intent to protect themselves from failure. Though distancing provides a certain sense of relief from pressure in oral performance, it fosters isolation and prevents growth in interactive skills for overall satisfactory educational progress.

Hindrances to Asking Questions Within the Classroom

In general, people evaluate other people by their language. They are credited with certain amounts of intelligence, friendliness, and ability according to the way they speak, even though such judgment may be quite wrong. In the classroom, students will be evaluated by professors and fellow students

according to the kinds of questions they ask as well as their general use of language. Therefore, foreign students must not only learn the linguistic forms of asking questions, they must also understand societal expectations related to image, face, and presentation of self which accompany the asking of questions (Mehan 1980).

There are numerous hindrances that language learners must learn to deal with in order to become part of the linguistic group of the class and to be comfortable enough to ask questions. They may be collected and grouped under the following terms: linguistic prejudice, linguistic insecurity, and cognitive uncertainty. These hindrances must be recognized and defined in order to be overcome.

Linguistic Prejudice

Within the social context of communication, speakers use language to communicate information about themselves and the kind of person they are. Linguistic forms chosen by speakers are signals of communication. Upon receipt of these signals, hearers draw conclusions and make evaluative judgments. These judgments may be termed "linguistic prejudice" (Hudson 1980). The term "prejudice" is used because it is reflective of evaluative judgments that are made which are both favorable and unfavorable. Asking sociolinguistically competent questions in class can lessen unfavorable linguistic prejudice.

Linguistic Insecurity

There are whole groups of people that think they speak badly (Hudson 1980). Many Chinese think they are among the worst speakers of English as a foreign language. This is not necessarily true, but carrying around such

negative attitudes not only hinders confidence in speaking, it also diminishes confidence in asking questions.

Cognitive Uncertainty

Another hindrance to asking questions in class is cognitive uncertainty. Cognitive uncertainty pertains to the basic need for information about the person with whom one is communicating (Hudson 1980). When the speaker lacks knowledge about the listeners, in this case his/her professor and peers, the cognitive uncertainty related to how to proceed in an acceptable way is high. Compounding cognitive uncertainty with linguistic prejudice and linguistic insecurity produces an environment that can be daunting to the first year foreign student. The result is a student whose morale may be low and who may remain on the fringes of classroom interaction. However, if students have strategies whereby they can perceive the interaction taking place within the social context of the classroom, work through linguistic prejudice and insecurity, and overcome cognitive uncertainty, then they can bring their actions into synchrony with the situation and actions of others.

Pragmatic Processes of Language Use in the Classroom

Perceiving sociolinguistic elements of language related to social context in asking questions is only one step in asking questions. Language learners must also be able to infer meaning from the classroom social context that enables them to appropriately use the language in order to accomplish the task of asking questions.

Inferencing

According to Brown and Yule (1983), the ability to infer meaning is an important language process whereby hearers are able to arrive at an interpretation of the speaker's utterance. Inferencing is the "process which the hearer must go through to get from the literal meaning of what is said to what the speaker intended to convey" (p. 256). For example, the interpretation of an utterance such as (1) to make an indirect request, is that the hearer considers the literal meaning and makes inferences to perceive the meaning of (1a) which is the meaning that the speaker intended to convey.

(1) We have a lot to cover today.

(1a) So, without any further interruption or waste of time, let's proceed.

Utterance (1) literally does not mean (1a), but when the hearer receives it in a classroom context, he must infer that the speaker intended utterance (1) to convey the meaning of (1a) (Brown and Yule 1983).

Inferences as "missing links"

Inferences may be described as the missing links to make the connection between two utterances (Brown and Yule 1983). The hearer must make the inference in order to establish the connection between the two utterances.

Consider the following examples. Utterances (2) and (3) are 'the spoken text' and will be linked by the inference expressed in (3a). Therefore, the content of (3a) is the 'missing link.'

(2) The role of C-R here is thus seen as one in which data that are crucial for the learner's testing of hypotheses, and for his forming generalizations, are made available to him in somewhat controlled and principled fashion (Rutherford 1987, 18).

(3) Now, have you got that?

(3a) Utterance (3) is a signal for the hearer to respond in some way to utterance (2), either by indicating that utterance (2) has been understood, or by asking a question about the utterance.

(3a) is part of the knowledge representation activated in the hearer. The knowledge inferred by the hearer may be on more than one level. On one level, the hearer knows that utterance (3) requires a simple yes/no response. On another and perhaps higher level, the hearer knows that the speaker is providing a signal whereby the hearer may take the opportunity to ask one or more questions for clarification.

(4) I'm not sure about the logic.

Similar to utterance (3), utterance (4) suggests the possibility of more than one function. On one level the utterance may have the simple function of clarification. However, on another level it may imply disagreement, challenge, or even refutation. The task for the non-native hearer is to infer with some degree of accuracy the intended meaning of the speaker.

The ability to infer enables the hearer to perceive the intended function of the speaker and then to subsequently contribute to the development of the on-going interaction. The hearer must have an adequate store of knowledge from which to draw in order to infer the intended meaning of the speaker. The

storage of that knowledge and how it is accessed can be observed within schematic theory.

Schematic Frames

Schematic frames are the metaphoric structures whereby background knowledge is organized (Kasper 1984; Hudson 1980) and used in the production and understanding of discourse (Brown and Yule 1983). The organization is somewhat hierarchical where the highest frames contain the most general and abstract information, such as social values and norms of interaction. The lowest frames contain the most specific and concrete information, such as the knowledge of rules and elements of individualized languages (Kasper 1984).

There are two major types of processing for the inferencing of schematic frames, bottom-up and top-down. Bottom-up processing begins with the recipient receiving incoming data which he/she matches with lower level frames. In the matching of data with lower level frames and the successive activation of increasingly higher order frames there is an attempt to build composite meaning from the bottom-up. Top-down processing starts off by activating a higher order frame which then searches for the appropriate data to match it (Kasper 1984). Inferences are established in order to connect them with some earlier event or more general frame. When the connection is made, the inference is complete and the appropriate frame is in place: then the context is perceived. The context is described by the frame which, in turn, provides for the comprehension of either a current event (Kasper 1984) or a future event.

Not only does top-down processing seek data to substantiate the frame and validate meaning, but it also operates with an interpretive strategy. It is with

such an interpretive strategy that top-down processing creates expectations about what is likely to come next. This predictive power enables the hearer via his/her bottom-up processing to determine what is the most likely intended message. Furthermore, this predictive power enables the speaker/hearer to predict what successive frames may be required for ongoing coherent interaction (Brown and Yule 1983).

Social Context, Schemata, and Asking Questions in the Classroom

Every utterance, whether it is a sentence or sentence fragment is uttered within some kind of context (Levinson 1983). A learner's social and psychological perception of the social context around him influences how he/she uses language at any given time.

There is a vast array of factors to be considered when looking at the social context within which a student asks questions in class. Factors which comprise this social context may be categorized within a list of schematic frames to be activated when students are asking questions. There is no clear theory on how any one list of factors can be predictably relevant in every context (Van Dijk 1976). Even though making such a list here may seem to be presumptuous, it may be helpful to at least begin to identify frames and factors within them. Such work may be helpful in providing some clarity to an otherwise impossible vagueness.

Frames to be activated and factors to be considered by students asking questions within the social context of the university classroom (adapted from Krathwohl, Bloom, and Masia 1964; Candlin 1978; Hunkins 1976; Kasper 1984; Van Dijk 1976)

1. Frames containing knowledge about speech acts and discourse functions related to questioning.

   a) Knowledge of formality level, public/private, (the formal lecture vs. a less formal seminar)
      --overall ongoing action and the sequence of acts preceding the speech act under comprehension
      --producing ordered discourse
      --making coherent ties
   b) Knowledge of language needed for asking questions
      --linguistic forms
      --question types and function

2. Frames containing conversational maxims relating to interpersonal aspects of discourse contributions in asking questions.

   a) Knowledge of social register
      --status, position, role
      --facesaving, politeness

   b) Knowledge of cognitive/affective factors and their position in asking questions

   c) Knowledge of classroom rules and behavior
      --procedures for turntaking
      --signaling to ask a question

3. Frames containing conversational maxims in asking questions relating to the propositional content of discourse contributions like the principle of relevance.
      --ability to infer meaning
      --ability to predict meaning

4. Frames containing parameters for context analysis by means of which the recipient can identify and understand the relevant context-determining factors in a given interaction.

   a) Knowledge of general social context of the classroom and its suitability for asking questions
      --level of course: advanced level courses generally have more discussion and therefore require more oral skills.
      --requirements of course
      --type of course: how much does it rely on oral interactive skills (asking questions) for academic success?
      --personality of professor: does he/she have a set time for students to ask questions? does he/she mind being interrupted?
      --expectations of professor in regards of asking questions
      --general awareness of academic, professional goals of fellow classmates

   b) Knowledge of spatial and temporal location
      --large (lecture hall) or small (seminar) room
      --time of day class is held: morning, afternoon, evening
      --length of class: number of hours
      --organization of class time: partial lecture, partial seminar

Problems of Pragmatic Use in the Classroom

Both teachers and students have been developing schemata for language tasks in the classroom since they were in elementary school. By the time they reach university, sociolinguistic features and pragmatic schemata are very well learned. Schemata at the university level range from giving lectures and developing exams by professors to the asking and answering of in-class oral questions by students. Sometimes classroom rules for appropriate behavior are clearly spelled out but more often than not they have simply become a part of a teacher's/student's tacit knowledge.

Chinese students from the PRC may have a lot of knowledge in their particular subject; however, there is a lack of schematic framework within the English speaking context which supports the accurate demonstration of that knowledge. They struggle with how to display what they know. They are not

really sure whether what they have said is being interpreted accurately by others. And they lack the schematic framework for discussion which includes strategies for asking key questions to fill in the gaps of what it is they would like to know (Mehan 1980).

Academic Content and Interactional Form

There must be adequate integration of academic content and interactional form within the classroom context. A balanced integration of academic content and interactional form provides a basis for interactional competence (see Table 1). One without the other, however, invites negative sanction. Academic content without interactional competence, or interactional competence without academic content, creates an unraveling of the social fabric of the classroom with practical consequences for the students (Mehan 1980).

Table 1.--Interrelationships between academic content and interactional form within the classroom context (Mehan 1980)

Academic Content	Interactional Form	
+	+	Effective participation; the integration of form and content within context
+	-	Academically correct, but inappropriate interaction
-	+	Interactionally appropriate behavior but academically incorrect content
-	-	Nonparticipation

Part of the problem in integrating academic content with interactional form is that foreign students in general do not attend to the same discourse markers that American students do. This can be seen in that some foreign graduate students reported they gain very little from the lectures they attend,

particularly if they are in the field of science (Ard 1987). Yuan (1982) found in a study that Chinese scientists could not give an accurate translation or target language paraphrase of a surprisingly large number of non-technical words which appeared in lectures. Yuan says such non-technical vocabulary makes up nearly 85% of the text in most lectures. If students do not attend to these words in the discourse much as a native speaker would, it is doubtful that clear understanding of what the speaker has said will take place.

Another important element within the integration of academic content and interactional form is how students make choices about what is relevant. Many professors said that perhaps even more important than asking questions is the ability to organize ideas and choose what is important. Many Chinese students are also weak in this aspect (Brann 1976).

Inferencing of Schematic Frames and Problems of Illocution

Chinese students do come into the American classroom with highly developed schemata of their own; however, such schemata are recognizably sensitized to their own educational system. And, as we have seen thus far, current Chinese educational philosophy does not reward student questioning in the classroom. The Chinese student quite naturally, consciously or subconsciously, activates schematic frames normally used in his/her first language. Confusion arises when a frame usually activated in the Chinese classroom context is activated in the American context and no longer accomplishes what once was a familiar task. Suddenly the learner feels threatened, unsure, and insecure because the inferencing skills of the past no longer bring the desired results of success and understanding (Kasper 1984; Levinson 1983).

Research in second language acquisition theory says that language learners can increase their capacities for reception and perception by getting

help from their interlocutors (Hatch 1983; Krashen 1982). That is, learners restructure their exchange by asking questions of confirmation or clarification in order to achieve understanding. This is illustrated in the following excerpts (Pica 1987, 5).

1. Learner (NNS English)	Interlocutor (NS English)
	so you came here by yourself or did you come with friends?
no no I -- what? what you say? (clarification request)	
	did you come to the States with friends or did you come alone?
no, alone -----from Toronto	
2. Learner (NNS English)	Interlocutor (NS English)
	did you get high marks? good grades?
high marks? (confirmation check)	
	good grades A's and B's----did you get A in English?
oh no in English yes em B	
3. Learner (NNS English)	Interlocutor (NS English)
	ok, he's dancing with the woman doctor
excuse me? (clarification request)	
	the the young man doctor is dancing with the woman doctor, right? (comprehension check)
mmhm	

Because of teacher-student social inequality and the teacher's lesson plans, such restructuring between professor and student to negotiate communication is generally not possible in the classroom. Rather than interrupt the flow of classroom discourse to attain the goal of communication, the hearer/student generally suspends comprehension or settles for less than total understanding. Students avoid seeking help when an appeal for assistance is considered a sign of incompetence as, for example, when a teacher's question

refers to previously instructed material for which the hearer's/students' accountability is assumed (Pica 1987).

