

**The Effect of Teacher's Questioning  
Behavior on EFL Classroom Interaction:  
a classroom-based research**

**A thesis submitted in the partial fulfillment of the requirements for the  
degree of Master of Arts in Teaching English as a Foreign Language**

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# Abstract

**Background:** After the failure of several important methods comparison studies in the 1960's, the influence of interaction analysis stimulated interest in foreign language classroom processes. More careful observational studies gradually revealed which process variables were of interest. Also, there has been much research on teacher talk, with a focus on issues such as the amount and type of teacher talk, speech modifications made by teachers, instructions and explanations, error correction and questions have been more or less the center of attention.

**Purpose:** This qualitative-quantitative study is conducted as a classroom research and has focused on two question types: display and referential. It explored recurring patterns of questioning behavior and their interactive effects through non-participant observation.

**Research design:** Forty reading comprehension classes were observed in Tehran, Iran by the investigator. The observations were done by the researcher and the study data were gathered through partial ethnography. Events were coded and analyzed. General patterns were considered in regard with the teacher's questioning behavior and the students' interaction to them.

**Findings:** The findings indicated that display questions were used by teachers more frequently than referential questions. Also, it was concluded that NOT all referential questions could create enough interaction. Further elaboration on the results may be found in the study report.

# I. Introduction

## A. Statement of the Problem

The study comprises of two parts. In the first, which is quantitative in fact, two focused issues are to be clarified. The first issue concerns EFL teachers' questioning behavior. The following questions are answered referring to the obtained data:

Does teacher's questioning behavior have any effect on EFL classroom interaction?

If it does so, what sort of questions is more effective? Referential questions? Or display ones?

Are all referential questions equal as to their interactive effects?

The second part of the study, which is more or less qualitative in nature, follows no predetermined line of search; rather, the obtained data is investigated for recurring patterns of EFL teachers' questioning behavior. This aspect of the study will reveal generalizeable patterns of teachers' use of questions in the observed EFL classrooms.

## B. Definition of key terms

1. Referential questions are those questions for which the answer is not already known by the teacher, these questions require interpretation and judgment on the part of the "answerer".
2. Display questions refer to those questions for which the questioner knows the answer beforehand; these types of questions are usually asked for comprehension, confirmation or clarification.
3. Classroom interaction is used, in this study, meaning any sort of interaction occurring in the classroom. Teacher-student, student-student discussions, group discussions and any type of classroom participation are all considered as interaction. Richards and Nunan (1990) believe that classroom interaction can be initiated either ways , by teachers or students.

## C. Assumptions

The main assumption behind this study is that interaction in language classrooms will lead the learners to better learning, and will activate their competence (Malamah-Thomas, 1987). Brock (1986) also maintains that an increase in the amount of classroom interaction will help foreign language learners learn the target language easily and quickly. She believes that *increased language output* will improve language learning. The above-mentioned authors have already worked on the assumption. Therefore, it can be a reliable backup for the present study to be of any significance.

#### **D. Delimitations of this study**

1. EFL classes observed include Reading Comprehension classes in Allamah Tabataba'ee University and Tehran University. These EFL classrooms are observed as a sample of Iranian EFL classrooms.
2. The only data collection device was non-participant observation.
3. Neither the teachers' nor the learners' psychological characteristics, such as reflectivity-impulsivity, introversion-extroversion, will be taken into consideration.
4. Selection of the teachers and classes is done at random. No certain criterion is used in selecting the classrooms or their teachers.
5. All observation tasks are done by the researcher himself.
6. Classroom interaction only includes learner participation in reaction to teacher's questions, if any.

#### **E. Statement of the Hypotheses**

As it has already been mentioned, the quantitative side of this study intends to answer the two research questions. The following hypotheses are shaped according to these questions:

1. There is no difference in the distribution of teacher's display and referential questions.
2. Referential questions create more interaction in the classroom than display questions do.

However, the qualitative side will help existing questioning patterns of EFL classrooms emerge out of the obtained data. Therefore, no hypotheses are made.

#### **F. Research questions**

1. How are display and referential questions distributed in Iranian EFL classroom discourse of Teachers?
2. What is the effect of such questions? Are all referential questions equal as to their interactive effects?
3. What other patterns can be found in these settings?

#### **G. Significance of the study**

Any study needs a degree of significance to be valid. The reason behind the selection of this research area was that too much attention has been paid to the products of the art of Teaching in Iran so far, and that classroom events, i.e. processes, have been forgotten. Proving, rejecting or even modifying these hypotheses, therefore, can be considered a considerable contribution to the understanding of the role of these pedagogic instruments, i.e. questions. *Also*, the resulting data may reveal unnoticed patterns of teachers questioning behavior in our country. *Moreover*, teachers may be persuaded to have more confidence in self- or peer-

observation. *Furthermore*, implications can be derived for teacher training and teacher education. The study will reveal our status in the communicative era with respect to the issue of questioning. The outcomes of this study can be helpful in developing improved programs for teacher education.

## **II. A Review of the Related Literature**

### **A. Quantification versus Qualification**

The terms quantity and quality have been very much used in research. Quantification has been defined as a numerical method of describing observations of materials or characteristics. Best (1991) states four scales: nominal, ordinal, interval and ratio, for application in quantitative studies. He also describes qualitative studies as those in which the description of observations is not ordinarily expressed in quantitative terms. It does not mean that numerical measures are never used, but other means of description are emphasized. Piaget, a scientist who was involved in research for more than fifty years, remarked that a non-quantitative search for explanations would be fruitful in the study of human development. Reichardt and Cook (1979) distinguish between the two with typical contrasting attributes: the qualitative paradigm involves naturalistic, uncontrolled, subjective and process-oriented observation, while the quantitative paradigm is obtrusive, controlled, objective and product-oriented.

### **Objectivity and subjectivity**

Objectivity and subjectivity are closely related with qualitative and quantitative approaches to data analysis and collection. Qualitative data would typically be considered as subjective, a record of opinions and perceptions, rather than facts. Quantification has a similar appeal to objectivity, in that if you can count things then you can subject them to rigorous statistical analyses. However, the problem here is that not everything can be counted or measured adequately, and therefore, numbers cannot tell the whole story. Also, statistical procedures are always subject to endless controversy. Therefore, it seems reasonable that in some types of investigations, events and characteristics may appropriately be described qualitatively, among which classroom events are just one.

### **Qualitative Research**

Inadequacy of quantitative approaches led to the development of a separate field known as qualitative approach to research. Originally, qualitative approach to research developed from the methodologies of field anthropologists and sociologists concerned with studying human behavior with respect to the natural occurrence of those behaviors. Such methods attempted to present the data from the perspective of the subjects or the observed groups so that the cultural and intellectual biases of the researcher did not distort the collection, presentation or analysis of the data. (Jacob, 1987) Unlike descriptive research, qualitative research avoids establishing research questions or hypotheses, or identifying any variables, beforehand, which would become the focus of the study. Qualitative research is considered as synthetic or

holistic, and heuristic with little or no manipulation of the research environment, and uses data collection procedures with low explicitness (Seliger and Shohamy, 1989).

### **Qualitative research in Language Teaching**

Qualitative research has increasingly been incorporated into second language research in recent years. Seliger and Shohamy (1989) maintain three reasons for such a selection. First, much second language acquisition (SLA) research are concerned with classroom learning, to which it is not easy to apply the controls associated with experimental research. Second, although this type of research could not control for variables, the development of rigorous methods for data collection and analysis has produced results which would not be possible through experimental designs. And finally, experimental designs led to artificial findings.

The ultimate goal of qualitative research in SLA is to discover phenomena such as patterns of second language behavior not previously described and to understand those phenomena from the perspective of participants in the activity. Bailey (1983) states that researchers themselves can be participant observers, e.g. those who write diaries. The other kind of observation is called non-participant observation, in which the investigator observes and records or takes notes of the observed activity, but without the control or guidance of a questionnaire or other instruments (See Long, 1983).

Qualitative research appears to be more appropriate, due to some limitations, for describing the social context of second language, such as dyadic speech interactions (who says what to whom, when and where), frequencies and descriptions of speech acts in given contexts such as language classrooms, and descriptions of teacher and learner language (Seliger and Shohamy, 1989; pp. 118-24). It is a useful approach wherever an investigator is concerned with discovering or describing SLA in its natural state or context and where there are no assumptions about what that activity consists of or what its role is in acquisition. Instead of being a hypothesis-testing approach, qualitative research is said to be hypothesis-generating because questions are suggested by the recurring patterns which emerge from the data itself.

The following steps are proposed for conducting qualitative research:

- (1) Define the phenomenon of second language to be described and investigated,
- (2) Use qualitative methods to gather data,
- (3) Look for patterns in the data,
- (4) Validate initial conclusions by returning to the data or collecting more data, and
- (5) If necessary, return to step one and repeat the cycle redefining the area of focus on the basis of the first cycle.

### **Qualitative and Quantitative Data Collection and Analysis**

The terms quantitative and qualitative are not only applied to the data collection but also to the data analysis phases of an investigation. Any sort of measurement that yields numerical information generates quantitative data. However, some data are not the product of

measurement or counting, and thus do not result in numerical information, hence qualitative in nature. Likewise, once the desired data are collected, we can either analyze them by counting or measuring (quantitative analysis) or by directly reflecting upon and trying to interpret them (qualitative analysis). For example, once we have produced a transcript of a lesson (qualitatively), we could count all sorts of variables as well, e.g. the amount of teacher talk, or of learner talk, etc. Alternatively, we could treat the lesson transcript more like a literary text, and try to understand it by close textual analysis. However, the third possibility is that the two approaches are combined (Allwright, 1980).

### **Towards a Combined Approach**

The inadequacy of each approach by itself in SLA research implied a combination of the two, which most scholars supported. Best (1991) believes that it may be unwise to draw a hard-and-fast distinction between qualitative and quantitative studies. The difference is not absolute, it is one of emphasis. One emphasis should not be considered superior to the other. The appropriate approach would depend on the nature of the variables under investigation and the objectives of the researchers. Traditionally, educational research has emphasized the quantitative approach. However, nowadays, researchers have come to the conclusion that the field needs and demands a combined approach. Chaudron (1986) states that both approaches are relevant to determining (a) the important variables to be investigated, and (b) the relationships those variables have to second language learning outcomes.

Increasingly, language classroom researchers are calling for judicious selection and combined approaches, rather than rigid adherence to one approach over another (Ellis 1984; van Lier 1984, 1988). However, as late as 1985, after conducting an exhaustive review of the available language classroom literature, Mitchell wrote that the two approaches to qualitative research are active and developing, but there is little sign of coming together of the two in some grand methodological design. The two points to be made here are that, first, readers of classroom studies should be aware of the researchers' biases, and should be able to judge whether the procedures of data collection and analysis employed were procedures of the purposes of the study. Second, if you undertake a qualitative research of your own, you need to be ready to face these kinds of decisions from the very beginning because they will influence your planning.

### **Interaction of the two approaches**

Research in and about second language classrooms illustrates the interdependence of qualitative and quantitative approaches. Whether the classroom research is qualitatively or quantitatively oriented, the goal of researchers has been much the same: (a) to determine which classroom processes are most conducive to learning outcomes, and (b) to discover why these relationships exist.

After the failure of several important methods comparison studies in the 1960's (e.g. Scherer and Wertheimer, 1964; Smith, 1970, etc.), the influence of interaction analysis (Flanders, 1970) stimulated interest in foreign language classroom processes (Jarvis, 1968; Moskowitz, 1971). Nevertheless, researchers made use of quantitative measurements in this regard (Politzer, 1970). A few years later, more careful observational studies gradually revealed which process variables were of interest. For this purpose, discourse-analytic schemes arose (e.g. Fanselow, 1977; Naiman, Frohlich, Stern, and Todesco, 1978). These schemes produced satisfactory, quantitative results which signified the relationships between

classroom processes and student learning outcomes. Frohlich, Spada and Allen (1985) conducted a research revealing differences among four different second language programs. The researchers considered this to be preliminary evidence of the descriptive adequacy of the categories (for describing communicative language learning activities and behaviors). Although the quantitative aspects of such a research may still be inadequate to reveal causal relationships, the categories have continued to be defined qualitatively. A large number of classroom-oriented studies in recent years have been conducted in simulated classroom situations (see Day, 1988). These studies have established an ever widening variety of variables that are plausibly associated with second language learning. Instead of simple measures of time spent on activities, number of hand raises, and so on, recent research has suggested that interactional variables such as communicative negotiation and feedback may be causally associated with second language development (see Allwright 1980; Gaies 1983; Gass and Varonis 1985; Long 1983; Pica and Doughty 1985).

### **Beyond Methodology of Teaching**

During the sixties and seventies several developments indicated a shift in language pedagogy away from the single method concept as the main approach to language teaching. These developments deserve our attention because they indicate a valuable new direction of thought in language pedagogy: to overcome the narrowness, rigidities and imbalances which have resulted from conceptualizing language teaching purely or mainly through the concept of method. The scope of the developments to consider is varied. Nevertheless, together they point to a wider and more differentiated interpretation of teaching.