Despite the limited number of exchanges and actual turns the professor and student take to achieve understanding, perception of illocutionary force is still required on the part of both interlocutors. Illocutionary force is defined within speech act theory as "the effect an utterance . . . has on the . . . listener" (Richards, Platt, and Weber 1985, 265). A speech act is a sentence or an utterance which has both propositional meaning and illocutionary force. For example, in the sentence, 'I am thirsty,' the propositional meaning is what the utterance says about the speaker's physical state. The illocutionary force may be a request for something to drink. Problems arise when illocutionary force is misinterpreted or mismatched. When illocutionary force is mismatched, it is usually because the utterance is an indirect speech act and the learners respond to what was said rather than what was meant (Kasper 1984; Thomas 1983).

In further examination of illocution, the exchanges between student and professor may be called pair parts. In this paper we call the professor's utterance the first pair part and the student's utterance the second pair part response. Each pair part has responsibility; however, irresponsibility may occur in either pair part. Three ways in which the student's second pair part responses often lack responsibility are (Kasper 1984):

1. In relating insufficiently to the propositional content of the preceding first pair part
2. In relating insufficiently to the illocutionary force of the preceding first pair part
3. In relating insufficiently to both speech act components

Society provides the norms for the development of the social context within the classroom and the motivation to adhere to those norms (Hudson 1980). Foreign students, upon entry to American university classrooms, face the challenge of perceiving sociolinguistic elements in the composition of these norms. Accurate perception of sociolinguistic elements is important in the activation of schematic frames related to asking questions. Activation of schematic frames which do not match the expectations of native speakers results in prob-lems of misunderstanding the intended illocutionary force and of ineffective integration of the interactional form with the academic content. Students must be able to display their accumulated knowledge and have adequate interactive skills related to questioning and critical thinking.

The classroom is a discourse community where participants are expected to ask questions and to do so according to overall societal norms (Mehan 1980). Research shows that it is possible to provide instruction on factors important in the questioning process (Rost 1990). The challenge for the ESL/EFL teacher is to provide as much meaningful experience as possible for the non-native speaking student.

CHAPTER 2

QUESTIONS AND THEIR CATEGORIZATIONS

Categorization of Questions According to Linguistic Form

Below is a listing of linguistic forms of questions most likely to be used in the classroom.

Basic Question Types	Example
1. Yes/No questions	Has this just been discovered?
	Is the average line likely to go down by 1/K?
	Has Canada changed?
2. Wh-questions	What are we maximizing in the problem?
	Where are the . . .
	How do you compare . . .
	How would you show that . . .
	Which would be the given information . . .
	Why is it that . . .
3. Disjunctive questions	Would one use this proof, or is there another method?
	Does this always happen, or are there exceptions?
	Can one say that, or does it depend on the circumstances at the time?

4. Tag questions	We can't use this method, can we?
	Sewerage and sewage disposal are the same things, aren't they?
	It doesn't follow from that that X = Y, does it?
5. Echo questions	What did you say this theory provides?
	Chomsky says what?
6. Noun phrase	S: Optimal allocatiɔn?
(Wang p. 36)	T: O-P-T-I-M-A-L A-L-L-O-C-A-T-I-O-N
7. Hidden questions in statement form	I don't suppose one could say that. (=Could one say that?)
	I understand A, but I don't see how B fits in. (=How does B fit in?)
	Perhaps we might go over that again sometime. (=Can we go over that again sometime?)
	I was very interested in what you said about X, although I didn't understand Y. (=What about Y?)

(Candlin 1978; Wang 1983)

Wang (1983) found in her research that professors do not necessarily respond to questions solely because of linguistic, grammatical form. They generally respond according to the function they perceive is intended by the question. For example, in Yes-No questions asked in the classroom, the asker is probably not only asking for a simple Yes-No response as illustrated below:

(1) S: Does Mac A equal 94?
T: Pardon
S: On the board?
T: Yeah, Yeah

(Wang 1983:38)

He/she is probably looking for a detailed expianation:

(2) T: ((talking about a 6-bit RCA flush A/D converter that can go up to 20 MHz))
S: Does the transmitting of the signal would only be eh able to do it would able to do so in the outward in the outward in the output monitor?
T: No, they don't. They are not transmitting TV signal digitals. They are talking about . . .

(Wang 1983:38)

In an academic setting, the professor knows that the students are not looking just for a simple "affirmative or negative". What the students really want to know is the underlying argument of why 'yes' or 'why' no".

The same is true for wh-questions. Explanations usually accompany the facts.

(3) S: This problem . . . when you transform it into a dual eh what will you can't maximize . . . the what the what are we maximizing in the dual?
T: Well, that's a good question. Really um . . . that you really don't care ((detailed explanation of the definition "the dual of a maximizing problem is a minimizing problem, and vice versa"))

(Wang 1983:39)

Categorization of Questions According to Type and Function

Below is a list of question types according to functions most likely used in the classroom. Included are examples or explanations of each type and function. (Items 1-12 are examples and Items 13-20 are descriptive explanations.)

1. Questions seeking clarification: I'm not sure I understand the relationship between defense and offense.

2. Questions eliciting new information: In what situations would we apply this formula?

3. Questions seeking confirmation: Network analysis isn't the same as PERT, is it?

4. Questions which elicit corroboration: How can one support the idea of a cause more than the idea of a threat?

5. Questions which elicit repetition: Sorry, could you please run through that point again?

6. Echo questions which seek exact repetition: Chomsky says what? Teacher probably repeats exact statement, so student can take notes.

7. Questions implying agreement/disagreement: I'm not sure about the logic. Are you suggesting that the ends justify the means? Does that justify their actions?

8. Questions which challenge facts and teacher: You're not asking us to believe that this formula actually works, are you?

9. Questions which refute: But, that's not true. If we go that route, we've got to realize that there will be someone that will try to block us on that side, too. Isn't that right?

10. Questions seeking facts with explanation: Could you explain, please, the events of November 25th that led to the resignation of the top leaders of East Germany?

11. Questions eliciting opinion: What do you think about the state of communism in Eastern Europe?

12. Questions requiring integration of fact and opinion: It seems obvious that East and West Germany will one day reunite to form one state; however, don't you think that such a large nation would be a threat to European stability? This question combines fact to support opinion.

13. Questions which digress from the main point: In a discussion related to the local government's responsibility in a recent disaster, a student asks about a similar disaster that took place in another state. The discussion becomes more generalized and broadens to include a discussion of disasters in general rather than the initial topic of the local government's responsibility in the recent localized disaster.

14. Questions which are totally off the subject: In a discussion regarding bio-physics, a student might ask when the final exam is going to be.

15. Questions which further class understanding: The class may be discussing a certain issue that has everyone puzzled, when a certain student asks a question which turns the light on for the rest of the class.

16. Questions students asked of other students: In a discussion on current economic problems in the urbanization of third world countries, a student asks a fellow classmate which of the three policies being discussed is the best policy.

17. Questions reflecting high level thinking: This kind of question would reflect complex thinking and synthesis of abstract ideas and concepts.

18. Questions over the other students' heads: This kind of question may lead to a discussion in which only the teacher and one brilliant student may participate.

19. Controversial questions: Such questions tend to stimulate controversy for the sake of controversy rather than for the sake of genuine inquiry.

20. Simplistic questions: These questions do not reflect any depth of thinking and do not evolve out of a serious involvement with the subject. They may possibly be used as a smoke screen by students who have other problems.

(Caldwell 1983; Candlin, Kirkwood, and Moore 1978; Farrar 1985; Hunkins 1976)

One type of question may take more than one linguistic form. Table 2 illustrates how a question with the function of seeking clarification may take many linguistic forms.

Table 2.--Linguistic forms of classification questions

Linguistic Form	Example Sentences
Hidden question in statement form:	I'm not sure I understand the relationship between defense and offense.
Wh-question:	What is the relationship between defence and offense?
Yes-No question:	Is the relationship between defense and offense very complicated?
Disjunctive question:	Is the relationship between defense and offense an issue for us to be concerned about or is it the responsibility of the CLE?
Tag question:	The relationship between defense and offense isn't very complicated, is it?

Categorization of Questions According to Cognitive and Affective Domain

Student questions may be divided into two broad domains of thinking: the cognitive and the affective. Cognitive domain questions involve intellectual inquiries about materials ranging in level of difficulty from specific and perhaps simple facts to complex, abstract materials which require higher level processes of synthesis in thinking . Affective domain questions emphasize emotional tone and carry with them a degree of acceptance or rejection. Affective questions "vary from attending to simple selected phenomena to complex internally consistent qualities of character and conscience" (Krathwohl, Bloom, and Masia 1964, 7). Below is a descriptive categorization of questions at increasing levels of difficulty found within each domain adapted from Bloom's taxonomy of educational objectives (Krathwohl, Bloom, and Masia 1964; Hunkins 1976).

Cognitive Domain Questions

Cognitive domain questions may be further categorized as knowledge, comprehension, application, analysis, synthesis, and evaluation questions. The range of difficulty begins with the lowest level questions at the knowledge level (level 1) and increases to the highest level questions at the evaluation level (level 6).

Knowledge questions--level 1

Knowledge questions involve inquiry about specific and definable pieces of information, terminology, and facts. They inquire about ways and means for dealing with specific conventions, trends and sequences, classifications and categories, and criteria and methodology. On the highest levels, knowledge questions inquire about principles, generalizations, theories, and structures in a field.

Key words found in knowledge questions are:

what	when	who	define
recall	list	which	present
proof	show	state	distinguish
tell	evidence	name	identify
reorganize	how	describe	

Comprehension questions--level 2

Comprehension questions pertain to inquiries about gaining understanding of what is being communicated in the material. They involve the ability to paraphrase or translate; the ability to interpret, explain, or summarize; and the ability to extrapolate trends or tendencies beyond the given material in order to determine implications and effects which support the original communication.

Key words found in comprehension questions are:

grip	mental	grasp	conceptualize
reader	which	estimate	explain
extent	predict	infer	demonstrate
what	distinguish	extent	inform
rephrase	reorder	relate	illustrate
conclude	contrast	fill in	differentiate
compare	extrapolate	in other words	
give an example of			

Application questions--level 3

Application questions involve inquiries about abstraction of general ideas, rules of procedure, or generalized methods in specific situations.

Key words used in application questions are:

apply	develop	test	consider
build	plan	choose	construct
solve	demonstrate	How could	

Analysis questions--level 4

It is often difficult to distinguish between analysis and comprehension questions, in that the initial words of both question types can be the same. Hunkins suggests that it may be helpful to "think of comprehension questions as asking for 'common sense' analysis while analysis questions are more concerned with the rules of logic or the syntactical rules of a particular discipline" (Hunkins 1976, 41). The context in which the question is asked may be helpful in deciding if a question is at the analysis level.

Key words used in analysis questions are:

analyze	discriminate	relate	categorize
explain	distinguish	describe	recognize
classify	indicate the	support your	
compare	what assumption		

Synthesis questions--level 5

Synthesis questions deal with inquiries about putting elements together to form a whole. In the classroom, questioners would be attempting to "put together" ideas in order to produce a new or unique product. The product could be a plan or proposed set of ideas in order to derive abstract relations for classification or explanation.

Key words and/or phrases used in synthesis questions are:

compose	derive	solidify	solution
integrate	hypothesis	create	develop
assimilate	make one	combine	plan
regarding	formulate	join	fuse
synthesize	put together	lump together	
merge	come together	what conclusion	

Evaluation questions--level 6

Evaluation questions make inquiries regarding judgments about value, methods and purpose, and accuracy and consistency according to certain criteria or standards of measurement.

Key words used in evaluation questions are:

estimate	choose	check	indicate
view	evaluate	asses	appraise
find	deduce	arrive	decide

judge indicate select defend

confirm How would you arrive at a conclusion

What is more appropriate? Which would you/we consider?

Affective Domain Questions

Affective questions may be further categorized as attending (receiving), responding, valuing, organizing, and characterizing by value or value-complex questions. Attending questions are the lowest level questions, while characterizing questions are the highest level.

Attending questions--level 1

In the beginning, a student becomes aware of something, a situation or a phenomenon, he/she would like to ask about. The student then focuses on the stimuli and shuts out distractions in order to ask the question.

Key words and phrases used in attending questions are:

Are we aware	Do we appreciate
Have we heard	Do we recognize
Will we accept	Have we ever
Do we know	Would we like
Do we prefer	Are we interested
Indicate whether	Is there a

Responding questions--level 2

The student is willing to respond to the stimuli. He/she has a sense of satisfaction which brings an emotional response in the asking of the question.

Key words and phrases used in responding questions are:

Have we contributed	Have we ever
Do we observe	Will we accept

Does it feel pleasant	Are we satisfied
Do we practice	Are we interested in

Valuing questions--level 3

This level of question indicates the value the asker places on the content of the question. It displays preference and commitment. Key phrases used in valuing questions are:

Do we like	Are we loyal to
Should the	Do we accept
Do we participate actively	Have we started
Do we feel responsible for	Defend our stance
Have we become interested	

Organizing questions or questions which organize--level 4

As a student internalizes values, he/she must organize them into a system. He/she asks questions that clarify identified values and enable conceptualization of values. As values are clarified, the student organizes them into an ordered relationship with one another. The interrelationship among them is determined, and dominant or pervasive ones are established.

Key phrases in questions which organize are:

How do we judge	Do we agree
How do we relate	How would we say
Does the statement imply	In your (our) view
How do we weigh	In your opinion
Could you (we) explain	alternatives

Questions characterizing values--level 5

At this level of questioning, an internalization of values already exists in the student's hierarchy of values. He/she has a generalized set of values that allows simplification and ordering of the complex world around him. Questions asked on this level enable the ongoing process of understanding things that are outside of his/her set of values. The highest level of characterization includes questions which concern a person's view of the universe or philosophy of life.

Key phrases in questions which characterize values are:

Is that just	Are you (we) willing
What would you do	Which of the following
What did you (we) do	Is that your (our) philosophy
Would you (we) engage in	Are you (we) confident that
Could you (we) explain how	How would you (we) indicate those

The above categorizations are those from which students generally draw in order to ask questions in the classroom. Most questions in university classrooms are generated from within the cognitive domain. However, even though questions may be divided into two broad domains of thinking, students may not totally isolate questions into one domain or the other. In the processing of information, it is not possible to ask a "cognitive question without some emotional response" (Hunkins 1976, 61). For example, a student may ask a comprehension question within the cognitive domain and at the same time express interest via the affective domain by incorporating affective elements of questioning such as valuing and responding. Students who organize material according to value in the affective domain also operate cognitive domain questions related to analysis and synthesis. Part of this overlapping effect may be due to similarities found in both domains.

When comparing levels of questioning within the affective domain and the cognitive domain, similarities are found. At the (cognitive) knowledge level and the (affective) receiving level there are commonalities just as there are at the (cognitive) analysis level and the (affective) organization level. In other words, questions of organization in the affective domain contain similarities found in questions of analysis in the cognitive domain (Hunkins 1976). (See Appendix D for table illustrating levels of questioning within both cognitive and affective domains.)

In summation, when considering cognitive and affective domains of questioning, foreign students should realize that even though they may be asking a question which lies particularly in one domain, they should also be cognizant of the fact that the other domain is also functioning. The fluctuation of function within each domain is related to sociolinguistic, pragmatic factors discussed in Chapter one.

Comparison of Categorizations of Functions and Categorizations of Domains

Heretofore, questions have been discussed within separate categorizations of form, function, and domain. It may be useful to do some further comparison and see how these categorizations interrelate. Each type of question found within the categorization of questions according to function corresponds with certain categorizations in the cognitive/affective domain.

For example, functional elements found within a question requesting clarification are also found in both the cognitive domain at the knowledge level and in the affective domain at the attending (receiving) level. Confirmation questions contain elements found at the comprehension level of the cognitive

domain as well as at the attending level of the affective domain. Questions of corroboration and refutation require elements of the cognitive domain at the analysis level and at the valuing level of the affective domain. The integration of fact and opinion necessitates cognitive questions of synthesis and organization from the affective domain. And, in the same way, questions which challenge the facts and the teacher require cognitive evaluation and elements of affective characterization. Table 3 illustrates the comparison of question functions and how thy match levels of domain.

Table 3.--Comparison of question functions (or types) and cognitive and affective domains

Cognitive Domain	Question functions (or types)	Affective Domain
Knowledge	clarification, confirmation, repetition, echo, facts with explanation, (simplistic)	Attending (receiving)
Comprehension	elicitation of new information, confirmation, (questions students ask of other students)	Responding
Application	further entire class understanding	Responding
Analysis	corroboration, refutation, elicitation of opinion, further entire class understanding	Valuing
Synthesis	integration of fact and opinion (high level thinking)	Organizing
Evaluation	agreement/disagreement challenge facts and teacher (over other student's heads) (controversial)	Characterization

Upon closer examination, it can be seen that perhaps elements of every function can be seen to operate at every level in both the cognitive and affective domains. For example, questions of clarification may be asked at every level of cognitive domain (knowledge, comprehension, application, analysis, synthesis, and evaluation). Simultaneously, clarification questions may be asked at every level of the affective domain: attending, responding, valuing, organizing, and characterization.

Questions organized according to categorizations of linguistic form, function, and cognitive/affective domain enable the non-native speaking students to see more clearly a structure within which they can ask questions. Classifications provide definitions for uncertain students. All students have uncertainties about questions. However, non-native speaking students in particular struggle with how or where their particular question fits into the entire realm of questioning. Perhaps these categorizations will assist in providing overall understanding.

CHAPTER 3

ASKING QUESTIONS IN THE CLASSROOM: THEIR VALUE TO LEARNING, THEIR INFLUENCE ON CLASSROOM ATMOSPHERE, AND THEIR FREQUENCY OF OCCURRENCE

Although the task of asking questions in the classroom is difficult for many non-native students, it has been examined in this paper with particular regard to graduate students and visiting scholars from mainland China whose majors are not English. It has been seen that even though these students and scholars generally believe they should ask questions in the classroom, they still tend not to do so (Yuan 1982). Reasons for their reticence, as has been discussed, may be linked to inability and lack of experience in perceiving certain socio-linguistic elements integral to the accurate perception of the speaker's intended illocutionary force (see Chapter one, page 28 for discussion on illocutionary force). On the whole, most non-native speaking students at some point feel uncertain in their perceptions of intended illocution of speakers because of inadequate development of schemata in English. Therefore, it is proposed that if knowledge of sociolinguistic factors which make up schematic frames and which are valued by native speakers is increased, then accuracy in activation of schematic frames would, perhaps, correspondingly increase. As non-native speaking students gain a clearer understanding of what is expected within the questioning process in the social context of the classroom, they should be able to lay a foundation which will then enable them to pose questions and make comments with increasing confidence.

Chapter two discussed the process of understanding questions with classification of questions within three categorizations: linguistic form, function, and cognitive/affective domain. Definitions, explanations, and examples were presented for each major category.

Chapter three continues the discussion on asking questions largely via the results of a questionnaire developed by the writer of this thesis. The questionnaire was devised in order to obtain significant input from professors as to their expectations and experience regarding questions asked by students in the classroom. Data was collected to build support for otherwise vague perceptions of what professors expect.

Three major questions considered in the development of the questionnaire were:

1) What kinds of questions are "liked" or appreciated by professors?
2) Do professors believe questions make significant contributions to the learning of the subject matter being presented?
3) What kind of impact do questions asked by students have on the classroom atmosphere?

Forty-three questionnaires were distributed to professors from eighteen departments in seventeen universities. No attempt was not made in the distribution of this questionnaire to focus on any one particular department. This is because most non-native speaking students are placed in ESL/EFL classes with little regard for their anticipated specialty or major. The information gained via the questionnaire will have most significance for students studying in conglomerate English classes of this kind prior to their admittance to regular university classes.

It may be interesting to note that of the professors contacted, 22 were in Natural Sciences, 18 were in Arts and Humanities, and 3 were in Behavioral Sciences (see Table 4).

Table 4.--Professors included in questionnaire

	Natural Sciences	Arts and Humanities	Behav. Sciences	Total Mailed
Profs contacted	22	18	3	43
Profs responded	12	9	2	23

The total response to the the questionnaires sent out was 53%. The breakdown of those who responded were 12 in natural sciences, 9 in arts and humanities, and 2 in behavioral sciences.

It was believed that if professors were approached individually rather than arbitrarily chosen from faculty lists, there would be a better response. Therefore, Chinese graduate students and visiting scholars who were former intensive English students in China and who are now studying in graduate level programs in the United States were contacted for the purpose of referrals. The students and scholars were sent letters briefly explaining the questionnaire along with a solicitation for names of professors who teach graduate level students and who might be willing to fill out the questionnaire.

No appeal was made for any particular kind of professor. The decision for a more general sampling was made because the data to be obtained is in regard to the questioning behavior professors expected of students in general rather than of students from biology, history, business, or any other specialty (see Appendix E for a copy of the sample cover letter sent to professors).

Further study on questioning behavior expected within certain specialties would have most value for students and teachers of English for Specific Purposes. With the information gained from this questionnaire, ESL/EFL teachers may assist non-native speaking students in the development of strategies for asking questions in the classroom.

The questionnaire is divided into two major parts. Part 1 includes sixteen items. A scale of 1 to 5 was used with 1 being strongly disagree and 5 being agree. Each item also provides an opportunity to make comments. Part 2 of the questionnaire pertains to questions and their value to learning as well as their contribution to classroom atmosphere. An additional section in Part 2 measures student questions and their frequency of occurrence in the classroom (see Appendix F for the entire questionnaire).

Question types used in the questionnaire follow the categorization of questions as developed in Chapter two. They are listed here. minus the examples and explanation. Starred forms will be explained below.

Questions seeking clarification
Questions which elicit new information
Questions seeking confirmation
Questions which elicit corroboration
Questions which elicit repetition
Echo questions which seek exact repetition
Questions implying agreement/disagreement
Questions which challenge facts and teacher
Questions which refute
Questions seeking facts with explanation
Questions eliciting opinion
Questions requiring an integration of fact and opinion
Questions which digress from the point*
Questions which are totally off the subject*
Questions to further class understanding
Questions students asked of other students
Questions reflecting high level thinking*
Questions over the other students' heads

Controversial questions*
Simplistic questions*

Most question types were created out of a recognition of their function in the classroom. That is, questions seeking clarification primarily perform the function of clarifying information. The question type of eliciting new information performs exactly that function. It elicits new and perhaps additional information. However, some question types listed above, the starred items, evolve from an effort to describe accompanying action taking place through the asking of the question. These questions are not asked for the sake of being digressionary, controversial, or simplistic. A question which digresses from the point is initially asked for an accepted functional purpose. As the question and discussion around it develops, it is possible for the question to digress from the topic at hand. The digression may or may not be perceived as having value. The digression may have value if it lends credibility to the subject at hand. However, if the digression leads the discussion away from the assimilation of the material to be learned, the question will most likely be valued less.

Not surprisingly, twenty-two of the twenty-three professors who responded to the questionnaire strongly agreed with the statement that it is important to ask questions in the classroom (Appendix G, Part 1, Item 1). Only one professor did not agree, but gave no reason for the disagreement. Some comments of those who strongly agreed were:

--Asking questions is essential for seminars.

--I encourage it, provided it is not over done.

--Opportunity varies, depending on class size; but it should be encouraged

--Classroom education must be interactive.

--Too many would be disruptive. A lecture cannot devolve into a question and answer session.

Student Questions and Their Value to Learning

Twenty-two of the twenty-three professors indicated that they strongly agreed (Appendix G, Part 1, Item #2) that questions asked by students help them to assimilate the material to be learned. Professors commented that asking questions helps both the students asking the question and their classmates who are listening. Furthermore, questions provide more interaction and opportunity to process thoughts as students articulate their ideas via the question.

When a question is asked by a student, it is assumed that it is for the general purpose of learning. This is true on a surface level; however, below the surface there are various other cognitive/affective processes taking place. In order for a question to be clearly articulated, the person asking the question must first sift alternatives in order to decide what 's relevant to the context in which the question is being asked, organize this knowledge, and then make decisions on how to ask the question (Hornsby 1966). More specifically, asking questions assists students in:

1) Perceiving of relationships between parts and the whole
2) Distinguishing between important and unimportant information on primary and secondary facts
3) Being able to understand the relevance certain examples have in discourse

4) Calling students attention to discourse markers they might otherwise misunderstand

5) Comprehending various rhetorical forms (Jordan 1983)

Not only does asking questions benefit the organization of thoughts within the target language, it also benefits the overall language learning process. The benefit of language learning is at two overlapping levels: (1) the local level which is related to and within each individual utterance, and (2) the discourse level which is related to the individual utterance and the preceding proposition. Students are forced to articulate their current state of understanding. If they are misunderstood, they must reformulate the utterance in order to be understood (Rost 1990).

Professors were asked in Part 2 of the questionnaire to indicate how they perceived various types of questions and their value to learning (see Appendix F for the entire questionnaire). A scale of 1 to 5 was used with 1 being not at all valuable and 5 being very valuable .

Questions seeking clarification, new information, confirmation, and corroboration (Table 5, Items 1, 2, 3 and 4) are seen as very valuable to learning and scored a five by the majority of professors. Questions which refute, seek facts with explanation, and which require integration of fact and opinion (Table 5, Items 9, 10 and 12) are also valued highly. One professor commented with caution regarding questions which refute, saying that such questions must be factual.

Table 5.--Professors' rating of student questions and their value to learning

		(not valuable. . . . very valuable) 1	2	3	4	5	Total Resps
1.	Questions seeking clarification	0	0	1	3	(19)	23
2.	Questions which elicit new information	0	0	2	3	(18)	23
3.	Questions seeking confirmation	0	0	1	6	(15)	22
4.	Questions which elicit corroboration	0	0	1	8	(13)	22
5.	Questions which elicit repetition	0	2	(13)	4	3	22
6.	Echo questions which seek exact repetition	1	(10)	7	2	2	22
7.	Questions implying agreement/disagreement	0	2	4	(11)	5	22
8.	Questions which challenge facts and teacher	0	2	3	(10)	7	22
9.	Questions which refute	0	0	1	7	(14)	22
10.	Questions seeking facts with explanation	0	0	1	4	(17)	22
11.	Questions eliciting opinion	1	3	6	4	(8)	22
12.	Questions requiring an integration of fact and opinion	0	1	2	6	(13)	22
13.	Questions which digress from point	2	(12)	4	2	2	22
14.	Questions which are totally off the subject	(13)	7	0	0	1	22
15.	Questions to further class understanding	0	0	1	3	(17)	21
16.	Questions students asked of other students	0	2	4	6	(9)	21
17.	Questions reflecting high level thinking	0	0	1	3	(18)	22
18.	Questions over the other students' heads	2	3	(7)	4	6	22
19.	Controversial questions	4	1	2	(9)	6	22
20.	Simplistic questions	3	(9)	3	3	4	22

Note: Circled numbers are highest number of professors scoring such frequencies. Of the twenty three professors who responded to the questionnaire, not all responded to all items.