Recent exploratory research in second language teaching signals a shift of the concept of method. Now, teachers are empowered with knowledge, skill and autonomy to devise for themselves a systematic, coherent and relevant alternative to method. This condition known as "post-method conditions" (Kumaravadivelu, 1994) reshapes the relationship between theorizers and teachers. In practical terms, it motivates a search for an open-ended, coherent framework based on current insights that will enable teachers to theorize from their own practice and practice what they theorize. It is also implied that teachers can design varied and situation-specific micro-strategies or classroom techniques to affect desired learning outcomes. Such an approach to theory and practice can transform classroom practitioners into strategic teachers as well as strategic researchers, conducting classroom-oriented research while still a teacher.

### **B. Teaching as a Research activity**

Having said farewell to the concept of method and theories of language teaching devised and developed by those who were not at all aware of teaching issues, teachers themselves were expected to start their trial-and-error procedure to teach and investigate. Teaching is considered to be a research activity whereby experimental techniques are designed to correspond with hypothetical principles of pedagogy. However, teachers as experimental subjects, observing how they learn under varying conditions with detached interest to satisfy an intellectual curiosity. The teachers' business is to induce learning. In effect, teachers become intervening variables in their own experiments. Therefore, assuming a double role for teachers, we can regard the classroom as a context for two related kinds of activities. In one, techniques are devised with regard to their practical effectiveness in the promotion of learning the instructional activity. In the other activity, techniques are related to principles, enquiring into the relationship between the two . the experimental activity . with the teachers acting as



observer manipulating the techniques concerned. Thus, the two related activities are reciprocally enhanced, and the most effective pedagogy is one in which the two act together. In this way, teaching fulfils a dual educational purpose. (Widdowson, 1991) The view of pedagogy proposed here, then, makes teachers responsible for their own problems and for providing their own solutions. Research from outside can not, therefore, be directly transferred to the classroom context. Research in language classroom is no longer considered to be the specialist and reserved occupation of theorists, an activity carried out in separation from the immediate context of actual events and requiring knowledge and expertise of a kind which only academic intellectuals can have.

### **Why Teacher Research?**

Growing interest in classroom-oriented research and indications by teachers that they would like to carry out their own research are signs of a kind of maturity in language teaching profession. This change marks their departure from "follow-the-right-method" approach to another area of research, with the implication that there is, somewhere, a better method waiting to be discovered, which will work for all learners under all circumstances. In contrast, teacher-as-researcher orientation encourages them to approach methods and ideas with a critical eye, and to adopt an experimental approach to incorporating these ideas into their classrooms. Rather than adopting new methods, materials or ideas, and judging their efficacy on intuitive grounds, it is far more satisfactory to establish a small-scale classroom experiment to observe, monitor and document the effect of the new methods or materials on learners language, learning outcomes, classroom climate, patterns of group interaction, and so on. In addition, this alternative orientation seeks to derive principles of what actually happens in the classroom rather than uncritically importing and applying ideas from outside. One of the most carefully devised investigations in the search for the effective teacher was carried out by Politzer (1970) who videotaped 17 high school teachers of French. Then, he tested these teachers' students and grouped them according to their teachers. The next step was to come up with a list of characteristics of the effective teacher by comparing the observable behaviors of the teachers with the level of achievement of the learners. The results revealed that teaching behaviors which correlated positively with student achievement included use of conversation drills, allowing free responses, the frequency with which teachers switched from controlled to free drills, the use of visual aids and the introduction of a variety of structures. Student-Student (SS) interaction should negative correlation with current communicative orthodoxy. An alternative to this approach is one in which teachers are encouraged to develop skills in observing, analyzing and critiquing their own classrooms (Nunan, 1989).

### **Self-monitoring**

Richards (1990) defines self-monitoring or self-observation as referring to a systematic approach to the observation, evaluation and management of one's own behavior (Also, Armstrong and Firth, 1984) for the purposes of achieving a better understanding and control over one's behavior. It's an approach to teacher evaluation that complements other forms of assessment. There are several good reasons for using self-observation technique by teachers. First, teachers need feedback on what they do and how well they do it, to improve their performance over time, self-monitoring can be a means of obtaining such feedback and is hence a key in gradient in a teacher's development. Second, it provides an opportunity for teachers to reflect critically upon their teaching. Third, it can help narrow the gap between teachers' imagined view of their own teaching and reality. And fourth, it shifts the

responsibility for improvement in teaching practices from an outsider (e.g. a supervisor) to teachers themselves.

Three possible ways are proposed for conducting such a task. The first way is personal reflection through the use of a diary or journal in which the teacher makes an honest and open report of his own teaching. The second way concerns self-reporting using an inventory or a checklist. Here, the teacher gathers data on his own teaching practices by completing the checklist or the inventory. The third way is audio- or video-recording of lessons. This latter type seems to be more reliable an approach (Richards, 1990). Issues such as classroom management, teacher-student (TS) interaction, grouping, structuring and so many other aspects of classroom teaching can be explored and reflected upon using self-monitoring technique. Ramani (1987) (quoted in Nunan, 1989) can be an interesting model and example of self-observation.

### **Transition from SLA research to classroom observation research**

In the mid-seventies, SLA researchers were moving on from their earlier preoccupations. Schumann was developing his ideas on the possible similarities between SLA and pidginization process. Krashen was developing his monitor theory. In short, the time had come, in SLA studies, when people were thinking more generally in terms of possible ways of explaining SLA phenomena (after a decade of research on discovering what the basic phenomena of the field were and how they could be described...). The parallels with classroom language learning research led to the development of classroom observation research originating in interdisciplinary works. The initial idea came from Fanselow (1979). Early topics proposed for such a research were, for example, oral errors (Allwright 1975; etc.), input and teacher talk (e.g. Gaies, 1977), and classroom interaction (e.g. Seliger, 1977).

### **Beginning of teacher research**

Modern classroom research began in the 1950s, among teacher trainers, in response to the problems involved in helping trainers, in response to the problems involved in helping second language teachers in subject-matter classes by giving them feedback on their performance in class during their teaching practice. The trainers realized that they needed find a way of incorporating their findings into effective teacher training programs.

### **C. Classroom-centered research appears**

After coming to the conclusion that the solution of their problems lies at the heart of their classrooms, teachers were justified to find their own solutions through reflecting systematically upon their teaching. This systematic procedure came to be known as classroom-centered or classroom-oriented, or classroom research. Allwright and Bailey (1990) define classroom research (CR) as a research centered on the classroom, as distinct from research which concentrates on the inputs to the classroom (i.e. the syllabus, the teaching materials, etc.) or on the outputs from the classroom (e.g. learner test scores). However, it doesn't devalue the importance of such inputs and outputs. In fact, it treats classroom interaction as virtually only object worthy of investigation. In general, it emphasizes on understanding what goes on in the classroom setting. Allwright and Bailey also state that:

*... it is a research field still in its infancy, but at the same time already well-established and already making a contribution to our understanding of classroom language learning and teaching (1990).*

Nunan (1991) encourages teachers to link theory and practice through an action research cycle of observation, identification of problem or issue, intervention, and evaluation. He argues that classroom practitioners should be involved in curriculum development and innovation, and that this can be achieved through encouraging teachers to adopt action research orientation to their own classrooms. Also, Wright (1990), suggesting that teacher-learner relationships lie at the heart of classroom interaction, emphasizes that achieving a balance between theory and practice is a primary goal of all teacher development programs. He further adds that this will not be achieved unless an investigation of teacher and learner roles is conducted. However, a necessary prerequisite to such research is the development of appropriate skills in classroom research and observation.

### **The Roles of Classroom Research**

Classroom research, which involves observation, assumes that the description of classroom activities is a prerequisite to research on second language learning effectiveness, and that formal instruction's contribution to language acquisition can not be studied without measuring actual classroom activity. In a hypothetical study, Gaies (1981) identifying three vital roles for classroom research: (1) identifying variables whose importance for classroom learning should be experimentally investigated, (2) discerning the unique character of the second language classroom, and (3) developing new conceptualization of the second language classroom. The view of the classroom largely guiding second language classroom research is that of an interaction between teacher and students.

### **Collaborative Teacher Research**

One of the main obstacles in the way of classroom research and observation is the lack of support available to teachers. This is a major problem for teachers attempting to implement a classroom research by themselves. One obvious solution is to promote collaborative research. Such collaboration might be between teachers sharing the same interests and concerns, or it might be between teachers and researchers, and even teachers and students. Such a research is expected to be much more fruitful and rewarding than individual research. Despite difficulties and complexities of collaborative research , especially research between individuals who because of their various backgrounds will have sharp differences of perspective ,such research is still worth pursuing. The important thing is for each participant to declare his/her interests at the outset so that each knows where the other stands.

### **What to investigate?**

No investigation can be conducted without a line of search, without an object of study and a focus of some sort. It is of paramount importance to search for a certain feature, occurrence, or issue among the data obtained in a study. The question of "what to investigate" is discussed in the following paragraphs.

Allwright and Bailey (1990) believe that watching language learners can be a rich source of ideas for investigation. Interesting topics may be found among classroom patterns or anomalies. There are two opposing points of view on how to determine the topic of an

investigation. The first position, associated with experimental sciences, holds that a researcher should decide in advance what to investigate, on the basis of predictions generated by a certain theory. A formal hypothesis or a research question is posed at the outset of the study, and the processes of data collection and analysis are planned specifically to test the hypotheses or answer the research question. In the second view, associated more with ethnography, the research questions and hypotheses arise from the data that are collected. This second, data-first approach is valuable in developing "grounded theory" (Glasser and Strauss, 1967). A **grounded theory** is one which stems from data rather than from logic alone.

However, today, scholars believe that the classic experimental design procedures may not be as useful in classroom research as they have been in other fields of scientific enquiry. There are two main reasons for such an attitude. First, the theories of language learning (e.g. Krashen's idea that language acquisition is an unconscious process) do not always lend themselves to making directly-testable predictions. Furthermore, some researchers (e.g. van Lier, 1988) feel that classroom lessons are such complex affairs that it is virtually impossible to control the number of different variables that could bias the results of any attempts to test a particular theory. The second reason is that it misses the point that theories themselves have to come from somewhere. But classroom research does not always have to concern itself so directly with theories at all. Instead, classroom research can be directed at trying to understand the immediate practical problems facing teachers and learners. The term for this type of research is action research – taking an action and systematically observing what follows.

### **Multiple Perspectives**

The value of multiple perspectives in data collection and analysis will be fully recognized with the classroom research being more and more sophisticated. Anthropologists used the term "triangulation" – meaning multiple perspectives – and borrowed it from land surveying to suggest that at least two perspectives are necessary if an accurate picture of a particular phenomenon is to be obtained. In classroom research, these perspectives (typically the researchers' and the teachers', or the researchers' and the learners') counterbalance each other and make it much more difficult to believe in the absolute truth of data taken from any single perspective. Where such triangulation has not been achieved, it is useful to find a left-out element. Denzin (1970) believed that triangulation might take several forms. For example, data triangulation means using a variety of sampling strategies. Investigator triangulation means cooperation of more than one investigator methodological triangulation refers to using different methods to collect data. And finally, theoretical triangulation demands that the researcher approaches the data analysis with more than one perspective on possible interpretations (Allwright and Bailey, 1990).

### **Action Research**

As mentioned above, action research, as a manifestation of classroom-centered research, appeared as teachers were encouraged to integrate theory into practice, Kemmis and McTaggart's (1982) conceptualization of action research highlights the fact that it is not simply a research grafted onto practice. Rather, it represents a particular attitude on the part of the practitioner, an attitude in which the practitioner is engaged in critical reflection on ideas, the informed application and experimentation of ideas in practice, and the critical evaluation of the outcomes of such application. Therefore, it has great potential for professional self-development.

## **The Procedure for Classroom Research**

The procedure for conducting a classroom-centered research is more or less the same among the researchers. The starting point is to get as well informed as possible on the issue to be investigated. It can be achieved by consulting expert opinion, which may include catching up with the speculative and theoretical literature as well as with earlier research. In this way, it tells you what issues have already been investigated and what is left. Also, it will tell you how the earlier studies have been done, so that you can make a more informed decision about the procedure of your own investigation. The second step is data collection and analysis. Broadly speaking, there are two different ways of getting such a record: direct observation and self-report (to be described later). Direct observation is done through sitting in the classroom and taking notes of the classroom processes.

An obvious alternative to direct observation is simply to ask, to give people an opportunity to report for themselves what has happened to them and what they think about it. The traditional way of getting self-report data is to conduct surveys and interviews, or to give questionnaires. Such data collection techniques normally involve working out in advance the categories to be used for investigation. Therefore, the wording of the questions must be carefully thought out so that nobody can say, for example, you got the answers you did just because of the way you posed the questions.

The problem with observation schedules and with surveys is that someone has to decide in advance what to look for, and that someone is most of ten a researcher who is not directly involved in the classroom to be investigated. Such relatively closed techniques may easily miss the insights that could be provided by the participants themselves, the teachers and learners. To capture these sorts of insights, other forms of data collection are needed. For example, a learner's diary may also reveal aspects of classroom experience that observation could never have revealed, and that no one would have thought of including as questions on a questionnaire.