Questions requiring an integration of fact and opinion have more value in the learning process than questions which only elicit an opinion. This belief can be seen in Table 5 which shows a strong cluster of thirteen professors giving the highest score of five to questions requiring an integration of fact and opinion (Item 12), whereas, professors were more diverse in rating questions eliciting an opinion (Item 11). Eight gave Item 11 a five, four gave it a four, and six scored it a neutral three. Explanation for the stronger rating for questions requiring fact and opinion may be due to the actuality that argument supported by convincing factual evidence is highly valued in American education.

Questions eliciting repetition were seen by most professors as rather neutral in the learning process and were most often scored a three (Table 5, Item 5). Echo questions seeking exact repetition were seen as having even less value to learning and scored a two by most professors (Table 5, Item 6).

Questions in the categories of implying agreement or disagreement (Table 5, Item 7) and questions which challenge the facts and the teacher (Table 5, Item 8) both rose in value to learning and were scored a four by most professors.

Questions totally off the subject (Table 5, Item 14) were perceived by most professors as having no value to learning at all. Most professors saw little value in digressionary questions (Table 5, Item 13) and gave the question type a two. Nevertheless, two professors did give it a very valuable score of five. No explanation was given for this. However, it may be surmised that certain professors have a personal affinity for the challenge and stimulation of digressionary questions.

Questions which further class understanding (Table 5, Item 15) and controversial questions (Table 5, Item 19) are seen as valuable to learning by professors. As well, questions students asked of other students (Table 5, Item 16) generally scored with higher values. Professors seemed ambivalent about questions over the heads of other students (Table 5, Item 18) and scored rather widely. Simplistic questions (Table 5, Item 20) generally had little value on the scale. However, one professor commented in regard to complexity and simplicity of questions that we live in a world with range from simple to complex; why not have the same distribution of questions (Table 5, Items 18 and 20)?

Numbers which are circled on Table 2 show the clustering of professors and how they tend to group themselves on the value scale.

To summarize, questions which tend to require higher level thinking and organizational skills are most highly valued in the learning process, while questions which are repetitive, digressionary, or off the subject are least valued.

Implications for ESL/EFL instructors are that they should provide adequate instruction on (a) questions and their value to learning, and (b) the use of different types and functions of questions. In addition, they should provide adequate opportunities for students to experience asking questions. The knowledge and experience gained will provide confidence for non-native speaking students as they wrestle with whether or not their questions have value.

Student Questions and Their Contribution to Classroom Atmosphere

A professor and his/her students together form a community. The formation process of this community takes place via interaction. As questioning

the context of interacting in the classroom. In the graduate level classroom, interacting which involves questioning by students increases. Perhaps, this is because graduate students have more power. They are expected to be more knowledgeable in the field and therefore better able to critically analyze, challenge, and question. Graduate students may or may not agree with the material, the professor, or each other. The purpose for questioning is not necessarily to be right or wrong. It may actually be seen as a form of mental sparring. In this kind of sparring, opinion may be upheld or modified (Candlin 1978).

The majority of questions in a lecture course at the graduate level function to co-develop with the lecturer the discourse in progress. The lecture may function in part as an equivalent to a conversational response (McKenna 1987). Most students who ask questions are active, verbal participants in forming community with the lecturer.

Students who ask questions often become much like spokespersons for the rest of the class. Because questions tend to represent the general interest of the group, they are well tolerated. However, questions will not be appreciated if they are inappropriate or are in some way out of step with what is generally accepted behavior in the classroom. Non-native speakers seem to intuitively know that asking a question does entail the responsibility of being "spokesperson." This knowledge increases pressure and insecurity as non-native speakers are unsure of this role and uncertain whether or not they will be accepted by their classmates in this role. Therefore, they usually hold back and let someone else ask the question.

Professors strongly agreed that student questions do help to create a positive classroom environment (Appendix G Item 3). Additional comments by

professors with regard to questions and their influence on classroom environment are as follows:

> In advanced classes, yes.
> It depends on its relationship to the subject matter being discussed.
> Good questions can stimulate an entire class.
> They make for communication and rapport with the professor.

Questions which further class understanding make the greatest contribution to classroom atmosphere (Table 6, Item 15). Class understanding is important for the development of conversational discourse. Therefore, it is not surprising that most professors scored questions that are totally off the subject and questions over the other students heads as contributing the least to classroom atmosphere (Table 6, Items 14 and 18). The flow of interaction taking place is disrupted by these kinds of questions.

Most professors believe that questions which further class understanding, clarification questions, questions reflecting high level thinking, questions eliciting new information, and questions seeking confirmation, facts with explanation, and corroboration (see Table 6, Items 15, 1, 17, 2, 3, 10, and 4), all make a great contribution to classroom atmosphere. However, one professor qualified his score of five by commenting that such questions contribute except when being done by the class "super ego."

Table 6.--Professors' rating of student questions and their contribution to classroom atmosphere

		(no contribution. . . . great contribution) 1	2	3	4	5	Total Resps
1.	Questions seeking clarification	0	0	2	5	(15)	22
2.	Questions which elicit new information	0	0	4	5	(13)	22
3.	Questions seeking confirmation	0	0	3	6	(13)	22
4.	Questions which elicit corroboration	0	0	2	8	(12)	22
5.	Questions which elicit repetition	3	2	(7)	5	5	22
6.	Echo questions which seek exact repetition	4	5	(7)	4	2	22
7.	Questions implying agreement/disagreement	1	2	4	(8)	6	20
8.	Questions which challenge facts & teacher	2	3	3	6	(7)	21
9.	Questions which refute	2	1	7	4	(8)	22
10.	Questions seeking facts with explanation	1	2	4	5	(13)	22
11.	Questions eliciting opinion	1	3	6	4	(8)	22
12.	Questions requiring an integration of fact and opinion	0	0	3	7	(10)	20
13.	Questions which digress from the point	(7)	(7)	3	3	2	22
14.	Questions which are totally off the subject	(14)	7	0	0	1	22
15.	Questions to further class understanding	0	0	0	5	(17)	22
16.	Questions students ask of other students	1	3	1	6	(11)	22
17.	Questions reflecting high level thinking	1	0	3	4	(14)	22
18.	Questions over the other students' heads	(8)	3	2	3	6	22
19.	Controversial questions	1	4	(7)	5	5	22
20.	Simplistic questions	6	(7)	3	3	3	22

Note: Circled numbers are highest number of professors scoring such frequencies. Of the twenty three professors who responded to the questionnaire, not all responded to all items.

Questions students ask of other students are seen as great contributors to classroom atmosphere. Perhaps this is because the very nature of these questions facilitates an atmosphere of communication and community (Table 6, Item 16). Questions students ask of other students are co-developers of the entire classroom conversational discourse involving the lecturer and students.

Over seventy-five per cent of the professors who responded to the questionnaire agreed with the statement that students' questions resulting in expression of personal opinion are important in the classroom (Table 7, Item 4). Furthermore, all professors, except for one who scored a neutral three, do not mind if a student asks a question which reflects an opinion that is different than the professor's (Table 7, Item 6).

However, questions which require integration of fact with opinion (Table 6, Item 12) are seen as making a greater contribution to the classroom atmosphere than questions which focus exclusively on opinion (Table 6, Item 11). Perhaps this is because opinion tends to be subjective, arbitrary, and difficult to analyze. Also, American educational and cultural ideals require significant proof that is factual and measurable in support of one's opinion in order for the opinion expressed to make any significant contribution.

Fewer professors were found united on questions which refute and their contribution to the classroom atmosphere (Table 6, Item 9). There were almost as many professors who gave a neutral three as those who gave a strong five in favor of its contribution to classroom atmosphere. This indicates that professors have differing opinions in regard to its contributions. One professor commented that whether or not positive contribution is made depends on attitude and tone.

Questions related to repetition (Table 6, Items 5 and 6) were scored a neutral three by most professors in their contribution to classroom atmosphere.

Questions related to repetition (Table 6, Items 5 and 6) were scored a neutral three by most professors in their contribution to classroom atmosphere. In further categorization of questions related to repetition, (e.g., questions which elicit repetition (Item 5) and echo questions which seek exact repetition (Item 6)), professors weighted echo questions which seek exact repetition on the side of little or no contribution. Whereas, questions which elicit repetition but not exact repetition are generally scored by professors as generally having greater contribution to the classroom atmosphere.

Questions which challenge the facts and the teacher (Table 6, Item 8) had a variety of responses. Seven professors scored five for great contribution, six scored four, three professors scored three, three scored two, and two scored one. Such a distribution of scores indicates that most professors generally welcome questions which challenge them as professors and the facts they are presenting. However, there is a significant number who are less willing to rank challenging questions and their contribution to the classroom atmosphere any higher than a neutral three.

Most professors scored questions which digress from the subject (Table 6, Item 13) either low in their contribution to atmosphere or as having no contribution at all. There were however a few renegade professors who scored over a neutral three with two professors even giving digressionary questions a score of five.

Controversial questions (Table 6, Item 19) were scored a neutral three by most professors in regards to their contribution to classroom atmosphere. However, there were five professors who scored a four, and five who scored a five, making a total of ten who scored on the positive side indicating that controversial questions make contribution toward classroom atmosphere. Profes-

depends on the nature of the question and the controversy as to the contribution made to the classroom atmosphere.

Scores for questions implying agreement/disagreement (Table 6, Item 7) were grouped clearly on the positive end of the scale toward contribution. Eight professors scored a four and six professors scored a five. Only two professors scored a two, and no professors indicated that questions implying agreement/disagreement made no contribution at all.

Finally, and not surprisingly, simplistic questions (Table 6, Item 20) received little credit for contribution to classroom atmosphere and were scored by most professors on the negative end of the scale.

To briefly summarize, questions which contribute most to classroom atmosphere are questions which are of general interest to the class and somehow benefit all members of the class rather than solely the person asking the question. Questions which are of an opinion nature should be supported with fact. And, extra care should be taken with attitude and tone when asking controversial questions or those questions which indicate disagreement or challenge. Questions which are simplistic, digress, or are off the subject should be avoided.

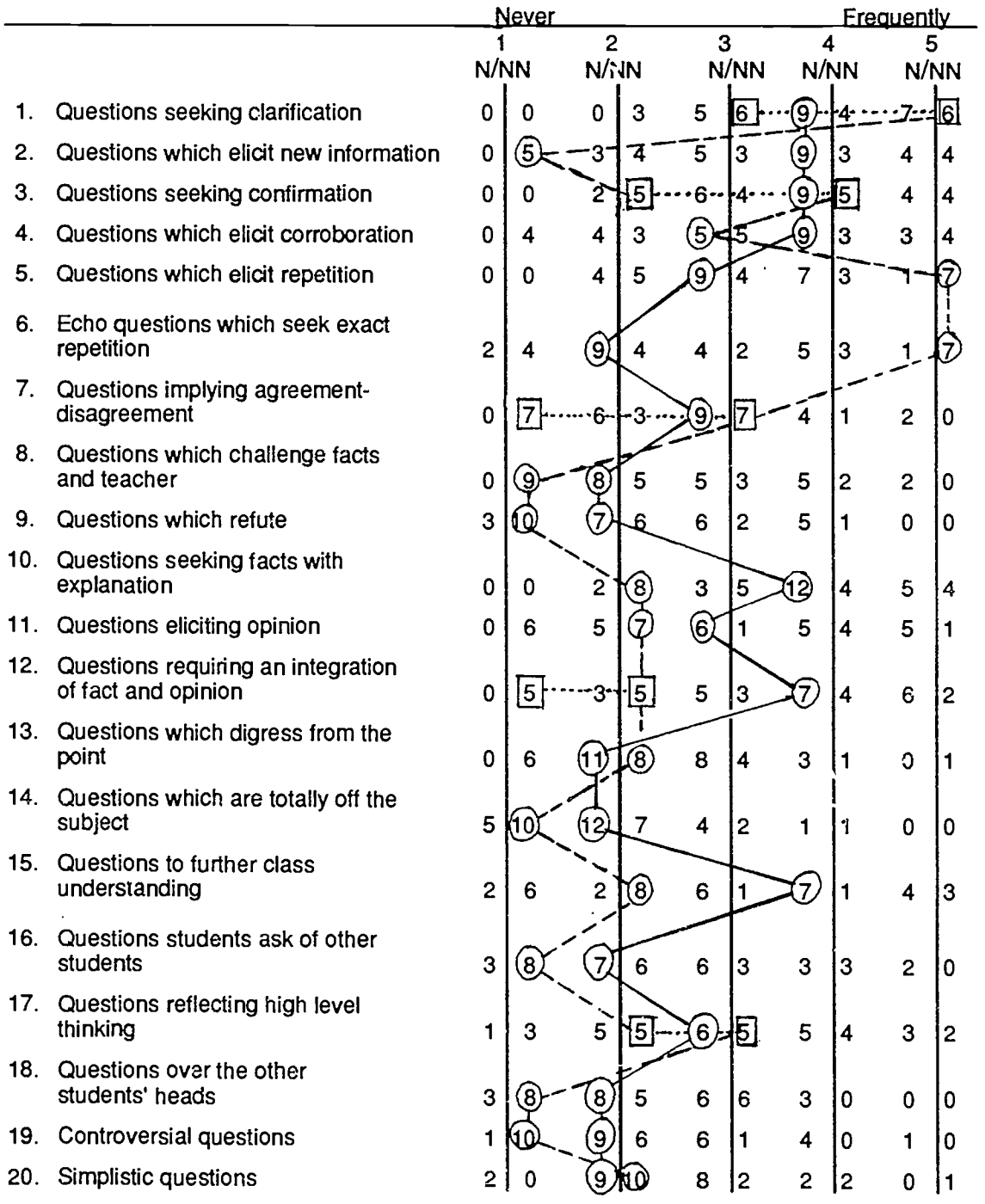
Student Questions and Their Frequency of Occurrence

Because non-native students need to meet the language expectations of their professors as well as fellow classmates, it was decided to include a section on the questionnaire that would provide information on just what kinds of questions professors find that are actually being asked and how often they are being asked.

To measure frequency of occurrence in the questionnaire, the question types were listed with a frequency measure of 1 to 5, 1 being never and 5 being frequently. Professors were asked how often the types of questions were asked in a typical class they teach, first for native speakers and second for non-native speakers (see Appendix F, Part 2, Section B).

Data gained from the questionnaire demonstrated wide ranges of frequency in asking questions for both native and non-native speakers. Professors were fairly united in their perceptions of the frequency with which questions were asked in their classrooms. However, professors did seem to be more united on frequency scorings for native speakers than for non-native speakers. Perhaps the reason for this agreement is the fact that it is easier to measure native speakers in general, primarily because there are more of them in the class, which in turn makes them more easily observable. Scores were more diffuse for non-native speakers and often closely clustered at two different points on the scale of measure, rather than at a single point on the scale which was more common for native speakers (Table 7). There was one item for non-native speakers on which professors were paradoxically and equally split; five professors scored a value of four on the frequent end of the scale, and at the same time another five also scored a value of two on the never end of the scale (Table 8, Item 3).

Table 7.-- Frequency of occurrence: Comparison of native and non-native speakers.



Note: Circled numbers are highest number of professors scoring such frequency. ——— connect Native speaker frequencies. — — — connect Non-Native speaker frequencies.Squared numbers connected by dots indicate equal number of professors scoring different frequencies.

Table 8.--Types of questions asked in the classroom and the frequency rate observed by professors of non-native speaking students as compared with the frequency rate of native speaking students. See Appendix D, Part 2, Section B for questionnaire.

Item # on ques.	Question type	NON-NATIVE SPEAKERS # of Profs scoring at freq. level	NATIVE SPEAKERS # of Profs scoring at freq. level
#5	elicit repetition	7 at 5	9 at 3 and only 1 at 5
#6	echo/exact repetition	7 at 5	9 at 2 and only 1 at 5
#1	clarification	6 at 5	9 at 4 and 7 at 5
#3	confirmation	5 at 4 and 5 at 2	9 at 4
#7	agree/disagree	7 at 3	9 at 3
#4	corroboration	5 at 3	9 at 4
#17	high level	5 at 3 and 5 at 2	6 at 3
#20	simplistic	10 at 2	9 at 2
#15	further class under-standing	8 at 2	7 at 4
#10	facts with explanation	8 at 2	12 at 4
#13	digression	8 at 2	11 at 2
#11	elicit opinion	7 at 2	6 at 3
#12	integration of fact/opinion	5 at 2 and 5 at 1	7 at 4
#2	new information	5 at 1	9 at 4
#16	questions students asked of other students	8 at 1	7 at 2 and 3 at 1
#18	over other students heads	8 at 1	8 at 2 and 3 at 1
#8	challenge facts and teacher	9 at 1	8 at 2 and 1 at 1
#9	questions which refute	10 at 1	7 at 2
#14	totally off the subject	10 at 1	12 at 2 and 5 at 1
#19	controversial questions	0 at 1 and 6 at 2	9 at 2 and 1 at 1

Scoring on many question types showed similarities (see Table 9) in frequency level between native and non-native speakers as well as sharp contrasts. High level questions and simplistic questions asked by native speakers and non-native speakers were scored similarly by professors. High level questions scored a neutral three for both groups while simplistic questions scored a two indicating, perhaps, that professors observe that non-native speaking students are just as able as native speaking students in asking high level questions and perhaps just as reluctant as native speakers in asking simplistic questions.

Table 9.--Question types receiving similar frequency scoring by professors for native and non-native speakers.

	NATIVE	NON-NATIVE
Question type	Nu. of prof. at fre. level	Nu. of prof. at fre. level
Questions/high level	6 at 3	5 at 3
Questions/simplistic	9 at 2	10 at 2
Questions/digress	11 at 2	8 at 2
Questions/refute	7 at 2	10 at 1
Questions/off subject	12 at 2	10 at 1
Questions/controversial	9 at 2	10 at 1
Questions/challenge facts and teacher	8 at 2	9 at 1
Questions students asked of other students	7 at 2	8 at 1
Questions over other students' heads	8 at 2	8 at 1

Similarities were also seen in low frequencies of asking questions which digress, refute, challenge the facts and the teacher, and which are off the subject and controversial. Furthermore, it is rare while in a lecture setting for either native speakers or non-native speakers to ask questions of their fellow classmates in class or to ask questions that are over other students heads (see Table 7, Items 16 and 18).

Sharp contrasts were also found in frequency levels between native and non-native speakers. It is perhaps not surprising to find that non-native speakers tended to score lower in frequency levels of questions asked in comparison to their native speaking classmates (Table 7). The sharpest contrasts were found in questions seeking facts with explanation, questions eliciting new information, and questions furthering class understanding (Items 10, 2, and 15). Sharp contrast in frequency scoring by professors for native and non-native speakers can be seen in Table 10.

Table 10.--Question types receiving sharp contrast in scoring by professors for native and non-native speakers.

	NATIVE	NON-NATIVE
Question type	Nu. of prof. at fre. level	Nu. of prof. at fre. level
Questions/seeking facts and explanation	12 at 4	8 at 2
Questions/eliciting new information	9 at 4	5 at 1
Questions/furthering class understanding	7 at 4	8 at 2

The question type most frequently asked by native speakers, questions seeking facts with explanation, scored a high four by professors. In contrast, professors scored the same question a low two for non-native speakers (Table 11, Item 10). Questions eliciting new information scored a high four for native speakers whereas, it received a low one for non-native speakers. Questions furthering class understanding also scored a high four for native speakers while non-native speakers again scored both a low two and a low one at the never end of the scale (Table 7 and 11, Items 2 and 5).

The two top question types most frequently asked by non-native speakers are questions which elicit repetition and echo questions which seek exact repetition (Table 8, Items 5 and 6). As we have observed earlier, questions eliciting repetition are not valued by professors in the learning process, nor are they seen as significant contributors to classroom atmosphere.

In summary, many types of questions asked by native and non-native speakers were scored similarly by professors in their frequency of occurrence in their classrooms. Similarities in frequency of occurrence of certain types of questions may be analyzed for general characteristics in strengths and weaknesses. However, those question types that most sharply contrast in their frequency of occurrence between native and non-native speaking students should perhaps require the most attention. ESL/EFL instructors may find it of value to analyze the type and frequency of questions asked by their students in order to discover the strengths and weaknesses related to the class as a whole; however, most importantly and of most value to students will be an analysis of individual students' strengths and weaknesses.

Table 11.--Types of questions asked in the classroom and the frequency rate of native speaking students, as observed by professors, compared with the frequency rate of non-native speaking students. See Appendix F, Part 2, Section B for questionnaire.

Item # on ques.	Questions type	NATIVE SPEAKERS # of Profs scoring at freq. level	NON-NATIVE SPEAKERS # of Profs scoring at freq. level
#10	facts with explanation	12 at 4	8 at 2
#1	clarification	9 at 4	6 at 5
#2	new information	9 at 4	5 at 1
#3	confirmation	9 at 4	5 at 2 and 5 at 4
#4	corroboration	9 at 4	5 at 3
#12	integration of fact & opinion	7 at 4	5 at 1 and 5 at 2
#15	further class understanding	7 at 4	8 at 2 and 6 at 1
#5	elicit repetition	9 at 3	7 at 5
#7	agreement/disagreement	9 at 3	7 at 3 and 7 at 1
#11	elicit opinion	6 at 3	7 at 1 and 6 at 1
#17	high level	6 at 3	5 at 3 and 5 at 2
#6	exact repetition (echo)	9 at 2	7 at 5
#19	controversial	9 at 2	10 at 1 and 6 at 2
#20	simplistic	9 at 2	10 at 2
#14	off the subject	12 at 2	10 at 1 and 7 at 2
#13	digression	11 at 2	8 at 2 and 6 at 1
#18	over other students' heads	8 at 2	8 at 1
#8	challenge facts and teacher	8 at 2	9 at 1
#9	refute	7 at 2	10 at 1
#16	questions students asked of other students	7 at 2	8 at 1

CHAPTER 4

PEDAGOGY FOR ASKING QUESTIONS

> Without the question there is no processing of information. The absence of the question indicates an absence of learning, for it is the question that centers the person's attention upon some topic; it is the question that enables data processing; and it is the question that determines whether a conclusion is justified or not (Hunkins 1976, 2).

The overall task in this thesis is to assist TESOL professionals to prepare non-native speakers for asking questions in American graduate level classrooms. Difficulties in asking questions, particularly for Chinese speakers, have been discussed. In order to understand what a non-native speaker must face in asking questions in the classroom, sociolinguistic and pragmatic features involved in the asking of questions have also been discussed. In Chapter two, questions have been categorized according to form and function, as well as cognitive and affective domain. In Chapter three, questions asked by both native and non-native students have been considered from the professor's point of view: how do professors perceive questions asked by students as to their value for learning and their contribution to the classroom, and what is the rate of frequency with which various types of questions occur in the classroom.

In considering the practical nature of how non-native speaking students might be taught to ask questions, activities for such may be grouped into two broad categories, meta-cognitive and cognitive. Very simply, meta-cognitive activities are those activities that assist the learner in understanding the overall process of how questions are asked. Cognitive activities are those that provide

process of how questions are asked. Cognitive activities are those that provide opportunities for students to ask questions in situations that are as meaningful and natural as possible. Both kinds of activities, meta-cognitive and cognitive, are important in strengthening questioning skills.

Meta-cognitive activities assist learners in planning, implementing, and assessing their questions. In planning, the learner determines the types, functions, domains, and levels of questions and focuses on the development of a schema for the use of questions. In implementation, learners utilize questions to actually gain understanding of information in situations that are as authentic as possible. Students must monitor their questions by paying attention to what they already know and what they are presently learning about asking questions. In assessment, learners judge and evaluate the effectiveness of their chosen questions. They also make evaluations of questions found in materials or in the investigations of others (O'Malley, Chamot, Stewner-Manzanares, Kupper, and Russo 1985; Hunkins 1976).

It is important for non-native speakers to continue to develop and strengthen skills gained via the meta-cognitive activities as much as possible. These skills will aid them greatly when they enter regular university classes. Therefore, the practical suggestions made in this section will largely focus on meta-cognitive activities surrounding the planning, implementing, and assessment of asking questions.

Sample Lesson--Study Skills: The Domain and Level in Asking Questions
Teacher's Instructions and Rational
(adapted from MeKenna 1987)

Group of students: Advanced

Teaching material: TV News Interview - ABC's Nightline

Description of students: This lesson is designed for students whose overall general focus is academic preparation for future studies in American universities.

Rationale for material chosen: News programs are among the most difficult for ESL students to listen to; however, news interviews provide many examples of different kinds of questions. Such a large number of questions enables the students to see differences in domain and level of questions.

Objective: Students will improve in the skill of asking questions by identifying domain and level of questions.

Warm up: The teacher presents the word embargo and elicits knowledge of the word. He/she involves the students in roleplay in order to demonstrate the meaning of the word.

Preparation for roleplay: The teacher asks class to stand. He/she presents two hypothetical nations, Sud and Bud, and indicates that one third the students represents each nation. The remaining third will represent other hypothetical nations of the world. The citizens of Sud and Bud each elect (choose) a leader who may be called president, premier, king, chairman, or

Cue card for Buds: You have just been invaded by the Suds and your government leaders have been ousted. The Suds are in control of the media and are trying to persuade the world to side with them in their annexing of your territory to their own. You have set up an underground radio. Prepare a news broadcast to be sent to the nations of the world which refutes the claims made by the Suds and which gives reasons why other nations should cooperate in an effort to help you regain your country.