The desire not to prejudge the importance of events observed has led some researchers to consider the procedures and philosophy of ethnography as an alternative approach to data collection and interpretation. Ethnography has been defined differently, but basically, it is a collection of procedures used predominantly by anthropologists who attempt to document and understand the behavior of people in cultures. It has also gained considerable support as an approach to classroom research in recent years.

## **Standards of Classroom Research**

Classroom research has borrowed three standards from experimental research, but technical meaning and use of these standards have somewhat altered. Reliability, validity and generalizeability are what is borrowed.

### **Reliability**

Consistency of research procedures is desired if they do not change over time and across the variety of people who might use them. The technical term for this desired consistency is "reliability" applies to both data collection and data analysis phases of classroom research. For example, if you investigate classes using an observation instrument, or if you code incidents of behavior in field notes, it is important to know that this observational system or

the coding categories do not change from one day to another or from one observer to another. (Allwright and Bailey, 1990). The degree of reliability between observers can be calculated and, of course, steps can be taken to train observers to improve their inter-observer agreement. The consistency with which different members of a research team use a category system to code or to evaluate is called inter-observer agreement, or inter-rater reliability. Another concern can be intra-observer agreement i.e. the extent to which a single observer or coder codes or categorizes the data consistently after a lapse of time. Sometimes, intra-observer and inter-observer reliability figures are reported as a correlation coefficient (see Brown 1988): 126-146; Seliger 1983: 254; for detailed information on how to calculate this statistic).

## **Validity**

Validity in experimental studies takes two important forms. First, there is the notion of internal validity, on the one hand, which refers to the direct and unambiguous attribution of the outcomes of the study to the treatment applied to the experimental group. On the other hand, there is the notion of external validity, which will be discussed under the title of generalizability (later in this review).

Chaudron (1988) has discussed internal validity in classroom research under three headings: construct validation, criterion-related validity, and treatment validation. The first type involves trying to determine that the construct (underlying concept or trait) has some reality, and is verifiable. The second type concerns using some form of an established and accepted instrument, along with another form (the one to be validated). The third type of validity which is of paramount importance in observational studies is treatment validation, closely related to the process component of process-product studies. Here the researcher tries to document that the treatment was in fact implemented, and that it was identifiably different from whatever it was being compared with. This latter type of validity is more similar to the concept of internal validity in experimental studies (Allwright and Bailey, 1990).

## **Generalizability**

The second type of validity in experimental studies i.e. external validity is also of use in classroom research. In observational studies, the little "generalizability" is used meaning the same as external validity. It means the extent to which the findings of a study can be generalized, or applied, to other situations. Experimental researchers conduct their studies in laboratory conditions and hope to generalize it to real-world situations, but it rarely happens to do so. However, the conditions that classroom researchers deal with is quite different from those of experimental studies; therefore, they can not apply these statistical techniques, developed to deal with experimental settings, in classroom-centered research. Instead of claiming that whatever has been discovered must be true of people in general, classroom researchers will claim that whatever understanding has been gained by study of a real-life classroom may illuminate issues for other people. Here, the issue of relativity of research arises.

## **The Relevance and Relativity**

We should not expect that research will come up with remedies that will work under all circumstances. It should always be born in mind that the validity of research is always relative, and relative in two different ways: first, it has to do with the conditions that define the methodology of enquiry. The second kind of relativity has to do with the conceptual

coherence of the theory to be supported by the designed empirical investigation. For example (Widdowson, 1990), if we have no clear definition of what is exactly meant by communication or comprehensible input, how can we accept that accuracy and acquisition orders are the same? Excellent techniques will not compensate for poor science. The value of empirical research depends on the quality of conceptual analysis that defines the objects of enquiry. However, Widdowson considers research beneficial in two ways. He contends that the value of research is that it can help teachers to define more clearly the problems that they themselves must solve. It can stimulate interest and encourage teachers to think about the implications of their practices. It can also provide them with a conceptual context within which to work. In short, theory can help practitioners to adopt a theoretical orientation to their task.

### **Discourse Analysis and Classroom Research**

In the early days of language classroom research, when the focus was more directly on teacher training, observation instruments were used which focused primarily on the teacher's behavior. But as language classroom research became more deeply involved with issues in language learning and the interaction between teachers and learners, the use of observation schedules decreased, and discourse analysis appeared on the scene of transcribed data. Discourse analysis appeared on the scene of transcribed data. Discourse analysis concerned a variety of procedures for examining chunks of spoken or written language. It usually involves the analysis of spoken language as it is used in classroom among teachers and students. Van Lier (1988) describes it as "an analysis of the processes of interaction by means of a close examination of audiovisual records of interaction". The term covers many analytical processes from coding and quantification to more qualitative interpretations. The focus on stretches of classroom interaction leads us usually to units of analysis which are different from such concepts as sentence, clause or phrase... Instead, discourse analysts have investigated concepts such as utterances, repair strategies, topic nomination, and turn allocation. They usually use transcripts and videotaped or audiotaped interactions in their data base (see van Lier 1988; Allwright and Bailey 1990, for more information).

### **A brief history of Classroom Research**

The attempts to determine what constitutes effective teaching was the early concern of teacher training which also provided the basic tools of classroom observation. Researchers such as Flunders (1970) had used direct observation, and developed observation sheets could not survive many years of scrutiny by many researchers who found classroom behavior too complex to be reduced to a few categories (Allwright and Bailey, 1990). Such tools were used originally to make global methodological prescriptions, but in the long run it no longer made sense to imagine one particular method superior to the other. This was absolutely declared by Prabhu (1990) in his article "There is no best method, why?" which puts an end to the early concern of classroom research.

Later, some researchers to move a step down in the Anthony (1963) hierarchy of Approach, Method, and Technique, and do small-scale research in the level of technique. The results were again inconclusive, at least until the researchers switched from children to adults. However, even such positive findings did not amount to verification of the absolute validity of any global methodological prescription. Meanwhile, in the United States, Politzer (1970) had already conducted a study in which he videotaped a number of French classes. He recorded the frequency with which certain techniques were used, and related the frequencies

to learner achievement in different classes. However, he retreated from prescription himself when he articulated his principle of classroom economics. He noted that the value of any technique depends in part on the relative value of other techniques that could have been used in place of the one actually selected by the teacher. Politzer concluded that the very high complexity of teaching process makes it very difficult to talk in absolute terms about good and bad teaching devices.

Having already retreated from a focus on method to focus on technique, classroom researchers felt an obligation to retreat at least one more step back into the unknown. In fact, two moves were involved. First, it meant retreating from prescription to description, and second, retreating from technique to process. In the pursuit of these two moves, two somewhat different viewpoints emerged in the last decade. Some researchers have looked at the language lesson as a socially-constructed event; they stopped looking at teaching as if everything important has come from the teacher; rather, they have started looking at interaction created by the classroom characters. The other viewpoint is the one adopted by those language-oriented researchers who chose to look at the classroom as a setting for studying how language might be acquired from the input provided by the teacher's talk.

### **Classroom research and observation in teacher training**

While there are a number of approaches to helping student teachers understand and appreciate what goes on in the second language classroom, in general, and the role of teacher, in particular, observation of second language classrooms is an exceptionally effective way. However, for observation to have a critical impact on student teachers' professional development, it needs to be guided and systematic. Having a formal program of observation can assist student teachers in:

1. Developing a terminology for understanding and discussing the teaching process,
2. Developing an awareness of the principles and decision making that underlie effective teaching,
3. Distinguishing between effective and ineffective classroom practices, and
4. Identifying techniques and practices student teachers can apply to their own teaching (Richards and Nura, 1990).

Thus, a successful program in second language teacher education helps student teachers develop an integrated set of theories and belief system that can provide them with a framework for effective teaching.

### **D. Observation**

A great task such as research needs data to be analyzed and processed to give results. The need for an instrument to gather a reasonable size of data for study has been an integral part of research from early time. A decade or so after the emergence of classroom-oriented research, a systematic way of direct observation was proposed (e.g. by Flanders 1970) to help researchers gather valid data. Allwright (1988) defines observation as "a systematic procedure



for keeping a record of classroom events in such a way that it can be later studied". However, it is to be done by agreed and explicit coding procedures. The first step, Nunan (1989) believes, in observation is to think about what we want to look for or at. The next step is to decide why observation is likely to help us find answers to our question or resolve our problem. It will be useful to consider the relevant characteristics of the setting, including space and equipment, in which the learner will be observed, and the constraints imposed by the physical setting.

### **Observation: a solution or a problem?**

Observation as a key ingredient of classroom-centered studies was seen as a single issue from two perspectives: a problem or a solution. It was considered either as a necessary component of experimental research, or as the basic research tool in general. In teacher training, it was used by supervisors to observe student teachers' classroom performance. However, the problem was how to observe trainees in such a way that the necessary evaluations of their teaching ability would be validated. Accuracy, gravity and objectivity of the records of classroom events, away from the supervisor's personal impressions, were the basis of their validity. Later, the trend moved towards a systematic as well as objective approach to observation. Allwright (1988) discusses this under the heading of "observation as a problem". On the solution counterpart of the discussion we find its benefits for the teacher, for the learner and for the field in general.

Following Jarvis (1968), Moskowitz (1968) published her influential paper "The effects of Training Foreign Language Teachers in interaction analysis", setting out the immediate benefits of systematic classroom observation for teacher training purposes. She proposed systematic observation as a solution to a trainee's feedback problem. This was in fact the first step towards teacher's self-observation but in a systematic way.

### **Observer's paradox**

Sometimes, it seems that observed teachers alter their behaviors due to the observation itself. This is called, in anthropology, reactivity. However, in sociolinguistics, we call it "the observer's paradox", a phrase coined by Labov (1972), who realized that sociolinguistics researchers often trigger alterations in speech patterns just by getting people to speak or by focusing on their speech (Allwright and Bailey, 1990). This is to be considered as a problem as to the validity of data collection in sociolinguistic research; however, certain suggestions have been made to minimize this problem, such as making repeated visits to the classroom, familiarizing the subject with your data collection devices (e.g. videotape recorders), making yourself available before and after observation, and maintaining an openness to the people involved in the study. Allwright and Bailey (1990) maintain that the dilemma will appear just when you let everyone know the focus of your study, then they will try to make their behavior fit whatever pattern they think you are looking for. If you keep it secret, they can't believe that you do not pose any threat to them. Then, how should it be treated? The recommendation is that, first, you should deceive them with a false idea, since it will cause distrust; and second, if you are obliged to keep the purpose of your study a secret, you have to make this clear to the participants, apologize for the awkwardness it causes, and promise to reveal it as soon as possible (see also van Lier, 1988:39).

### **Observation in Teacher Training**

Systematic classroom observation came into teacher training originally as an answer to the problems faced by supervisors who had to evaluate their trainees' classroom performance, but it became much more closely associated with research on learner achievement, and research on teacher behavior. However, results of achievement research were taken for granted. But Politzer's (1976) design concerned with correlations between both observational and achievement data. The complex role of systematic observation was finally introduced by Simon and Boyer (1967) as "mirrors for Behavior", hence the development of self-observation. Later, systematic observation came in as a way of getting over the problems of the impressionistic subjectivity of earlier ways of evaluating teaching practice. But in the 1970s, the role of systematic observation changed rapidly in conjunction with the development of microteaching. Long and others were concerned with devising an adequate category system, suggesting a fully developed system, valuable and necessary for future research; while Allwright (1988) raised the question of the value of category systems and offered some intensive text analysis as an alternative possibility for the last and most delicate stage of investigation. For Long et al. (quoted in Allwright, 1988) the only available data was that of the observation, while Allwright was able to base his final speculations on the additional data of the teacher's largely impressionistic rankings of the learner on a variety of relevant parameters. In Allwright and Long et al. the enormous complexity of observational data was most impressive for the researchers. This suggested that Fanselow's hope of finding consistent relationships between communications and learning was too optimistic.

However, Seliger (1983) had a quite different role for his observational data. He needed only to isolate subjects for further study, in a research design that permitted relationships to be sought directly between interaction and achievement, and which therefore depended on the gathering of other sorts of data, including language test results. Apart from Seliger (1983), there was a move that could be characterized as a move to divorce the faith in the observable from the faith in the measurable. There was only the observable to study, and whether on the observable was also measurable was a doubtful matter (Allwright, 1988).

### **Direct observation criticized**

Successive research using observation as a device for data collection revealed a number of facts for the researchers. Allwright and Bailey (1990) believe, on the basis of the earlier research, that direct observation is not always the most appropriate way to gather classroom data. Sometimes, it seems too risky because of the likelihood that being observed will change people's behavior. Furthermore, there are many interesting aspects of classroom processes that are not actually observable in any very reliable or measurable way. Sometimes, people do look anxious, but a lot of people are able to cover it up very convincingly in class. Therefore, if we want to investigate anxiety, then, some other way of measuring will be necessary.