Cue card for world leaders: The Suds have invaded the Buds. You have heard the claims of the Suds and the Buds. You have decided to help the Buds. Discuss the pros and cons of using an embargo against the Suds. Consider the effect of an embargo on the leaders of Sud, the military forces, and, the general public. Consider the feasibility of an embargo. (Can all borders be guarded? Will all nations agree?)

Vocabulary preview: Small groups are given at least two vocabulary words and one expression to decide together how they will explain the meaning. Students may have English-only dictionaries. After a limited amount of time, various students will explain the meaning of their word or expression to the rest of the class.

vocabulary	expressions
offensive	long drawn out
capacity	war of attrition
assuming	do the things that were outlined
embargo	on the fence
sensitivity	at best

whatever legitimate title the citizens decide. Because the remaining nations have only leaders and no citizens, the leaders 'represent' the wishes of their citizens. These leaders choose names for their countries and titles for themselves as leaders. As time permits, they may also choose forms of governments. However, the entire process of preparation should be limited to approximately five minutes. The teacher should keep in mind that the roleplay serves as a warm-up activity.

The teacher next presents a hypothetical situation: The Suds have invaded nearby Bud in order to have free access to the Helemian Sea. The surrounding nations are outraged and have decided to oppose the invasion by placing an embargo on the nation of Sud. They declare that no ships from Sud may enter their ports.

Students extemporaneously roleplay the situation. The time for roleplay should be limited to five minutes. Thus, total time including preparation should be about ten minutes. The following cue cards could be used to provide direction for the roleplay.

Cue card for Suds: You have reasons why you feel justified (right about) invading Bud and incorporation Bud's territory into your own nation. Prepare a news report to be broadcast internationally stating your claims to the territory of Bud and why the nations of the world should support you and not interfere with your plans.

foreign policy	build-up rate
constituents	look with great favor

Presentation for viewing of news interview: The teacher shows an edited five minute segment of video and asks the students to take notes on questions they hear. Students tell question or questions they think they catch. The teacher may replay the video two or three times. The teacher elicits from different students what cognitive/affective level the questions are at and why those particular levels were chosen. The teacher should have the cognitive/affective levels clearly observable in the room (see Chapter 2 pp. 7-14 or Appendix H, Handout 1).

The teacher repeats process with another five minute segment.

The teacher passes out the remaining questions (Appendix I, Handout 2) to the same small groups that discussed vocabulary. Each group discusses what level they believe the questions represent and prepares to explain why they think so. As students make explanations to the whole class, the teacher allows discussion and debate concerning the chosen level. During the discussion, the teacher completes a record sheet on the overhead projector. (See Appendix J for a completed example record sheet.)

Record Sheet: For teacher use with an overhead projector (adapted from Hunkins 1976)

Topic: _____

Key words of question raised	Cognitive/ Affective Level	Reason for choosing level
#1		
#2		
#3		

Concluding discussion: The teacher points out that these particular questions have been observed in a television news interview. He/she discusses how the questions might be used in an academic setting. Would register and appropriateness change? Which questions would be appropriate to ask a lecturer on this subject in a classroom? What factors would need to be considered? Suppose the topic was different. How would you adjust questions? Suppose the lecturer was different?

Additional possibilities:

1. Choose a certain level of question and think how it could be changed to a higher or lower level. Think how the question may be changed from one domain to another.

2. Discuss the reaction/response made to the question by the person being interviewed. How did he react or respond? Was the question appropriate? Had you been the person being interviewed, how would you have reacted or responded?

3. After students are familiar with levels of questions, the suggested roleplay situation may be exploited for future activity with cognitive/affective levels. Suds, Buds, or other nations may be asked in their groups to prepare questions at levels specified by the teacher. For example: the nations of the world may be asked to work together to propose questions at a knowledge level or an evaluative level that need to be discussed concerning possible effects of the embargo. The Suds may be asked to compose questions at an evaluative or a synthesis level regarding how they may break, oppose, or undo the embargo. And, finally, the Buds may be asked to pose questions at an

application or a comprehension level regarding how the other nations of the world may support their efforts for release.

4. Analyze the questions from a functional perspective. Refer to the chart of examples and explanation of question types found in the questionnaire (Appendix F). What function does each question perform?

Possible problems:

If too much time is spent for any one aspect of the lesson, students may get bogged down in details. The lesson needs to move fast. All questions do not need to be discussed. At the teacher's discretion, some questions may be assigned for analysis as homework.

If students are not all at the same level of comprehension, classmates can be encouraged to assist each other.

More Suggestions for Lessons Related to Domain and Level in Asking Questions

Suggestion 1: Question Profile. Students may make a personal profile in order to perceive patterns in levels of questions they ask in the classroom over a measured period of time. The profile may also be adapted for use in observing the class as a whole or in observing a particular professor's patterns in asking questions. See the sample profile below.

Question Profile

Class: Economics

Cognitive levels

Evaluation

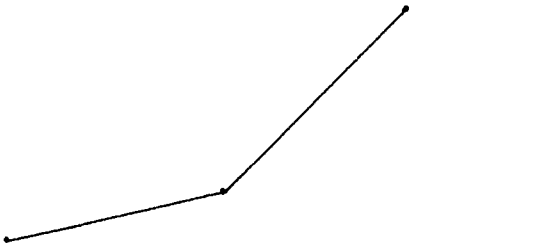
Synthesis

Analysis

Application

Comprehension

Knowledge



Dates checked: Day 1 Day 2 Day 14

Suggestion 2: Judging Questions. Students may judge their questions with specified criteria for good questions. The criteria chart may be enlarged in order to write the question samples.

Criteria check on questions

Criteria / Question Sample	1	2	3	4	5	6	7	8	9	10	11	12
1.												
2.												
3.												
4.												
5.												
6.												

General reaction to questions:

Criteria:

1. Are the questions academically correct in that they relate to the objectives of the course and or the lecture of the day?
2. Do the questions accomplish the purpose for which they are asked?
3. Do the questions assist in the assimilation of the material to be learned?

4. Do the questions lead to questions at higher levels?
5. Is the timing of the questions right? Is there enough time to provide an adequate answer?
6. Are the questions clearly worded?
7. Is the grammatical form correct?
8. Does the professor understand the question and make the desired response ?
9. Do the questions contribute to the classroom atmosphere?
10. Are the questions interactionally appropriate?
11. Do the questions trigger other people's interests as well as mine?
12. Do the questions lead to the formation of concepts and generalizations?

Suggestion 3: Professor Response. Students may observe and note the professor's response to questions asked by students as follows:

a) How did the professor deal with the students' questions?

b) Did the professor seem to think the questions were appropriate?

Suggestion 4: Small Group Activity. Students may also be put in groups to work on the formulation of questions. As questions are formed, the group may clarify vocabulary, make joint inferences, and pool guesses. Whitaker (1983) suggests that the students use dictionaries and even occasional use of the mother tongue. The advantage in such a method of forming questions is that learners ask questions that are at a level that is significant for them.

Suggestion 5: Analysis Checksheet. Students take periodic samplings of questions asked in the classroom as often as wished in order to determine the patterns and/or preferences for particular kinds of questions as well as to observe improvements. See the sample analysis checksheet with example questions below.

Analysis checksheet

	Level
Q 1 - What are the costs of a long, drawn out political war?	Knowledge
Q 2 - How long will it take the embargo to work?	Evaluation
Q 3 - The administration thinks this, but what do you think?	Valuing

Overall reaction: There was a balance of levels in cognitive questioning. An affective question was also included.

Suggestions for Activities Related to Asking Questions and the Development of Classroom Community.

Listening committees: Students may give talks in their own fields with listening committees preparing to ask questions of either those listening to the talk or the person actually giving the talk (Dittman, cited in Brann 1976 as personal communication). The teacher should help students to attend to various sociolinguistic and pragmatic factors as discussed in Chapter one.

Small groups: Students could be put in groups to work on the formulation of questions. As questions are formed, the group should consider sociolinguistic and pragmatic factors as discussed in Chapter one. Students can predict how their questions may be perceived by professors as well as their peers. This builds confidence and fluency. During such group activity, the teacher is able to observe, advise, and inform.

Video taping: In as many questioning sessions as possible, videotape the students and their questioning behavior. They are not often able to judge

their performance and comprehensibility unless they view themselves. In order to observe progress, it is particularly important to videotape at the beginning and at the end of the semester.

Concluding Discussion

Non-native speaking students must move beyond linguistic form and the idea that language is a collection of discrete points (Li 1983; Kern 1989). In preparing for the American graduate level classroom, non-native speakers must become familiar with the pragmatic use of questions and increasingly aware of sociolinguistic features and the pragmatic context within which questions function.

Asking questions makes vital connections in the learning process by making contributions to intellectual development and sharpening critical thinking skills by requiring higher levels of thinking.

Professors observe that native and non-native speakers do not necessarily have unlike patterns of frequency in asking certain types of questions. For example, both native and non-native speaking students frequently ask questions seeking clarification and corroboration, and both groups of speakers score relatively close in frequency of occurrence (See Table 7, Items 1 and 4). However, even though both groups score not too far from one another on the scale, the overall rate of frequency with which native speakers ask questions is generally higher than non-native speakers.

Sharpest contrasts in frequency of questions asked by native and non-native speakers can be seen in that native speakers more frequently ask questions which seek facts along with explanation, questions which elicit new information, and questions which further class understanding. It is perhaps at

these points of contrast that non-native speakers could begin the challenge of increasing the frequency of such kinds of questions.

Questions that are seen by professors as those that contribute most to class atmosphere are questions that are of general interest to the class and those that benefit all members. Questions of opinion should be supported by fact. It is also important to watch attitude and tone. It goes without saying, that students should avoid simplistic, digressionary questions and those off the subject.

The challenge for ESL professionals is to provide as many opportunities as possible for learners to practice their questioning skills in authentic situations. It is then that learners will grow in their behavioral competence and be prepared to achieve their learning goals through the asking of questions in the classroom.

APPENDIX A

STUDENT COMMENTS ON INADEQUACIES
OF THEIR ORAL ABILITIES

	Comments	Number of Students Reporting the Comment
1.	I'm not used to raising questions in class.	5
2.	I'm not used to interrupting the professor.	5
3.	Before I figure out how to express myself they have already changed the topic of discussion.	4
4.	At first I didn't know when to interrupt. It seemed the professor was talking all the time.	3
5.	If I have different opinions about a certain point in the lecture, I check with the professor during the break.	3
6.	I'm not sure if my classmates are interested in what I am saying.	2
7.	My English is not good, I don't want to make a fool of myself.	2
8.	Well, I don't have to ask the professor to repeat, I just look at the notes of my peers.	1
9.	Once when I was asking a question, I got stuck with an expression and I had to give up. How embarrassing!	1

(Wang 1983)

APPENDIX B

ACADEMIC NEEDS ACCORDING TO MAJOR*

Major - - - - - - - - - -	Over All Mean	All	Hum	SSc	HS	Bus	Edu	Eng	Mus	PAf	USt
Skill											
Read Texts	90	63	50	95	100	85	75	93	100	100	85
Read Journals	58	25	0	77	53	48	50	64	50	75	43
Give Talks in Class	41	13	0	59	47	38	25	34	50	88	29
Participate in Panel Discussion	35	0	50	45	27	29	25	32	50	100	29
Take Multiple Choice Exams	45	63	0	36	47	57	50	50	0	25	29
Take Essay Exams	48	25	0	55	47	43	50	52	100	50	43
Take Notes in Class	84	63	50	86	86	86	75	89	50	88	86
Write Lab Report	34	13	0	14	60	0	25	65	0	13	14
Write Book Review	46	25	0	68	33	48	50	43	50	63	29
Make Interviews	18	0	0	23	33	5	26	25	0	0	14
Make Research Proposal	32	0	0	41	27	14	25	43	0	88	57
Write Research Paper	58	50	0	73	40	52	50	57	0	88	57
Read Graphs and Charts	41	13	0	50	33	38	50	55	0	0	29
Make Graphs and Charts	38	13	0	41	33	38	50	55	0	0	29
Discuss Issues in Class	45	25	0	64	47	29	25	41	50	100	43
Ask Questions in Class	68	38	0	68	67	57	75	77	50	88	71

*All scores are to be read as percentages

(Ostler 1980)

APPENDIX C

ACADEMIC NEEDS ACCORDING TO CLASS STANDING*

Year in College	1-2	3-4	MA/MS	PhD	Mean Over-All
Skill					
Read Texts	92	89	87	80	90
Read Journals	48	78	73	80	58
Give Talks in Class	33	33	63	80	41
Participate in Panel Discussion	28	33	50	60	35
Take Multiple Choice Exams	53	22	37	20	45
Take Essay Exams	47	56	53	40	48
Take Notes in Class	83	100	83	80	84
Write Lab Report	43	33	132	0	34
Write Book Review	41	44	57	60	46
Make Interviews	16	11	27	20	18
Write Research Proposal	29	11	27	20	18
Write Research Paper	53	78	60	80	58
Read Graphs and Charts	37	33	50	60	41
Make Graphs and Charts	38	44	36	60	38
Discuss Issues in Class	38	43	66	0	38
Ask Questions in Class	65	56	0	80	68

*All scores are to be read as percentages

(Ostler 1980)

APPENDIX D

LEVELS OF QUESTIONS WITHIN THE COGNITIVE AND AFFECTIVE DOMAINS

Questions Within the Cognitive Domain	Questions Within the Affective Domain
Level 1--KNOWLEDGE QUESTIONS INVOLVE:	RECEIVING QUESTIONS INVOLVE:
Knowledge of specifics	Awareness
Knowledge of ways and means of dealing with specifics	
Knowledge of the universals and abstractions in a field	Controlled or selected attention
Level 2--COMPREHENSION QUESTIONS INVOLVE:	RESPONDING QUESTIONS INVOLVE:
Translation	Acquiescence in responding
Interpretation	Willingness to respond
Extrapolation	Satisfaction in response
Level 3--APPLICATION QUESTIONS INVOLVE:	
Application	
Development	
Demonstration	

Level 4--ANALYSIS QUESTIONS INVOLVE:

Analysis of elements

Analysis of relationships

Analysis of organizational principles

VALUING QUESTIONS INVOLVE:

Acceptance of a value

Preference of a value

Commitment

Level 5--SYNTHESIS QUESTIONS INVOLVE:

Production of a unique communication

Production of a plan, or proposed set of Operations

Derivation of a set of abstract relations

ORGANIZATION QUESTIONS INVOLVE:

Conceptualization of a value

Organization of a value system

Level 6--EVALUATION QUESTIONS INVOLVE:

Judgments in terms of internal evidence

Judgments in terms of external evidence

CHARACTERIZATION OF VALUES OR VALUE COMPLEX QUESTIONS INVOLVE QUESTIONS:

Within a generalized set

Characterization

(Hunkins 1976, 66-67)

APPENDIX E

SAMPLE COVER LETTER FOR QUESTIONNAIRE

February 1, 1990

Dr. H_____ F_____
Graduate Director
Biology Department
M_____University
Oxford, Ohio - - - - -

Dear Dr. F_____,

Mr. L_____ G_____, a former English as a foreign language student of mine at B_____University, has given your name to me as a professor who might be willing to fill out a questionnaire for my research. Responding to the questionnaire should take about twenty minutes. Thank you in advance for your response.