### **Techniques and instruments**

There are two broad approaches to observing second language classrooms, qualitative and quantitative. The division does not imply that either one is preferable to the other, or it implies that either one is preferable to the other, nor does it imply that one or the other should be used exclusively. Indeed, a combination of both approaches is desired.

### **Qualitative approaches**

Techniques in the qualitative approach are generally referred to by several different terms, including *ethnography* (Good and Brophy, 1987) and wide-lens (Acheson and Gall, 1987). The general goal of this approach is to provide rich and descriptive data about what happens in the second language classroom. Written ethnographies are beneficial to student teachers in helping them see the multiple roles of the second language teachers. Another advantage is that they allow student teachers to compare and contrast a teacher's use of both subject-matter knowledge and action-system knowledge during a lesson. However, the main disadvantage of qualitative approaches lies in their very nature. They are so broad that it takes a highly-trained observer to do a reliable observation. An untrained observer may be overwhelmed by the complexity of what goes on, and not be able to focus on important events as they occur. On the whole, we divide ethnographies into two categories, written ethnographies are hard to accomplish, and video- or audio-recorded ethnographies are more complete but costly in nature.

### **Quantitative Approaches**

Quantitative techniques or instruments generally take the form of a checklist or a form to be filled in, or completed. The behaviors in question are indicated in a way, and the observer's role is to record their occurrence and the time. Since such checklists are relatively easy to construct or revise and to use, they are used very frequently. Unlike qualitative approaches, the observer using quantitative checklists does not have to be highly-trained in their use and interpretation. The main disadvantage of these checklists is that the units of observation may be trivial aspects of the teaching and learning processes. Also, the actual behaviors observed may not explain all of the facts of the focus of the observation or the problem. Richards (1990) associates another factor in this regard: the concept of inference. He divides observation items into two categories. Low-inference item is one which is readily recognizable and specific (e.g. student raises hand), while a high-inference item refers to more covert, less specific behavior (e.g. teacher asks a know-answer question, where the observer may have to infer if the teacher knows the answer to the question or not). Seating chart observation records, teacher and student talk checklists, at-task checklists, movement patterns analysis, teacher expectations, classroom management and motivation analysis are all examples of quantitative instruments of second language teacher observation (see also Richards and Nunan 1990: pp. 43-57). The question here arises as to the selection and the appropriacy of these instruments for our purposes.

### **Selection of observation schemes**

The first decision to be made about selecting research methodology for observing and analyzing classroom interaction is whether to adopt an observation scheme or not. Such schemes can tell us a great deal about the interaction being recorded, and enable us to uncover patterns and regularities which might otherwise go unnoticed. Once we have adopted a particular scheme, we are operating with a pair of mental blinkers which may well obscure other significant features of the interaction. In addition, in many schemes, the actual language used in the interaction is lost.

We may also decide not use one such scheme because of the factors mentioned above, and decide to base our data on an analysis of the actual interactions themselves. In order to do this, we shall need an audio or videotaped record. We may also require a transcript of the interaction. In general, a number of considerations is to be taken into consideration when deciding on an observational instrument: complexity of coding the interactions in real time

when using a system with a large number of categories is the first of these considerations. Obviously, there is a trade-off between the relative crudity of an easy-to-use instrument with few categories and the sophistication of a complex instrument with many categories.

### **An overview of observation schemes**

The basic tools of classroom research were originally borrowed from general educational research, and consisted mostly of techniques for using observation schedules for the classification of teacher behavior. Relatively little attention was paid to learner behavior at the time. Krumm (1973) was the first figure to point out the problem of finding the appropriate categories for an observation system. He took it for granted that these categories should focus on teachers' behavior.

The starting point was Flanders' pioneering work on Interaction Analysis (1970). He used this term for his ten-category observation schedule, designed for general educational purposes. He combined a powerful idea that teaching was more or less effective depending on how directly or indirectly teachers influenced learner behavior. This was a pre-democratic, anti-authoritarian position that looked for a positive relationship between a democratic teaching style and learner achievement. He, then, developed a simple way of analyzing the results of the observations to give teachers score reflecting the directness or indirectness of their teaching style. The Flanders' Interaction Analysis Categories (sometimes referred to as FIAC) classified classroom language into one of the ten categories as follows:

#### **Teacher Talk**

1. Accept feelings
2. Praises or encourages
3. Accepts or uses ideas of pupils
4. Asks questions
5. Lectures
6. Gives directions
7. Criticizes or justifies authority

#### **Pupil Talk**

8. Pupil talk: response
9. Pupil talk: initiation

#### **Silence**

10. Period of silence or confusion (Allwright and Bailey, 1990)

In 1971, Moskowitz published her own adaptation and modification of FIAC. Her FLint (Foreign Language Interaction) system was specifically designed for analyzing language classrooms, and was more sophisticated than FIAC, expanding the original ten categories to twenty two categories and subcategories. (Nunan, 1990: 84-5) Expanding and refining Flanders' categories, Moskowitz used her schedule both as a research tool and as a feedback tool in teacher training (Richards and Nunan, 1990).

Another important contribution to this field is Fanselow's (1977) schedule abbreviated as FOCUS (Foci for observing communication used in settings). FOCUS was an observation scheme developed for teacher training purposes, but used as a descriptive system applicable to research on any example of human interaction. Fanselow's system did not have separate

categories that could be used regardless of who the participants are or what role they play in the interaction.

One of the most sophisticated instruments is the COLT system (communicative orientation of language teaching) originally developed for a large-scale investigation of SLA by children (Frohlich et al., 1985). Recently, it has been used by Spada (1990) for observing classroom behaviors and learning outcomes in different SLA settings. The nature of language proficiency and its development in educational contexts for children learning a second language were the earlier focus of this system. The scheme consists of two sections: part A contains categories derived from issues in the communicative language teaching literature, and describes classroom activities in organizational and pedagogical terms. Part B contains categories to reflect in first and second language acquisition research and describes aspects of the verbal interactions that take place between teachers and students within activities.

Allwright and Bailey (1990) believe that these refinements of the basic tools of classroom research are the result of two issues. First, some researchers can not bear to use anyone else's observation schedules. And second, it might be the case that the existing instruments are not necessarily appropriate tools for some types of classroom-oriented research. (More information, Nunan, 1990; Wright, 1983: pp. 109-196)

### **Motivations for change**

Many researchers, who criticized the validity of the category systems, referring to the problem that they had to prejudge what was worth paying attention to, have now turned to transcriptions of recorded classroom events as their main data base. This revolution in the domain of the tools of classroom research was due to the emergence of discourse analysis as a field of linguistic enquiry. Another stimulus for change development in this regard came from teaching itself. Changes in pedagogic theories have led, naturally, to changes in the questions asked of observational data. And the data collection procedures have led to change in order to provide material for the researchers to analyze. A clear example of this sort of change is the COLT system (Frohlich, Spada and Allen, 1985). It stands for communicative orientation of language teaching, developed in hopes of distinguishing communicative language teaching classes from those that are teacher-centered and form-focused. COLT's categories were designed to measure the extent to which an instructional treatment may be characterized as communicatively oriented (Allwright and Bailey, 1990). Such motivations led to a complete review of the form and function of observation schedules.

### **The Emergence of Ethnography**

One of the problems with the use of observational schemes and schedules was that the various categories comprising the schedules were predetermined by the researchers before they actually go into classroom to collect their data. Van Lier (1988) has criticized the use of a single observation scheme, no matter how comprehensive. He argues that such schemes should be valuable if they are simply one of a number of tools which might also include lesson plans, field notes and interviews. However, constraints of time and money often preclude the use of a comprehensive array of tools and techniques. In addition, a broad ethnographic approach is devalued by those who favor the use of measurement and statistics. Amongst such researchers, it is fashion to equate excellence with hypothesis-testing methods of the natural science. Those who advocate the tabulation of classroom interaction using observation schemes, and the subjection of the resulting data to statistical analysis are falling

into the trap of equating quality in research with measurement. While van Lier (1988) admits the attraction of such schemes, and the fact that they are a great improvement over anecdotal reports and the like, he also questions whether they actually add to our knowledge and understanding of what goes on in the classroom. They are all based on a prior selection of categories which are determined by ideological beliefs about the nature of learning. They focus on the observable, countable and usually low-inference behaviors. Van Lier's alternative is to record, transcribe and engage in the close textual analysis of classroom interaction. His stricture that issues should emerge from the data also needs to be tempered by the fact that there is no such thing as theory-free observation. Even without formal and pre-determined observation schedules, we bring with us "our own interior's observation schedule" which will be framed in terms of our beliefs, attitudes, and ideologies about language learning and teaching. Out of such rich picture of classroom interaction will emerge patterns which can be used in pattern analysis.

### **Pattern Analysis**

Another alternative to observation schedules is pattern Analysis (Nunan, 1990). This has been used by Ireland and Russell (1978). It is a technique for looking at what happens in classrooms. It is an open-ended technique, rather than a preconceived set of categories for analysis. It is amenable to a variety of different points of view, and is probably most useful to teachers who have already identified particular aspects of their teaching which they wish to examine. Category-based observation schedules are sometimes referred to as tally sheets. As already discussed, researchers have found a number of shortcomings in them. The main disadvantage of these schemes is that the actual language used in the classroom is usually lost. On the contrary, there is the advantage that the observations can be made by someone with appropriate training in real time. Also, there is no need for the observer to go through the laborious task of recording and transcribing the interaction.

Using a narrative or ethnographic account can be another technique to document classroom interaction. Here, the actual language used by teacher and students, as well as interpersonal dynamics and affective climate of the classroom can be brought out. The major disadvantages of this technique are extremely time-consuming nature of the task, and the biases inherent in the authorial comments which are inserted into the narrative itself (Nunan, 1990). The two observation techniques are described, in sum, and compared as in the following table (Table 1) (Nunan, 1990: 79-80).

### **Self-observation**

To observe others and ourselves with the purpose of helping cope with teaching and learning problems implies not only that we know that one set of practices is superior to another, but that we know what needs to be done in each distinct setting. It also implies that there is a cause-effect relationship between a communication and a result. To help others and ourselves through self-observation means constricting our own knowledge, not the acceptance of knowledge of others in the shape of a product. However, for any sort of observation to be effective, it needs to be followed by a discussion of the observed points, but it is usually rare to see discussions after observations (Fanselow, 1990).

Table 1. Tally sheets and narrative accounts compared

	<b>Advantages</b>	<b>Disadvantages</b>
<b>Tally sheets</b>	Good for observer to use while watching class Good for self-analysis by teacher Easy to compare different interactional categories Easy to focus on specific elements Orients one's mindset as observer Visual presentation Easy to overview	Likely to distort reality Does not show the human element Very abstract Focuses on quantity Does not indicate success or failure Does not indicate sequence of interaction Open to misinterpretation Categories are biased towards teacher  Does not indicate length of interaction
<b>Narrative accounts</b>	Displays significant paralanguage  Reflects support between teacher and students Gives overall effects of interaction can be used to carry out subsequent tally-sheet analysis Shows real nature of questions asked Context given to support the language	Difficult to use for clinical purposes Time-consuming to write Allows distraction by focus on trivial detail Open to emotive reporting Inadequate on its own Cannot be done in real time Requires high-quality recording equipment

## E. Teacher Talk

### Characteristics

Teacher talk is the special language the teacher uses when addressing second or foreign language learners in the classroom. It shares a number of common features of the learners' language. Gaies (1977) found that teachers' utterances were simpler on a range of measures of syntactic complexity when they addressed pupils than when they were talking amongst themselves in seminars. Henzl (1979) notes lexical, phonological and grammatical modifications in a teacher's language depending on the level of the learners he is teaching. Teacher talk is also characterized by functional adjustments. Gaies (1977) also found evidence in his teachers' speech of the same training strategies, characteristic of adult input to children. He gives examples of repetition, prompting and prodding, modeling and expansions. Weasche and Reedy (1983) found that an English-speaking professor and a French-speaking professor used significantly more self-repetitions when addressing second language students in university psychology classes than when teaching the same content to first-language students. This finding is similar to that reported by Long (1983). It might be hypothesized that these adjustments facilitate second language and foreign language development in the classroom. Therefore, this sort of talk compensates for the real-world language found outside the classroom.

Observations show that teachers do at least one half of the talking done in the classrooms. This is one of the major ways that teachers convey information to learners and it is one of the primary means of controlling learner behavior. One aspect of it is pitching the complexity of their speech so that learners would understand with less effort. Gaies (1977)

found, in a study, that in classroom speech with learners, teachers modified their speech complexity. This factor led some researchers to claim that the language to which second language learners are exposed in the language classrooms is often unlike the language they will encounter outside the classroom (e.g. see Long and Sato, 1983; Long, 1980). Long (1983) interpreted the result of one such study as follows: in so far as the findings are representative of at least elementary level ESL instruction, the second language classroom offers very little opportunity to the learner to communicate in the target language or to hear it used for communicative purposes by others. He rightly points out that the picture revealed by these data is one of a transmission model of education, the idea that the teacher's task as the knower is to transmit information to the learners. This approach leaves little opportunity to practice genuine communicative uses of language in a full range of functional moves or to negotiate for meaning.