I am doing my M.A. thesis here at William Carey International University on "Chinese Students and Questioning Skills in American University Classrooms". I have found that it is often the case that newly arrived Chinese students from the People's Republic of China do not ask questions in the classroom. As a part of my research, I need to find out from graduate level professors just what types of questions they expect native speaking students in general to ask in their classrooms. By finding out this information, English as a second language teachers can help Chinese students as well as other foreign students to develop strategies for asking competent questions in the classroom.

I appreciate you taking time to provide your valuable insights. These items can be answered on the basis of your experience. I am hoping to have all questionnaires returned by February 16, 1990. Thank you for your consideration.

Sincerely,

Gail Portin
(818) 398- - - -

Enclosures
Questionnaire
Stamped return envelope

APPENDIX F

QUESTIONNAIRE

BIOGRAPHICAL INFORMATION

Name _____ Position/Title _____

Name of Institution _____

Academic Department Date _____ Date _____

Class Information

See information below to complete chart.

Name of Class	C/N	Semesters Taught	Class Type	Class Size	# of Non-Native Eng. Speakers
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					

Name of class . . . . . Graduate level classes you teach in which students are most likely to ask questions

C/N . . . . . C = Currently teaching / N = Not currently teaching

Semesters taught . . . . . Number of semesters you have taught the class

Class type . . . . . Lecture, seminar, lab or other

Class size . . . . . Number of students in class

# of non-native English speakers . Number of non-native English speakers in the class

Part 1 - STUDENT QUESTIONS IN THE CLASSROOM

For the following statements, please circle the appropriate number to indicate your agreement and add comments.

	Strongly Disagree				Strongly Agree
1. It is important for students to ask questions in the classroom.	1	2	3	4	5
Comment: _____					
2. Questions asked by students help them to assimilate the material to be learned.	1	2	3	4	5
Comment: _____					
3. Student questions help create a positive classroom environment.	1	2	3	4	5
Comment: _____					
4. Student questions which result in discussion where students are able to express personal opinion are important in my class.	1	2	3	4	5
Comment: _____					
5. Student questions that are loosely linked to the subject at hand are disruptive.	1	2	3	4	5
Comment: _____					
6. I don't like it when a student asks a question which reflects an opinion that is different from mine.	1	2	3	4	5
Comment: _____					

	Strongly Disagree				Strongly Agree
7. Generally speaking student questions are somewhat disruptive when asked in class.I prefer that students find what they need to know some other way.	1	2	3	4	5
Comment:_____					
8. I have a set time when students should ask questions and I don't like being interrupted at other times.	1	2	3	4	5
Comment: _____					
9. In order to keep up with the day's material, I feel it is important for me to control the direction of student questions in the class.	1	2	3	4	5
Comment: _____					
10. Student questions that get me and/or the class "off track" should not be asked in class.	1	2	3	4	5
Comment: _____					
11. Students are bothered by other students' irrelevant questions in class.	1	2	3	4	5
Comment: _____					
12. A foreign student shouldn't ask a question unless his or her spoken grammar is good.	1	2	3	4	5
Comment:_____					

		Strongly Disagree				Strongly Agree
13.	I assume that foreign students will take responsibility for understanding the required material for my class. This includes asking necessary questions.	1	2	3	4	5
	Comment:_____					
14.	I would rather a foreign student risk his or her poor grammar and ask a question, than to remain silent in class.	1	2	3	4	5
	Comment:_____					
15.	I prefer for foreign students that don't speak well, to ask questions after class.	1	2	3	4	5
	Comment:_____					
16.	Foreign students do not need to speak or ask questions in class so much. The most important thing for them to do is to understand the material and pass the tests.	1	2	3	4	5
	Comment:_____					

17. Do you have any other comments about student questions in the classroom?

_____

_____

Part II - TYPES, FUNCTIONS AND USES OF QUESTIONS

The remainder of this questionnaire includes two sections. Section A is concerned with student questions and their value to learning as well as their contribution to the classroom atmosphere. Section B concerns student questions and their frequency of occurrence in the classroom, first with native speakers and second, with non-native speakers.

Section A - STUDENT QUESTIONS AND THEIR VALUE TO LEARNING

Rate the following types of questions according to their value to learning, i.e., helping students assimilate materials, stimulating student interest. See the attached chart of example questions and explanations regarding question types (pp. 9-10).

QUESTION TYPES	not at all valuable				very valuable
1. Questions seeking clarification	1	2	3	4	5
2. Questions which elicit new information	1	2	3	4	5
3. Questions seeking confirmation	1	2	3	4	5
4. Questions which elicit corroboration	1	2	3	4	5
5. Questions which elicit repetition	1	2	3	4	5
6. Echo questions which seek exact repetition	1	2	3	4	5
7. Questions implying agreement /disagreement	1	2	3	4	5
8. Questions which challenge facts and teacher	1	2	3	4	5
9. Questions which refute	1	2	3	4	5
10. Questions seeking facts with explanation	1	2	3	4	5
11. Questions eliciting opinion	1	2	3	4	5
12. Questions requiring an integration of fact and opinion	1	2	3	4	5
13. Questions which digress from the point	1	2	3	4	5
14. Questions which are totally off the subject	1	2	3	4	5
15. Questions to further class understanding	1	2	3	4	5
16. Questions students asked of other students	1	2	3	4	5
17. Questions reflecting high level thinking	1	2	3	4	5
18. Questions over the other students' heads	1	2	3	4	5
19. Controversial questions	1	2	3	4	5
20. Simplistic questions	1	2	3	4	5

Section A (cont.) - STUDENT QUESTIONS AND THEIR CONTRIBUTION TO CLASSROOM ATMOSPHERE

Rate the same types of questions according to their contribution to classroom atmosphere, i.e., creating positive attitudes, facilitating teacher/student and student/student relationships

QUESTION TYPES	no contribution				great contribution
1. Questions seeking clarification	1	2	3	4	5
2. Questions which elicit new information	1	2	3	4	5
3. Questions seeking confirmation	1	2	3	4	5
4. Questions which elicit corroboration	1	2	3	4	5
5. Questions which elicit repetition	1	2	3	4	5
6. Echo questions which seek exact repetition	1	2	3	4	5
7. Questions implying agreement/ disagreement	1	2	3	4	5
8. Questions which challenge facts and teacher	1	2	3	4	5
9. Questions which refute	1	2	3	4	5
10. Questions seeking facts with explanation	1	2	3	4	5
11. Questions eliciting opinion	1	2	3	4	5
12. Questions requiring an integration of fact and opinion	1	2	3	4	5
13. Questions which digress from the point	1	2	3	4	5
14. Questions which are totally off the subject	1	2	3	4	5
15. Questions to further class understanding	1	2	3	4	5
16. Questions students asked of other students	1	2	3	4	5
17. Questions reflecting high level thinking	1	2	3	4	5
18. Questions over the other students' heads	1	2	3	4	5
19. Controversial questions	1	2	3	4	5
20. Simplistic questions	1	2	3	4	5

Section B - STUDENT QUESTIONS AND THEIR FREQUENCY OF OCCURRENCE - NATIVE SPEAKERS

How often do native speakers of English ask the following types of questions in a typical class you teach?

QUESTION TYPES	Never				Frequently
1. Questions seeking clarification	1	2	3	4	5
2. Questions which elicit new information	1	2	3	4	5
3. Questions seeking confirmation	1	2	3	4	5
4. Questions which elicit corroboration	1	2	3	4	5
5. Questions which elicit repetition	1	2	3	4	5
6. Echo questions which seek exact repetition	1	2	3	4	5
7. Questions implying agreement/ disagreement	1	2	3	4	5
8. Questions which challenge facts and teacher	1	2	3	4	5
9. Questions which refute	1	2	3	4	5
10. Questions seeking facts with explanation	1	2	3	4	5
11. Questions eliciting opinion	1	2	3	4	5
12. Questions requiring an integration of fact and opinion	1	2	3	4	5
13. Questions which digress from the point	1	2	3	4	5
14. Questions which are totally off the subject	1	2	3	4	5
15. Questions to further class understanding	1	2	3	4	5
16. Questions students asked of other students	1	2	3	4	5
17. Questions reflecting high level thinking	1	2	3	4	5
18. Questions over the other students' heads	1	2	3	4	5
19. Controversial questions	1	2	3	4	5
20. Simplistic questions	1	2	3	4	5

Sect.- B (cont)-STUDENT QUESTIONS AND THEIR FREQUENCY OF OCCURRENCE NON-NATIVE SPEAKERS

How often do non-native speakers of English ask the following types of questions in a typical class you teach.

QUESTION TYPES	Never				Frequently
1. Questions seeking clarification	1	2	3	4	5
2. Questions which elicit new information	1	2	3	4	5
3. Questions seeking confirmation	1	2	3	4	5
4. Questions which elicit corroboration	1	2	3	4	5
5. Questions which elicit repetition	1	2	3	4	5
6. Echo questions which seek exact repetition	1	2	3	4	5
7. Questions implying agreement/ disagreement	1	2	3	4	5
8. Questions which challenge facts and teacher	1	2	3	4	5
9. Questions which refute	1	2	3	4	5
10. Questions seeking facts with explanation	1	2	3	4	5
11. Questions eliciting opinion	1	2	3	4	5
12. Questions requiring an integration of fact and opinion	1	2	3	4	5
13. Questions which digress from the point	1	2	3	4	5
14. Questions which are totally off the subject	1	2	3	4	5
15. Questions to further class understanding	1	2	3	4	5
16. Questions students asked of other students	1	2	3	4	5
17. Questions reflecting high level thinking	1	2	3	4	5
18. Questions over the other students' heads	1	2	3	4	5
19. Controversial questions	1	2	3	4	5
20. Simplistic questions	1	2	3	4	5

CHART OF EXAMPLES AND EXPLANATIONS OF QUESTION TYPES*

1. Questions seeking clarification: I'm not sure I understand the relationship between defense and offense.

2. Questions elicit new information: In what situations would we apply this formula?

3. Questions seeking confirmation: Network analysis isn't the same as PERT, is it?

4. Questions which elicit corroboration: How can one support the idea of a cause more than the idea of a threat?

5. Questions which elicit repetition: Sorry, could you please run through that point again?

6. Echo questions which seek exact repetition: Chomsky says what? Teacher probably repeats exact statement, so student can take notes.

7. Questions implying agreement/disagreement: I'm not sure about the logic. Are you suggesting that the ends justify the means? Does that justify their actions?

8. Questions which challenge facts and teacher: You're not asking us to believe that this formula actually works, are you?

9. Questions which refute: But, that's not true. If we go that route, we've got to realize that there will be someone that will try to block us on that side, too. Isn't that right?

10. Questions seeking facts with explanation: Could you explain, please, the events of November 25th that led to the resignation of the top leaders of East Germany?

11. Questions eliciting opinion: What do you think about the state of communism in Eastern Europe?

12. Questions requiring integration of fact and opinion: It seems obvious that East and West Germany will one day reunite to form one state; however, don't you think that such a large nation would be a threat to European stability?

13. Questions which digress from the main point: In a discussion related to the local government's responsibility in a recent disaster, a student asks about a similar disaster that took place in another state. The discussion becomes more generalized and broadens to include a discussion of disasters in general rather than the initial topic of the local government's responsibility in the recent localized disaster.

14. Questions which are off totally off the subject: In a discussion regarding bio-physics, a student might ask when the final exam is going to be.

15. Questions which further class understanding: The class may be discussing a certain issue that has everyone puzzled, when a certain student asks a question which turns the light on for the rest of the class.

16. Questions students asked of other students: In a discussion on current economic problems in the urbanization of third world countries, a student asks a fellow classmate which of the three policies being discussed is the best policy.

17. Questions reflecting high level thinking: This kind of question would reflect complex thinking and synthesis of abstract ideas and concepts.

18. Questions over the other students' heads: This kind of question may lead to a discussion in which only you and one brilliant student may participate.

19. Controversial questions: Such questions tend to stimulate controversy for the sake of controversy rather than for the sake of genuine inquiry.

20. Simplistic questions: These questions do not reflect any depth of thinking and do not evolve out of a serious involvement with the subject. They may possibly be used as a smoke screen by students who have other problems.

*Works listed below were used in the development of the Chart of Examples and Explanations of Question Types

Caldwell, Mary. 1983. An analysis of question types used in public conferences. Paper for ESP project, William Carey International University.

Candlin, C.N., J.M. Kirkwood, and H.M. Moore. 1978. Study skills in English: Theoretical issues and practical problems. In English for specific purposes: A case study approach, ed. Ronald Mackay and Alan Mountford, 190-219. London: Longman.

Farrar, Mary Thomas. 1985. Three models of discussion: A sociolinguistic analysis examining relationships among models of discussion and verbal interactional patterns. Paper presented at the Annual Meeting of the American Educational Research Association (3rd draft) Chicago, Illinois, March 31-April 4, 1985)

Hunkins, Francis P. 1976. Involving students in questioning. Boston: Allyn & Bacon.

APPENDIX G

DATA REVIEW OF PART 1 OF QUESTIONNAIRE WITH COMMENTS OF PROFESSORS

Statement and Comments	Number of Profs and Response Strongly Disagree 1	2	3	4	Strongly Agree 5
1. It is important for students to ask questions in the classroom.	0	1	0	3	19

Comments:

I encourage it, provided it is not overdone.
Too many would be disruptive.
Is essential for seminars.
Classroom education must be interactive.

2. Questions asked by students help them to assimilate the material to be learned.	0	1	0	3	19

Comments:

Helps both students asking and others listening.
Provides more interaction and thought process to articulate questions.

3. Student questions help create a positive classroom environment.	0	0	1	8	14

Comments:

Advanced courses - yes.
Depends on its relationship to the subject.
Good questions can stimulate an entire class.
Makes for communication and rapport with professor.

4. Student questions which result in discussion where students are able to express personal opinion are important in my class.	0	3	3	5	12

Comments:

Should be an informed opinion.
Should be relevant.

Statement and Comments	Number of Profs and Response Strongly Disagree 1	2	3	4	Strongly Agree 5
5. Student questions that are loosely linked to the subject at hand are disruptive.	1	5	9	7	1

Comments:

Must guide in right direction.
Dislike digression and feel students do not either.
Can be disruptive, but on occasion can open new areas for discussion.
Must be evaluated case by case.
Agree, although a skilled teacher could take some of them and turn them into a positive experience.

6. I don't like it when a student asks a questions which reflects an opinion that is different from mine.	15	6	1	1	0

Comments:

Depends on attitude--constructive or not?
Actually, I enjoy debate.
I encourage differing perspectives.
As long as student is not truing to be argumentative for the sake of argument.
Disagreement usually yields opportunity for further explanation.
It is useful to test one's views.
Disagreements should be expressed politely and not belligerently.

7. Generally speaking, student questions are somewhat disruptive when asked in class. I prefer that students find what they need to know some other way.	18	4	0	1	0

Comments:

I encourage appropriate questions.
Too many questions can be somewhat disruptive though.
Questions let me know right away that I am doing something wrong.
Always best to look it up, especially for background material they should know.

Statement and Comments	Number of Profs and Response Strongly Disagree 1	2	3	4	Strongly Agree 5
8. I have a set time when students should ask questions. I don't like being interrupted at other times.	15	5	3	0	0

Comments:

Prefer questions related to the topic.
Depends on class, time and kind of question.
Students should ask questions as they arise.
I often set times, but do not restrict them to that time.
Only when I am in the middle of a sentence or developing a point do I temporarily "ignore" questions, although I do acknowledge them.

9. In order to keep up with the day's material, I feel it is important for me to control the direction of student questions in the class.	3	3	4	12	1

Comments:

Only if behind, then I encourage students to come after class.
Can keep up without controlling too much.
I will call time out if we get too far behind.
Keyword is "control".
There certainly is the tension between needing to cover material and wanting to encourage questions. Openness and balance are essential.

10. Student questions that get me and/or the class "off track" should not be asked in class.	2	6	5	8	2

Comments:

I just say, "See me after class."
I evaluate the question and decide accordingly.
It is my job to return the course to its proper course.
I frequently go "off track" to show relationships.
Agree most of the time. Sometimes, however, a diversion ends up being crucial.
Depends on situation and relevance to the total educational goals of the course and professor.

Statement and Comments	Number of Profs and Response Strongly Disagree 1	2	3	4	Strongly Agree 5
11. Students are bothered by other students' irrelevant questions in class.	2	2	1	11	7

Comments:

Sometimes question can be too far removed from the agenda and can cost useful time.

Happens rarely - in lower level classes, may help them stay awake.

Especially American students who blame the foreign students' lack of understanding on language.

Part of management challenges of a professor.

12. A foreign student shouldn't ask a question unless his or her spoken grammar is good.	20	3	0	0	0

Comments:

Strongly disagree. However, if their grammar is really bad, it could take time to sort out what they are trying to get at.

How else will students gain practice?

Foreign students benefit from asking questions as any other student does.

How will grammar improve without practice? Classroom environment should be supportive of students who are mastering a new language and culture.

13. I assume that foreign students will take responsibility for understanding the required material for my class. This includes asking necessary questions.	0	3	1	10	9

Comments:

I tell them to ask, knowing that Asians are hesitant to do so.

If "will" were changed to "should", I would agree.

Any student has this responsibility.

Education is two way. I will help all who help themselves.

Statement and Comments	Number of Profs and Response Strongly Disagree 1	2	3	4	Strongly Agree 5
14. I would rather a foreign student risk his or her poor grammar and ask a question, than to remain silent in class.	0	0	0	6	17

Comments:

They might consider writing the question out and reading it to me.

15. I prefer for foreign students that don't speak well, to ask questions after class.	14	5	2	1	0

Comments:

I do not have a preference here . . . Or I prefer what the student prefers.

Do not prefer, but encourage since they are less intimidated/embarrassed then, and I can take time to make sure they understand.

They may feel more comfortable after class. Also, depends on whether teacher is free after class.

Only if it is too difficult for effective communication to occur and the entire class is unduly disrupted.

16. Foreign students do not need to speak or ask questions in class so much. The most important thing for them to do is to understand the material and pass the tests.	13	7	1	0	0

Comments:

Of course understanding is important; if speaking in class helps, so be it.

Because it must be stressful to them, I would not expect all foreign students to participate as fully in class as native speakers.

17. Do you have any other comments about student questions in the classroom?

Any student's questions help me think more clearly.

The important thing is to participate, whether through discussion or question.

I strongly encourage discussion from both domestic and foreign students.

Stimulating questions and answering them make classes more dynamic and interesting for both students and professors.

Some students may ask questions which do not appear to be relevant, but which may reflect their cultural (mis) understandings.

APPENDIX H

SAMPLE LESSON--HANDOUT 1

Cognitive Domain

Knowledge Questions:
(lowest level)
Definition--information, facts
Key words--what, who, when, where, direction, identification

Comprehension Questions:
Definition--understanding,interpreting paraphrasing, common sense
Key words--which, predict, explain grasp, rephrase

Application Questions:
Definition--procedure, generalized methods
Key words-- apply, develop, relate, choose, construct

Analysis Questions:
Definition--analyze, support, rules of logic
Key words--distinguish, discriminate relate, describe

Synthesis Questions:
Definition--putting together to produce a new product
Key words--integrate, join, hypothesize compose, solidify, conclusion

Affective Domain

Attending Questions:
(lowest level)
Definition--focus on stimuli
Key words--know, appreciate ever, like, interest

Responding Questions:
Definition--satisfaction, emotional response
Key words--willing, observe, practice, feel pleasant

Valuing Questions:
Definition--preference, commitment, feel responsible,
Key words--loyal, accept, defend stance

Organizing Questions:
Definition--clarify values, enable conceptualization, ordered
Key words--judge, weigh, explain, view, opinion, alternative

Characterizing Questions:
Definition--internalization of values, view of universe, philosophy of life
Key words--feel about, explain how, what did you (we) do?

Evaluation Questions: (highest level)
Definition--judgments, methods
Key words--purpose, confirm, defend, appraise, consider, assess

APPENDIX I

SAMPLE LESSON - HAND OUT 2

TV News Interview - ABC's Nightline, August 29, 1990
Sam Donaldson interview with Defense Secretary Dick Cheney

1. If it is to be a long drawn out political and economic war of attrition, what are the costs? And how will it end?

2. What is your latest estimate as to Saddam Hussein's sincerity in saying that he will allow women and children to leave?

3. The British have said they are prepared to send airplanes to lift Westerners out, if that's allowed. Are you prepared to do the same thing? Is anything in the works?

4. The Iraqi ambassador to Washington said that men would be allowed to leave also if the U.S. would simply promise not to attack Iraq. Can we make that promise?

5. Well, are you saying since you've just said once again that we are not there in the offensive capacity, that we could in fact make a promise not to attack Iraq, assuming Iraq does not invade Saudi Arabia or do some other action which we have stated would be against U.S. interests?

6. Why haven't we boarded an Iraqi vessel? Is that because they have not been there to board? Or what?

7. If the purpose of the embargo is to force Saddam Hussein to withdraw from Kuwait and to do the things that were outlined, how long do you think it will take for the embargo to work that way?

8. But you are suggesting that King Hussein of Jordon is still, at best, on the fence?

9. How long will American troops have to be in Saudi Arabia?

10. How long do you think the American public will support a policy if troops are in that desert for months and months and months?

11. How much is it going to cost? You have given an estimate saying
that cost through September 30th is about 2 1/2 billion dollars. That is 33 million dollars a day. Is that the rate at which it will continue or is that simply the build-up rate?

12. You have announced a new arms package for Saudi Arabia, M-60 tanks and F-15 planes and Stinger missiles. And some of these things are items that because of sensitivity on the part of Israel have never been included before. How can you now say that Israel's defenses are not as important as they once were?

13. Is this a significant effort?

14. In the past, the administration has not looked particularly with great favor on some of the Reverend Jessie Jackson's activities when it comes to conducting foreign policy. He says he's not doing that, but, what do you think?

15. Do you have any objection to this particular trip as far as you know?

16. Now what about the members of Congress that want to go to the Persian Gulf to personally inspect our troops in the field and of course to have pictures taken of them to send to their constituents of them personally inspecting our troops in the field. Is that a problem?

APPENDIX J

RECORD SHEET

Completed Example: For use on the overhead projector

Topic: TV news interview with Defense Secretary Dick Cheney

Key words of question raised	Cognitive/ Affective Level	Reason for choosing level
#1 political/economic war of attrition, costs?	knowledge, evaluation	knowledge of specifics, judge kind of war & effect on cost
#1 how will it end?	knowledge, comprehension, synthesis	combines knowledge with comprehension to propose a plan, make a prediction
#2 latest estimate of sincerity?	comprehension, analysis	prediction, analysis of what is known about Hussein
#3 U.S. prepared to airlift like British?	knowledge, analysis	yes/no question that will involve analysis, evaluation
#4 U.S. promise not to attack?	knowledge, synthesis	yes/no question involving synthesis of facts & projected plan
#5 rephrasal of #4, promise not to attack?	knowledge, evaluation	yes/no question that includes more information to evaluate
#6 why U.S. has not boarded Iraqi vessel?	knowledge, evaluation	requires explanation of facts, decisions along with defense
#7 how long will it take embargo to work?	comprehension, evaluation	requires explanation of plan & estimation of time needed
#8 King Hussein still on the fence?	analysis	requires description of King's position, support for position

#9 American troops in Saudi Arabia how long?	comprehension, evaluation	requires information, conceptualization, prediction
#10 how long American public support desert policy?	application	consider policy in light of situation and make projection
#11 cost of policy?	knowledge	requires facts
#11 current cost to continue?	analysis	requires knowledge of facts to support projection
#12 Israel's defense not important any more?	comprehension valuing	requires understanding of major issues & seeming preference on part of U.S.
#13 significant effort?	comprehension	conceptualize information in order to explain
#14 administration thinks, but what do you think?	valuing	answer will require display of commitment and preference
#15 you object to Jackson's trip?	organization	opinion question that requires explanation of presupposition
#16 in light of information, is this what you perceive?	characterization	requires statement dependent on certain perimeters of information

General reactions to the questions:

The interviewer asked questions at all levels. Most of the questions were in the cognitive domain and required a basis of knowledge as a foundation for the higher level question. Towards the end of the interview, the interviewer moved over into affective questioning domain. However, he began the affective questioning at mid-level, valuing, and proceeded to the highest level, characterization. Perhaps this is because anything lower than the midpoint level in the affective domain would be considered opinion.

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