### **Teacher Talk as Input**

Gaies (1977) was the first figure to investigate this area of SLA. Henzl (1973) had done some related research in 1973 and 1975, and Larsen-Freeman entered this field in 1976. Wagner-Gough and Hatch (1976) had drawn attention to the importance of input studies in the context of natural SLA. In his paper "The nature of linguistic input in formal second language learning: linguistic and communicative strategies in ESL teachers' classroom language", Gaies (1977) examined the syntactic aspects of the oral classroom language of eight ESL teacher trainees enrolled in a practicum course offered by the program in Applied Linguistics on Indiana University; he hoped to find similar-to-natural- acquisition adjustments in the formal language classrooms. Direct classroom observation was crucial to his research design. His conclusions did not concern all with possible new and improved techniques for language pedagogy. However, it helped focus attention on the role of classroom input, and the field could move on and begin to deal more adequately with the social nature of that input (Allwright, 1988). Chaudron (1983), with studies on "teacher talk as foreigner talk" stays in a closer position to Gaies' findings. Also, Krashen (1985) draws attention more to the probable importance of comprehensible input.

### **Classroom Language**

The assumption that second language classroom language can be described as focusing either on form or on meaning does not reflect a third language category, i.e. restricted language, such as the language of many teacher questions. This form focuses completely on message but transfers no information. It is suggested that the existence of this category may explain in part why teachers are unable to move into true communicative teaching but have stayed in an approach dominated by restricted language questions, which limits student participation to responding to questions. Examination of one unusual classroom pattern led to the development of an activity approach, entitled "The Teacher is Unprepared" approach, in which the interaction language must be unrestricted and the discourse pattern must correspond to that of native-speaker interaction. The approach is found to work because the conversational lies with the students and all of the language generated is unrestricted (Coyle, 1984).

The predominant type of discourse, in classroom, is three-phase, a teacher initiation, a pupil response, and a teacher feedback. The prevalence of initiation, response and feedback (IRF) has been well-documented by Barnes (1976) and Sinclair and Coulthard (1981). IRF is also common in language classes, although a number of differences from content classrooms



have also been noted. However, the important point is that the basic pattern of classroom discourse differs considerably from the discourse patterns found in normal conversations outside the classroom. Sinclair and Brazil (1982) observe that there are also differences in the discourse contributions from the pupils. They state that having a very restricted range of verbal functions to perform, the pupils rarely initiate, and never follow up; most of their verbal activity is response, and normally confined strictly to the terms of initiation. However, not all classroom discourses are the same; there can be many various types.

## **F. Questioning Behavior of English Teachers**

There has been much research on teacher talk in recent years. This interest reflects the importance of such talk in language teaching. Issues which have been investigated include the amount of type of teacher talk, speech modifications made by teachers, instructions and explanations, type and number of questions asked and error correction. One aspect of teacher talk which has received a lot of attention is that of teacher's questions. Comparisons have been made between the types of questions addressed to learners in a classroom and those addressed to them outside the classroom. Studies have also looked at the didactic function of questions and the relationship between different question types and learning outcomes.

### **Definitions of Question**

The Longman Dictionary of English Language provides the following definition: command or interrogative expression used to elicit information or a response, or to test knowledge. The advantage of this definition is that not all questions are considered to be interrogatives (e.g. tell me how you make chocolate soup) and that not all interrogatives are considered as questions (e.g. How do you do?). However, one aspect of this definition, i.e. the potential use of questions as a means of measuring knowledge, is crucial to any discussion of patterns of question-asking in the classroom, because one of the remarkable differences of educational and non-educational settings is that in the latter case, people seldom ask questions to which they already the answers. There are exceptions, of course, such as jokes (what's the difference between...?) and quizzes (which country will host the next Olympics?) and courtroom discourse (what did the defendant say to you then?) (Lynch, 1991).

Quirk et al. (1972, 1985) define question as a semantic class which is primarily used to seek information on a specific point. They have classified questions into three major classes: Yes-No questions, Wh-questions, and alternative or or-questions. This classification, is made according to the response expected, however, it seems that this is more of a syntactic nature. Lyons (1977) characterizes question as an utterance with a particular illocutionary force. He asserts that the difference between a question and a statement is that the former contains a feature of doubt, and that one of its felicity conditions is that the speaker should not know the answer to his question. This is not also a satisfactory definition. What Lyons (1977) and Quirk et al. (1985) have done is trying to offer a description which takes into account both syntactic form and discourse function. Therefore, different and inconsistent criteria are used in identification and classification of questions. The result is that the category of questions becomes a "half-way house" between a syntactic category and a discourse category.

### **Questioning in mother-tongue classes**

Despite the lack of studies of teacher's questions in the ESL and EFL classroom, there is a substantial body of literature about the kinds of questions teachers ask in the first-language

classrooms. These studies shed light on at least three major issues: (1) the intellectual level of teacher's questions, (2) the degree to which teachers can be trained to change the type of questions they ask, and (3) the relationship between the types of questions teachers ask and certain features of their students' responses. It is suggested that questions at low-cognitive levels, asking for factual recall or recognition are display questions, and questions calling for evaluation and judgment are referential. Research results indicate that teachers are more inclined to ask questions of low-cognitive levels (e.g. Guszak, 1967; Wilson, 1973). However, there is evidence that they can increase the frequency of questions of higher cognitive levels in their classroom speech (e.g. Gall, 1970; Rogers and Davis, 1970). Also, results of research on the third issue suggest that the level of a question affects what the student says in response. Arnold et al. (1974) found a significant one-to-one correspondence between the question level and level of student response (Brock, 1986).

### **The significance of question in informal settings**

Brock (1986) maintains that in informal conversation between native speakers (NSs) and beginning-level nonnative-speakers (NNSs), questions are the form most frequently used by NSs to initiate topics and as a consequence of frequent shifts in topic (Long, 1981, 1983). Nss' preference for questions in topic initiation in informal conversation may be due to the obligation to respond which questions generate, the assistance they provide to the NNSs in the form of partially or fully pre-formulated responses, and the salience added by such linguistic features as rising intonation and wh-words (Long, 1981). Long (1982) contends that questions may be a crucial input feature fostering development of second language abilities in many third world societies.

Despite their probable importance, there have been few studies of teachers' questions in EFL classrooms. This is to be re-emphasized given the important role questions have been found to play in NS-NNS conversation outside the classroom. (Long & Sato, 1983). Freed (1978) and Long (1980, 1981) suggested that the higher frequency and varied functions of questions are among the most significant and most consistent modifications made from NS-Ns norms. In NS-NNS conversation, questions are thought to facilitate and sustain participation by the NNS. For example, they can serve to signal speaking turns for the NNS, to make conversational topics salient, and generally to compel the NNS to participate (Goody, 1978). Further, certain kinds of questions, especially yes-no questions, are particularly easy for NNS. Therefore, questions can help, in various ways, make greater quantities of linguistic input comprehensible, and also offer more speaking opportunities.

### **Questions help learning**

Conversation is the only SLA experience available to language learners. Numbers of people in many societies where multilingualism is the norm make use of this source of learning. It is believed (Long, 1981) that conditions for such conversation to take place outside classroom is modification of interactional structure of NS- NNS conversation, which may be achieved through such devices as repetition, rephrasing, various forms of discourse repair and questioning (Long and Sato, 1983). It was found (Brock, 1986) that the learners in the group in which more referential question were asked gave significantly longer and more syntactically complex responses. She concludes, "That referential questions may increase the amount of speaking learners do in the classroom is relevant to at least **one current view of SLA**. Swain (1983), in reporting the results of a study of the acquisition of French children in

elementary school immersion classrooms, argues that output may be an important factor in successful SLA” (Brock, 1986: 55).

### **Classification of questions**

Kearsley (1976) conducted a cross-disciplinary review of questions and question-asking in verbal discourse; out of the corpus, he made the following *taxonomy* of questions' functions.

1. Echoic: those which ask for the repetition of an utterance or confirmation that an utterance has been interpreted as intended. (E.g. Pardon! what!)
2. Epistemic: those which serve the purpose of acquiring information:
  - (a) Referential: intended to provide contextual information about situations, events, actions, purposes, relationships or properties (Wh-questions, for example).
  - (b) Evaluative: asked to establish the addressee's knowledge of the answer (sometimes called display, test or known-information questions)
3. Expressive: conveying attitudinal information to the addressee (e.g. Are you coming or aren't you?)
4. Social control: used to exert authority by maintaining control of the discourse.
5. Attentional: allows the questioner to take over the direction of the discourse (meta-message is "listen to me" or "think about this").
6. Verbosity: asked only for the sake of politeness or to sustain conversation (e.g. cocktail party questions!) (Quoted in Long & Sato, 1983).

Long and Sato (1983) extended this taxonomy to include as much of the functions as possible. The following is their modification and expansion of Kearsley's (1976) taxonomy of questions' functions:

#### **1. Echoic:**

- (a) Comprehension checks (e.g. OK? All right? Does everyone understand "polite"?)
- (b) Clarification requests (e.g. what do you mean? I don't understand what?)
- (c) Confirmation checks (e.g. Did you say "he"?)

#### **2. Epistemic:**

- (a) Referential (e.g. why didn't you do your homework?)
- (b) Display (e.g. what's the opposite of "up"?)
- (c) Expressive (e.g. It's interesting the different pronunciations we have now, isn't it?)
- (d) Rhetorical: asked for effect only, no answer is expected from listeners, answered by speaker (e.g. why did I do that? Because...)

### **Referential versus display questions**

As highlighted above, two types of questions can be contrasted as to the knowledge, of the one who asks, about the answer expected. These two are referential and display questions. As noted above, the teachers ask display questions only to evaluate their students, only to find out whether they have got the lesson or not. While, by asking referential questions, teachers want to elicit first-hand information from the students. However, to some classroom researchers, this division did have little sense. Van Lier (1988) has questioned the value of

drawing a distinction between display and referential questions, pointing out that,” Such [display] questions have the professed aim of providing comprehensible input and of encouraging early production. I shall suggest by and large, what gives such question types their instructional, typically L2-classroom character is not so much that they are display rather than referential, but that they are made with the aim of eliciting language from the learners” (p.222).

According to van Lier, the important distinction between questions in the classroom is the fact that classroom questions of whatever sort are designed to get learners to produce language. What distinguishes instructional questions from non-instructional (conversational) questions is their eliciting function, not their referential or display nature. Though, there can be found other factors which will be operating, such as the topic area, background knowledge of the learners, and contextual and interpersonal variables.

### **Referential questions**

Brock (1986) contends that referential questions increase the amount of speaking in the classroom. This output is an important factor in successful SLA, and creates the necessity for learner to perform a syntactic analysis of the language. She notes that through attention to vocabulary and extralinguistic information, it is possible to comprehend input to get the message without such an analysis. Producing one's own messages in the target language, on the other hand, may be the trigger that forces the learner to pay attention to the means of expression needed in order to successfully convey his or her intended meaning. Therefore, if it is true that referential questions *increase the amount of learner output*, then such questions may be an important tool in the language classroom, especially in those contexts in which the classroom provides the learners their only opportunity to produce the target language. Finally, it is suggested that an increased use of referential questions by teachers, which create a flow of information from student to teacher may create discourse which more nearly resembles the normal conversation learners experience outside of the classroom.

### **Display questions**

Brock (1986) and Smith (1978) report that responses to questions calling for the recognition or recall of factual information are shorter than responses to higher -order questions calling for interpretation or opinion. A study conducted by Cole and Williams (1973) indicated a strong positive relationship between the cognitive level of the teachers' questions and the cognitive level, length and syntactic complexity of the pupils' response. Mehan (1979) observes that the use of display questions, which reflect the one-way flow of information from teachers to students, is responsible for the fact that conversations in classroom discourse must be kept separate from the demands of everyday discourse. Mehan (1979) maintains that this is because there is only a single correct response to display questions, and it is known in advance, teachers often find themselves searching for that answer, while students provide various trial responses which are in search of validation as the correct answer, and this is the unique nature of the classroom conversation produced by display questions.

### **Question-based interaction**

A consequence of interaction created in language classrooms as a result of using display questions is a special structural pattern into which the answer will fit. In other words, the teacher may be in charge of both answers to the question and establishing their linear

coherence. On the other hand, referential questions may require that a student provide the connections between the propositions expressing that information, connections which are necessary to form linearly coherent sequences (van Dijk, 1977). Since these connections between propositions are typically expressed by natural connections such as and, because, yet, so etc., it was hypothesized that a greater number of referential questions would be accompanied by a greater number of connectives in learner speech.

### **Earlier studies on teacher's questions**

Teacher's classroom questions have already been investigated in various settings by many researchers, especially in ESL classrooms. Winne (1979) established relationships between the form and cognitive level of questions and student achievement. From a sociological viewpoint, Mishler (1975) tried to indicate that questions can be one means by which the dominant member, in conversation between participants of unequal status, maintains control of interaction. Hoetker and Ahlbrand (1969) have well documented the ritual nature of teacher's display questions in classroom setting. Also, ethnographic studies have highlighted the cultural specificity of teacher questioning behavior (Boggs, 1972; Heath 1979; Philips 1972) and have explained some children's apparent failure to respond or inappropriate responses in the classroom. Such studies do in fact offer insights into the dynamics of classroom conversation.

Quantitative findings in the case of teacher's questioning behavior would mean little. On the other hand, questioning would not be of great interest unless we believed that it contributed in a causal, quantifiably-verifiable way to second language production and development. Chaudron (1986) states, "Whereas Politzer's (1970) study of good and bad language teaching behavior omitted questions as an observational category, later work (Politzer 1977; Ramirez and Stromquist 1979) included several types of guided questions. These closed-response types of questions had the strongest positive correlation with pupil achievement, presumably since the practice in responding to the closed questions improved student's performance on similar points on the achievement tests."

Other observational studies have compared the amount of general questioning behavior in classroom speech with that in free conversation (Long and Sato 1983; Pica and Long 1986). The proportion of interrogative to declaratives in teachers classroom speech was found to be much lower than the normal ratio in NS-NNS conversation. This quantitative finding led to the conclusion that questioning might be a variable representing greater negotiation of meaning and exchange of information.

A number of researchers investigated the balance between referential questions and display questions in *foreign language* classrooms. They have generally concluded that the situation in EFL setting is not very different from the British Secondary School classrooms that Sinclair and Coulthard (1970) studied. Also, Long and Sato (1983) compared the questions occurring in informal NS-NNS conversation, and teacher-learner interaction in the second language classroom. Lynch (1991) summarizes their findings as follows:

Referential (information-seeking) questions, which predominate in NS-NNS conversation outside classrooms (76% of all questions asked) made up a mere 14% of questions asked by teachers. This result suggest that, contrary to the recommendations of many writers on second language teaching methodologies, communicative use of the target language makes up only a minor part of typical

classroom activities. "Is the clock on the wall?" and "Are you a student?" are still the staple diet, at least for beginners.

Further qualitative distinctions were made by Long and Sato (1983) who believed that learners' responses would differ not only quantitatively but also qualitatively, depending on the type of questions. Referential questions, which seek information unknown to the speaker, were thought more likely to elicit longer, more communicatively authentic responses than display questions, for which responses are predetermined by lesson content. This hypothesized effect of a process variable was tested both in a simulated classroom interaction (Brock, 1986) and in a natural classroom experiment (Long et al. 1984). The results suggested that referential questions elicit slightly longer and more student utterances.

Brock (1986) states the main purpose of his study as determining if higher frequencies of referential questions have an effect on adult ESL classroom discourse. In order to observe this process, he provided four experienced ES teachers and twenty four NNS, as participants in this study. Two of the teachers were provided with training in incorporating referential questions into their classroom activity; the other two were not. Each of the four teachers taught the same reading and vocabulary lesson to group of six NNSs. The treatment-group teachers asked significantly more syntactically complex and longer questions and contained greater number of connectives. The results confirmed her hypotheses.

Another proposed qualitative distinction is that of closed and open referential questions (for the former, a unique, short answer is expected, while for the latter an indeterminately longer one) said to have differential effects. Duff (1986) showed in a related research that certain classroom activities generate a greater total number of referential and other questions. However, a continued program of qualitative refinement and quantitative testing is needed to determine what aspects of learning tasks are relevant to difference in amount or type of questions.

### **Questioning Patterns in ESL and EFL settings**

Kubota (1986) examined student responses to teacher-initiated questions in classrooms of ESL and EFL. This study focused specifically on the similarities and differences in the questions asked by NS teachers of ESL and by NNS teachers of EFL, and to assess the relationship between teacher's question types and students' responses. Results suggest that: (1) the Power of wh-questions is strong, triggering longer and more syntactically complex utterances than yes/no questions; (2) teachers should note that higher-level cognitive questions might increase the length and syntactic complexity of students speech; (3) NNS teachers may paraphrase questions in more cases, but not simply repeat them with one turn when students have difficulty answering; (4) in some contexts, teachers should give students frequent speaking turns and as much speaking time as possible, and (5) as in natural discourse outside the classroom, *two-way* or *multi-way exchange* of information is ideal for genuine communication.

An example of such questions in EFL settings is provided by Grow-Maienza (1991) in studying question and response patterns in middle and secondary schools in Indonesia. The study examines questioning from the point of view of several previous studies. Interactions in 12 classes in English and in Bahasa Indonesian were videotaped in three middle schools and three secondary schools. Analysis of the data revealed patterns showing that teachers using traditional approaches to teaching vary significantly in function, form, level, rate and

participant structures in their questioning interactions with students. Using classifications adapted from Bloom's taxonomy of Educational Objectives in the cognitive domain, teacher's questions were analyzed for the level of cognitive reasoning expected in the responses. The patterns that emerged revealed sequences marking (1) translations in teacher's objectives, and (2) the degree to which teachers involve students in higher order thinking. This evidence *refutes assumptions that classroom interaction is marked by lower-level teacher questioning and rote echoic responses*. However, it is also concluded that analysis of the level of questioning must be accompanied by analysis of the level of responses received.

### **Why not learners ask questions?**

Abbot (1980) argues that, in contrast with children who are efficient interrogatives, adult language learners have stifled willingness and freedom to ask questions, and have learned not to ask question. He, further, adds that the more authoritarian the teacher, the less willing the pupil will be to ask questions; also, it is unacceptable in some societies to challenge one's teachers with questions. It is believed that this is a consequence of having large classes which produce teacher-initiated communication. In such settings, teachers are questioner and pupils' answers. This lack of motivation to ask questions, it is believed, will certainly suppress the inquiring attitude which is considered fundamental to learning. In his article, Abbott (1980) argues that it is the duty of the English teacher to provide the learner with the means of asking for information. It is intended that teachers should not dominate the questioning. Further, focusing on the reversal of the traditional roles of teachers and students a, respectively, questioner and answerer; Abbott emphasizes the role of "purpose" as a key element for learner to learn how to ask for information. Therefore, these traditional roles do not guarantee effective teaching, and do not reflect the real-world patterns of interaction. Lynch (1991) also intended to realign the conventional demarcation of teacher-questioner and pupil-answerer. He looks at the issue from three perspectives: Linguistic, interactional and psycholinguistic. The linguistic aspects concern authenticity argument , that is, assimilating the classroom discourse with real-life language communication. International aspect of his argumentation concerns the control over discourse which is exerted by the questioner. Van Lier (1988) also considers the ways of exerting social control over discourse using questions. He states that it may be unimportant whether teacher asks display or referential questions, rather what counts here is the way in which control over discourse is maintained. The third line of Lynch's argumentation concerns the mutual processes involved in foreign language comprehension. The whole idea is that students should ask questions, not the teachers. On the basis of his detailed arguments and practical experiences based on his self-designed teaching materials, Lynch (1991) concludes that comprehension questions should be asked by the learners. That is, they should be encouraged to ask questions when they fail to understand messages.

## **G. Classroom Interaction**

### **Definitions**

Seliger (1977) considered interaction in language classroom as the practice of new linguistic concepts acquired or learned in the classroom. In addition, input-output speech acts which make up the interaction, he stated, may vary in length from one word, such as "yes" or "no", to several sentences in reply to an input question. It was also assumed that even in the case of a simple but meaningful "yes" or "no", practice has been taking place in the form of processing the input. He counted any speech act by a student as an interaction. Seliger's (1977) paper, "Does practice make perfect? : a study of Interaction patterns and L2

competence", was firmly related to a practical pedagogic issue. He focused on classroom interaction and two types of learners-high-input generators (HIGs) and low input generators (LIGs). He emphasized that learners in formal instruction do not have adequate acquire the feature system of a new language concept. He attributed the success of a few certain learners to cognitive factors and concluded that the remaining others need to practice more. Finally, he came to the conclusion that HIGs generated more interaction and practice, and were, hence, more successful than LIGs.

### **Management of interaction**

The success of interaction in the classroom cannot be taken for granted, and it cannot be guaranteed by exhaustive planning either. If the interaction is totally planned in advance, then the result is a play-reading, rather than a lesson. Interaction is to be managed by all the participants as it goes along, no matter how much thought has gone into it before hand. Interaction is usually viewed as a sort of co-production (Allwright and Bailey, 1990). The main problem, here, is that successful interaction in the classroom, or anywhere, involves everybody managing at least five different factors all the time, at the same time,

1. Who gets to speak? (Turn distribution)
2. What do they talk about? (Topic)
3. What does each participant do with the various opportunities to speak? (Task)
4. What sort of atmosphere is created? (Tone)
5. What accent, dialect or language is used? (Code)

What makes it even more complicated is the fact that these five factors can be means as well as ends. This means that if teachers of EFL want a particular learner to say something they have a variety of possibilities open to them, and this leads to move interaction.

### **The role of interaction in L2 development**

Conti et al. (1983) believe that research findings and statewide evaluation studies suggest that in adult basic education and ESL classes students learn more when they are engaged in interactions. In other words, when the teachers practice the recommended participatory learning principles, learning outcomes are considerably high. They recommend the following guidelines: (a) establish a learning-centered classroom, (b) personalize instruction, (c) relate learning activities to each learner's experiences, and (d) encourage learner interaction. Hatch et al (1979) argued that (1) frequency of specific syntactic forms in the speech directed at the learner influences the language forms he produces, (2) conversations provide the learner with large units which are incorporated into sentence structure, and (3) conversations with different interlocutors provide the learner with a variety of input which is of benefit to language development in different ways.

### **Information-gap and Interaction**

Dought and Pica (1986) refer to the existence of a lack of information among participants working on a common problem, as information gap, but the term does not define the nature of the gap. Two - way information-gap tasks are those which require the exchange of information among all participants, each of whom possesses some piece of information not known to all other participants to solve the problem. Long (1981) claims that such activities promote optimal conditions for students to adjust their input to each others' level of



comprehension and thereby facilitate their SLA. One-way information-gap tasks are usually described as tasks which do not require exchange of information; rather, participants decide whether or not to contribute to the solution of the problem. Often, confident and proficient speakers carry the conversation, and weaker students tend to avoid the task altogether. Such a task does not pose any constraints on all students to participate.

## Group Discussions

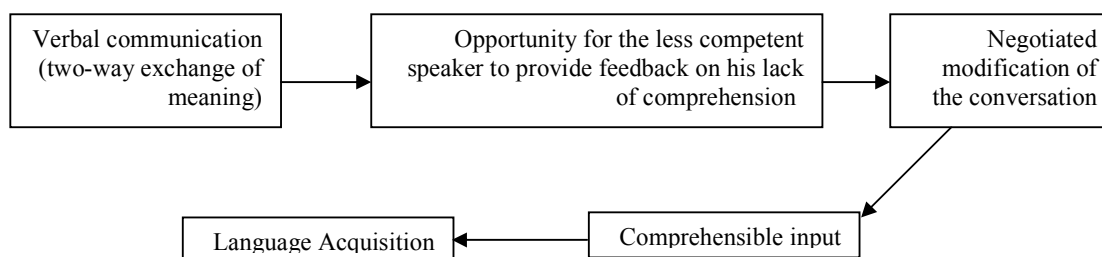
In group discussions, many students tend to go along with the majority opinion of both their class and group. In some cases, if the students are not able to reach a unanimous decision, they may simply shift to a different aspect of the problem, abandoning the topic at hand altogether. The less linguistically proficient students avoid participation, and the less skillful debaters capitulate their opinion. The more expressive participants, including the teacher, dominate the interaction and supply most of the input (Doughty and Pica, 1986).

## Comprehensible Input

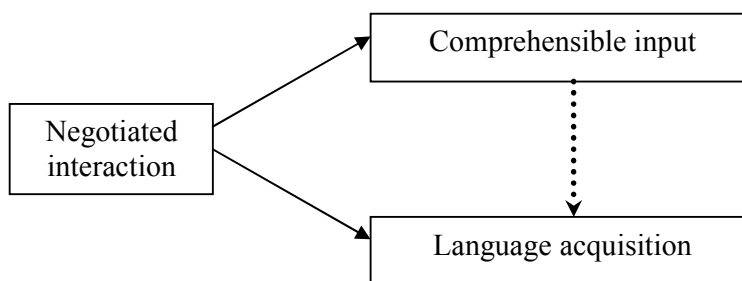
Comprehensible input refers to the fact that not all the target language to which second language learners are exposed is understandable, only some of the language they hear makes sense to the. Krashen (1985) hypothesized that teacher language data which were slightly above the current level of understanding of the learners should promote learning. He called this type of input "i+1", where the "i" represents the current interlanguage of the learners, and the "1" designates that the input is challenging but not overwhelming to the learner. However, Krashen's concept of comprehensible input is problematic in a variety of ways. First, it is not all obvious that incomprehensible input is of no value for the language learner, since there is much to be learned beyond linguistic forms and their meanings (e.g. intonation and stress). Second, it is not easy to see how more exposure to input, actually promotes language development.

## Models of the relationship between language acquisition, comprehensible input and interaction

Krashen (1985) attributes the progress in language acquisition to comprehensible input, saying that output is possible as a result of acquired competence. In other words, when performers speak, they encourage input. In contrast, Long (1983) proposed a model in which the role of conversation (interaction) in getting comprehensible input and its primacy are emphasized.



Swain (1985) feels that, while comprehensible input may be sufficient for acquiring semantic competence in the target language, comprehensible output is needed to gain grammatical competence. In other words, language learners must struggle with producing output which is comprehensible to their interlocutors if they are to master the grammatical markers of the language. Such mastery would come about as a result of the negotiation of meaning by seeking future input. However, the above model does not deny that language acquisition can perhaps best be seen as the direct outcome of the work involved in the negotiation process itself, not as the outcome of comprehensible input per se. This possibly which can be related to Stericks (1976) notion of "investment" is diagrammatically represented as follows:



The important point, here, is that it is the work required to negotiate interaction that spurs language acquisition, rather than the comprehensible input. Negotiated interaction means the modifications that occur in conversations between NSs and second language learners. These interactional adjustments include a whole range of attempts to understand and to be understood, (e.g. comprehension checks such as "Do you get what I am saying?" confirmation checks such as "Oh, so you are saying you did study last week?" or clarification requests such as "what do your mean?"). These conversational signals and strategies provide concentration on contextualized input turned to the learner's level of understanding. In the process of interacting, learners have opportunities to negotiate meaning by seeking further input.

### Interaction and Teacher Education

A study was conducted by Johannessen (1982) to determine (1) whether teachers see a need for or value interaction in the classroom, (2) what methods they use to encourage interaction, (3) how much interaction actually occurs in high school English classes, and (4) what factors or methods encourage or discourage interaction. The study involved five high school teachers observed in the same class on consecutive days. The classes were audiotaped, as were interviews before and after the observation period. The results indicated that teachers saw a need for and tried to encourage interaction, and that a wide range of interaction occurred in these classes, with different emphases on class discussion, individual presentations, small group interaction, and lecturing. The findings suggested specific factors or methods that tend to encourage or discourage interaction. The use of individual student presentations and student-led small group discussions may have contributed to higher levels of interaction. Teacher's questioning patterns during class discussions encouraged or discouraged interaction, depending on the ratio of teacher talk to student response and the nature of the questions. Finally, the activities used to introduce a specific piece of literature were critical to the level of interaction in the classroom.

In a language teaching practicum, Gebhard (1990) tried to highlight the role of interaction in the professional development and behavior change of student teachers. He adds

that interaction provides them with opportunities to change their teaching behavior. Moreover, teacher educators are given insights on how to educate student teachers. Implications, in addition, are given for researchers to be interested in more than what is going on in teacher education programs, and to want to focus on how participants in the programs arrange interaction to accomplish teacher education purposes.

### **The social Organization of the classroom**

In this section, we will look at the use of seating charts, and sociograms for tracing patterns of classroom interaction. Acheson and Gall (1987) use the acronym SCORE to refer to seating-chart observ **Background:** After the failure of several important methods comparison studies in the 1960's, the influence of interaction analysis stimulated interest in foreign language classroom processes. More careful observational studies gradually revealed which process variables were of interest. Also, there has been much research on teacher talk, with a focus on issues such as the amount and type of teacher talk, speech modifications made by teachers, instructions and explanations, error correction and questions have been more or less the center of attention.

**Purpose:** This qualitative-quantitative study is conducted as a classroom research and has focused on two question types: display and referential. It explored recurring patterns of questioning behavior and their interactive effects through non-participant observation.

**Research design:** Forty reading comprehension classes were observed in Tehran, Iran by the investigator. The observations were done by the researcher and the study data were gathered through partial ethnography. Events were coded and analyzed. General patterns were considered in regard with the teacher's questioning behavior and the students' interaction to them.

**Findings:** The findings indicated that display questions were used by teachers more frequently than referential questions. Also, it was concluded that NOT all referential questions could create enough interaction. Further elaboration on the results may be found in the study report.

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ation records. They provide a diagrammatic representation of the physical arrangements of the classroom and allow the observer to record a range of behaviors, including the amount and type of interaction between different classroom participants. Seating charts as such allow a great deal of information to be presented on a single page (see, for example, Nunan 1989, P. 93). Hopkins (1985) uses a similar technique, to those proposed earlier, for documenting questioning techniques and observing on-task behaviors (ibid, P. 95). Sociometry is also used to obtain an indication of the interpersonal dynamics and social structure of a group. Conducting sociometric surveys needs care. It is of particular importance that confidentiality be preserved and that the participants in the process are aware of this.

### **Too much Interaction!**

It is a dangerous oversimplification to suggest that verbal interaction in the classroom is just a case of "the more the merrier". There may be times when teacher's desire to get students to interact verbally can be counter-productive. Rather, it is important for teachers to adjust their teaching style to learners' strategies (Allwright and Bailey, 199). If teachers think too much about the management of interaction in the classroom, they may lose sight of the fact that what is of paramount importance is the management of learning. They should not create interaction for its own sake. Rather, it is to be means towards learning. In fact, everything we do in the classroom can make a difference to what anyone else in the class could possibly learn from being there. In this way, managing interaction and managing learning come together.

## **III. Methodology and Design**

This study, as already clarified, is a combination of both quantitative and qualitative research methods. Therefore, it can not be confined to one single experimental research design, for example; rather, it has been conducted in a way that both quantitative and qualitative requirements are satisfied. In order to keep the balance, I have analyzed the data partially on a quantitative basis, and partially on a qualitative basis.

### **A. Subjects:**

This study did not have experimental subjects in the sense that we have in experimental research. There were no treatment or control groups. The subjects, of this study, to be observed were five non-native-speaking English instructors at Allamah Tabataba'ee and Tehran Universities. Two of the teachers had a Ph.D. degree in TEFL or Applied Linguistics, the other three had MAs. Their age ranged from 30 to 50. All taught Reading Comprehension courses at upper-intermediate levels, using the same textbook. None of them knew about the focus of this study. However, they were let to know after the data were collected. All of these

instructors had enough experience in teaching EFL courses for several years, I selected them quite randomly. Questioning was their only behavior to be observed.

Other subjects of my observation were Iranian students of English at Allamah Tabataba'ee and Tehran Universities. The students were not aware of my study; they thought that I was also a student like others. The focus was not on certain students; rather, their participation in teacher-fronted or group discussions was observed in general.

## **B. Instrumentation**

The only way to collect data useful for this study was observation. The researcher used non-participant observation to collect data. The focus of the observation was teacher's use of question types as means of turn allocation, comprehension checks, clarification requests, confirmation checks, talk initiation, and holding control over the discourse. The immediate effects of these teaching devices were observed as the result of them. The amount of learner speech produced as a result of teacher's questions was recorded in minutes, and summed up. Also, the number and frequency of display and referential questions were recorded, as well as their interactive result. None of the observation schedules or checklists, presented the appendix of this study, completely suited this study because it was only partially quantitative and partially qualitative. In general, the number and frequency of display and referential questions, their functions, teacher-student or student-student interactions, length of the answers to these questions were written down in real time, and were subjected to data analysis. However, there was no possibility of videotaping or audio-taping the classes; rather, some of the observed data were transcribed and some were just written down. The final point about the observation phase of this study is that the teachers and students were observed with no reference to their age, *psychological features* or any other sort of bias.

## **C. Procedure**

After doing a review of the related literature on four areas (i.e. qualitative and quantitative research, classroom research and observation, teachers' questioning behavior and classroom interaction) and getting familiar with earlier studies on relevant topics, the researcher needed to make an observation scheme for the study. However, none of the earlier schemes was suitable for the purpose since it was not meant to be a mere quantitative study. Therefore, it was decided to transcribe the necessary data, and do it in a way similar to partial ethnography.

EFL English classrooms were needed to elicit data out of them. There fore, three instructors of English from Allameh Tabataba'ee University, and two from Tehran University were randomly selected. They have been teaching English courses for several years in Iran. The classes to be observed were all Reading Comprehension courses taken up by the students of English Language and Literature, or students of English Translation. The textbooks were the same: (1) Markstein, L and L. Hirasawa. 1982. Expanding Reading Skills (intermediate). Rowley, Mass.: Newbury-House (for Reading Comprehension II) and (2) Developing Reading Skills (advanced) by the same writers and publication (for Reading Comprehension III). The classes were observed as carefully as possible by the researcher. Neither the teachers nor the learners were let to know about the focus of the study until all observation sessions were finished. It took about two months to observe twenty classes of these teachers (forty hours).

Non-participant observation style was selected for data collection purposes. The researcher visited the classes, sitting from the beginning to the end of the session, taking notes of teacher's question types (display or referential), their number, frequency and functions (comprehension checks, talk initiators, etc.), listening to the raised discussions of the students, writing down the amount of student-student and teacher-student interactions, length of learners' responses to different types of questions, and other noticeable patterns. After the preliminary data collection, observed patterns were analyzed with reference to earlier studies and their confirmed results, first, to verify the hypotheses and, second, to find and reveal other noticeable generalizations and patterns in teachers' questioning behavior in EFL classrooms. The data analysis and results will be presented next.

## IV. Results and Analysis

Long and Sato's (1983) adaptation of Kearsley's (1976) taxonomy of question types, and their definition of display questions those for which the teacher knows the answer in advance and referential questions those for which the teacher does not know the answer, were used to categorize question types and the data. (For example of referential and display questions you may refer to the appendices.) After the required data are collected through observation, it is time for the researcher to analyze them. As already mentioned, the study has two intentions: first, finding a proof for each of the hypotheses and, second, exploring other possibly extant patterns of teacher's questioning behavior.

### The Quantitative Aspect

In order to find a distribution balance for teacher's use of referential and display questions, their corresponding numbers in each session were added up. The first column in the following table (Table 2) indicates the number of sessions. The second one indicates the number of display questions (DQ), and the third one shows the number of referential questions (RQ) in each of the sessions. The fourth column indicates the total number of both questions types asked in one session.

**Table 2. Number of RQs and DQs observed in each session**

Sessions	Number of RQs	Number of DQs	Total
1	42	11	33
2	29	8	37
3	52	25	77
4	50	5	65
5	47	13	50
6	90	20	110
7	74	15	89
8	45	4	49
9	110	10	120
10	150	10	160
11	100	20	120
12	30	11	41
13	80	11	91
14	87	25	112
15	70	25	95
16	45	11	56
17	60	18	78
18	55	18	73
19	37	22	96
20	35	11	46

**Table 3. Total number of RQs and DQs**

number of DQs	number of RQs	total
1335	293	1628

The numbers indicate that the observed teachers have used display questions 4.4 times as the number of referential questions. Out of a total of 1628, 1335 questions have been display (about 82%) and only 293 referential (about 18%). Also, using chi-square ( $\alpha=0.05$  and  $DF=1$ ),



the first hypothesis was observed to be rejected. That is, the observed chi-square was far greater than the corresponding critical chi-value (3.841). Statistically speaking, the number of DQs used by EFL teachers in Iran was significantly higher than the number of RQs they asked. In other words, the distribution of the two question types was not the same.

As for the second hypothesis, two groups of questions were randomly selected from among the obtained data for statistical analysis. The amount of time each question ignited classroom interaction was measured (in minutes), then added up; and a mean time was calculated for each type ( $\bar{X}_{DQ} = 0.625$  /  $\bar{X}_{RQ} = 2.833$ ). Then using t-test, ( $\alpha = 0.05$  and  $DF = (18+8)-2 = 24$ ), the observed t-value (3.82) was observed to be greater than the t-critical (1.71).

**Table 4. T-test analysis**

Groups	Number of cases	Mean	SD	T-observed
RQs	18	2.833	1.465	3.82
DQs	8	0.625	1.001	

Comparing the two means, it was seen that the observed results are statistically reliable. In other words, the second hypothesis of this study is to be confirmed. That is, the amount of classroom interaction, in Iranian EFL classes, caused by RQs is much greater than that caused by DQs. RQs cause more interaction than DQs.

**Table 5. List of the RQs**

What kind of a diet is the best? (2 min) What do you have to add? (1 min) Do you feel mosquitoes are harmful or useful? (3 min) Has a mosquito ever bit you? How did you feel then? (3 min) Have you ever been close to death? (6 min) Do you know how to defuse a mine? Have you been in the mine disposal unit? (4 min) How important are proteins for health? (2 min) What kind of food is rich in protein? (1 min) Will you be stronger if you eat much protein? (3 min) Do you think that healing and belief are related? Why? (5 min) Do you believe that our workers should also have fun & games in their break intervals? (4 min) Why do you think so? (3 min) Do you think that it is fair to deduce to deduce taxes from the wages of workers? Why? (2 min) What's your opinion on working for the same company all your life? (2 min) Do you believe in vegetarianism? (3 min) Are you married? Could you please tell us how you found your wife? How you selected her? (2 min)  What's your opinion about finding your spouse through ads? (4 min)
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**Table 6. List of the DQs**

Where does the stress fall in "nutrition"?
What's the meaning of "current"?
Where do we use "guarantee" most?
What part of speech is "populated"?
What does this paragraph say? (1 min)
What's the opposite of "gloomy"?
Can anybody tell us a brief account of this unit? (3 min)
True or false? why? (1 min)

### Referential Questions Display Questions

The second hypothesis was statistically confirmed. However, the qualitative data, gathered through observation, implied that it is to be modified. An exemplary referential data from the study data is, "Have you ever been close to death? How did you survive then?" Such questions were found to cause more learner speech than display questions such as "what is the opposite of "near"? . did. It is reasonable to accept that learners tend to speak and participate more, say, when the expected answer is longer. While display questions are usually asked for comprehension checks, confirmation checks or clarification requests (Long and Sato, 1983; Brock, 1986), Referential questions are usually used to fill in the information gaps. Therefore, motivation and interest causes the interaction to be more life like (Long, 1981) However, there can be found a number of questions, while referential, required a shorter answer and after them there was a period of silence or topic - change; for example; questions like the following did not help initiate a well-formed interaction:

Where do you live?  
What's your father's job or name?  
What's the combination of your suitcase lock?  
What page is it?  
Do we have any exercises left?

Therefore, it is better to modify our second hypothesis as follows: **Most** referential questions create more interaction in the classroom than display questions do.

So far, I have dealt with the quantitative analysis of the present data. However, during the observation period, certain patterns were explored, which will be how presented.

### The Qualitative Aspect

The study was not confined to answering the two research questions; rather, during the data collection procedure, a number of patterns were explored, which were almost true of the five observed teachers. The following generalizations are explored out of the data.

1. Before the teacher starts to work directly on the Reading comprehension, s/he asks a number of warm-up questions, mostly referential. These questions help the students get familiar with the topic of the reading, and warm up for the task. It is usually in this phase that some of the vocabulary used in the reading are activated, and learners experience their use in real contexts. This is, in fact, what Chastain (1988) calls "advance organizer", preparing the learners for a task before it starts. The following conversation is an exemplary advance organizer, presented at the beginning of a reading lesson:

**Teacher:** Are you married, sir?  
**Student:** Yes, I am.

- T:** Could you please tell us how you found your wife? I mean how you selected her? (Everybody becomes curious)
- S:** Well, it was 6 years ago... I was in military service, near the end. I came back to see my family, they told me that my cousin is a nice girl (he he he... laughing) I got the point... We married just after I had finished my military service...
- T:** All right, do you believe that you have made a happy marriage?
- S:** I think so, we love each other, we are good husband and wife. We have a son now, we love him...

Such an exchange of meaning was also played by another couple of students, too, using a number of similar questions. The dialogs happened before a reading about "marriage in India" was started.

2. Teachers used a number of general questions which were not directly addressed to any of the students present in the classroom. Questions such as, "what's generation gap?", "Has anybody ever been to Japan?" are of this kind. An interesting aspect of such questions is that learners answered in two contrasting ways to them: they either keep silent or give a choral response. Examples:

- (1) Teacher: Does anybody know about American Immigration Permit?  
Students: (Silence)
- (2) T: Any questions here?  
Ss: No, no... (Choral response).

3. Contrary to what is customary about display questions, said to elicit short or even one-word answers (e.g. Brock, 1986), sometimes a display question may cause learners to speak at least for five minutes. However, this is not considered interaction due to its one-way nature. Examples of such questions are the questions about the summary or general concept of a reading, usually asked after the reading is worked out. (E.g. what's the summary of this paragraph? what does this story tell us? etc.)

4. Teachers usually paraphrase, rather than, repeat their questions, whether the same person or another is asked. This can also be considered as a pseudo-wait-time, giving an opportunity to think for the learner. However, teachers usually do not give real wait-time in the sense that they wait a period of silence for the answer (see for example, Richards and Nunan, 1990). This lack of wait-time is often observable mostly about display questions (for which the teacher expects learners know the answer). Observation, also, revealed that paraphrasing elicited longer responses than repeating did (see Long and Sato, 1983).

Are you married?  
Have you found your better-half?  
Could you please tell us about how you found your wife? I mean how you selected your wife?

5. Almost all of the questions asked by the teacher during the session on doing the exercises are display questions. Perhaps it is due to the focus of the class on doing the exercises correctly that teachers do not interfere with their students' practice. It may not be necessary at this stage to have interaction or speaking practice, since learning grammar and meaning through doing the exercises is also an important aspect of language learning. It was also observed that the amount of interaction, speaking, and group discussions were reduced to the least.

6. Not all teachers made equal use of display and referential questions. This seems to be a natural incidence since not all teachers think alike, and not all of them teach in the same way. Every teacher has a particular way of teaching, with its own strategies and techniques which can rarely be found in others.

7. Two main functions of questions asked by teachers are: turn allocation and talk initiation. This is also documented in Chaudron (1986). Students who are less likely to participate are usually encouraged, or forced, to speak when asked to speak. Questioning is also used to distribute turns of speaking in a fair way among all students. Some students are less confident or shy, but they can also participate when the teacher allocates a turn. Sometimes, teachers prefer a question asked by a student to be answered by another student, which is also a kind of turn allocation by questioning.

8. Most of the display questions asked by teachers concerned textual information, such as comprehension checks, summary of paragraphs, meaning of words, idioms, etc., position of stress, and right way of pronouncing certain words. While, most of the referential questions asked concerned personal information, such as age, marital status, family, future arrangements, etc., and opinions, such as on education, smoking, crimes, etc. Sometimes, a referential question can function as a comprehension check as well. For example, in one of the observed classes, the teacher asked "what's the combination of your suitcase lock?" just after she had elaborated on the meaning of "lock combinations". She did not know the answer; at the same time, she was trying to make sure that the student had got the meaning.

9. It seems that the use of display questions is not separable from Reading Comprehension classes, and the results indicated that the frequency of such questions outnumbered the frequency of referential questions in general. This fact can be justified from two interrelated angles. First, this type of questions can contain small pieces of information to be quickly verified by asking. Secondly, the nature of Reading Comprehension classes, where comprehension precedes production, demands that teachers make sure that all students have comprehended the reading, and this cannot be done unless teachers make use of comprehension checks usually display questions, to which a short and syntactically less complex answer is given. This pattern of teacher's questioning behavior in Reading Comprehension classes has the reduction of interaction as its outcome. Since it doesn't lead usually to more than one turn, negotiation of more than one chunk of meaning is impossible. Therefore, after the teacher shifts to another student, or changes the topic, there remains nothing more than a one-turn communication of small pieces of information. And this is contrary to what Malamah-Thomas (1987) or Allwright and Bailey (1990) consider as interaction.

10. The observation analysis reveals that there is no real interaction in the observed classes. Interaction of two or more sides with a defined topic, tone, code, turn and task (see Allwright and Bailey, 1990) rarely happens in these classrooms. Such an interaction needs a considerable information gap (Doughty and Pica, 1986) to enhance it. An important ingredient is student-student interaction which is quite absent from the scene of EFL Reading Comprehension classes. However, teacher-student interaction is observed in some cases.

There are a number of factors leading to enhanced and reduced amount of interaction which will be explained now. Repeated questions, low language proficiency, and limitation to textbook were among observed factors leading to the reduction of interaction. When a certain question is asked for several times, e.g. what's your opinion about capital punishment?

students lose their interest in it. It becomes boring, and discourages any motivation to continue. Also, when teachers ask a low-proficiency learner a talk-initiating question, and s/he fails to respond, communication stops and the teacher is disappointed, turning to another learner in hopes of achieving communication. Furthermore, when the class work is limited to a textbook, it was observed that negotiation of meaning is reduced to zero when doing the structural-formalistic exercises of the book. However, when there were, say, warm-up discussions at the outset of sessions, learners were more inclined to talk and initiate.

On the Contrary, there are a number of factors enhancing the amount of interaction: interesting, teacher's attention, misunderstanding, information gap and humor. It was observed that classroom experiences more student participation when the topic interests them (e.g. topics such as marriage, religion, etc.). Also, in one interesting case it was observed that one of the students had got a wrong idea of the meaning of the word "food shopper". He thought that the word equaled shopkeeper, while there was a real interaction for about several minutes; his coin dropped after a real challenge of meaning. This can also be considered as an example of interaction resulting from a considerable information gap (see, Long 1981; Doughty and Pica, 1986). Moreover, teachers can increase the amount of interaction in their classes by applying two factors: humor and interest (attention). A learner will be more inclined to talk when s/he finds the teacher paying attention and interested in the topic. Also, when teacher incorporates a piece of humor into the atmosphere of the classroom, students, feeling friendly, are encouraged to participate more than when it is a gloomy atmosphere with the teacher as the sole speaker.

## V. Conclusion and Discussion

As it is the nature of classroom research, the study focused on what is going on in the classroom, specifically on teacher's questioning behavior .what kind of questions they ask, to what purposes, and so on. It was, more specifically, decided to focus on referential and display questions. Through observation, it was clarified that display questions outnumbered referential ones. It was further observed that referential questions, bearing an information gap, produced more classroom interaction. Swain (1983), in reporting the results of a study of the acquisition of French by Canadian children in elementary school immersion classrooms, argues that output may be an important factor in successful second language acquisition. She suggests that output creates the necessity for the learner to perform a syntactic analysis of the language. She further notes that comprehending input or getting the message is possible without such an analysis. Producing one's own messages, on the other hand, may force the learner to pay attention to the means of expression to successfully convey his/her intended meaning (also see Seliger, 1977). If it is true that such questions increase the amount of learner output, and if output leads to better learning, then they may be an important tool in the language classroom, especially in those contexts where the classroom provides the only opportunity to produce the target language .i.e. EFL contexts.

It was inferred from the obtained data that display question, requiring short answers, contained small pieces of information .e.g. on part of speech, word stress, intonation, antonyms and synonyms, word pronunciation and meaning, comprehension checks, etc. Brock (1986) and Long and Sato (1983) have reported that classroom interaction was characterized by the use of display questions. However, it seems that the use of display questions can encourage language learners .especially beginners .to get interested. It may also help teachers provide comprehensible input for learners. While, referential questions, typical of content classrooms and high proficiency language classrooms, and usually requiring Long and syntactically answers, contained, in fact, important points .e.g. interpretation, elaboration, giving opinions, etc.

However, it would be dangerous to generalize that referential questions, say, are more useful for language learning, or display ones are useless. Each context requires an appropriate strategy for itself. Allwright and Bailey (1990) maintain that it is a dangerous oversimplification to suggest that verbal interaction in the classroom is just a case of "the more, the merrier". They add that" there may be times when teacher's desire to get students to interact verbally can be counterproductive. Rather, it is important for teachers to adjust their teaching style to learners' strategies (pp. 144-5).

### Implications for further research

1. Any of the limitations of this study can be the focus of another study.
2. Interactional features of teacher's questions
3. Characteristics of follow-up questions
4. Relationships between syntactic and cognitive question types
5. Relationship between length and complexity of teacher's questions and students' responses
6. Types of learners' responses
7. Personality type and interaction

There are a lot of other implications, here, in this study to be followed for a later research which you may enjoy noticing while studying the original study.

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# Appendices

## A. Typical general questions from the data

Does anybody know about American immigration permit?  
what's generation gap?  
Any ideas about g. gap?  
Any new ideas?  
Have you ever heard of vegetarianism? You haven't?  
Has anybody ever been to Japan?  
Does anybody know about Japanese life?  
All right, what about others? Any idea?  
Did you have any chance to study the rest of the unit?  
What page is it?  
Any questions so far?  
Did you study the rest of the unit?  
Do you think mosquitoes are harmful or not?  
What's the unit about?  
Did you have any special problems with this unit?  
Any problem here?  
Do we have any exercises left?

## B. Typical referential questions (RQs) from the data

Are you married?  
Have you found your better-half?  
What's your own idea about finding a good wife or husband in newspaper ads?  
Do you believe that any young man should be rich to many? Or you believe in hard work for life?  
Does anybody live with their grandparents?  
Mrs. X, you said you live with your grandmother! Then, do you approve of the social changes in her sole?  
Do you believe in vegetarianism?  
Do you like to be a vegetarian for the rest of your life?  
What's your opinion about working for one company all your life?  
Do you believe that our workers, like the Japanese, should also have fun & games in their break intervals?  
Do you think that we should deduce taxes only from capitalists or it is fair to deduce it from workers as well?  
Have you ever been close to death? How did you survive?  
Do you think healing & belief are related? why?

## C. Typical display questions (DQs) from the data

Can you explain the paragraph?  
What did you get from this lesson?  
What does this paragraph tell us?  
What is the correct pronunciation of this word (written on the board)?  
What's the meaning of immigration?  
What typical duties does a grandmother do in our society?  
What's the meaning of multi in multigenerational?  
Ok, can you give us another example?  
What kinds of food are rich in protein?  
Do you know what Recommended Daily Allowance (RDA) is?  
Did you know that only the female mosquito can bite you?